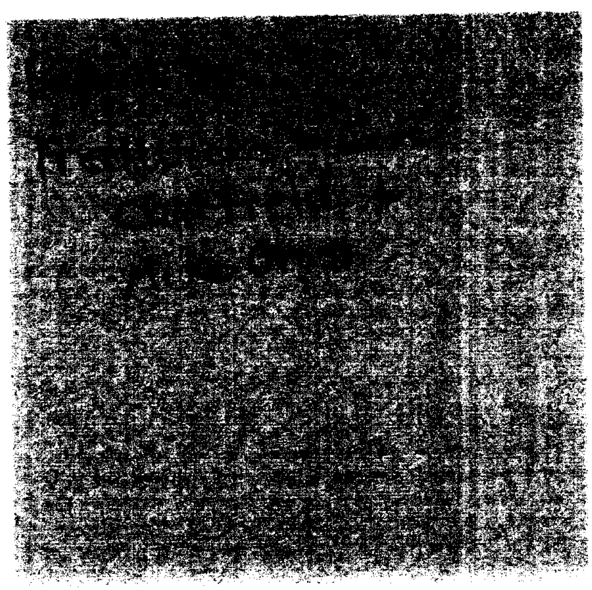
Index



2.28159

Employee	Time frame	Totals	1191295	1191249	1163443	1077035	1077036
Douglas Newman	9 months	20,000.00	4,500.00	5,500.00	5,000.00	3,000.00	2,00.00
Rurnelle Rickard	6 months	1,440.00			1040.00	200.00	200.00
Mike Campbell	3 months	420.00			220.00	100.00	100.00
Brent James	1 month	390.00	78.00	78.00	78.00	78.00	78.00
Conrad Lanouette	3 months	1050.00	210.00	210.00	210.00	210.00	210.00
Gord Jessup	3 months	865.00	173.00	173.00	173.00	173.00	173.00
Brennan Lanouette	3 months	820.00	164.00	164.00	164.00	164.00	164.00
Triple A Resources	10 months	27,500.00	8,500.00	9,000.00	6,000.00	2,000.00	2,000.00
Mike Grosse	10 months	7,500.00	2,500.00	2,500.00	2,500.00		
Chatfield Wicks	3 years	21,838.61	5,798.85	5,531.25	6,735.01	1,886.75	1,886.75
SGS Lakefield	1 month	3,210.00	1,070.00	1,070.00	1,070.00		
Eric Moeller	9 months	58,328.09	6,402.81	11,331.36	20,194.29	11,536.61	8,863.02
Excavator	9 months	990.00	330.00	330.00	330.00		
	10 month	**144,351.70**	**29,726.66**	**35,887.61**	**43,714.30**	**19,348.36**	**15,674.77**

Hours of employee's in exploration

Employee	sampling	equipment	screening	exfoliating	assay	crushing	construction	Total
Brunelle	39	11 excav	30					80
Douglas	100		200	300	509	50	30	1189
Mike C.			20				10	30
Brent	10						20	30
Conrad			30	30			27.5 clean up	87.5
Gord			20	30			36.5 clean up	86.5
Brennan	10		40	2			30 clean up	82

Excavator	90.00 per hr.	11 hrs.	$990.00
Consultants			
Mike Gross	7,500.00 per month	1 month	$ 7,500.00
Eric Moeller		9 months	$ 58,328.09
Triple A Resources	5,500.00 per month	5 months	$ 27,500.00
Chatfield ans Wicks			$ 21,838.61
SGS.			$ 3,210.00
		TOTALS	$118,376.70
LABOUR			
Brunelle Rickard	18.00 per hr.	80hrs.	$ 1,440.00
Douglas Newman	3000.00 per month	1189.5	$ 20,000.00
Mike Campbell	14.00 per hr.	30	$ 420.00
Brent James	13.00 per hr.	30	$ 390.00
Conrad Lanouette	12.00per hr.	87.5	$ 1,050.00
Gord Jessup	10.00 per hr.	86.5	$ 865.00
Brennan Lanouette	10.00 per hr.	82	$ 820.00
	Total	1503 hrs.	$ 24,985.00
	Page total		$ 144,351.70

Employee	Total work dates	Total wages	Total hours	Hours of assessment	Wages in assessment
Brunelle Rickard	Jan. 1 to June 30 /04	$21,707.82	1065	80	$1,440.00
Douglas Newman	Oct 1 to June 30 / 04	$31,178.20	9 months	9 months	$20,000.00
Mike Campbell	April16 to June 30 / 04	$ 7,612.00	455	30	$420.00
Brent James	June 17 to June 30 / 04	$ 1,508.00	110	30	$390.00
Conrad Lanouette	April 1 to June 30 / 04	$ 1,050.00	87.5	87.5	$1,050.00
Gord Jessup	April 16 to June 30 / 04	$ 865.00	86.5	86.5	$865.00
Brennan Lanouettte	April 1 to June 30 / 04	$ 820.00	82	82	$820.00
TOTALS	7 MONTHS	$42,811.00	3603	1585	$24,985.00

Consultants	Total work dates	Pay rates	Total time on site	Assessment time	Assessment value
Triple A Resources	Sept.1 to June 30 / 04	5,500.00 Per. month	10 months	5 months	$27,500.00
Mike Gross	Oct 1 to June 30 / /04	7,500.00 Per. month	10 months	1 month	$7,500.00
Eric Moeller	Oct.31 / 03 June 30 / 04			6 months	$58,328.09
SGS Lakefield	Oct. 7- 03 Nov. 1 /03				$3,210.00
Dr. Fred Wicks	Mar. 22 /02 Aug. 6 03	300.00 Per. hr.		38 hrs. 26.5 hrs.	$9,675.00
Dr. Eric Chatfield	Jan. 15 /02 Mar. 30 / 03	250.00 Per. hr.		88.5	$12,163.61
Totals					$118,376.70

Disbursement of expenses on claims from Chatfield and Wicks report

Claim numbers		**1191295**	**1191249**	**1163443**	**1077035**	**1077036**
invoice 01M098 50%	$2,541.25 $1,270.62	283.09 141.54	283.08 141.54	283.08 141.54	846.00 423.00	846.00 423.00
invoice 02C004 50%	$535.00 $267.50			535.00 267.50		
invoice 02C009 50%	$1,070.00 $535.00	535.00 267.50		535.00 267.50		
invoice 02C012 50%	$4,012.50 $2,006.25			1,337.50 668.75	1,337.50 668.75	1,337.50 668.75
invoice 02C013 50%	$15098.48 $7,549.24	5,032.82 2,516.41	5,032.82 2,516.41	5,032.84 2,516.42		
invoice 03C010 100%	$535.00 $535.00	178.40 178.40	178.30 178.30	178.30 178.30		
Wicks 50%	$11,400.00 $5,700.00	3,800.00 1,900.00	3,800.00 1,900.00	3,800.00 1,900.00		
Wicks 50%	$7,950.00 $3,975.00	1,590.00 795.00	1,590.00 795.00	1,590.00 795.00	1,590.00 795.00	1,590.00 795.00
TOTALS **50%**	**$43,142.23** **$21,838.61**	**$11,419.31** **$5,798.85**	**$10,884.20** **$5,531.25**	**$13,291.72** **$6,735.01**	**$3,773.50** **$1,886.75**	**$3,773.50** **$1,886.75**

Disbursement of expenses on claims from SGS Lakefield report

Claim		**1191295**	**1191249**	**1163443**
invoice	**$3210.00**	**$1070.00**	**$1070.00**	**$1070.00**

Disbursement of expenses on claims from Eric Moellers report(crushing)

Claim		**1191295**	**1191249**	**1163443**
invoice	**$2,631.10**	**877.00**	**877.10**	**877.00**

Disbursement of expenses on claims from Eric Moellers report(crushing)

Claims		**1191295**	**1191249**	**1163443**	**1077035**
invoice	**$10,694.34**	**2,673.60**	**2,673.58**	**2,673.58**	**2,673.58**

Disbursement of expenses on claims from Eric Moellers report(assays)

Claims	1191295	1191249	1163443	1077035	1077036
invoice $8,556.63	2,852.21	2,852.21	2,852.21		
$9,856.95		4,928.47	4,928.48		
$26,589.07			8,863.02	8,863.03	8,863.02
TOTALS	**2,852.21**	**7,780.68**	**16,643.71**	**8,863.03**	**8,863.02**

Disbursement of expenses on claims from Triple A Resources, M. Gross and Regis Resources staff

	Claims	1191295	1191249	1163443	1077035	1077036
D. Newman	Oct.-Dec	2,000.00	2,000.00	2,000.00		
	Jan.- Mar.	1,000.00	2,000.00	1,500.00	1,000.00	1,000.00
	Apr.-June	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00
B Rickard	Jan.- June			1,040.00	200.00	200.00
M. Campbell	Apr.- June			220.00	100.00	100.00
B. James	June	78.00	78.00	78.00	78.00	78.00
C. Lanouette	Apr.- June	210.00	210.00	210.00	210.00	210.00
G. Jessup	Apr.- June	173.00	173.00	173.00	173.00	173.00
B. Lanouette	Apr.- June	164.00	164.00	164.00	164.00	164.00
Triple A	Sept.-June	8,500.00	9,000.00	6,000.00	2,000.00	2,000.00
M. *Gross*	Oct.	2,500.00	2,500.00	2,500.00		
TOTALS		**$16,125.00**	**$17,625.00**	**$15,385.00**	**$5,425.00**	**$5,425.00**

Reports from Chatfield and Wicks

CHATFIELD				
invoice	date	total	amount credited	
01M098	Jan. 15/ 02	2,541.25	50%	$1,270.62
02C004	Mar. 20/02	535.00	50%	$267.50
02C009	Apr. 10/02	1070.00	50%	$535.00
02C012	Apr. 14/02	4012.50	50%	$2,006.25
02C013	July 31/03	15,098.48	50%	$7,549.24
03C010	Mar. 30/03	535.00	100%	$535.00
	Totals	23,792.23		$12,163.61
WICKS		11,400.00		$5,700.00
		7,950.00		$3,975.00
	Totals	19,350.00		$9,675.00
PAGE TOTAL		43,142.23		$21,838.61

Chatfield and Wicks work and reports cover samples taken from several areas of claims 1191249 - 1191295 - 1163443 - 1077035 - 1077036.

1191249- 1191295 - 1163443- Horse Shoe Lake Property

Horse Shoe Property samples were collected from small amounts of the rejects of all Trench samples. Trenches AW- HW

Most all of Trenches AW - CW in Lot 13 South half of Concession 3 Claim 1191295
North sections of Trenches DW - FW in Lot 12 South half Concession 3 Claim 1191295
South sections of Trenches DW - FW in Lot 12 North half of Concession 2 Claim 1191249
All of Trenches GW and HW in Lot 11 Concession 2 Claim 1163443

Northern Zone samples were taken from six pits each weighing 20 pounds. Those samples were riffled and a portion was sent for analysis. Centre of Trench 0 (line 0+00 - 0+00 area) in a 25 metre range. Lot 14 North half Concession 7. Claim 1077036

Kirks Property (Zone # 2) a sample from Trench 400 and was included with the North Zone sample. Lot 17 Concession 6. Claim 1077035

Most of the rejects were stored in a warehouses in Toronto. When Sentient Asset Management Canada Ltd. became involved, it was suggested that we redo several samples for fibres. Although several test were previously completed and others in the process of being completed we redone several others under their supervision.

When samples are gathered a portion of each sample is dumped into large metal containers. Each claim has containers in which we combine several hundred pounds of material and use as bulk samples to run into winnowers. At times we may revisit other areas of the site and try to combine different types of material to allow us to get higher yields to make use of lower grades.

To do successful and accurate assays we need to do and redo several samples. In the past we used a exfolitaor with a propane burner. This is a good method for exploration and bag yields, however, with a chimney leading to the outside results may be effected by the wind or rain. We have recently purchased a muffle furnace in which we can control the heat and it's not effected by the conditions around it. Most trenches have now been resampled and yields completed in the form of bulk samples or singles.

Exploration on Claims 1191249 and 1191295 has now been completed. We now need to focus on extending the North Zone Claim 1077036 and Zone 2 Claim1077035. Regis Resources has rented a mid size excavator with top priority being exploration. Some areas on claim numbers 1077041- 1077413 and 1230939 has had small samples taken and vermiculite was present. We have not gathered enough information on those areas to do a report.

We are confident that we will find more vermiculite on our claims. When it comes to exploration there isn't a lot of information on vermiculite exploration in books as there are only a few mines and each deposit is very different. I have spent several days in small areas just digging and using a propane torch which is a simple and fast way to explore. I have found three areas which contain several piles of mica (south of 1163443)and swamps with mica(1191460). The material at surface wouldn't exfoliate but with the aid of an excavator we can dig deeper.

Last winter (2003) a large fire was built to burn brush. The fire was put over a low grade area just to see what effects a fire would have on vermiculite close to the surface. The fire did affect the vermiculite and in fact vermiculite near the surface exfoliated. Material just inches below dried out and the material below the organic material, twigs or roots, were fine. It is very important that we take into consideration any changes nature may have caused; e.g. weather, fires or swamps washing out as in 1191249 and 1191295.

Vermiculite can be very complicated when it comes to good yields and commercial grades.

- ➤ It should be moist but not saturated (bogs may saturate and delaminate) .
- ➤ Dry but not cooked (over drying may remove moisture need to create a steam that allows exfoliation)
- ➤Have several thin layers but not to many (if flakes are too thin, then there aren't enough layers to give good yields. If flakes are to thick it becomes difficult to make concentrates and some form of delaminating may be needed)
- ➤A millimetre or two in length but not too big.(Size ranges are important depending on applications).
- ➤Vermiculite requires a sudden burst of extreme heat to penetrate through each flake as fast as possible. We set the muffle furnace at 1800 degrees c and pre heat stainless steel trays for several minutes. When the samples and trays are ready the door is quickly opened and samples are placed inside for three to five minutes. Our tray dimensions are 8 inches in length, 4 inches high and 4 inches wide. We ran several samples in our muffle furnace before we got good yields. We have spent weeks experimenting with different areas of our three deposits. With the muffle furnace we had to reduce our sample weights from 250 grams to 25 grams to get good results. Some of the material in the tray was being insulated by the other flakes causing them to dry out before they could exfoliate.

Once exfoliated vermiculite should be removed from the heat. The heat can destroy it after it's exfoliated. Over heating causes vermiculite to become brittle and fall apart. When good vermiculite is exfoliated it should stay together like a button accordion. It should also feel soft and spongy and absorb water. Light colours are a bonus.

After several months of running samples, combining samples, grinding and crushing we have drawn the following conclusions on claims 1191295- 1191249- 1163443- 1077035 and 1007036.

Work report for claim number 1077035
Location Lots 16 and 17 Concession 5 and 6
Access 507 19 Kms North of 36

Work has previously been performed with an excavator digging three trenches (200, 335 and 400). Bag yields were not done at that time. In an area in trench 400 where small ore piles were left, approximately 300 pounds of material was taken and extensive screening, assays, and bag yields were completed.

The vermiculite is darker in colour due to the zone in which it is found. A vertical Amphibolite schist (samples 8 through 19) that has been highly weathered, was high in biotite and iron. The zone is between a lesser weathered marble and a narrow swamp, which both contain lesser grades of Vermiculite. The marble zones contain Vermiculite that is much lighter in colour. The swamp material has a orange tint, very low bag yields and of little value. The darker material which contains larger flakes would be considered for the soil or the fertilizer industry which has a greater value.

More exploration will continue to the south over a distance of 1,200 metres into Lots 16 and 17 Concession 5.

The original deposit of vermiculite was discovered between Catchacoma and Mississagua Lakes, Lots 19-23 Concessions 3 and 4 and staked by H. G. Green in 1950. A report was filed in Ontario Geological Survey, Open File Report 5711-1989. Zone 2, which we discovered much later, may be an extension of that zone. Reading this report it seems that the zones may be simular in many ways. I would not question the past approach toward exploration or their results as 20 years can change a lot of market demands. I feel that maybe the focus on that property was leading to the East and West, following the rock formations. I have traced the zone to the Northwest and around the West side of Catchacoma Lake leading to our Zone 2.

We have drilled holes in the past for monitoring wells and curiosity. We found that the vermiculite did not decrease with depth but remained consistent at depths up to 100 feet plus. We drilled over a period of two days and found that the vermiculite did carry the length of the core to 200 feet plus. With a propane torch we tested all the fractures and void areas of the core. The vermiculate appeared to have more biotite and or greenish tint with depth but certainly did exfoliate. The more competent rock did not allow the vermiculite to reach a stage in chemical change to exfoliate. At the present time vermiculite in unweathered rock is not feasible to mine. As was the deposit between the Lakes twenty years ago. But in time things may change and if they do Regis may dig deeper. After discovering Zone 2 I visited Tweed MNR office and collected two maps (p .3096) Precambrian Geology of Burleigh Falls Area and Map No. 1957b. By overlapping the maps the zones are easier to trace.

Samples

All samples were air dried outside on plywood over a period of three days. The best possible results occur when the material is dried slowly reducing the moisture as much as possible. When bag yields are calculated, the higher the volume and lower the weight the better the bag yields.

Samples were screened several times using a rolltap in several different fractions. Those fractions were essayed and bag yields completed using an intecon, (propane burner) and muffle furnace.

Assays and results for claim 1077035

Previous results in trenching

sample	Location	Vermiculite
8 [59988]	20-22.5 m.	17.5
9 [59989]	22.5-25 m.	22.9
10 [59990]	25-27.5 m.	12.3
11 [59991]	27.5-30 m.	50.5
12 [59992]	30-32.5 m.	41.4
3v [400s.]	30 m.	10.6
13 [59993]	32.5-35 m.	51.7
14 [59994]	35-37.5 m.	57.7
15 [59995]	37.5-40 m.	61.7
4v [400s]	35 m.	7.7
5v [400s]	40 m.	43.0
16 [59996]	40-42.5 m.	39.7
17 [59997]	42.5-45 m.	22.3
18 [59998]	45-47.5 m.	30.2
19 [59999]	47.5-50 m.	29.4

CLAIM NUMBER 1077036

Work on this claim was preformed by crushing a 30 lb. Concentrate of large vermiculite. Several bags of material were collected from Trench 0 at line 0+00-0+00 that had been left next to the trench. The material was screened with +3 mesh to 3in. for crushing. In the North Zone there are several stringers that contain large flakes that are too big for markets. This material, if mined, would have to be crushed. The purpose of crushing was to test our impact crushers on the material to check their performance.

We need to reduce the flake size to a point where it falls into market specks and would have enough layers to exfoliate, giving good yields. At first the sample was screened using a home made rotary screen. We found that slotted screens work best with flakes as they would fall through the slots. The next stage was to screen in three sizes, 2inch and up, 1 inch to 2 inch, and 20 mesh to 1inch. Material was then hand picked. Several pieces were passed through the exfolitaor (propane burner) but due to the size, expansion was poor. The outside edges just curled and started to exfoliate, due to the thickness the heat couldn't pass through the flake fast enough. We then set up a crusher for testing. We tried several speeds by changing sheaves. The expansion did improve in 20 mesh to 3 mesh, but over that size the material needed more work. Material would have to be recycled several times which wouldn't be feasible. There are other methods of reducing vermiculite sizes that we will be looking at when work resumes on this Claim.

This Claim had two short sampling programs. One with a hand auger program and four trenches. Both showing 8% over all averages. Overall grades may be low in the areas we prospected but due to the size range of the vermiculite flakes and value of material it would be important to prospect to the South. As the zone heads North, weathering decreases as it reaches higher ground. This means there isn't much soil or dirt for vermiculite to progress.

As the zone heads South we get into lower ground and more swamps. Line 900 South and 700 West will be the starting point of our next phase of exploration. In this area there is a overburden of material that isn't in place, which we need to penetrate and a fault zone. The zone has shifted 20 feet to the east heading North. South of this is a large shallow swamp in which the zone is covered. The outcrops are marble with vermiculite in the fractures. An excavator will be used in this area.

CLAIM NUMBER 1163443

We have done five trenches on this claim and all were encouraging. The Vermiculite is light in colour and of good grades. In the snowmobile trail Southwest of Trench J there is a fault with shale on one face and marble on the other. South of the fault is a large swamp. We haven't preformed much work over a steep bank toward the swamp to draw any conclusion. We know at the far South end of the swamp there are piles of orange coloured flakes of mica. The material may have been a part of the zones from Horse Shoe. There is a swamp with a creek that flows through the property dividing the deposit. From trenching and working around the swamp it is clear that Horse Shoe Lake was much larger. On Claim 1163443 there is a steep hill leading to a larger and deeper swamp. We have not done any work in the lower swamp. We plan to do soil samples along the edge. The mica flakes to the South may have floated down the creek and gathered over time and pushed up by ice. The flakes are simular to the flakes in the swamp on Claim 1077035. Also on Claim 1077417 a simular deposit of flakes were found. Vermiculite and mica flakes move with very little water motion. This next round of exploration will include some studies on swamps and their movements over long periods of time.

Samples

As in other claims we had large volumes of samples collected and rejects combined for winnowing. Claim 1163443 is the Western section of the Horse Shoe Property. Located in Lot 11 Concession 2. This claim consist mainly of swamp material. In the North half of Lot 11 Trenches GW, HW, I ,J and a few extra exploratory trenches were dug. As in all trenches we leave small piles of material from the deep portions of the trench on surface. We leave those piles in place as they are easily assessable and we know what we are sampling. All trenches lead to and into the swamp. We have dug several holes along the edge and a few in the middle. The swamp is 25 to 30 feet deep and deeper in the centre. From the surface down one to three feet from the bedrock the material consist of mainly rotted trees grass and organic matter. The lower material is highly concentrated in vermiculite. This Vermiculite does not have a orange tint but simular to the material in the trenches. This material may of been protected by the swamp material and chemical change was minimal. After the material from the swamp dried out it may become stained from the iron content and lose its natural chemical composition, as the material to the south.

Although the vermiculite in the swamp has great yields and heavily concentrated, we have no plans in the present to retrieve that material. Swamp material is difficult to liberate from Vermiculite due to its weight when dried. We would also have to deal with water and several other issues, so for now swamps are put on hold except for exploration.

CLAIM NUMBER 1191249-1191295

All exploration on these claims have been completed and are ready to mine. Several tonnes of ore have been ran through crushers, screens of all sizes and winnowers. The ore is first dried with a rotary drier then passed through screens to separate the # 4's and # 5's from the # 3's. The # 3's were stored in a large bin for later use. The combined # 4's and # 5's were then screened and separated into proper sizes. A winnower was set up for each size. Each winnower has three chutes; waste, mids for rerun, and concentrate. A second set of winnowers were set to handle the mids after they were rescreened. Concentrate from each winnower was sent to a sizing screen to form two grades of concentrate. The mids in the first stage was sent to the second winnower and again concentrate sent to sizing screens. The waste from all winnowers was sent outside. The mids from the second stage was placed in large bags. After a tonne of concentrate was collected it was placed into bags then full analysis were completed. Several screen sizes were tried on the bags of material, both mids and con. Some of the bags of mids were ran through the crusher. Both the crusher and screens took several hours to change. First stage winnowers are the lead winnowers. Those winnowers are mainly to form a good mids for the second stage and dump as much waste as possible. In the second stage the main focus is on making a good concentrate, while maintaining a good mids. Mids with a 55+ percent may be sold for a lower price.

The following analysis sheets are from combined tonnage taken from all trenches on Horse Shoe Property. Several tonnes from each trench were brought out and screened together to form a 50 tonne sample for complete analysis.

Claim 1191295-1191249-1163443

Vermiculite Canada Corporation

Regis Resources – Cavendish Operation

RR1 Box 2, Buckhorn, ON K0L 1J0 • (705) 657-2022 • (705) 657-2282 *fax*
Mill Phone (705) 657-9449

TO: Stephen Shefsky

Date: August 19, 2003

FROM: James R. Hindman

SUBJECT: Sampling Protocol ~~for Quality Control~~ at the Cavendish Mill

Finished Products - Daily Composite Samples

As part of a quality control program sampling and analysis of vermiculite products obtained from the Cavendish mill should be carried out on a daily basis. In order to assure accuracy of the analytical data the sampling procedure must be carried out in a methodical and consistent manner. A common way to achieve accurate sampling is by use of automated sample splitters that move a splitter through the material stream at regular intervals. The splittings are collected in a single container, such as a 5-gallon bucket, and at the end of the production day. The bucket of splittings is then further blended and split into roughly 500 grams of sample that is an accurate representation of that day's product.

Although automated samplers can be the most efficient and reliable method for sampling production I feel that they are inappropriate for the Cavendish mill. Until such time as production rates require automated splitters I would suggest that the sampling and analysis of mill production done on each ton bag produced and at each bag be individually labeled to correspond with the analysis.

Previously[1] I suggested that bag hangers be attached to the bottom of production bins and then tapping into the bins above the current discharge gates fill the jumbo bags. Besides the advantage of not needing to use the wheeled auger with the attendant dust problem, the use of hangers allow each bag to be filled, sampled, and weighed in the most timely manner. I suggest these hangers be installed as soon as possible.

Recommended Sampling Protocol - Finished Products

1. Sampling of each product is accomplished by running small loaf pan or similar container through the discharge stream while the 1-ton bag is being filled from the product bin. The discharge stream is sampled 3-5 times during the filling of the bag at regular intervals of 1/5th or 1/3rd levels in the bag.
2. The collected sample is then run through a riffle splitter multiple times until a representative sample of approximately 1000 grams of sample is obtained.
3. The remaining sample is then added back into the bag. The bag is then weighed and marked with the same ID used for both bag and composite sample.
4. The 1000-gram sample is then re-split twice to produce (1) a 500-gram sample for bag yield determination using the rotary furnace, (2) a 250-gram sample for grade and size distribution analysis, and (3) a 250-gram retained sample to be archived in a secure location for at least 3 months.

James R. Hindman
Consultant to Regis Resources

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[1] ndman to Gross, *Cavendish Mill Concentrate Bins*, April 20, 2003.

1. VERMICULITE ORE AND PRODUCT ASSAY PROCEDURE

Overview

The analysis or assay of commercial vermiculite is not as straightforward as one might assume, and the accuracy and precision can be affected by a number of variables. There are two unusual factors that affect the analysis of vermiculite found within the Cavendish deposit. The first factor is a component of organic material that appears to be extremely variable in both physical properties and distribution within the ore body[1]. Organic material in vermiculite samples can be a significant source of error in the analysis. The second unusual aspect of Cavendish ore is the presence of significant amounts of calcite and other carbonate minerals. Carbonate minerals can decompose at temperatures encountered during exfoliation the weight loss as CO_2 as well as the physical weight loss from decrepitation in the assay furnace can significantly affect assay results.

In developing an assay procedure for Cavendish vermiculite samples I take the approach of having optimizing the need for accuracy and precision in conjunction with tailoring each of the three sample types to provide the most relevant information in the shortest time. It is expected that all but a few samples requiring analysis can be classified as one of the following: (1) mill products, (2) mill feed, and (3) exploration and development. Research continues to develop a chemical exfoliation process that will provide a higher degree of accuracy.

Record Keeping

It is important to analyze ore and mill samples that are representative of the material under consideration. It is generally a waste of time and resources to assay samples that have not been carefully collected and split into a manageable weight. The sole exception is in the case where one wishes to develop a set of data to determine average values and how much variation one might encounter in, say, the amount of organic material in a finished product or the average weight loss of vermiculite due to exfoliation.

All samples that are assayed in the Cavendish mill laboratory are recorded in legers or books where pages are individually numbered. Normally a sample identification tag will be furnished with a sample submitted for assay and it is important to immediately write on the tag the Assay Book number and at the same time write in the Assay Book the information written on the identification tag. The information to written on the tag (using permanent, waterproof marker) would be something like B2-33 for Book 2, Page 33, and the information entered onto that particular page in the assay book would be something like Dryer Feed, 9-1-03, 20 TPH, 10:30 AM.

General Comments on Assay Procedures Using a Furnace

Mill products, both concentrates and process streams, are assumed to be relatively dry and without oversize material or excessive fines. It was decided to develop a laboratory analytical routine for these samples first and modify the procedure as needed for mill feed and exploration samples.

A standard procedure that uses the laboratory rotary furnace has been developed that appears to provide results that are relatively accurate and reproducible. The procedure is straightforward in that the sample is dried (if necessary) and then screened into separate particle size fractions. Each fraction is then weighed, exfoliated and when cool the vermiculite is floated away in a water wash. The remaining rock is then dried and weighed to calculate the vermiculite by simple difference.

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[1] The Cavendish vermiculite deposit differs in character from most vermiculite deposits in that much of the "ore" is actually soil and not *in situ* altered mica.

One essential step in this procedure is the measurement of material volumes after exfoliation so that a bulk density (cc's/gm) can be calculated. It has been observed that 6 cc's/gm appears to be a baseline value for measurable vermiculite content so values significantly above 6 indicate significant exfoliated vermiculite. Using the average value for all sizes measured in the test sample provides a single number that can be thought of as a measure of "quality".

Another quantity that is measured and reported in the vermiculite assay is "weight loss from exfoliation" or LOE (loss on exfoliation). This is the difference in weight of a sample or portion of the sample after the vermiculite has been exfoliated and the value is expressed relative to the amount of vermiculite measured. Put another way, this is the percentage of water lost by vermiculite due to exfoliation. This value is normally in the range of 12-16%.

In samples with significant organic contents the LOE can reach values of over 50% since the organic material can contain very high amounts of moisture and some of the organic portion is destroyed in the furnace. One might assume that many unrealistically high values of vermiculite grade may be due to high organic content.

A third possible source of error in the analysis of Cavendish vermiculite reflects the loss of –65 mesh (<0.25mm) material during the exfoliation process. Most of this material loss appears to be due to the strong draft of hot air lifting the exfoliated vermiculite and very fine sized particles up and out of the exhaust stack. The loss of this fine sized product can be on the order of 50% of the amount present so all of the vermiculite grades reported are for +65 mesh or plus 0.25mm vermiculite.

In summary, the traditional vermiculite assay using a furnace or rotary kiln to exfoliate the vermiculite is rapid and provides excellent size distributions and good qualitative vermiculite data. Major sources of error come from (1) carbonate minerals chemically decomposing and physically falling apart during heating, (2) high organic content that misreports as vermiculite moisture loss, and (3) loss of –65 mesh material during exfoliation.

Vermiculite Analysis Using Hydrogen Peroxide for Chemical Exfoliation

The major problems associated with the furnace assay of Cavendish vermiculite may be avoided by using hydrogen peroxide to effect a chemical exfoliation of the vermiculite. A procedure is being developed that would use a water decant to first remove as much of the organic matter as possible, followed by treatment with 35% H_2O_2 to exfoliate the vermiculite. Although the peroxide technique would avoid the issues with carbonate decomposition and the loss of fines, it would require several more steps in the analysis and would require a higher caliber of analyst.

Bag Yield Determination

A standard quality control test for vermiculite concentrates requires an exfoliated yield value or a "bag yield". This value is obtained by exfoliating a known amount of concentrate (generally 250 grams) and measuring the volume of the exfoliated material. Using correction factors based on particle size distributions an accurate measure of the exfoliated product that an exfoliation plant might expect per ton on concentrate can be calculated. The data needed to determine bag yields at Cavendish will be obtained once shipments are exfoliated and plant production numbers can be correlated with laboratory values

Vermiculite Screening and Assay Methods

A sample is air dried, if required. It is then mixed and split into subsamples by coning and quartering or by riffling.

A screen analysis is carried out by placing a subsample in a stack of Tyler sieves, shaken by a RoTap machine for about 4-5 minutes. Each screen fraction is then weighed and a size distribution is determined.

A 250 gram subsample is generally used in assaying. It is first heated in order to exfoliate the vermiculite. This causes the vermiculite to exfoliate or expand when its contained water turns to steam. The exfoliator is a gas-fired, rotary Entecon furnace. It is fed by a hopper and a vibratory feeder. After exiting the furnace, it settles in a cyclone and is collected from the cyclone bottom.

It is then weighed and the volume is measured in a graduated cylinder.

The Entecon product is then put in water. The exfoliated or expanded vermiculite tends to float, while other minerals sink, so the vermiculite can be scooped or poured off. Each product is dried and weighed and the vermiculite assay is calculated from these weights.

From the volume, the bag yield can be calculated. This is the volume divided by the original weight of the sample. Bag yield can be expressed in terms of milliliters of volume per gram of original weight. The industry generally prefers units of bags per ton, which is the number of 4 cubic foot bags of expanded vermiculite that can be produced from a short ton of unexpanded material. A very good bag yield of 10 mL/gram is equivalent to about 80 four cubic foot bags per ton of concentrate.

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July 21, 2004

SENT VIA FAX

To: Mr. Keith Vatcher, Triple A Resources/Regis Resources

Re: Regis Resources/Vermiculite Canada – Summary of Prospecting & Research Activities

My services were requested starting in September, 2003 to provide an overview and make recommendations regarding the greenfields vermiculite mine/mill located North of Buckhorn, Ontario, Canada. This report will briefly summarize the work that I was involved with in the prospecting and research phases of this project through June, 2004.

I have more than 23 years of experience in the vermiculite industry from prospecting, patenting of mining claims, geologic and mineralogical evaluations, ore reserves preparation, mapping, mine and mill management and engineering; to worldwide sales and marketing authority with the world's premier vermiculite company, W.R. Grace & Co. – Specialty Vermiculite group. I am a registered professional geologist (South Carolina #374), was appointed by the Governor of South Carolina to the State Board of Registration for Geologists and was actively involved in the Association of State Boards of Geology (ASBOG). I am president of the Vermiculite Association (UK based). I am also the principle for Nanoparticle Consultancy LC – a consulting firm dedicated to serving customers in industrial mineral markets with nanoscale mineral technologies (vermiculite is such a mineral). Please see my attached resume.

Scope of Work –

Regis Resources has more than 10,000 acres under lease for the development of vermiculite in Ontario, Canada. During my numerous site visits I had the opportunity to walk and inspect the deposit in the southern area of the claims (now being developed) as well as prospects to the north and east of the current development work. I reviewed a number of reports with assay data and inspected samples taken from various claims. Recommendations were made to management and investors regarding the interpretation of the reports as well as my interpretation of the geology and potential for discovery of additional reserves.

Assaying of vermiculite is a mechanical procedure and I made a number of recommendations regarding the sampling, labeling, storage, preparation and assaying techniques. In particular I recommended the purchase and utilization of a muffle furnace for assaying (standard in the industry and required for UL certification) to supplement the Entecon rotary furnace, which should be used primarily for yield (exfoliation) determination. Standards were also prepared for future calibration of assay equipment and the training of new lab personnel.

The separation of vermiculite from gangue rock is also a mechanical process, achieved at the Regis Resources/Vermiculite Canada facility using air separation (winnowing). The existing winnowers did not perform separation and an extensive review of several types of winnower designs, utilizing various sampled ores from a variety of claims was made to determine the optimum winnower design for the various ore types encountered in this region. Mock-up winnowers were constructed of wood and metal, a testing protocol was developed and the results summarized over a 3-month period of time. This research activity will be key to the successful economic success of the final mill design.

Research activities were also conducted in conjunction with Lakefield Research on the use of crushing equipment on the various ore types. Specifically, crushers can delaminate "booky" or thick vermiculite flakes allowing them to optimize exfoliation, while simultaneously degrading the rock fractions in the gangue fraction to improve separation. The different types of ore encountered on the various claims react differently to crushing, so a variety of ore types from various sources were tested on two crushing units.

Health and safety issues are paramount. Vermiculite is a very safe mineral, however some gangue minerals can contaminate the deposit and finished concentrates. Specifically asbestiform amphiboles (Actinolite, Tremolite and their various derivatives) may result in serious health issues if airborne fibers are inhaled. Also crystalline silica if respirated is a known health risk. Testing of both of these contaminates has been conducted with results indicating no detection of either of these at levels below current regulatory limits. I have recommended an ongoing monitoring program for these and other contaminates as the operation is brought on-stream.

Eric M. Moeller

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April 2004

Goals

To provide increasing value to my employer, by innovatively using my skills and knowledge base to improve profitability and productivity.

Quote: It is good to have an end to journey towards, but it is the jouney that matters, in the end.

Education

University of Nevada, Reno, B.S. in Geology received May 1977.

Additional Studies:

Economic Evaluation and Investment Decision Methods, Stermole, Colorado School of Mines.
Dupont Surface Blasting and Safety Techniques.
Mine Safety and Health Administration (MSHA) First Aid Instructor, Accident Prevention.
W.R. Grace, Effective Management Program (GMPC I - Boston, MA, GMPC II - Boca Raton, Fl.)
Dale Carnegie Sales Advantage Program (1996) / Sandler Sales Progarm (1998 – 1999)

Personal Data

Date of Birth:	April 19, 1955, Tübingen, Germany
Marital Status:	Single
Health:	Excellent
Professional Organizations:	American Association of Petroleum Geologists, Society of Mining Engineers, The Vermiculite Association (President 2003 - 2004)
Additional Achievements:	South Carolina Registered Professional Geologist #374
	Guest Speaker 1987 Interstate Mining Compact Commission Meeting
	South Carolina Mining Association 1992 Miner of the Year
	Two Grace Presidential Awards (1989, 1990), 1992 Grace Vision Award
	State Board of Registration of Geologists (1995 - 2001)
	Grace Salesmasters Council 1995 Recipient
	Board of Directors Vermiculite Association (1998-2001) / VP/President (2002-2003)
Hobbies:	Investing, Skiing, Mineral Collecting, Flying (Private Pilot), Sky Diving

Work Experience

7/5/03 – Present **Nanoparticle Consultancy LLC, Inverness, CA**

- Technical Geologic Services

Provided geologic and engineering services to various companies performing due diligence as well as startup greenfields mining projects. Specializing in industrial minerals.

10/1/99 – 7/4/03 **W.R. Grace & Co.-Conn., Cambridge, MA**
Specialty Vermiculite Unit

-Sales & Marketing Manager

Develop strategic and operating plans for the business unit to drive sales and margin growth. Team with manufacturing to ensure those plans are implemented in concert with their goals of reducing costs and improving quality. Responsible for international sales and two key North American House accounts as well as Western Territory (2002). Manager international sales force of six sales reps and 6 customer service personnel..

Accomplishments:

- Filled in as General Manager (4 months 2002) – maintained business profitability.
- Set 8 year sales record. Managed Grace's Libby, Montana asbestos legacy issues (market declined 22%, Grace market share increased 6 percentage points, gross margins increased due to effective price increases)
- Managed personnel to take ownership of their territories and introduced Siebel CRM system for tracking opportunities and tracking territory wealth.

4/1/94 – 9/30/99 **W.R. Grace & Co.-Conn., Cambridge, MA**
Specialty Vermiculite Unit

-Technical Sales Representative / Sales Manager (promoted 2/1/97)

Responsible for regional sales and marketing of the vermiculite product line (34 products serving 8 different markets) in the 12 southern states. Total of 168 customers with over 400 locations. In addition assisted in mine planning, ore reserve, property administration and timber management for the Enoree, SC open pit vermiculite operations (1994 – 1996).

Accomplishments:

- Set several all time regional monthly sales records adding 20+ new accounts in the first year.
- Three consecutive years of double digit sales and margin dollar growth. International accounts grew 38% in 1999.
- Mentored new salesfolks and provided coverage for other regions while recruiting new hires.
- Developed timber sales program, netting over $1.7MM in 1996.
- Recipient of the Grace Salesmasters award for 1995.

8/1/92 - 3/31/94 **W.R. Grace & Co.-Conn., Enoree, S.C.**

-Manager Mines & Milling

Responsible for all phases of mining and milling of vermiculite concentrates including: all duties listed below for Mine Superintendent plus operating and maintenance responsibility for 100,000+ Ton/Yr mill as well as maintenance of five furnace expanding facility (both are largest of their kind in North America). Direct supervision of six salaried and 50± hourly (non-union) employees.

Accomplishments:

- -Operation received 1992 S.C. State Chamber of Commerce Award for Environmental Excellence
- -Formed cross departmental teams to coordinate mill feed requirements for better quality control.
- -Worked with Laurens County Literacy Association to develop an in house remedial reading and study program with goal of providing GED to employees that were not able to finish high school.

1/1/84 - 8/1/92 — W.R. Grace & Co.-Conn., Enoree, S.C.
Vermiculite Open Pit Mining Operations

- Mine Superintendent

Responsible for all phases of mining, including: engineering, ore reserves/mine planning, equipment maintenance, exploration, timber management, mill tailings disposal. Primary contact for all mine and environmental permits as required by state, federal and local regulatory agencies. Annual preparation of operating and capital budgets. Direct supervision of four salaried and 29 hourly (non-union) employees. Property includes 63 mines (20 leased) covering 4500+ acres, scattered over a 700 square mile mineralized area. Major equipment (Draglines, dozers, backhoes, front end loader, scrapers, graders etc.) capitalization exceeds $8M. Annual movement 2 Million Tons.

Accomplishments:

- -Cost per ton total movement 39% less than 1984 (non-inflation adjusted)
- -Tons/Manshift up 8%. Ton-Miles/Truckshift up 18%. Reduced ore variations in mill feed by 52%.
- -Longest run of no lost time accidents in the history of the operation (in four years, over 280,000 no lost time man-hours)
- -Operation received ten reclamation awards and certificates by the South Carolina Land Resources Commission.
- -Operation received 1990 National Reclamation Award by National Association of State Land Reclamationists. Certificate of Achievement issued in 1990 & 1992 by the Interstate Mining Compact Commission.
- -Developed extensive PC computer based mine planning, statistical reporting and budgeting models.
- -Named 1992 Miner of the Year by the South Carolina Mining Association

11/19/79 - 1/1/84 — W.R. Grace & Co., Libby, MT
Vermiculite Open Pit Mining Operations

- Mine Planning Engineer

Responsible for the evaluation of ore reserves and the preparation of mine plans to meet sales projections at the 20,000 ton/day operation. Supervised salaried engineering assistant, and filled in for mine foremen on a regular basis. Maintained contacts with the Forest Service and BLM, for evaluation of timber and exploration of mining claims. Familiar with programming on Apple II/III, IBM PC, IBM System 34, experienced in programming in Basic, FORTRAN, and some RPG.

Accomplishments:

- - Revised ore reserves and the development of a long term mine plan reduced stripping ratio from 2:1 to 1:1.
- - Instrumental in the final patenting of 42 mining claims (1200 acres).
- - Developed comprehensive mapping system of the pit which allows updates of reserves and mining advances for grade control and mine planning through the use of computer modeling.
- - Assumed the duties of Drilling and Blasting Engineer in addition to regular duties in June, 1981. By 1983 the drilling and blasting costs were reduced by 30%/ton broken material
- - Developed a PC based budget program to mimic the COBOL based mainframe budget in Cambridge.

5/28/77 - 11/19/79 — Ozark-Mahoning Co., Rosiclare, IL
Fluorspar, Lead, Zinc Underground Mines.

- Mine Foreman/Mine Engineer
Coordination and supervision of construction phase of the Denton Mine. Supervised erection of headframe, engineered and designed shaft layout and stations, and assisted in shaft sinking. Filled in for mine foremen, supervising daily operation of mines. (8 months)

- Assistant to the Mine Superintendent
Maintained production levels, grade, and bonus contracts at four underground mines. Two mines were room and pillar, the other two were a combination of modified shrinkage stope and poled stope. Supervised the drilling of a 44" ventilation shaft by Teton Drilling. (7 months)

- Geologist
Coordinating, spotting, logging, plotting, and correlating the results from three surface core drills (Joy 22). Drilled out and developed mine reserves/plans for the Denton mine. (12 months)

- Assistant Geologist
Drafting, splitting core, assisting geologists with drilling program. (3 months)

11/1/76 - 5/28/77 — Mackay School of Mines, UNR, Reno, N. V.
(ERDA-Bendix Grant #6-1-332-5301-704)

- Geologist/Draftsman — Regional geologic drafting, and assisting in geochronologic data of the Great Basin

2/20/75 - 5/28/77 — Flying J. Oil Co., Brigham City, UT
Retail Distribution of Gasoline in Reno.

- Cashier — Assisting in management of the Reno Fastway Gasoline Station, and worked as construction laborer at Reno Flying J Motel.

Vermiculite Canada

Assays of Mill Feed through Large Minpro Rotary Crusher

Run 10/29/03 - Note changed sheaves to tip speed of <8100 ft/min, gap setting 1/4", feed rate 24+ TPH

2734 lbs fed in 1 min 15 sec (65 tph empty rate on tote, but screw rated at 24 TPH)

Note: Both tests crusher plugged up under full load (most likely backed up from discharge chute)

Crusher Run #1 (8:00 PM)

100.0

Feed

From 10/29 dryer run

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Wt %	Lbs Vm
+10	112.6	112.6	106.7	0.0	103.7	7.90%	11.3%	0.9
+18	122.8	122.8	114.8	0.0	107.7	12.30%	12.3%	1.5
+35	220	220	202.0	0.0	173.7	21.05%	22.0%	4.6
+70	343.1	343.1	302.8	0.0	225.9	34.16%	34.3%	11.7
Pan	201.8	201.8	165.3		146.0	27.65%	20.2%	5.6

18.7% +70 mesh

Output

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Wt %	Lbs Vm
+10	1	0	0.0	0.0	0.0	#DIV/0!	0.1%	#DIV/0!
+18	6	0	0.0	0.0	0.0	#DIV/0!	0.6%	#DIV/0!
+35	298.8	298.9	281.5		242.0	19.04%	29.9%	5.7
+70	621.8	250	224.7		162.5	35.00%	62.3%	21.8
Pan	70.9	70.9	51.3		35.8	49.51%	7.1%	3.5

23.3% +70 mesh

Hall +1mm

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite		
+10	192	192	184.9		179.7	6.41%	19.2%	1.2
+18	551	302.2	291.2		276.6	8.47%	55.2%	4.7
+35	238.1	238.1	227.8		209.1	12.18%	23.8%	2.9
+70	6.6	0	0.0		0.0	#DIV/0!	0.7%	#DIV/0!
Pan	12	0	0.0		0.0	#DIV/0!	1.2%	#DIV/0!

9.1% +70 mesh

Hall -1mm +1/4mm

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite		
+10	1	0	0.0	0.0	0.0	#DIV/0!	0.1%	#DIV/0!
+18	6	0	0.0	0.0	0.0	#DIV/0!	0.6%	#DIV/0!
+35	298.9	298.9	281.5		242.0	19.04%	29.9%	5.7
+70	621.8	250	224.7		162.5	35.00%	62.3%	21.8
Pan	70.9	70.9	51.3		35.8	49.51%	7.1%	3.5

23.3% +70 mesh

Run 10/29/03 - Note changed sheaves to tip speed of <8100 ft/min, gap setting 1/4", feed rate 24+ TPH

2282 lbs fed in 1 min 45 sec (39.1 tph empty rate on tote, but screw rated at 24 TPH)

Crusher Run #2 (9:00 PM)

Feed Weight

Feed

From 10/29 dryer run

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Wt %	Lbs Vm
+10	112.6	112.6	106.7	0.0	103.7	7.90%	11.3%	0.9
+18	122.8	122.8	114.8	0.0	107.7	12.30%	12.3%	1.5
+35	220	220	202.0	0.0	173.7	21.05%	22.0%	4.6
+70	343.1	343.1	302.8	0.0	225.9	34.16%	34.3%	11.7
Pan	201.8	201.8	165.3		146.0	27.65%	20.2%	5.6

18.7% +70 mesh

Output

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Wt %	Lbs Vm
+10	1	0	0.0	0.0	0.0	#DIV/0!	0.1%	#DIV/0!
+18	6	0	0.0	0.0	0.0	#DIV/0!	0.6%	#DIV/0!
+35	298.8	298.9	281.5		242.0	19.04%	29.9%	5.7
+70	621.8	250	224.7		162.5	35.00%	62.3%	21.8
Pan	70.9	70.9	51.3		35.8	49.51%	7.1%	3.5

23.3% +70 mesh

Hall +1mm

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Wt %	Lbs Vm
+10	254.2	254.2	244.7		230.7	9.24%	25.5%	2.4
+18	545.2	234.8	225.8		212.0	9.71%	54.6%	5.3
+35	189.2	189.2	180.1		166.4	12.05%	18.9%	2.3
+70	2.1	0	0.0		0.0	#DIV/0!	0.2%	#DIV/0!
Pan	9.4	0	0.0		0.0	#DIV/0!	0.9%	#DIV/0!

10.2% +70 mesh

Hall -1mm +1/4mm	Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite		
	+10	2.1	0	0.0	0.0	0.0	#DIV/0!	0.2%	#DIV/0!
	+18	6.7	0	0.0	0.0	0.0	#DIV/0!	0.7%	#DIV/0!
	+35	338	338	317.9		270.0	20.12%	33.9%	6.8
	+70	615.7	250	226.1		175.5	29.80%	61.7%	18.4
	Pan	36.8	36.8	28.5		21.7	41.03%	3.7%	1.5

22.8% +70 mesh

Vermiculite Canada

Assays of Screened Middlings through Small Minpro Rotary Crusher

Run 10/8/03 - Note changed sheaves to tip speed of 6200 ft/min, gap setting 13/16", feed rate 2.2 TPH

Crusher Run #1

Feed Weight 3088

Screened Weight

		Percent
#3 Bin	32	2.18%
#4 Bin	1469	100.00%
#5 Bin	708	48.20%
Dust Los	879	59.84%
	3088	210.21%

	Weight %	Screen Size	Sample Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Bag Yield	Total lbs Contained Vermiculite	
Feed	94.4%	+40	250.0	231.4	1.50	125.4	49.8%	6.5		
	5.6%	-40	133.0	122.6	0.45	81.9	38.4%	3.7	722.8	
Product	73.3%	+40	250.0	227.6	1.80	93.9	62.4%	7.9		
	26.7%	-40	250.0	220.9	0.70	131.8	47.3%	3.2	857.8	-408.4
#4 Bin			250.0	228.8	2.00	98.6	60.6%	8.7	889.6	-46.5%
#5 Bin			250.0	233.9	0.88	164.7	34.1%	3.6	241.6	
									1,131.2	

Crusher Run #2

Feed Weight 4656

Screened Weight

		Percent
#3 Bin	6	0.27%
#4 Bin	2185	100.00%
#5 Bin	1587	72.63%
Dust Los	878	40.18%
	4656	213.09%

	Weight %	Screen Size	Sample Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Bag Yield	Total lbs Contained Vermiculite	
Feed	94.3%	+40	250.0	232.0	0.85	160.1	36.0%	3.7	531.1	
	5.7%	-40	234.8	213.8	0.75	142.5	39.3%	3.5		
Product	55.3%	+40	250.0			161.4	35.4%		908.8	#DIV/0!
	44.7%	-40	250.0	208.6	0.45	127.0	49.2%	2.2	1,323.2	#DIV/0!
#4 Bin			250.0	228.8	2.00	98.6	60.6%	3.6	#DIV/0!	
#5 Bin							#DIV/0!		#DIV/0!	

Crusher Run #3

Feed Weight 1139

Screened Weight

		Percent
#3 Bin	0	0.00%
#4 Bin	573	100.00%
#5 Bin	180	31.41%
Dust Los	386	67.36%
	1139	198.78%

	Weight %	Screen Size	Sample Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Bag Yield	Total lbs Contained Vermiculite	
Feed			250.0	226.0	1.95	90.9	63.6%	8.6	#DIV/0!	
							#DIV/0!			
Product	73.3%	+40	250.0	227.6	2.20	81.8	67.3%	9.7	352.0	-143.2
	26.7%	-40	250.0	219.6	0.75	136.5	45.4%	3.4	420.1	-37.1%
#4 Bin			250.0	224.4	2.55	66.7	73.3%	11.4	75.1	
#5 Bin			250.0	229.7	1.20	145.7	41.7%	3.6	495.2	

24

Vermiculite Canada

Assays of Screened Middlings through Small Minpro Rotary Crusher

Run 10/8/03 - Note changed sheaves to tip speed of 6200 ft/min, gap setting 13/16", feed rate 2.2 TPH

Crusher Run #1

Feed Weight 3088

Screened Weight

		Percent
#3 Bin	32	2.18%
#4 Bin	1469	100.00%
#5 Bin	708	48.20%
Dust Los	879	59.84%
	3088	210.21%

	Weight %	Screen Size	Sample Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Bag Yield
Feed	94.4%	+40	250.0	231.4	1.50	125.4	49.8%	6.5
	5.6%	-40	133.0	122.6	0.45	81.9	38.4%	3.7
Product	73.3%	+40	250.0	227.6	1.80	93.9	62.4%	7.9
	26.7%	-40	250.0	220.9	0.70	131.8	47.3%	3.2
#4 Bin			250.0	228.8	2.00	98.6	60.6%	8.7
#5 Bin			250.0	233.9	0.88	164.7	34.1%	3.6

Crusher Run #2

Feed Weight 4656

Screened Weight

		Percent
#3 Bin	6	0.27%
#4 Bin	2185	100.00%
#5 Bin	1587	72.63%
Dust Los	878	40.18%
	4656	213.09%

	Weight %	Screen Size	Sample Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Bag Yield
Feed	94.3%	+40	250.0	232.0	0.85	160.1	36.0%	3.7
	5.7%	-40	234.8	213.8	0.75	142.5	39.3%	3.5
Product	55.3%	+40	250.0			161.4	35.4%	
	44.7%	-40	250.0	208.6	0.45	127.0	49.2%	2.2
#4 Bin			250.0	228.8	2.00	98.6	60.6%	3.6
#5 Bin							#DIV/0!	

Crusher Run #3

Feed Weight 1139

Screened Weight

		Percent
#3 Bin	0	0.00%
#4 Bin	573	100.00%
#5 Bin	180	31.41%
Dust Los	386	67.36%
	1139	198.78%

	Weight %	Screen Size	Sample Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight	Percent Vermiculite	Bag Yield
Feed			250.0	226.0	1.95	90.9	63.6%	8.6
							#DIV/0!	
Product	73.3%	+40	250.0	227.6	2.20	81.8	67.3%	9.7
	26.7%	-40	250.0	219.6	0.75	136.5	45.4%	3.4
#4 Bin			250.0	224.4	2.55	66.7	73.3%	11.4
#5 Bin			250.0	229.7	1.20	145.7	41.7%	3.6

Total lbs Contained Vermiculite	
722.8	
857.8	-408.4
889.6	-46.5%
241.6	
1,131.2	

Total lbs Contained Vermiculite	
531.1	
908.8	#DIV/0!
1,323.2	#DIV/0!
#DIV/0!	
#DIV/0!	

Total lbs Contained Vermiculite	
#DIV/0!	
352.0	-143.2
420.1	-37.1%
75.1	
495.2	

Vermiculite Canada

Assays of Mill Feed through Large Minpro Rotary Crusher

Run 10/29/03 - Note changed sheaves to tip speed of <8100 ft/min, gap setting 1/4", feed rate 24+ TI

2734 lbs fed in 1 min 15 sec (65 tph empty rate on tote, but screw rated at 24 TPH)

Note: Both tests crusher plugged up under full load (most likely backed up from

Crusher Run #1 (8:00 PM)

Feed

From 10/29 dryer run

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	112.6	112.6	106.7	0.0	103.7
+18	122.8	122.8	114.8	0.0	107.7
+35	220	220	202.0	0.0	173.7
+70	343.1	343.1	302.8	0.0	225.9
Pan	201.8	201.8	165.3		146.0

Output

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	1	0	0.0	0.0	0.0
+18	6	0	0.0	0.0	0.0
+35	298.8	298.9	281.5		242.0
+70	621.8	250	224.7		162.5
Pan	70.9	70.9	51.3		35.8

Hall +1mm

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	192	192	184.9		179.7
+18	551	302.2	291.2		276.6
+35	238.1	238.1	227.8		209.1
+70	6.6	0	0.0		0.0
Pan	12	0	0.0		0.0

Hall -1mm +1/4mm

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	1	0	0.0	0.0	0.0
+18	6	0	0.0	0.0	0.0
+35	298.9	298.9	281.5		242.0
+70	621.8	250	224.7		162.5
Pan	70.9	70.9	51.3		35.8

Run 10/29/03 - Note changed sheaves to tip speed of <8100 ft/min, gap setting 1/4", feed rate 24+ TI

2282 lbs fed in 1 min 45 sec (39.1 tph empty rate on tote, but screw rated at 24 TPH)

Crusher Run #2 (9:00 PM)

Feed Weight

Feed

From 10/29 dryer run

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	112.6	112.6	106.7	0.0	103.7
+18	122.8	122.8	114.8	0.0	107.7
+35	220	220	202.0	0.0	173.7
+70	343.1	343.1	302.8	0.0	225.9
Pan	201.8	201.8	165.3		146.0

Output

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	1	0	0.0	0.0	0.0
+18	6	0	0.0	0.0	0.0
+35	298.8	298.9	281.5		242.0
+70	621.8	250	224.7		162.5
Pan	70.9	70.9	51.3		35.8

Hall +1mm

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	254.2	254.2	244.7		230.7
+18	545.2	234.8	225.8		212.0
+35	189.2	189.2	180.1		166.4
+70	2.1	0	0.0		0.0
Pan	9.4	0	0.0		0.0

Hall -1mm +1/4mm

Screen Size	Sample Weight	Assay Weight	Exfoliated Weight	Exfoliated Volume	Waste Weight
+10	2.1	0	0.0	0.0	0.0
+18	6.7	0	0.0	0.0	0.0
+35	338	338	317.9		270.0
+70	615.7	250	226.1		175.5
Pan	36.8	36.8	28.5		21.7

PH

discharge chute)

Percent Vermiculite	Wt %	Lbs Vm
		100.0
7.90%	11.3%	0.9
12.30%	12.3%	1.5
21.05%	22.0%	4.6
34.16%	34.3%	11.7
27.65%	20.2%	5.6

18.7% +70 mesh

Percent Vermiculite		
#DIV/0!	0.1%	#DIV/0!
#DIV/0!	0.6%	#DIV/0!
19.04%	29.9%	5.7
35.00%	62.3%	21.8
49.51%	7.1%	3.5

23.3% +70 mesh

Percent Vermiculite		
6.41%	19.2%	1.2
8.47%	55.2%	4.7
12.18%	23.8%	2.9
#DIV/0!	0.7%	#DIV/0!
#DIV/0!	1.2%	#DIV/0!

9.1% +70 mesh

Percent Vermiculite		
#DIV/0!	0.1%	#DIV/0!
#DIV/0!	0.6%	#DIV/0!
19.04%	29.9%	5.7
35.00%	62.3%	21.8
49.51%	7.1%	3.5

23.3% +70 mesh

PH

Percent Vermiculite		Wt %	Lbs Vm
7.90%		11.3%	0.9
12.30%		12.3%	1.5
21.05%		22.0%	4.6
34.16%		34.3%	11.7
27.65%		20.2%	5.6
18.7%	+70 mesh		

Percent Vermiculite			
#DIV/0!		0.1%	#DIV/0!
#DIV/0!		0.6%	#DIV/0!
19.04%		29.9%	5.7
35.00%		62.3%	21.8
49.51%		7.1%	3.5
23.3%	+70 mesh		

Percent Vermiculite			
9.24%		25.5%	2.4
9.71%		54.6%	5.3
12.05%		18.9%	2.3
#DIV/0!		0.2%	#DIV/0!
#DIV/0!		0.9%	#DIV/0!
10.2%	+70 mesh		

Percent Vermiculite			
#DIV/0!		0.2%	#DIV/0!
#DIV/0!		0.7%	#DIV/0!
20.12%		33.9%	6.8
29.80%		61.7%	18.4
41.03%		3.7%	1.5
22.8%	+70 mesh		

Rod Milling

A standard Bond rod mill was used to process the sample. This mill will take a sample volume of 1250 mL, after compaction by vibration. The weight of this volume was determined and used for the next two charges.

Three charges were ground for different periods: 10, 25 and 50 revolutions. The products from these grinds were screened.

Test Results

Table 2: Screen Sizing of the Feed and Crushed/Ground Products

Size		Crusher Feed	Roll Crusher			Rod Mill		
			1 Pass	2 Passes	3 Passes	10 Rev	25 Rev	50 Rev
Mesh	µm	% Retained Individual	% Retained Individual	% Retained Individual	% Retained Individual	% Retained Individual	% Retained Individual	% Retained Individual
14	1,180	0	0	0	0	0	0	0
20	850	0.41	0.39	0.78	0.70	0.22	0.15	0.13
28	600	54.5	35.3	27.1	27.9	34.7	21.6	15.2
35	425	43.5	51.4	54.4	54.5	50.8	53.5	51.2
48	300	1.02	4.19	5.42	5.37	4.22	6.48	8.13
65	212	0.060	2.00	2.79	2.79	2.12	3.60	4.86
Pan	-212	0.47	6.79	9.46	8.76	7.97	14.7	20.5
Total	-	100	100	100	100	100	100	100
K80		782	713	680	683	710	650	682
+35	+425	98.5	87.0	82.3	83.1	85.7	75.2	66.5
-35	-425	1.5	13.0	17.7	16.9	14.3	24.8	33.5

The screen products were returned to the mine site for vermiculite 'assaying'. In addition to assaying, the samples should be submitted for separation testing; i.e. what recovery can be achieved by winnowing. At this point, no such test for small samples is available.

The assay results are shown in Table 3. A gangue assay was calculated by assuming that the remainder of the sample is all gangue. The results of this calculation are shown in Table 4.

Table 3: Vermiculite Assays and Distribution

Size		Crusher Feed		
		Wt %	Vermiculite	
Mesh	µm	Individual	Assay, %	Distr. %
14	1,180			
20	850			
28	600	54.9	59.5	48.0
35	425	43.5	78.3	50.0
48	300	1.02	87.0	1.30
65	212	0.060	87.0	0.077
Pan	-212	0.47	95.0	0.65
Total	-	**100**	68.1	100.0

Size		Roll Crusher								
		1 Pass			2 Passes			3 Passes		
		Wt %	Vermiculite		Wt %	Vermiculite		Wt %	Vermiculite	
Mesh	µm	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %
14	1,180									
20	850									
28	600	35.7	66.9	34.3	27.9	68.5	26.7	28.6	67.9	27.2
35	425	51.4	71.5	52.8	54.4	73.8	56.3	54.5	74.9	57.2
48	300	4.19	53.7	3.23	5.42	52.6	3.99	5.37	49.0	3.68
65	212	2.00	47.5	1.37	2.79	47.6	1.86	2.79	47.1	1.84
Pan	-212	6.79	85.4	8.34	9.46	84.1	11.1	8.76	82.7	10.1
Total	-	**100**	69.6	100.0	**100**	71.4	100.0	**100**	71.4	100.0

Size		Rod Mill								
		10 Rev			25 Rev			50 Rev		
		% Retained	Vermiculite		% Retained	Vermiculite		% Retained	Vermiculite	
Mesh	µm	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %
14	1,180									
20	850									
28	600	34.9	64.9	32.0	21.7	70.0	21.5	15.3	78.7	16.0
35	425	50.8	74.6	53.5	53.5	74.0	56.0	51.2	77.0	52.1
48	300	4.22	55.5	3.31	6.48	52.7	4.83	8.13	53.4	5.75
65	212	2.12	50.4	1.51	3.60	51.5	2.62	4.86	48.8	3.14
Pan	-212	7.97	85.6	9.65	14.7	72.5	15.1	20.5	84.8	23.0
Total	-	**100**	70.8	100.0	**100**	70.7	100.0	**100**	75.6	100.0

Table 4: Gangue Assays and Distribution

Size		Crusher Feed		
		Wt %	Gangue	
Mesh	µm	Individual	Assay, %	Distr. %
14	1,180			
20	850			
28	600	54.9	40.5	69.9
35	425	43.5	21.7	29.6
48	300	1.02	13.0	0.42
65	212	0.060	13.0	0.024
Pan	-212	0.47	5.0	0.07
Total	-	**100**	31.9	100.0

Size		Roll Crusher								
		1 Pass			2 Passes			3 Passes		
		Wt %	Gangue		Wt %	Gangue		Wt %	Gangue	
Mesh	µm	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %
14	1,180									
20	850									
28	600	35.7	33.1	38.8	27.9	31.5	30.7	28.6	32.1	32.1
35	425	51.4	28.5	48.1	54.4	26.2	49.9	54.5	25.1	47.9
48	300	4.19	46.3	6.37	5.42	47.4	8.99	5.37	51.0	9.57
65	212	2.00	52.5	3.46	2.79	52.4	5.12	2.79	52.9	5.16
Pan	-212	6.79	14.6	3.26	9.46	15.9	5.3	8.76	17.3	5.3
Total	-	**100**	30.4	100.0	**100**	28.6	100.0	**100**	28.6	100.0

Size		Rod Mill								
		10 Rev			25 Rev			50 Rev		
		% Retained	Gangue		% Retained	Gangue		% Retained	Gangue	
Mesh	µm	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %	Individual	Assay, %	Distr. %
14	1,180									
20	850									
28	600	34.9	35.1	41.9	21.7	30.0	22.3	15.3	21.3	13.4
35	425	50.8	25.4	44.1	53.5	26.0	47.5	51.2	23.0	48.2
48	300	4.22	44.5	6.42	6.48	47.3	10.47	8.13	46.6	15.51
65	212	2.12	49.6	3.60	3.60	48.5	5.96	4.86	51.2	10.19
Pan	-212	7.97	14.4	3.93	14.7	27.5	13.8	20.5	15.2	12.8
Total	-	**100**	29.2	100.0	**100**	29.3	100.0	**100**	24.4	100.0

Table 5: Assays and Distribution at 425 µm Split

Size Mesh	Size µm	Crusher Feed Wt % Individual	Vermiculite Assay, %	Vermiculite Distr. %	Gangue Distr. %
35	425	87.0	76.7	98.0	99.5
-35	-425	12.98	10.7	2.03	**0.51**
Total	-	**100**	68.1	100.0	100.0

Roll Crusher

Size Mesh	Size µm	1 Pass Wt % Individual	1 Pass Vermiculite Assay, %	1 Pass Vermiculite Distr. %	1 Pass Gangue Distr. %	2 Passes Wt % Individual	2 Passes Vermiculite Assay, %	2 Passes Vermiculite Distr. %	2 Passes Gangue Distr. %	3 Passes Wt % Individual	3 Passes Vermiculite Assay, %	3 Passes Vermiculite Distr. %	3 Passes Gangue Distr. %
35	425	87.0	69.6	87.1	86.9	82.3	72.0	83.0	80.6	83.1	72.5	84.3	80.0
-35	-425	12.98	69.3	12.9	**13.1**	17.7	68.7	17.0	**19.4**	16.9	66.1	15.7	**20.0**
Total	-	**100**	69.6	100.0	100.0	**100**	71.4	100.0	100.0	**100**	71.4	100.0	100.0

Rod Mill

Size Mesh	Size µm	10 Rev Wt % Individual	10 Rev Vermiculite Assay, %	10 Rev Vermiculite Distr. %	10 Rev Gangue Distr. %	25 Rev Wt % Individual	25 Rev Vermiculite Assay, %	25 Rev Vermiculite Distr. %	25 Rev Gangue Distr. %	50 Rev Wt % Individual	50 Rev Vermiculite Assay, %	50 Rev Vermiculite Distr. %	50 Rev Gangue Distr. %
35	425	85.7	70.6	87.0	82.7	75.2	72.8	76.7	71.5	66.5	77.4	72.1	52.6
-35	-425	14.31	71.5	14.7	**13.4**	24.8	64.3	22.3	**31.0**	33.5	72.0	33.7	**32.9**
Total	-	**100**	70.8	101.7	96.1	**100**	70.7	99.0	102.4	**100**	75.6	105.8	**85.5**

Based on Table 3 and Table 4, the following charts have been produced. Figure 3 shows the distribution after roll crushing, compared to the feed, while Figure 4 shows the same for the gangue distribution. Note that the vermiculite primarily ends up in the –65 mesh (-212 μm) fraction, with very little reporting to the +212 and +300 μm fractions. For the gangue, this is different. While most ends up in the –212 μm fraction, a more significant portion is in the +212 and +300 μm fractions.

The same effect is seen for the rod milling, in Figure 5 and Figure 6. Thus, on the basis that all –212 μm vermiculite is a waste product, screening on 425 μm and discarding the passing fraction, will not significantly increase the vermiculite losses, but will eliminate more fine gangue, that will tend to concentrate with the vermiculite. Table 5 shows the vermiculite recovery and losses and the gangue recovery and losses after screening at 425 μm.

Of interest is, that when the vermiculite recovery after crushing/grinding is plotted against the loss of gangue in the fines, the relationship is the same for roll crushing and rod milling, as shown in Figure 2.

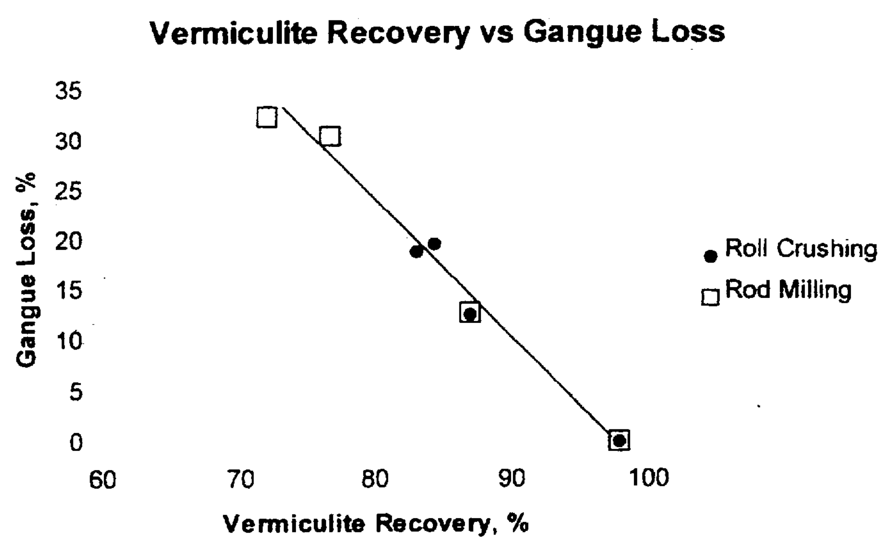

Figure 2: Relationship between Vermiculite Recovery and Gangue Loss after Crushing/Grinding

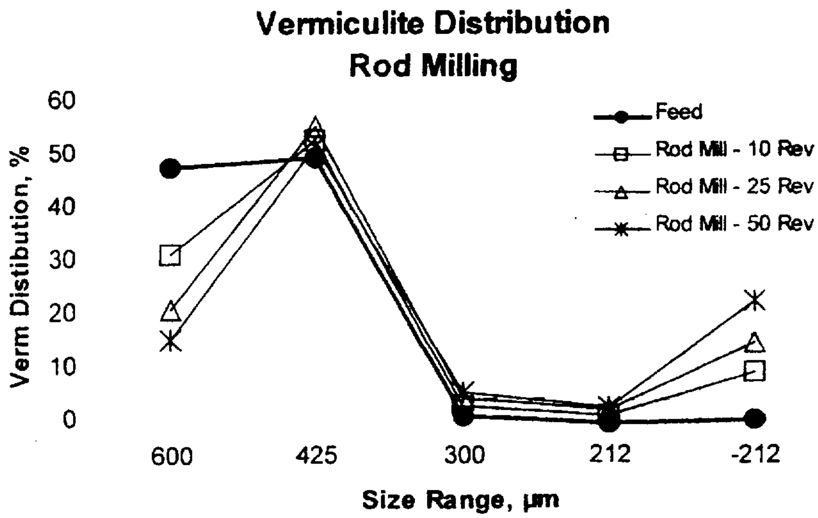

Figure 5: Vermiculite Distribution after Rod Milling

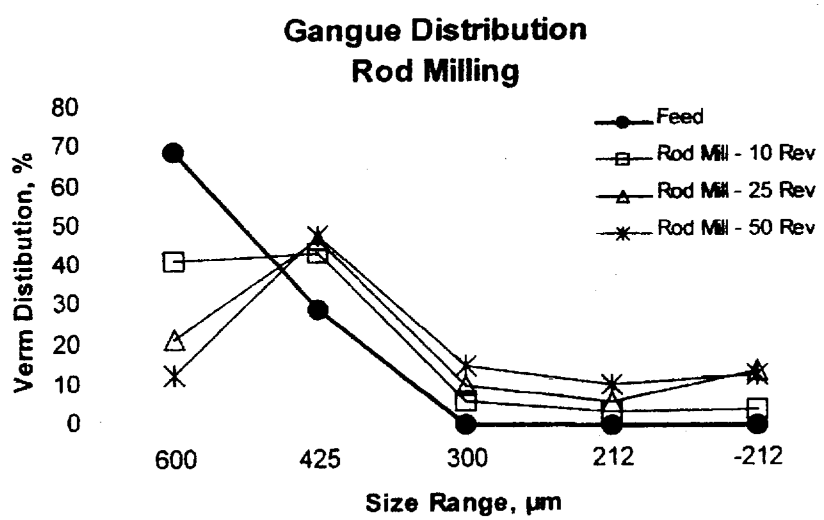

Figure 6: Gangue Distribution after Rod Milling

Another way of looking at the data is to see how the vermiculite and gangue will be distributed in the +425 µm fraction. Figure 7 and Figure 8 show that the rod mill and the crusher products fall on the same curve.

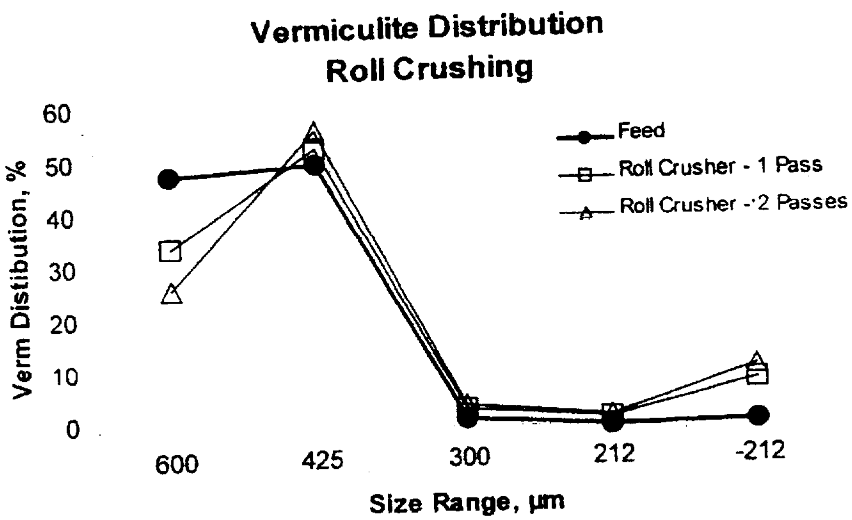

Figure 3: Vermiculite Distribution after Roll Crushing

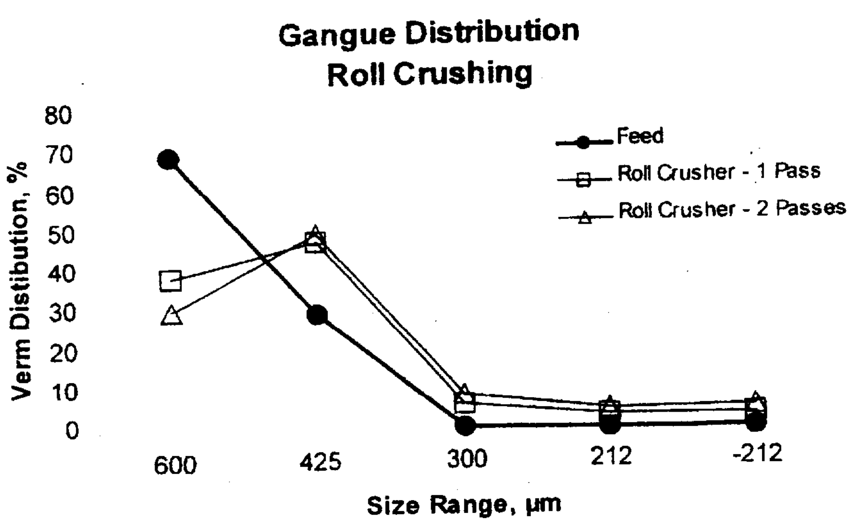

Figure 4: Gangue Distribution after Roll Crushing

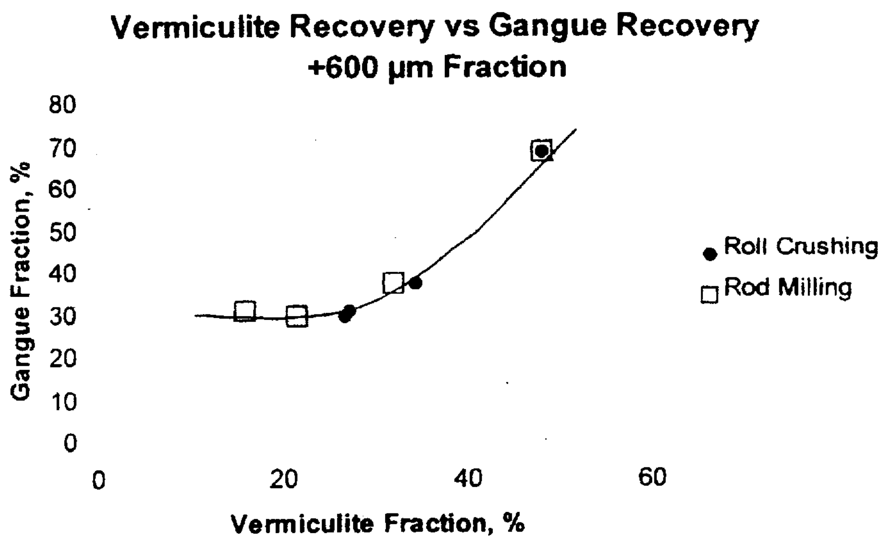

Figure 7: Deportment of Vermiculite and Gangue to the +600 µm Fraction

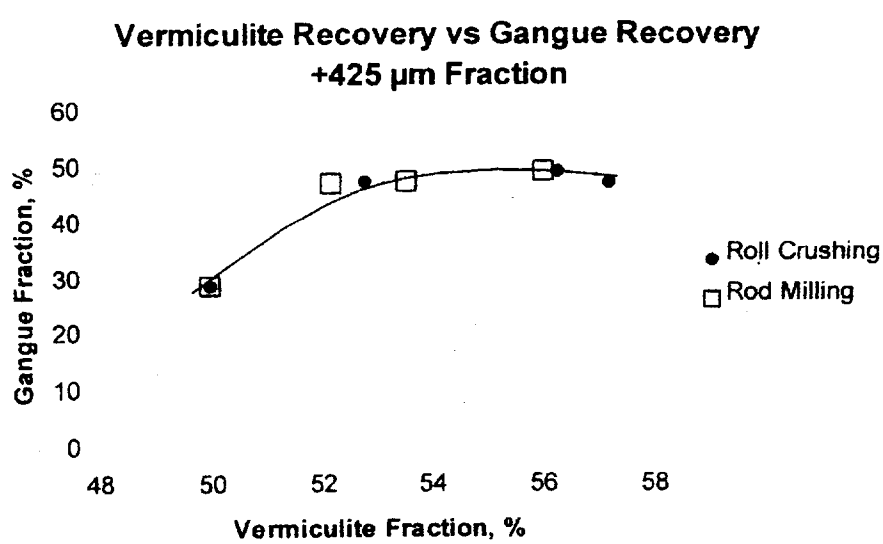

Figure 8: Deportment of Vermiculite and Gangue in the +425 µm Fraction

Comments on Test Results

The test results indicate that there is no difference in size reduction comparing a roll crusher to a rod mill, in terms of how the vermiculite and the gangue break and the resulting distribution of these fractions. The difference is only in the degree of breakage. Differences in capital costs, ease of installation and operation, as well as operating costs, will influence the decision regarding which size reduction technique will be preferred.

It is recommended that the impact breakage be compared to either of the above techniques, in order to determine whether its size reduction is different than these techniques.

The flowsheet emerging from the above test is to screen the crushed product on a screen with a 425 µm aperture. The oversize will recycle to the winnowing process and the reject returned to the crusher. In this flowsheet the only reject will be the –425 µm product; i.e. the gangue must recycle several times to be crushed fine enough to escape.

The degree of size-reduction per pass will be the variable that will have to be selected. A low size reduction per pass will allow the vermiculite to be removed before it is reduced to fines and lost for recovery. However, this will result in a high recycle. A high degree of size reduction limits the recycle, but will grind more vermiculite fine enough to be lost in the fines reject.

More testing will be required to determine the correlation between the degree of stage grinding and the vermiculite recovery and grade. This will require a small-scale winnowing test on the crushed product, after screening. To develop this test is one of the recommendations.

Crushing Testing

One sample, in three pails, of UD#3 concentrate was received on October 9th. A second sample, in one pail, was the product from a crushing test, performed at the concentrator in a stand-alone impact crusher. This second sample was the +0.5 mm fraction of this product.

While the main sample was a concentrate, the product quality was considered to be low enough to resemble a middling product, which will need to be upgraded before final sale. Upgrading through crushing and screening is considered and testing at SGS-LR was performed to evaluate different methods of upgrading.

The three pails were accepted as containing the same sample composition. However, stratification within a pail was considered likely and the sample was blended by subdivision with a rotary splitter. A representative sample was extracted for a screen sizing on the screens shown in Table 1. All screening was performed dry.

Table 1: Screens

National Bureau of Standards Sieve	Tyler Mesh	Sieve Aperture mm
8	8	2.38
12	10	1.68
16	14	1.19
20	20	0.84
30	28	0.60
40	35	0.42
50	48	0.30
70	65	0.21

Roll crushing

Three one-kilogram samples were passed through a laboratory roll crusher, set at the finest setting feasible. One sample was passed through the crusher once, the second sample through the crusher twice and the last was crushed three times.

Vermiculite Canada

Test Run # 1 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	About 300 Feet Per Minute	
Total Weight of Sample	190.3	
Total Weight Recovered	190.4	
Percent Variance	0.0%	
Total Time To Run Sample		Minutes
Feed Rate Per Hour	#DIV/0!	Ton/Hr
Weighted Average Vermiculit	**40.9%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed				6.7		116.0	45.0	12.0	4.6	2.5	1.4	0.8	0.5	0.4	0.2	0.1	0.1	190.4
Percent of Feed Recovered				3.5%	0.0%	61.0%	23.6%	6.3%	2.4%	1.3%	0.7%	0.4%	0.3%	0.2%	0.1%	0.1%	0.1%	100.0%
Vermiculite Percent				**10.8%**	**15.9%**	**29.9%**	**50.0%**	**86.0%**	**91.2%**	**88.2%**	**89.7%**	**89.5%**	**93.5%**	**93.6%**	**92.0%**	**94.0%**	**94.8%**	
Weight of Vermiculite				0.7	0.0	34.7	22.5	10.3	4.2	2.2	1.3	0.7	0.5	0.3	0.2	0.1	0.1	77.9

Weighted Average Tailings Grade For Chutes 4 Thru 6	**28.9%**
Percent Vermiculite Not Recovered	**45.5%**
Weighted Average Middlings Grade For Chutes 7	**50.0%**
Percent Vermiculite Recovered To Middlings	**28.9%**
Weighted Average Concentrate Grade for Chutes 8 Thru 17	**88.1%**
Percent Vermiculite Recovered To Concentrate	**25.6%**
Percent Vermiculite Accounted For	100.0%

Vermiculite Canada

Test Run # 2 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	320	Feet Per Minute
Total Weight of Sample	140.0	
Total Weight Recovered	137.0	
Percent Variance	-2.2%	
Total Time To Run Sample		Minutes
Feed Rate Per Hour	#DIV/0!	Ton/Hr
Weighted Average Vermiculite	**20.0%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed					10.3	86.0	26.1	8.0	3.6	0.9	0.9	0.5	0.3	0.2	0.1	0.1	0.0	137.0
Percent of Feed Recovered				0.0%	7.4%	61.4%	18.6%	5.7%	2.6%	0.6%	0.6%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	97.8%
Vermiculite Percent							**56.2%**	**82.7%**	**90.9%**	**93.3%**	**94.4%**	**93.6%**	**96.5%**	**95.4%**	**93.5%**	**93.7%**	**88.3%**	
Weight of Vermiculite				0.0	0.0	0.0	14.7	6.6	3.3	0.8	0.9	0.5	0.3	0.2	0.1	0.1	0.0	27.3

Weighted Average Tailings Grade For Chutes 4 Thru 6	**0.0%**
Percent Vermiculite Not Recovered	**0.0%**
Weighted Average Middlings Grade For Chutes 7	**56.2%**
Percent Vermiculite Recovered To Middlings	**53.7%**
Weighted Average Concentrate Grade for Chutes 8 Thru 17	**87.0%**
Percent Vermiculite Recovered To Concentrate	**46.3%**
Percent Vermiculite Accounted For	100.0%

Vermiculite Canada

Test Run # 3 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	420	Feet Per Minute
Total Weight of Sample	225.0	
Total Weight Recovered	229.0	
Percent Variance	1.8%	
Total Time To Run Sample		Minutes
Feed Rate Per Hour	#DIV/0!	Ton/Hr
Weighted Average Vermiculite	**31.4%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed				0.3	18.3	73.0	79.0	30.4	13.0	6.0	3.5	2.0	1.4	1.0	0.6	0.5		229.0
Percent of Feed Recovered				0.1%	8.1%	32.4%	35.1%	13.5%	5.8%	2.7%	1.6%	0.9%	0.6%	0.4%	0.3%	0.2%	0.0%	101.8%
Vermiculite Percent					**14.3%**	**16.0%**	**27.6%**	**46.2%**	**67.5%**	**81.2%**	**88.0%**	**91.2%**	**90.2%**	**93.1%**	**93.4%**	**91.1%**		
Weight of Vermiculite				0.0	2.6	11.7	21.8	14.0	8.8	4.9	3.1	1.8	1.3	0.9	0.6	0.5	0.0	71.9

Weighted Average Tailings Grade For Chutes 4 Thru 6	**15.7%**
Percent Vermiculite Not Recovered	**19.9%**
Weighted Average Middlings Grade For Chutes 7 Thru 10	**38.5%**
Percent Vermiculite Recovered To Middlings	**68.8%**
Weighted Average Concentrate Grade for Chutes 11 Thru 17	**90.2%**
Percent Vermiculite Recovered To Concentrate	**11.3%**
Percent Vermiculite Accounted For	100.0%

Vermiculite Canada

Test Run # 4 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	500	Feet Per Minute
Total Weight of Sample	209.0	
Total Weight Recovered	212.4	
Percent Variance	1.6%	
Total Time To Run Sample		Minutes
Feed Rate Per Hour	#DIV/0!	Ton/Hr
Weighted Average Vermiculite	**32.4%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed				0.3	4.3	46.6	73.0	44.0	20.0	9.0	5.0	3.0	2.0	1.5	0.9	0.8	2.0	212.4
Percent of Feed Recovered				0.1%	2.1%	22.3%	34.9%	21.1%	9.6%	4.3%	2.4%	1.4%	1.0%	0.7%	0.4%	0.4%	1.0%	101.6%
Vermiculite Percent				**9.0%**	**9.5%**	**14.3%**	**24.0%**	**32.4%**	**49.4%**	**70.9%**	**84.5%**	**88.6%**	**91.4%**	**93.9%**	**95.0%**	**95.1%**	**95.5%**	
Weight of Vermiculite				0.0	0.4	6.7	17.5	14.3	9.9	6.4	4.2	2.7	1.8	1.4	0.8	0.8	1.9	68.8

Weighted Average Tailings Grade For Chutes 4 Thru 7	**19.8%**
Percent Vermiculite Not Recovered	**35.8%**
Weighted Average Middlings Grade For Chutes 8 Thru 10	**41.8%**
Percent Vermiculite Recovered To Middlings	**44.4%**
Weighted Average Concentrate Grade for Chutes 11 Thru 17	**89.8%**
Percent Vermiculite Recovered To Concentrate	**19.8%**
Percent Vermiculite Accounted For	100.0%

Vermiculite Canada

Test Run # 5 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	570	Feet Per Minute
Total Weight of Sample	208.0	
Total Weight Recovered	208.9	
Percent Variance	0.4%	
Total Time To Run Sample	9.1	Minutes
Feed Rate Per Hour	0.7	Ton/Hr
Weighted Average Vermiculite	**33.1%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed				0.1	0.6	26.0	64.6	53.6	30.6	13.0	7.0	4.1	2.9	2.2	1.2	1.1	1.9	208.9
Percent of Feed Recovered				0.0%	0.3%	12.5%	31.1%	25.8%	14.7%	6.3%	3.4%	2.0%	1.4%	1.1%	0.6%	0.5%	0.9%	100.4%
Vermiculite Percent				**19.7%**	**9.8%**	**13.8%**	**17.9%**	**28.7%**	**44.2%**	**55.8%**	**78.2%**	**86.8%**	**89.8%**	**94.1%**	**93.3%**	**94.2%**	**95.8%**	
Weight of Vermiculite				0.0	0.1	3.6	11.6	15.4	13.5	7.3	5.5	3.6	2.6	2.1	1.1	1.0	1.8	69.1

Weighted Average Tailings Grade For Chutes 4 Thru 7	**16.7%**
Percent Vermiculite Not Recovered	**22.0%**
Weighted Average Middlings Grade For Chutes 8 Thru 10	**37.2%**
Percent Vermiculite Recovered To Middlings	**52.4%**
Weighted Average Concentrate Grade for Chutes 11 Thru 17	**86.7%**
Percent Vermiculite Recovered To Concentrate	**25.6%**
Percent Vermiculite Accounted For	100.0%

47

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Test Run # 6 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized Middlings That Has Been Crushed & Screened

Air Velocity	465	Feet Per Minute
Total Weight of Sample	197.0	
Total Weight Recovered	194.5	
Percent Variance	-1.3%	
Total Time To Run Sample	8.5	Minutes
Feed Rate Per Hour	0.7	Ton/Hr
Weighted Average Vermiculite	52.7%	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed					0.1	2.7	43.2	69.0	43.3	18.4	8.4	3.8	2.1	1.3	0.7	0.6	0.9	194.5
Percent of Feed Recovered				0.0%	0.0%	1.4%	21.9%	35.0%	22.0%	9.3%	4.3%	1.9%	1.1%	0.7%	0.4%	0.3%	0.5%	98.7%
Vermiculite Percent					**10.6%**	**21.0%**	**26.2%**	**42.3%**	**69.1%**	**84.0%**	**92.0%**	**88.0%**	**88.1%**	**86.0%**	**89.4%**	**86.2%**	**86.2%**	
Weight of Vermiculite				0.0	0.0	0.6	11.3	29.2	29.9	15.5	7.7	3.3	1.8	1.1	0.6	0.5	0.8	102.4

Weighted Average Tailings Grade For Chutes 4 Thru 7	**25.9%**
Percent Vermiculite Not Recovered	**11.6%**
Weighted Average Middlings Grade For Chutes 8 Thru 9	**52.6%**
Percent Vermiculite Recovered To Middlings	**57.7%**
Weighted Average Concentrate Grade for Chutes 10 Thru ~	**86.8%**
Percent Vermiculite Recovered To Concentrate	**30.7%**
Percent Vermiculite Accounted For	100.0%

Vermiculite Canada

Test Run # 7 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized Middlings That Has Not Been Crushed Or Screened

Air Velocity	465	Feet Per Minut
Total Weight of Sample	208.0	
Total Weight Recovered	205.9	
Percent Variance	-1.0%	
Total Time To Run Sample	8.3	Minutes
Feed Rate Per Hour	0.8	Ton/Hr
Weighted Average Vermiculite	51.5%	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed				0.0	0.0	0.9	28.0	77.0	61.0	24.0	9.0	3.6	1.3	0.6	0.2	0.1	0.1	205.9
Percent of Feed Recovered				0.0%	0.0%	0.4%	13.5%	37.0%	29.3%	11.5%	4.3%	1.7%	0.6%	0.3%	0.1%	0.1%	0.1%	99.0%
Vermiculite Percent						**25.6%**	**30.8%**	**40.8%**	**58.6%**	**73.3%**	**81.7%**	**85.9%**	**87.2%**	**88.5%**	**88.7%**	**87.6%**	**86.0%**	
Weight of Vermiculite				0.0	0.0	0.2	8.6	31.4	35.7	17.6	7.4	3.1	1.1	0.5	0.2	0.1	0.1	106.1

Weighted Average Tailings Grade For Chutes 4 Thru 7	**30.6%**
Percent Vermiculite Not Recovered	**8.3%**
Weighted Average Middlings Grade For Chutes 8 Thru 9	**61.4%**
Percent Vermiculite Recovered To Middlings	**79.9%**
Weighted Average Concentrate Grade for Chutes 10 Thru 17	**83.7%**
Percent Vermiculite Recovered To Concentrate	**11.8%**
Percent Vermiculite Accounted For	100.0%

Vermiculite Canada

Test Run # 10 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized Middlings That Has Not Been Crushed Or Screened

Air Velocity	550	Feet Per Minut
Total Weight of Sample	225.0	
Total Weight Recovered	223.8	
Percent Variance	-0.5%	
Total Time To Run Sample	10.5	Minutes
Feed Rate Per Hour	0.6	Ton/Hr
Weighted Average Vermiculite	55.0%	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed			0.0	0.0	0.0	0.1	3.1	24.0	61.8	56.5	36.5	19.8	11.2	6.1	2.3	1.3	1.0	223.8
Percent of Feed Recovered				0.0%	0.0%	0.1%	1.4%	10.7%	27.5%	25.1%	16.2%	8.8%	5.0%	2.7%	1.0%	0.6%	0.4%	99.5%
Vermiculite Percent						**16.0%**	**27.8%**	**32.8%**	**40.0%**	**54.4%**	**67.5%**	**77.9%**	**84.2%**	**86.9%**	**87.0%**	**86.9%**	**86.8%**	
Weight of Vermiculite				0.0	0.0	0.0	0.9	7.9	24.7	30.7	24.6	15.4	9.4	5.3	2.0	1.1	0.9	123.0

Weighted Average Tailings Grade For Chutes 4 Thru 6	**11.3%**
Percent Vermiculite Not Recovered	**0.0%**
Weighted Average Middlings Grade For Chutes 7 Thru 12	**57.3%**
Percent Vermiculite Recovered To Middlings	**84.8%**
Weighted Average Concentrate Grade for Chutes 13 Thru 17	**85.5%**
Percent Vermiculite Recovered To Concentrate	**15.2%**
Percent Vermiculite Accounted For	100.0%

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Test Run # 11 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized Middlings That Has Been Crushed & Screened

Air Velocity	550	Feet Per Minute
Total Weight of Sample	206.0	
Total Weight Recovered	203.0	
Percent Variance	-1.5%	
Total Time To Run Sample	6.8	Minutes
Feed Rate Per Hour	0.9	Ton/Hr
Weighted Average Vermiculite	53.6%	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed				0.0	0.0	0.2	6.9	38.9	64.5	41.6	23.0	11.9	6.7	4.2	1.6	1.4	2.1	203.0
Percent of Feed Recovered				0.0%	0.0%	0.1%	3.3%	18.9%	31.3%	20.2%	11.2%	5.8%	3.3%	2.0%	0.8%	0.7%	1.0%	98.5%
Vermiculite Percent						**14.3%**	**21.2%**	**30.2%**	**43.8%**	**61.5%**	**77.4%**	**83.9%**	**86.9%**	**89.6%**	**87.6%**	**85.4%**	**86.6%**	
Weight of Vermiculite				0.0	0.0	0.0	1.5	11.7	28.3	25.6	17.8	10.0	5.8	3.8	1.4	1.2	1.8	108.9

Weighted Average Tailings Grade For Chutes 4 Thru 6	**13.7%**
Percent Vermiculite Not Recovered	**0.0%**
Weighted Average Middlings Grade For Chutes 7 Thru 11	**55.9%**
Percent Vermiculite Recovered To Middlings	**77.9%**
Weighted Average Concentrate Grade for Chutes 12 Thru 17	**86.0%**
Percent Vermiculite Recovered To Concentrate	**22.0%**
Percent Vermiculite Accounted For	100.0%

51

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Test Run # 12 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	340	Feet Per Minute
Total Weight of Sample	180.0	
Total Weight Recovered	173.3	
Percent Variance	-3.7%	
Total Time To Run Sample	6.8	Minutes
Feed Rate Per Hour	0.8	Ton/Hr
Weighted Average Vermiculite	**32.3%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed				0.9	39.5	74.5	37.0	10.2	4.3	2.0	1.1	2.0	0.4	0.3	0.2	0.1	0.9	173.3
Percent of Feed Recovered				0.5%	21.9%	41.4%	20.5%	5.7%	2.4%	1.1%	0.6%	1.1%	0.2%	0.2%	0.1%	0.1%	0.5%	96.3%
Vermiculite Percent				**10.9%**	**13.0%**	**24.0%**	**40.9%**	**73.2%**	**87.4%**	**93.7%**	**92.8%**	**96.0%**	**94.3%**	**94.5%**	**94.8%**	**97.1%**	**88.8%**	
Weight of Vermiculite				0.1	5.2	17.9	15.1	7.5	3.8	1.9	1.0	1.9	0.4	0.3	0.2	0.1	0.8	56.0

Weighted Average Tailings Grade For Chutes 4 Thru 5	**13.0%**	Chutes 4 Thru 6	**20.2%**
Percent Vermiculite Not Recovered	**9.4%**		**41.3%**
Weight of Vermiculite in lbs	**5.2**		23.2
Weight of Feed in lbs	**40.4**		114.9
Weighted Average Middlings Grade For Chutes 6 Thru 8	**33.3%**	Chutes 7 Thru 9	**51.2%**
Percent Vermiculite Recovered To Middlings	**72.3%**		**47.0%**
Weight of Vermiculite in lbs	**40.5**		26.4
Weight of Feed in lbs	**121.7**		51.5
Weighted Average Concentrate Grade for Chutes 9 Thru 17	**91.3%**	Chutes 10 Thru 17	**93.7%**
Percent Vermiculite Recovered To Concentrate	**18.4%**		**11.6%**
Weight of Vermiculite in lbs	**10.3**		6.5
Weight of Feed in lbs	**11.3**		7.0
Percent Vermiculite Accounted For	100.0%		100.0%

Vermiculite Canada

Test Run # 13 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	370	Feet Per Minute
Total Weight of Sample	192.0	
Total Weight Recovered	193.2	
Percent Variance	0.6%	
Total Time To Run Sample	7.5	Minutes
Feed Rate Per Hour	0.8	Ton/Hr
Weighted Average Vermiculite	**29.7%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed		0.0	0.1	1.0	42.0	82.5	44.5	12.4	5.1	2.3	1.3	0.7	0.5	0.3	0.2	0.1	0.1	193.2
Percent of Feed Recovered		0.0%	0.0%	0.5%	21.9%	43.0%	23.2%	6.5%	2.7%	1.2%	0.7%	0.4%	0.2%	0.2%	0.1%	0.1%	0.1%	100.6%
Vermiculite Percent				**9.7%**	**11.8%**	**20.6%**	**38.5%**	**67.1%**	**88.0%**	**92.7%**	**95.7%**	**97.3%**	**94.5%**	**95.4%**	**94.1%**	**94.4%**	**89.3%**	
Weight of Vermiculite				0.1	5.0	17.0	17.1	8.3	4.5	2.1	1.2	0.7	0.4	0.3	0.2	0.1	0.1	57.3

Weighted Average Tailings Grade For Chutes 4 Thru 5	**11.8%**	Chutes 4 Thru 6	**17.6%**
Percent Vermiculite Not Recovered	**8.8%**		**38.6%**
Weight of Vermiculite in lbs	**5.1**		22.1
Weight of Feed in lbs	**43.0**		125.5
Weighted Average Middlings Grade For Chutes 6 Thru 8	**30.5%**	Chutes 7 Thru 9	**48.3%**
Percent Vermiculite Recovered To Middlings	**74.2%**		**52.3%**
Weight of Vermiculite in lbs	**42.5**		30.0
Weight of Feed in lbs	**139.4**		62.1
Weighted Average Concentrate Grade for Chutes 9 Thru 17	**91.3%**	Chutes 10 Thru 17	**94.3%**
Percent Vermiculite Recovered To Concentrate	**17.0%**		**9.1%**
Weight of Vermiculite in lbs	**9.7**		5.2
Weight of Feed in lbs	**10.7**		5.5
Percent Vermiculite Accounted For	100.0%		100.0%

Vermiculite Canada

Test Run # 14 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	400	Feet Per Minute
Total Weight of Sample	183.0	
Total Weight Recovered	182.5	
Percent Variance	-0.3%	
Total Time To Run Sample	7.8	Minutes
Feed Rate Per Hour	0.7	Ton/Hr
Weighted Average Vermiculite	**31.6%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed		0.0	0.0	0.6	24.5	70.2	53.3	17.7	7.4	3.4	2.0	1.2	0.8	0.5	0.3	0.3	0.3	182.5
Percent of Feed Recovered		0.0%	0.0%	0.3%	13.4%	38.4%	29.1%	9.7%	4.0%	1.9%	1.1%	3.0%	0.4%	0.3%	0.2%	0.1%	0.2%	99.7%
Vermiculite Percent				**8.9%**	**11.1%**	**18.2%**	**31.5%**	**62.3%**	**83.4%**	**92.4%**	**92.6%**	**95.2%**	**94.6%**	**97.8%**	**93.8%**	**92.9%**	**96.3%**	
Weight of Vermiculite				0.1	2.7	12.8	16.8	11.0	6.1	3.1	1.8	1.1	0.7	0.5	0.3	0.2	0.3	57.7

Weighted Average Tailings Grade For Chutes 4 Thru 5	**11.1%**	Chutes 4 Thru 6	**16.4%**
Percent Vermiculite Not Recovered	**4.8%**		**27.0%**
Weight of Vermiculite in lbs	**2.8**		15.6
Weight of Feed in lbs	**25.1**		95.3
Weighted Average Middlings Grade For Chutes 6 Thru 8	**28.8%**	Chutes 7 Thru 9	**43.3%**
Percent Vermiculite Recovered To Middlings	**70.4%**		**58.8%**
Weight of Vermiculite in lbs	**40.6**		34.0
Weight of Feed in lbs	**141.2**		78.4
Weighted Average Concentrate Grade for Chutes 9 Thru 17	**88.9%**	Chutes 10 Thru 17	**93.6%**
Percent Vermiculite Recovered To Concentrate	**24.8%**		**14.2%**
Weight of Vermiculite in lbs	**14.3**		8.2
Weight of Feed in lbs	**16.1**		8.7
Percent Vermiculite Accounted For	100.0%		100.0%

Vermiculite Canada

Test Run # 15 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	460	Feet Per Minute
Total Weight of Sample	192.0	
Total Weight Recovered	191.7	
Percent Variance	-0.2%	
Total Time To Run Sample	8.8	Minutes
Feed Rate Per Hour	0.7	Ton/Hr
Weighted Average Vermiculite	**34.9%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed			0.0	0.4	7.9	52.4	67.5	33.4	13.8	6.1	3.5	2.1	1.4	1.1	0.6	0.5	0.8	191.7
Percent of Feed Recovered				0.2%	4.1%	27.3%	35.2%	17.4%	7.2%	3.2%	1.8%	1.1%	0.8%	0.6%	0.3%	0.3%	0.4%	99.8%
Vermiculite Percent			**0.0%**	**12.0%**	**11.5%**	**18.3%**	**29.0%**	**39.8%**	**65.3%**	**81.6%**	**89.9%**	**92.9%**	**93.3%**	**95.0%**	**95.2%**	**95.7%**	**95.8%**	
Weight of Vermiculite				0.0	0.9	9.6	19.5	13.3	9.0	5.0	3.2	1.9	1.4	1.1	0.6	0.5	0.8	66.8

Weighted Average Tailings Grade For Chutes 4 Thru 6	**17.4%**	Chutes 4 Thru 7	**23.5%**
Percent Vermiculite Not Recovered	**15.8%**		**45.1%**
Weight of Vermiculite In lbs	**10.6**		30.1
Weight of Feed In lbs	**60.7**		128.2
Weighted Average Middlings Grade For Chutes 7 Thru 9	**36.5%**	Chutes 8 Thru 10	**22.6%**
Percent Vermiculite Recovered To Middlings	**62.7%**		**40.9%**
Weight of Vermiculite In lbs	**41.9**		27.3
Weight of Feed In lbs	**114.7**		53.3
Weighted Average Concentrate Grade for Chutes 10 Thru 17	**88.5%**	Chutes 11 Thru 17	**92.7%**
Percent Vermiculite Recovered To Concentrate	**21.5%**		**14.1%**
Weight of Vermiculite In lbs	**14.4**		9.4
Weight of Feed In lbs	**16.3**		10.2
Percent Vermiculite Accounted For	100.0%		100.0%

Vermiculite Canada

Test Run # 16 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	390	Feet Per Minute
Total Weight of Sample	245.0	
Total Weight Recovered	228.4	
Percent Variance	-6.8%	
Total Time To Run Sample	6.5	Minutes
Feed Rate Per Hour	1.1	Ton/Hr
Weighted Average Vermiculite	**32.8%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed		0.0	0.0	0.6	26.0	96.0	74.6	21.0	0.0	4.1	2.1	1.3	0.9	0.6	0.4	0.3	0.4	228.4
Percent of Feed Recovered				0.3%	10.6%	39.2%	30.4%	8.6%	0.0%	1.7%	0.9%	0.5%	0.4%	0.3%	0.2%	0.1%	0.2%	93.2%
Vermiculite Percent				**10.2%**	**13.0%**	**22.0%**	**37.9%**	**60.4%**	**0.0%**	**91.8%**	**93.5%**	**95.4%**	**96.1%**	**95.8%**	**97.3%**	**97.5%**	**97.8%**	
Weight of Vermiculite				0.1	3.4	21.1	28.3	12.7	0.0	3.8	2.0	1.3	0.9	0.6	0.4	0.3	0.4	75.0

Weighted Average Tailings Grade For Chutes 4 Thru 5	**12.9%**	Chutes 4 Thru 6	**20.0%**
Percent Vermiculite Not Recovered	**4.6%**		**32.7%**
Weight of Vermiculite in lbs	**3.4**		24.5
Weight of Feed in lbs	**26.6**		122.6
Weighted Average Middlings Grade For Chutes 6 Thru 8	**32.4%**	Chutes 7 Thru 9	**42.8%**
Percent Vermiculite Recovered To Middlings	**82.7%**		**54.6%**
Weight of Vermiculite in lbs	**62.0**		41.0
Weight of Feed in lbs	**191.6**		95.6
Weighted Average Concentrate Grade for Chutes 9 Thru 17	**93.9%**	Chutes 10 Thru 17	**93.9%**
Percent Vermiculite Recovered To Concentrate	**12.7%**		**12.7%**
Weight of Vermiculite in lbs	**9.6**		9.6
Weight of Feed in lbs	**10.2**		10.2
Percent Vermiculite Accounted For	100.0%		100.0%

Vermiculite Canada

Test Run # 17 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized, Crushed & Screened Middlings

Air Velocity	410	Feet Per Minute
Total Weight of Sample	178.0	
Total Weight Recovered	169.9	
Percent Variance	-4.5%	
Total Time To Run Sample	4.5	Minutes
Feed Rate Per Hour	1.2	Ton/Hr
Weighted Average Vermiculite	**62.1%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed			0.0	0.0	0.2	7.0	55.6	53.6	26.0	11.3	5.6	3.0	2.1	1.7	1.0	1.0	1.8	169.9
Percent of Feed Recovered				0.0%	0.1%	3.9%	31.2%	30.1%	14.6%	6.3%	3.2%	1.7%	1.2%	0.9%	0.6%	0.6%	1.0%	95.5%
Vermiculite Percent				**0.0%**	**14.3%**	**32.0%**	**46.6%**	**62.2%**	**78.2%**	**86.8%**	**83.9%**	**84.4%**	**84.1%**	**90.3%**	**86.0%**	**91.5%**	**91.0%**	
Weight of Vermiculite				0.0	0.0	2.2	25.9	33.3	20.3	9.8	4.7	2.5	1.8	1.5	0.9	0.9	1.6	105.6

Weighted Average Tailings Grade For Chutes 4 Thru 5	**13.9%**	Chutes 4 Thru 6	**31.4%**
Percent Vermiculite Not Recovered	**0.0%**		**2.2%**
Weight of Vermiculite in lbs	**0.0**		2.3
Weight of Feed in lbs	**0.2**		7.2
Weighted Average Middlings Grade For Chutes 6 Thru 8	**52.9%**	Chutes 7 Thru 9	**58.9%**
Percent Vermiculite Recovered To Middlings	**58.2%**		**75.4%**
Weight of Vermiculite in lbs	**61.5**		79.6
Weight of Feed in lbs	**116.2**		135.2
Weighted Average Concentrate Grade for Chutes 9 Thru 17	**82.4%**	Chutes 10 Thru 17	**86.4%**
Percent Vermiculite Recovered To Concentrate	**41.7%**		**22.5%**
Weight of Vermiculite in lbs	**44.0**		23.7
Weight of Feed in lbs	**53.5**		27.5
Percent Vermiculite Accounted For	100.0%		100.0%

Vermiculite Canada

Test Run # 18 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

Air Velocity	240	Feet Per Minute
Total Weight of Sample	213.0	
Total Weight Recovered	213.9	
Percent Variance	0.4%	
Total Time To Run Sample	3.5	Minutes
Feed Rate Per Hour	1.8	Ton/Hr
Weighted Average Vermiculite	**32.8%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed		0.0	0.3	24.0	145.0	34.0	7.1	1.9	0.7	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	213.9
Percent of Feed Recovered			0.2%	11.3%	68.1%	16.0%	3.3%	0.9%	0.3%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.4%
Vermiculite Percent			**12.2%**	**14.2%**	**26.8%**	**55.2%**	**82.8%**	**92.6%**	**93.8%**	**94.0%**	**91.7%**	**93.4%**	**92.2%**	**92.5%**	**90.7%**	**86.7%**	**88.3%**	
Weight of Vermiculite			0.0	3.4	38.9	18.8	5.9	1.7	0.7	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	70.2

Weighted Average Tailings Grade For Chutes 3 Thru 4	**14.2%**	Chutes 3 Thru 5	**25.0%**
Percent Vermiculite Not Recovered	**4.9%**		**60.3%**
Weight of Vermiculite in lbs	**3.5**		61.1
Weight of Feed in lbs	**24.3**		203.0
Weighted Average Middlings Grade For Chutes 5 Thru 6	32.2%	Chutes 6 Thru 7	**60.0%**
Percent Vermiculite Recovered To Middlings	**82.1%**		**35.1%**
Weight of Vermiculite in lbs	**57.7**		24.6
Weight of Feed in lbs	**179.0**		41.1
Weighted Average Concentrate Grade for Chutes 7 Thru 17	**86.1%**	Chutes 8 Thru 17	**92.8%**
Percent Vermiculite Recovered To Concentrate	12.9%		**4.6%**
Weight of Vermiculite in lbs	**9.1**		3.2
Weight of Feed in lbs	**10.5**		3.5
Percent Vermiculite Accounted For	100.0%		100.0%

Vermiculite Canada

Test Run # 19 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized, Crushed & Screened Middlings

Air Velocity	310	Feet Per Minute
Total Weight of Sample	187.0	
Total Weight Recovered	190.7	
Percent Variance	2.0%	
Total Time To Run Sample	3.0	Minutes
Feed Rate Per Hour	1.9	Ton/Hr
Weighted Average Vermiculite	**58.2%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed		0.0	0.0	0.1	10.0	86.0	64.0	16.1	5.6	2.6	1.6	1.1	0.8	0.7	0.4	0.4	1.3	190.7
Percent of Feed Recovered				0.1%	5.3%	46.0%	34.2%	8.6%	3.0%	1.4%	0.8%	0.6%	0.4%	0.4%	0.2%	0.2%	0.7%	102.0%
Vermiculite Percent				**16.7%**	**32.7%**	**49.4%**	**65.9%**	**75.2%**	**79.4%**	**74.9%**	**71.2%**	**69.7%**	**69.8%**	**74.7%**	**71.7%**	**74.7%**	**71.5%**	
Weight of Vermiculite				0.0	3.3	42.5	42.2	12.1	4.5	1.9	1.1	0.7	0.6	0.5	0.3	0.3	1.0	110.9

Weighted Average Tailings Grade For Chutes 4 Thru 5	**32.4%**	Chutes 4 Thru 6	**47.6%**
Percent Vermiculite Not Recovered	**3.0%**		**41.3%**
Weight of Vermiculite in lbs	**3.3**		45.8
Weight of Feed in lbs	**10.1**		96.1
Weighted Average Middlings Grade For Chutes 6 Thru 8	**58.3%**	Chutes 7 Thru 9	**68.6%**
Percent Vermiculite Recovered To Middlings	**87.2%**		**52.9%**
Weight of Vermiculite in lbs	**96.7**		58.7
Weight of Feed in lbs	**166.1**		85.7
Weighted Average Concentrate Grade for Chutes 9 Thru 17	**75.2%**	Chutes 10 Thru 17	**72.5%**
Percent Vermiculite Recovered To Concentrate	**9.8%**		**5.8%**
Weight of Vermiculite in lbs	**10.9**		6.4
Weight of Feed in lbs	**14.5**		8.9
Percent Vermiculite Accounted For	100.0%		100.0%

This Test Has Some Most Unusual Numbers. It needs to be redone.

5
9

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Test Run # 20 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized, Crushed & Screened Middlings

Air Velocity	350	Feet Per Minute
Total Weight of Sample	189.0	
Total Weight Recovered	188.1	
Percent Variance	-0.5%	
Total Time To Run Sample	3.5	Minutes
Feed Rate Per Hour	1.6	Ton/Hr
Weighted Average Vermiculite	**58.1%**	
One Pound = Grams	453.6	.

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed			0.0	0.1	3.4	63.0	79.0	25.0	8.0	3.4	1.9	1.2	0.9	0.7	0.5	0.5	0.7	188.1
Percent of Feed Recovered			0.0%	0.0%	1.8%	33.3%	41.8%	13.2%	4.2%	1.8%	1.0%	0.6%	0.5%	0.4%	0.2%	0.2%	0.4%	99.5%
Vermiculite Percent					26.4%	44.7%	59.6%	76.0%	81.2%	79.6%	77.8%	78.8%	77.8%	82.8%	81.8%	85.8%	86.3%	
Weight of Vermiculite			0.0	0.0	0.9	28.1	47.1	19.0	6.5	2.7	1.5	0.9	0.7	0.6	0.4	0.4	0.6	109.4

Weighted Average Tailings Grade For Chutes 4 Thru 5	**25.9%**	Chutes 4 Thru 6	**43.7%**
Percent Vermiculite Not Recovered	**0.8%**		**26.5%**
Weight of Vermiculite in lbs	**0.9**		29.0
Weight of Feed in lbs	**3.4**		66.4
Weighted Average Middlings Grade For Chutes 6 Thru 8	**56.4%**	Chutes 7 Thru 9	**64.8%**
Percent Vermiculite Recovered To Middlings	**86.2%**		**66.4%**
Weight of Vermiculite in lbs	**94.3**		72.6
Weight of Feed in lbs	**167.0**		112.0
Weighted Average Concentrate Grade for Chutes 9 Thru 17	**80.6%**	Chutes 10 Thru 17	**80.1%**
Percent Vermiculite Recovered To Concentrate	**13.0%**		**7.1%**
Weight of Vermiculite in lbs	**14.2**		7.8
Weight of Feed in lbs	**17.6**		9.7
Percent Vermiculite Accounted For	100.0%		100.0%

Graph Tables

WUD 20 Ft Test 20

Chute	Material	TPH	Recovery (%)	Grade	TPH Vm
8 - 16	Mids	1.036514	30%	78%	0.8
1 - 6	Tails	0.568789	26%	44%	0.2
17	Conc	0.006168	1%	86%	0.0
		1.61147			

Vermiculite Canada

Test Run # 21 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

This was a 1000 lb batch. It was run one time as fresh feed. The middlings were crushed and screened, making what appeared to be a concentrate. The number 6 chute was also crushed and screened and then winnowed using four passes to make concentrate. There were 331 lbs lost through crushing & screening and 25.9 pound unaccounted for. The low grade of the concentrate samples cannot be accounted for on 10/1.

Air Velocity	400	Feet Per Minute
Total Weight of Sample	1,006.0	
Total Weight Recovered	649.1	
Percent Variance	-35.5%	
Total Time To Run Sample	18.8	Minutes
Feed Rate Per Hour	1.6	Ton/Hr
Weighted Average Vermiculite	**18.7%** ?	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed			0.1	25.0	240.0	144.0	92.0	63.0	40.0	19.0	11.0	6.0	4.0	2.0	1.0	1.0	1.0	649.1
Percent of Feed Recovered				2.5%	23.9%	14.3%	9.1%	6.3%	4.0%	1.9%	1.1%	0.6%	0.4%	0.2%	0.1%	0.1%	0.1%	64.5%
Vermiculite Percent								**81.8%**	**78.2%**	**86.8%**	**83.9%**	**84.4%**	**78.9%**	**90.3%**	**86.0%**	**91.5%**	**91.0%**	
Weight of Vermiculite				0.0	0.0	0.0	0.0	51.5	31.3	16.5	9.2	5.1	3.2	1.8	0.9	0.9	0.9	121.2

Weighted Average Tailings Grade For Chutes 4 Thru 6	**0.0%**	
Percent Vermiculite Not Recovered	**0.0%**	
Weight of Vermiculite in lbs	**0.0**	
Weight of Feed in lbs	**409.1**	
Weighted Average Middlings Grade For Chutes 7	**0.0%**	
Percent Vermiculite Recovered To Middlings	**0.0%**	
Weight of Vermiculite in lbs	**0.0**	
Weight of Feed in lbs	**92.0**	
Weighted Average Concentrate Grade for Chutes 8 Thru 17	**82.0%**	Composite Repeat @ 83%
Percent Vermiculite Recovered To Concentrate	**100.0%**	
Weight of Vermiculite in lbs	**121.2**	
Weight of Feed in lbs	**148.0**	
Percent Vermiculite Accounted For	100.0%	

6

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Test Run # 22 With Wooden 20 Foot Long Winnower

Feed Is A # 4 Sized and Screened Winnower Feed

This was a 1000 lb sample in which the middlings, including chute 6 were run and re-run through the winnower until recovery tapered off to nearly nothing. Then the # 8 chute was screened and upgraded and the number 6 & 7 chutes were crushed and screened followed by repeated winnowing.
The low concentrate grades cannot be accounted for on 10/1.

Air Velocity	400	Feet Per Minute
Total Weight of Sample	1,000.0	
Total Weight Recovered	955.2	
Percent Variance	-4.5%	
Total Time To Run Sample	18.8	Minutes
Feed Rate Per Hour	1.6	Ton/Hr
Weighted Average Vermiculite	**32.0%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed		0.0	0.2	8.0	462.0	303.0	15.0	8.0	82.0	33.0	17.0	10.0	6.0	4.0	2.0	2.0	3.0	955.2
Percent of Feed Recovered		0.0%	0.0%	0.8%	46.2%	30.3%	1.5%	0.8%	8.2%	3.3%	1.7%	1.0%	0.6%	0.4%	0.2%	0.2%	0.3%	95.5%
Vermiculite Percent			**10.9%**	**10.2%**	**12.2%**	**35.4%**	**65.8%**	**69.6%**	**83.1%**	**70.0%**	**71.7%**	**83.8%**	**82.1%**	**81.4%**	**83.9%**	**82.7%**	**80.2%**	
Weight of Vermiculite				0.8	56.2	107.3	9.9	5.6	68.2	23.1	12.2	8.4	4.9	3.3	1.7	1.7	2.4	305.5

Weighted Average Tailings Grade For Chutes 2 Thru 5	**12.1%**	Chutes 2 Thru 6	**21.2%**
Percent Vermiculite Not Recovered	**18.7%**		**53.8%**
Weight of Vermiculite in lbs	**57.0**		164.3
Weight of Feed in lbs	**470.2**		773.2
Weighted Average Middlings Grade For Chutes 6 Thru 7	**36.8%**	Chutes 7 Thru 8	**67.1%**
Percent Vermiculite Recovered To Middlings	**38.3%**		**5.1%**
Weight of Vermiculite in lbs	**117.1**		15.4
Weight of Feed in lbs	**318.0**		23.0
Weighted Average Concentrate Grade for Chutes 8 Thru 17	**78.6%**	Chutes 9 Thru 17	**79.1%**
Percent Vermiculite Recovered To Concentrate	**43.0%**		**41.2%**
Weight of Vermiculite in lbs	**131.3**		125.8
Weight of Feed in lbs	**167.0**		159.0
Percent Vermiculite Accounted For	100.0%		100.0%

Assays for chute 9 thru 17 were redone and were relatively consistent.

Vermiculite Canada

Test Run # 24 With Wooden 20 Foot Long Winnower

Feed Is A # 3 Sized and Screened Winnower Feed

Air Velocity	400	Feet Per Minute
Total Weight of Sample	180.0	?
Total Weight Recovered	179.4	
Percent Variance	-0.3%	
Total Time To Run Sample	20.7	Minutes
Feed Rate Per Hour	0.3	Ton/Hr
Weighted Average Vermiculite	**12.5%**	
One Pound = Grams	453.6	

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed		0.1	2.6	23.0	142.0	8.0	2.0	0.1	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	179.4
Percent of Feed Recovered		0.1%	1.5%	12.8%	78.9%	4.4%	1.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	99.7%
Vermiculite Percent		**9.6%**	**8.3%**	**8.1%**	**11.3%**	**24.9%**	**55.8%**	**69.1%**	**67.9%**	**68.5%**	**66.3%**	**65.8%**	**62.4%**	**66.3%**	**66.2%**	**71.8%**	**71.0%**	
Weight of Vermiculite		0.0	0.2	1.9	16.1	2.0	1.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	22.4

Weighted Average Tailings Grade For Chutes 2 Thru 5	**10.8%**	Chutes 2 Thru 6	**11.5%**
Percent Vermiculite Not Recovered	**81.0%**		**89.9%**
Weight of Vermiculite in lbs	**18.2**		20.2
Weight of Feed in lbs	**167.6**		175.6
Weighted Average Middlings Grade For Chutes 6 Thru 7	**31.1%**	Chutes 7 Thru 8	**56.7%**
Percent Vermiculite Recovered To Middlings	**13.9%**		**5.4%**
Weight of Vermiculite in lbs	3.1		1.2
Weight of Feed in lbs	**10.0**		2.1
Weighted Average Concentrate Grade for Chutes 8 Thru 17	**67.4%**	Chutes 9 Thru 17	**67.3%**
Percent Vermiculite Recovered To Concentrate	**5.1%**		**4.6%**
Weight of Vermiculite in lbs	**1.1**		1.0
Weight of Feed in lbs	**1.7**		1.5
Percent Vermiculite Accounted For	100.0%		100.0%

69

Vermiculite Canada

Test Run # 26 With Wooden 20 Foot Long Winnower

Feed is A # 4 Sized and Screened Winnower Feed

Air Velocity	410	Feet Per Minute
Total Weight of Sample	199.0	?
Total Weight Recovered	199.8	
Percent Variance	0.4%	
Total Time To Run Sample	3.6	Minutes
Feed Rate Per Hour	1.6	Ton/Hr
Weighted Average Vermiculite	**29.0%**	
One Pound = Grams	453.6	

Chute 5 & 6 combined

Chute #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Total Weight of Feed			0.1	1.7		100.0	76.0	4.4	8.4	3.8	2.2	1.2	0.8	0.5	0.2	0.2	0.2	199.8
Percent of Feed Recovered			0.0%	0.9%		50.3%	38.2%	2.2%	4.2%	1.9%	1.1%	0.6%	0.4%	0.3%	0.1%	0.1%	0.1%	100.4%
Vermiculite Percent				11.2%		15.5%	32.8%	63.4%	74.8%	87.4%	91.2%	92.4%	93.0%	90.0%	91.6%	86.2%	88.5%	
Weight of Vermiculite			0.0	0.2		15.5	24.9	2.8	6.3	3.3	2.0	1.1	0.7	0.5	0.2	0.2	0.2	57.9

Weighted Average Tailings Grade For Chutes 2 Thru 5	**10.8%**	Chutes 2 Thru 6	**15.4%**
Percent Vermiculite Not Recovered	**0.3%**		**27.1%**
Weight of Vermiculite in lbs	**0.2**		15.7
Weight of Feed in lbs	**1.8**		101.8
Weighted Average Middlings Grade For Chutes 6 Thru 7	**23.0%**	Chutes 7 Thru 8	**34.4%**
Percent Vermiculite Recovered To Middlings	**69.8%**		**47.8%**
Weight of Vermiculite in lbs	**40.4**		27.7
Weight of Feed in lbs	**176.0**		80.4
Weighted Average Concentrate Grade for Chutes 8 Thru 17	**78.7%**	Chutes 9 Thru 17	**82.5%**
Percent Vermiculite Recovered To Concentrate	**29.9%**		**25.1%**
Weight of Vermiculite in lbs	**17.3**		14.5
Weight of Feed in lbs	**22.0**		17.6
Percent Vermiculite Accounted For	100.0%		100.0%

Graph Tables

WUD 20 Ft Test 26

Chute	Material	TPH	Recovery	Grade	TPH Vm
7 - 9	Mids	0.808312	30%	79%	0.6
1 - 6	Tails	0.826446	27%	16%	0.1
10 - 17	Conc	0.001877	0%	88%	0.0
		1.636635			

Mat

Description		**Test #**
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	1
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	2
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	3
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	4
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	5
Feed Is A # 4 Sized Middlings That Has Been Crushed & Screened	WSD 20 ft	6
Feed Is A # 4 Sized Middlings That Has Not Been Crushed Or Screened	WSD 20 ft	7
Feed Is A # 4 Sized Middlings That Has Not Been Crushed Or Screened	WSD 20 ft	10
Feed Is A # 4 Sized Middlings That Has Been Crushed & Screened	WSD 20 ft	11
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	12
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	13
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	14
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	15
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	16
Feed Is A # 4 Sized, Crushed & Screened Middlings	WSD 20 ft	17
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	18
Feed Is A # 4 Sized, Crushed & Screened Middlings	WSD 20 ft	19
Feed Is A # 4 Sized, Crushed & Screened Middlings	WSD 20 ft	20
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	21
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	22
Feed Is A # 3 Sized and Screened Winnower Feed	WSD 20 ft	24
Feed Is A # 4 Sized and Screened Winnower Feed	WSD 20 ft	26
Feed is cleanup of 4 and 5 mids from Westfield	MSD	1.1
Feed is #1UD #4 recycle	MSD	15
Feed is #4 feed from Sweco	MSD	16
Feed is crushed #4 mids & screened	MSD	20
Feed is mids #4 crushed and screened through Sweco	MSD	22
Feed is #4 mids from full production run (no crushed)	MSD	24
Feed is #4 bin from full plant run #2	MSD	25
Con from Bin #5 crushed and screened mids	MSD	21
1st run crusher	MSD	23
Westfield Material	MSD	10
Run 4 Crushed and Screened mids	MSD	
Run #1 MSD	MSD	1
Run #2 MSD	MSD	2
Run #5 MSD mids from Run #4	MSD	5
Run #12 Oct 17	MSD	12
Run 18 Second Run	MSD	18
Test 19 #5 bin screened to winnower	MSD	19
Run 13	MSD	13
Feed Is A # 4 Sized and Screened Winnower Feed TOTAL	WSD	
Feed is A #4 Sized Crushed and Screened Middlings TOTAL	WSD	

erial Balance

Feed Pounds	Grade	Lbs R	Lbs Vm	Er Ck	Production Pounds	Grade	Lbs R	Lbs Vm	Er Ck	Conc % Reco
190.3	40.9%	112.5	77.8	0.0	22.7	88.1%	2.7	20.0	0.0	25.6%
140.0	20.0%	112.1	27.9	0.0	14.6	87.0%	1.9	12.7	0.0	45.3%
225.0	31.4%	154.3	70.7	0.0	9.0	90.2%	0.9	8.1	0.0	11.5%
209.0	32.4%	141.3	67.7	0.0	15.2	89.8%	1.6	13.6	0.0	20.1%
208.0	33.1%	139.2	68.8	0.0	20.4	86.7%	2.7	17.7	0.0	25.7%
197.0	52.7%	93.2	103.8	0.0	36.2	86.8%	4.8	31.4	0.0	30.3%
208.0	51.5%	100.8	107.2	0.0	39.0	83.7%	6.4	32.6	0.0	30.4%
225.0	55.0%	101.3	123.7	0.0	21.9	85.5%	3.2	18.7	0.0	15.1%
206.0	53.6%	95.5	110.5	0.0	27.9	86.0%	3.9	24.0	0.0	21.7%
180.0	32.3%	121.8	58.2	0.0	11.3	91.3%	1.0	10.3	0.0	17.7%
192.0	29.7%	135.0	57.0	0.0	10.7	91.3%	0.9	9.7	0.0	17.1%
183.0	31.6%	125.1	57.9	0.0	16.1	88.9%	1.8	14.3	0.0	24.8%
192.0	32.8%	128.9	63.1	0.0	16.3	88.5%	1.9	14.4	0.0	22.8%
245.0	32.8%	164.5	80.5	0.0	10.2	93.9%	0.6	9.6	0.0	11.9%
178.0	62.1%	67.4	110.6	0.0	53.5	82.4%	9.4	44.0	0.0	39.8%
213.0	32.8%	143.1	69.9	0.0	10.5	86.1%	1.5	9.1	0.0	13.0%
187.0	58.2%	78.2	108.8	0.0	14.5	75.2%	3.6	10.9	0.0	10.0%
189.0	58.1%	79.1	109.9	0.0	17.6	80.6%	3.4	14.2	0.0	12.9%
1006.0	18.7%	818.2	187.8	0.0	148.0	82.0%	26.7	121.3	0.0	64.6%
1000.0	32.0%	680.2	319.8	0.0	167.0	78.6%	35.7	131.3	0.0	41.1%
180.0	12.5%	157.5	22.5	0.0	1.7	67.4%	0.5	1.1	0.0	5.1%
199.0	29.0%	141.3	57.7	0.0	22.0	78.7%	4.7	17.3	0.0	30.0%
2771.0	21.0%	2189.1	581.9	0.0	61.0	90.4%	5.9	55.1	0.0	9.5%
2284.0	17.4%	1886.6	397.4	0.0	44.0	90.6%	4.1	39.9	0.0	10.0%
1006.0	24.0%	764.6	241.4	0.0	55.0	81.0%	10.5	44.6	0.0	18.5%
1065.0		1065.0	0.0	0.0	302.0		302.0	0.0	0.0	#DIV/0!
200.0	40.0%	120.0	80.0	0.0	68.0	73.1%	18.3	49.7	0.0	62.1%
727.0	35.0%	472.6	254.5	0.0	190.0	72.9%	51.5	138.5	0.0	54.4%
2185.0	49.2%	1110.0	1075.0	0.0	288.0	89.9%	29.1	258.9	0.0	24.1%
180.0		180.0	0.0	0.0	79.0		79.0	0.0	0.0	#DIV/0!
751.0		751.0	0.0	0.0	314.0		314.0	0.0	0.0	#DIV/0!
1577.0	39.2%	958.8	618.2	0.0	345.0	82.3%	61.1	283.9	0.0	45.9%
703.0		703.0	0.0	0.0	22.0		22.0	0.0	0.0	#DIV/0!
2000.0	23.3%	1534.0	466.0	0.0	56.0	94.0%	3.4	52.6	0.0	11.3%
2000.0	27.2%	1456.0	544.0	0.0	93.0	89.4%	9.9	83.1	0.0	15.3%
540.0		540.0	0.0	0.0	22.0		22.0	0.0	0.0	#DIV/0!
2153.0		2153.0	0.0	0.0	130.0		130.0	0.0	0.0	#DIV/0!
2633.0	29.2%	1864.2	768.8	0.0	199.0	80.3%	39.2	159.8	0.0	20.8%
9338.0	41.2%	5490.7	3847.3	0.0	865.0	94.7%	45.8	819.2	0.0	21.3%
1692.0	27.0%	1235.2	456.8	0.0	122.0	79.0%	25.6	96.4	0.0	21.1%
4562.3	28.2%	3275.1	1287.2				85.0	410.6		
957.0	56.8%	413.5	543.5				25.1	124.6		

Waste Pounds	Grade	Lbs R	Lbs Vm	Conc % Recovery	Er Ck	Mids Pounds	Grade	Tons R	Tons Vm
122.7	28.9%	87.3	35.4	26%	0.0	45.0	50.0%	22.5	22.5
96.3	0.0%	96.3	0.0	45%	0.0	26.1	56.2%	11.4	14.7
91.6	15.7%	77.3	14.3	12%	0.0	128.4	38.5%	78.9	49.5
124.2	19.8%	99.6	24.6	20%	0.0	73.0	41.8%	42.5	30.5
91.3	16.7%	76.0	15.2	26%	0.0	97.2	37.2%	61.0	36.2
46.0	25.9%	34.1	11.9	30%	0.0	112.3	52.6%	53.2	59.1
28.9	30.6%	20.0	8.8	30%	0.0	138.0	61.4%	53.3	84.7
0.2	11.3%	0.2	0.0	15%	0.0	201.7	57.3%	86.1	115.6
0.2	13.7%	0.2	0.0	22%	0.0	174.9	55.9%	77.2	97.7
40.4	13.0%	35.1	5.2	18%	0.0	121.7	33.3%	81.2	40.5
43.1	11.8%	38.0	5.1	17%	0.0	139.4	30.5%	97.0	42.5
25.1	11.1%	22.3	2.8	25%	0.0	141.2	28.8%	100.6	40.6
60.7	17.4%	50.2	10.6	23%	0.0	114.7	36.5%	72.8	41.9
26.6	12.9%	23.2	3.4	12%	0.0	191.6	32.4%	129.6	62.0
0.2	13.9%	0.2	0.0	40%	0.0	116.2	52.9%	54.7	61.5
24.3	14.2%	20.9	3.5	13%	0.0	179.0	32.2%	121.3	57.7
10.1	32.4%	6.9	3.3	10%	0.0	166.1	58.3%	69.3	96.7
3.4	25.9%	2.5	0.9	13%	0.0	167.0	56.4%	72.7	94.3
409.1	0.0%	409.1	0.0	65%	0.0	92.0	0.0%	92.0	0.0
470.2	12.1%	413.2	57.0	41%	0.0	318.0	36.8%	200.9	117.1
167.7	10.8%	149.6	18.2	5%	0.0	10.0	31.1%	6.9	3.1
1.8	10.8%	1.6	0.2	30%	0.0	176.0	23.0%	135.6	40.4
1523.0	14.0%	1309.8	213.2	9%	0.0	1187.0	27.0%	866.5	320.5
1083.0	12.0%	953.0	130.0	10%	0.0	1156.0	35.5%	745.6	410.4
354.0	10.0%	318.6	35.4	18%	0.0	589.0	28.2%	422.9	166.1
727.0		727.0	0.0	#DIV/0!	0.0	31.0		31.0	0.0
4.0	12.0%	3.5	0.5	62%	0.0	134.0	35.0%	87.1	46.9
10.0	12.0%	8.8	1.2	54%	0.0	524.0	35.7%	336.9	187.1
318.0	6.8%	296.4	21.6	24%	0.0	1579.0	27.5%	1144.8	434.2
0.0		0.0	0.0	#DIV/0!	0.0	104.0		104.0	0.0
0.0		0.0	0.0	#DIV/0!	0.0	437.0		437.0	0.0
201.0	16.8%	167.2	33.8	46%	0.0	962.0	49.1%	489.7	472.3
346.0		346.0	0.0	#DIV/0!	0.0	209.0		209.0	0.0
1366.0	13.4%	1183.0	183.0	11%	0.0	575.0	28.7%	410.0	165.0
1326.0	13.8%	1143.0	183.0	15%	0.0	580.0	52.1%	277.8	302.2
338.0		338.0	0.0	#DIV/0!	0.0	209.0		209.0	0.0
187.0		187.0	0.0	#DIV/0!	0.0	1806.0		1806.0	0.0
1250.0	11.4%	1107.5	142.5	21%	0.0	1262.0	32.0%	858.2	403.8
1183.0	14.9%	1006.7	176.3	21%	0.0	5994.0	40.4%	3572.4	2421.6
237.0	11.5%	209.7	27.3	21%	0.0	1265.0	27.3%	919.7	345.3
		1599.7	195.6					1254.1	599.2
		43.9	16.1					327.1	409.3

Section 2

Claims
1191295
1191249
1163443
1077035
1077036

This section contains information on Claims 1191295-1191249-1163443-1077035 and 1077036. Included are maps assays, yields and screen analysis. As refereed to in previous section.

Previous work on claim 1077035
Lots 16 and 17 - Concession 5 and 6
Location ; 507 twenty km north of Flynns Turn

1 Horse Shoe
2 North Zone # 2
3 North Zone

Grade	Particle size distribution mm 75% retained (mm)	Loose Bulk density (kg/m3)	Lbs/ft3
Premium	-16.0 + 5.6	600-800	39.2
Large	-8.0 + 2.8	750-850	43.6
Medium	-4.0 + 1.4	880 -1000	46.7
Fine	-2.0 + 0.710	890 - 1000	54.6
Superfine	-1.0 +0.355	925 - 1050	57.3
Micron	-0.710 + 0.250	925 - 1050	59.3

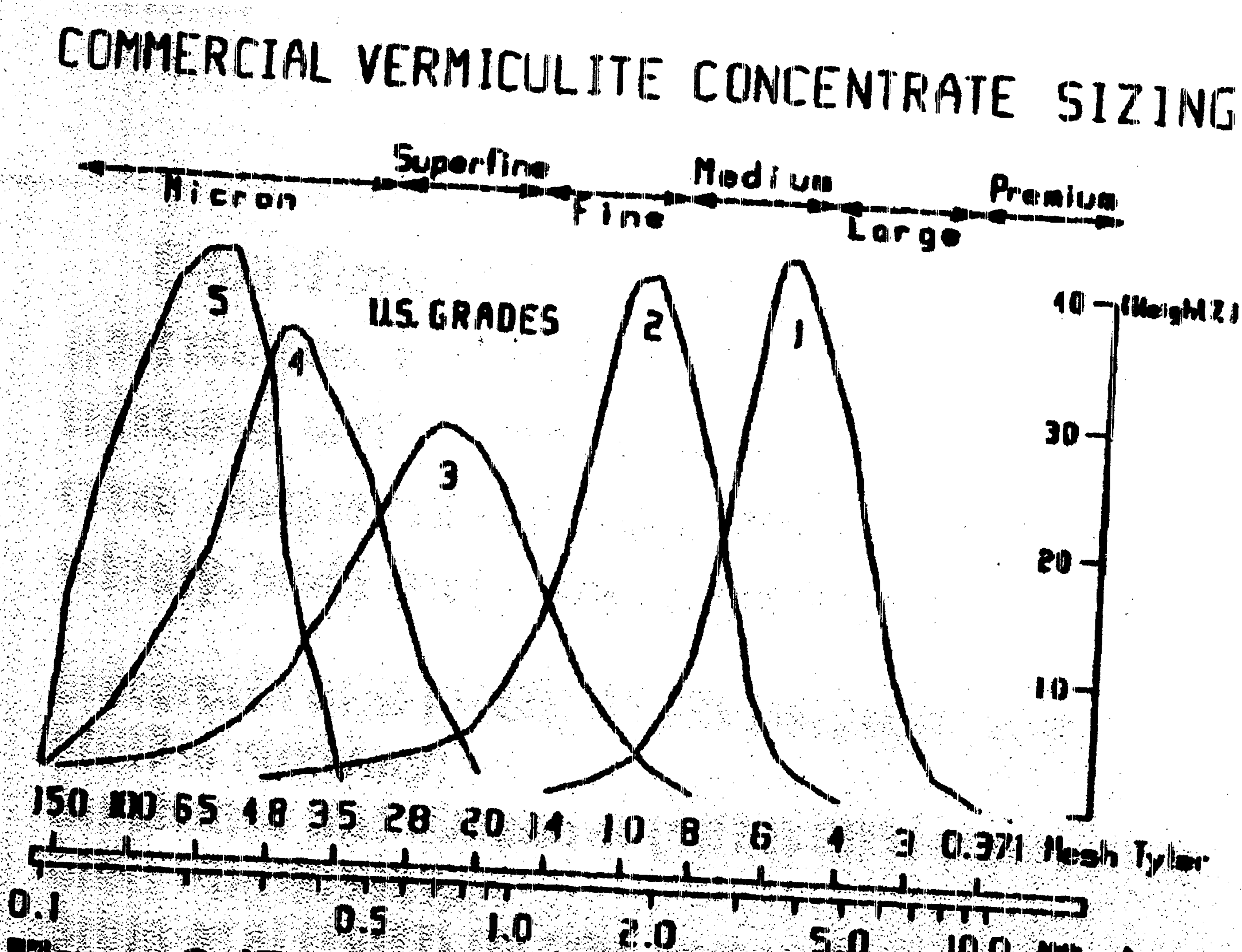
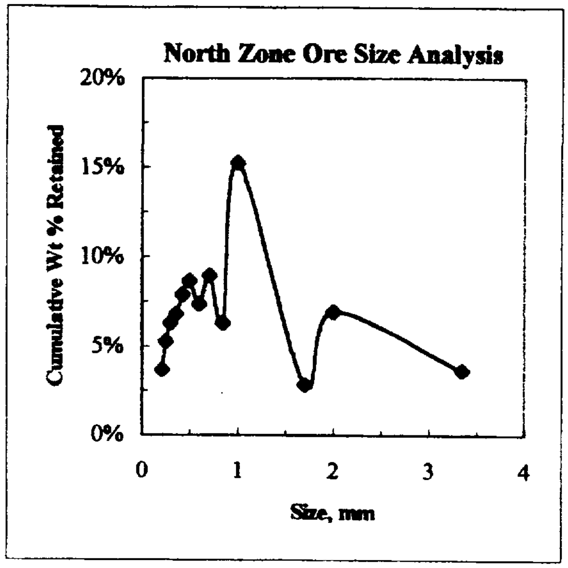


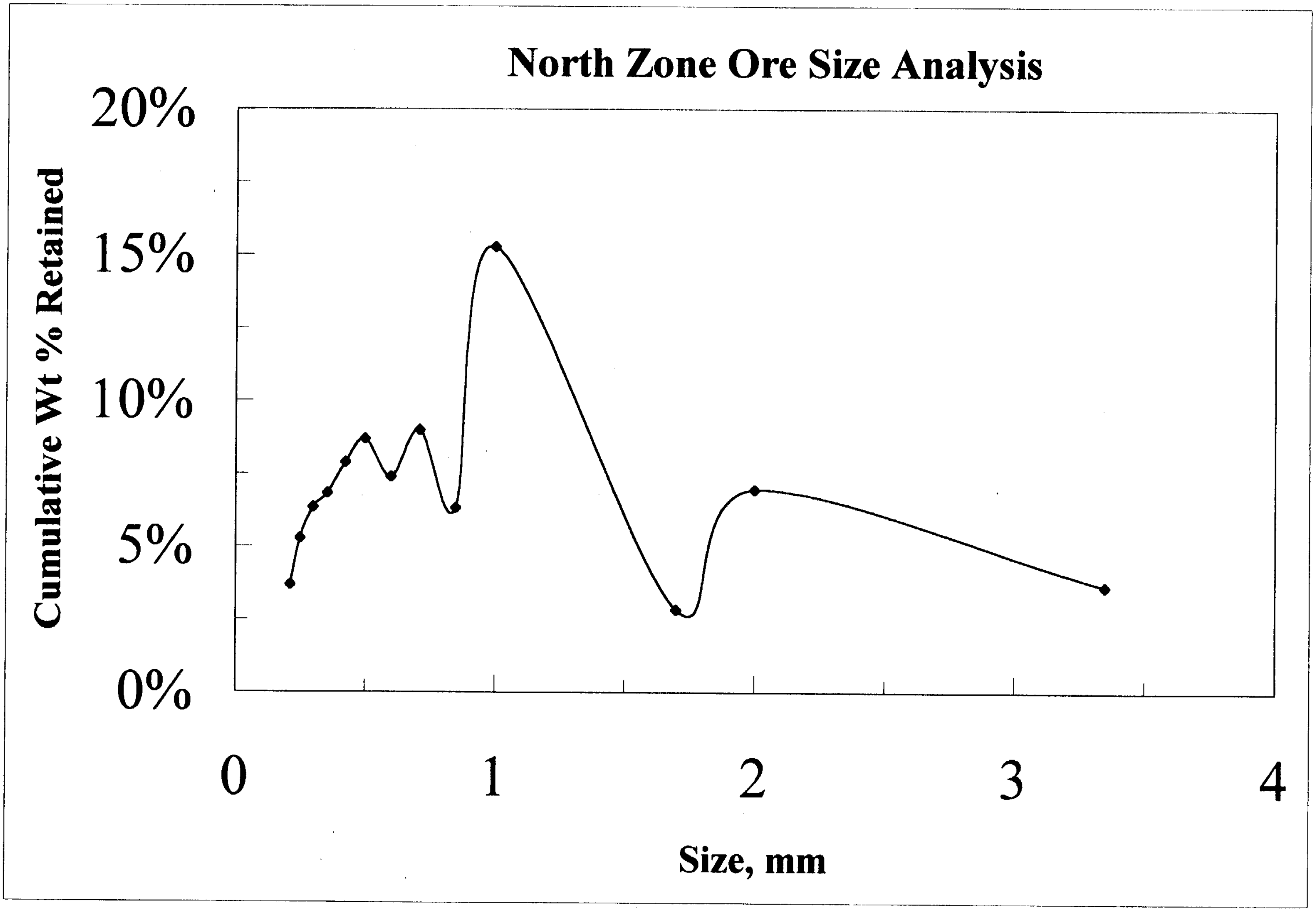
Figure 6-17. Particle size distributions for Libby concentrates compared to international

RECENT WORK



CUM. WT. % Retained

3.35	-	3.6%
2	-	6.9%
1.7	-	2.8%
1	-	15.3%
0.85	-	6.3%
0.71	-	9.0%
0.6	-	7.4%
0.5	-	8.7%
0.425	-	7.9%
0.355	-	6.8%
0.3	-	6.3%
0.25	-	5.3%
0.212	-	3.7%


North Zone Ore Size Analysis
Cumulative Wt % Retained
20%
15%
10%
5%
0%
0
1
2
3
4
Size, mm

Page 6

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: North Zone Ore **Date:** 6/23/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (ml/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	66.5	3.6%											
10	2.000	126.8	6.9%		all of +12									
12	1.700	51.8	2.8%	245.1	234.2	30.7%	0.37	1.5	12.1	25.4	209.6	10.8%		0.8
18	1.000	278.9	15.3%	278.9	258.1	15.3%	1.612	5.8	46.3	117.4	143.2	45.0%		18.7
20	0.850	115.3	6.3%		-18 + 25									
25	0.710	164.1	9.0%	279.4	252.1	15.1%	2.086	7.5	59.8	160.8	98.3	62.1%		15.1
30	0.600	134.9	7.4%	134.9	121.0	14.8%	1.09	8.1	64.7	81.7	41.1	66.5%		13.3
35	0.500	158.6	8.7%	158.6	141.6	16.6%	1.283	8.1	64.8	88.9	56.1	61.3%		14.5
40	0.425	143.9	7.9%	143.9	129.3	16.2%	1.026	7.1	57.1	73.5	53.8	57.7%		12.4
45	0.355	124.4	6.8%	124.4	112.8	17.6%	0.778	6.3	50.1	59.3	58.6	50.3%		9.3
50	0.300	115.6	6.3%	115.6	104.7	19.6%	0.545	4.7	37.8	44.6	60.1	42.6%		7.3
60	0.250	96.2	5.3%	96.2	84.7	26.6%	0.325	3.4	27.1	31.6	52.9	37.4%		5.3
70	0.212	67.3	3.7%	67.3	58.8	29.9%	0.185	2.7	22.0	18.6	38.9	32.3%		3.2
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	182.2	10.0%											
Totals		1826.5	100.0%	1644.3	1497.3	17.7%	9.30	6.1	45.3	701.8	812.6	46.3%		100.0
Direct Assay														
-18 +70 calc		1644.3	90.0%	1644.3	1497.3	17.7%	9.30	6.1	45.3	701.8	812.6	46.3%		100.0
-18 + 70 direct assay:				282.4						133.0	125.4	51.5%		

Bulk Sample:
<0.5 mm 32.1%
<0.25 mm 13.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Collected at 2 sites on the surface, across the Beaver Dam. Air dried.

*** Possible Grade After Adjustment of LOE**

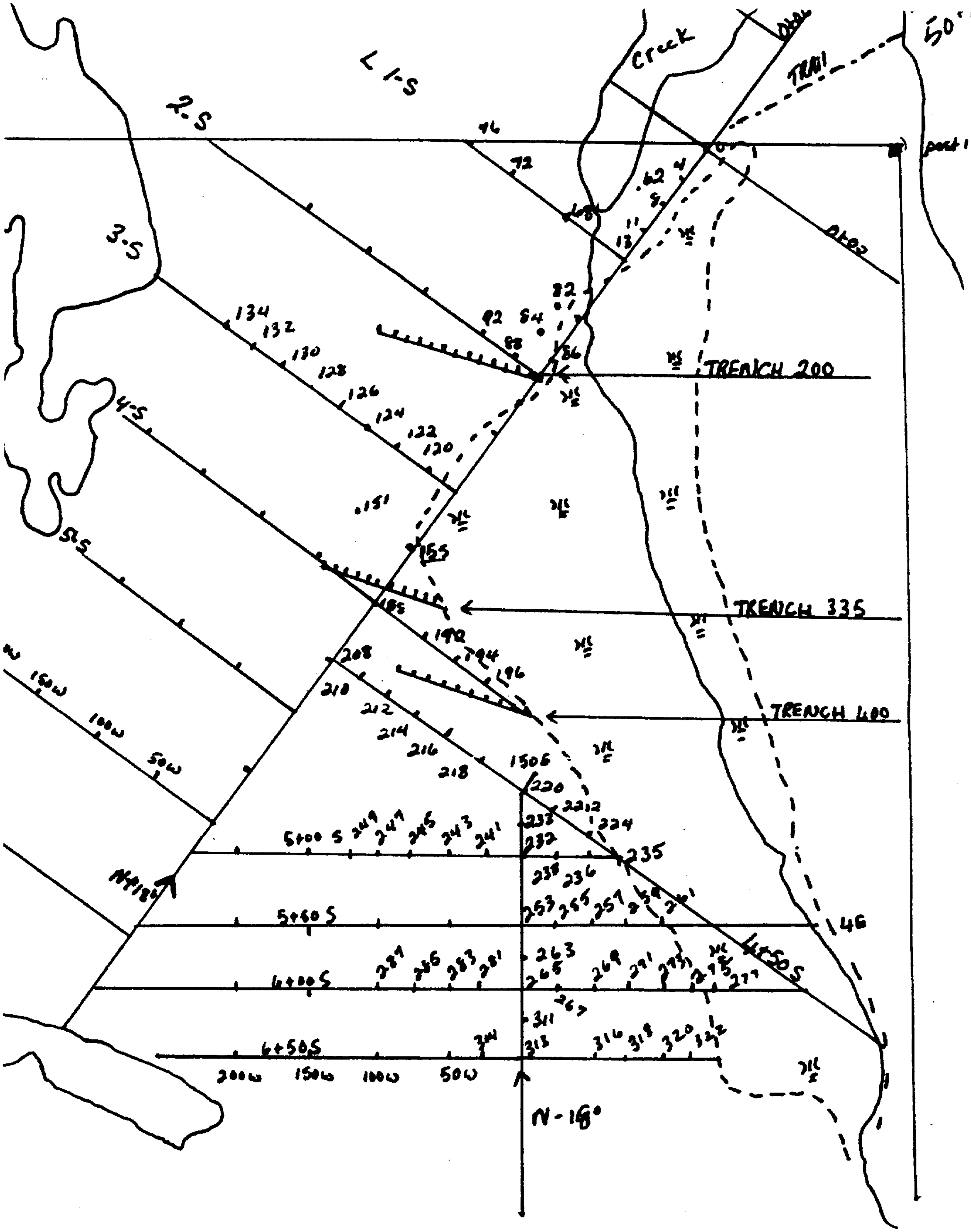
Book 6 **Sheet** 42

Significant Organics in

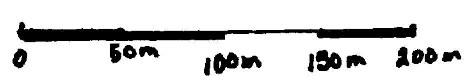
Exfoliated vermiculite colour is

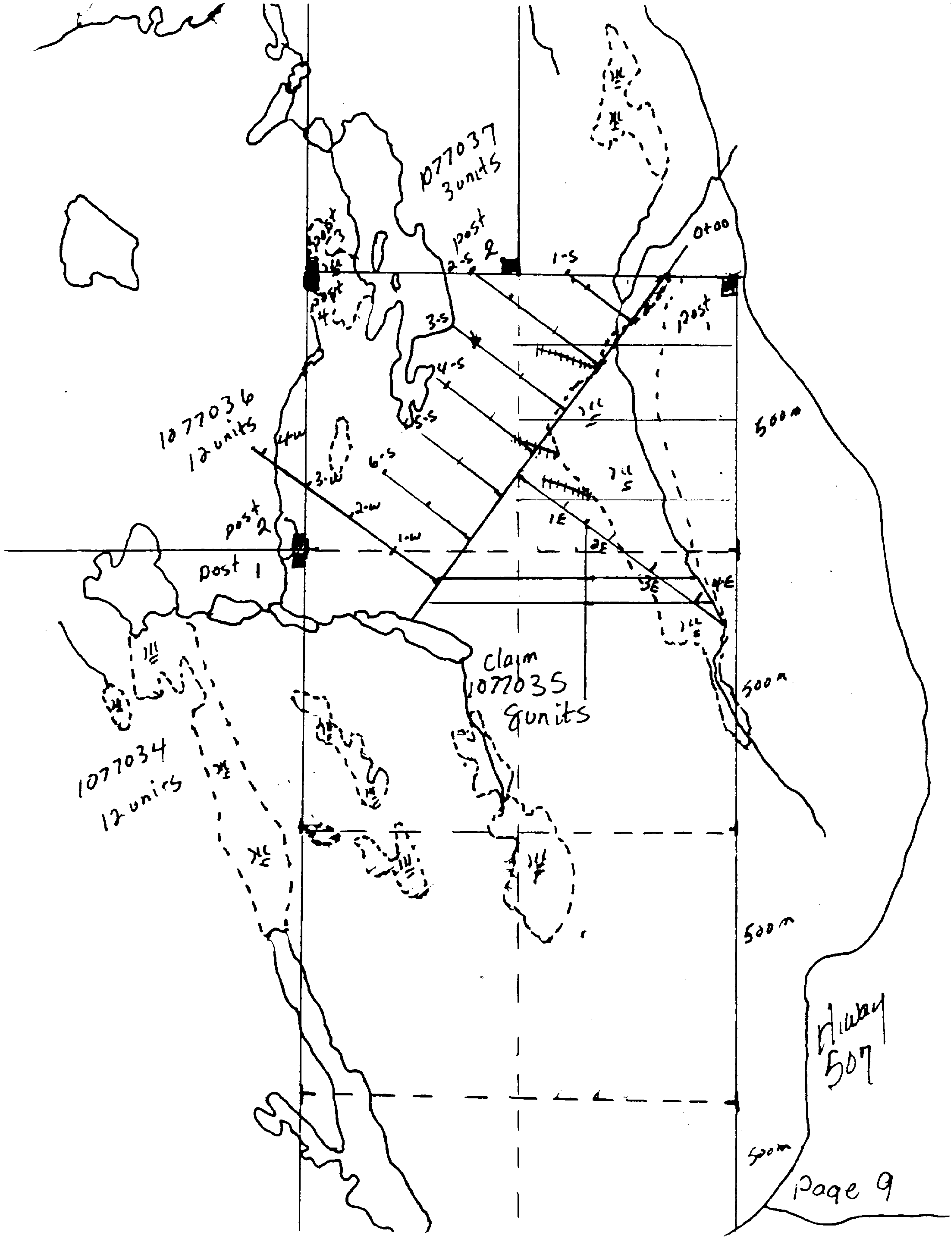
Composite grains or excessive fines in

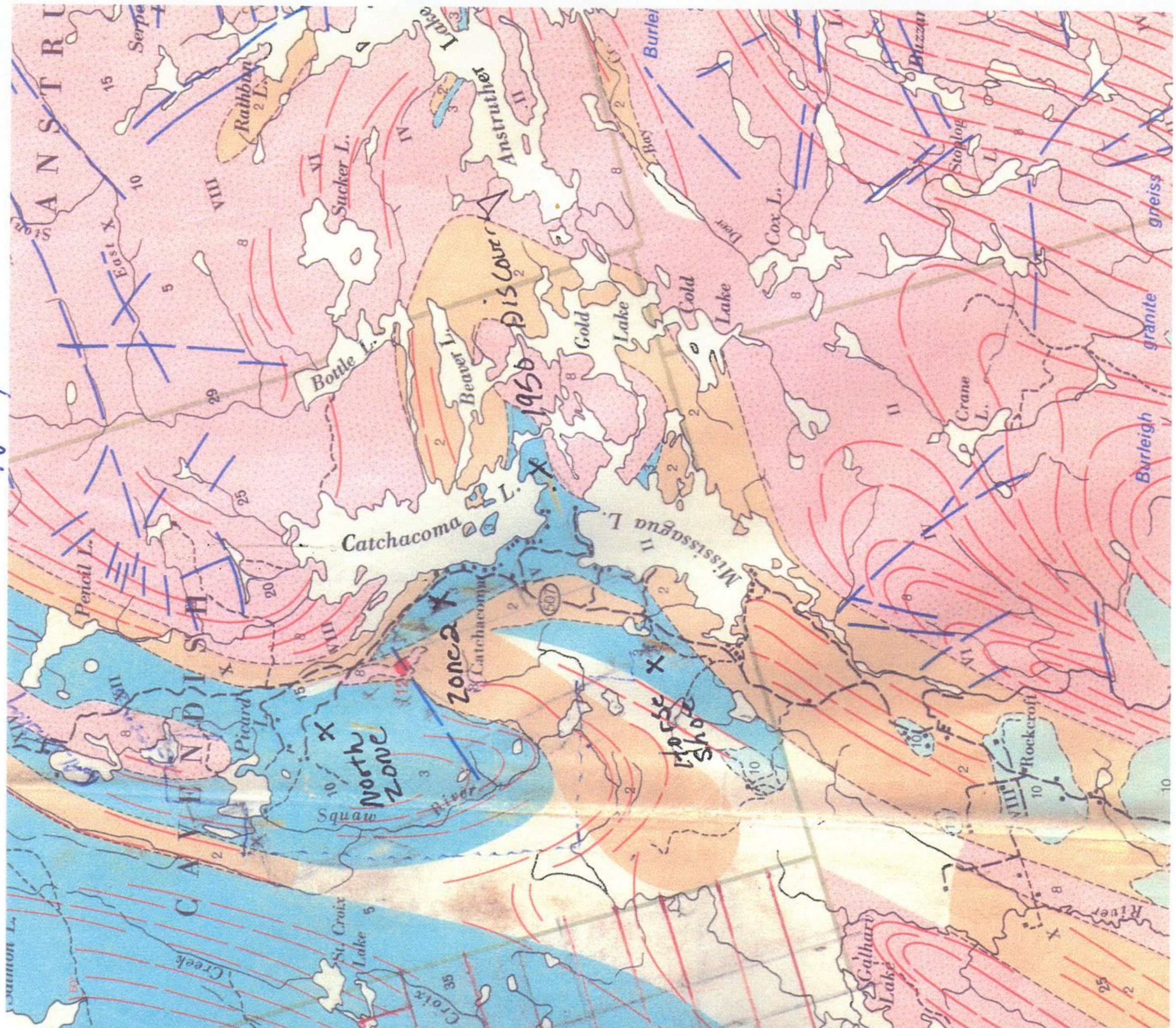
Page 7



CLAIM # 1077035




1077037
3 units
post 2
post 3
post 4
post 1
0+00
1-S
2-S
3-S
4-S
5-S
6-S
1077036
12 units
4-W
3-W
2-W
1-W
post 2
Post 1
1E
2E
3E
4E
500m
Claim
1077035
9 units
1077034
12 units
500m
500m
Hiway
507
500m


N
1950 Discovery
Zone 2
North Zone
Horse Shoe
Catchacoma L.
Catchacoma
Mississagua L.
Bottle L.
Beaver L.
Gold Lake
Sucker L.
Anstruther
Rathbun L.
Pencil L.
Picard L.
Squaw River
St. Croix Lake
Crystal Lake
Mount Irwin
Ewan
Frounce L.
Bass L.
DeCarlie Lake
Galhart Lake
Rockcroft
Crane L.
Cox L.
Burleigh granite gneiss
ANSTRU
CAVENDISH
GALWAY
PETERBORO
VICTOR

Page 10

Trench # 400

Sample#	Location	Vermiculite	Rock type
1[59981]	0-5m.	1.4	Marble
1v[400s]	2.5m.	2.5	Marble
2[59982]	5-7.5m.	17.9	Marble
2v[400s]	7m.	1.6	Marble
3[59983]	7.5-10m.	6.7	Marble
4[59984]	10-12.5m.	1.7	Marble
5[59985]	12.5-15m.	2.0	Marble
6[59986]	15-17.5m.	3.6	Marble
7[59987]	17.5-20m.	6.8	Marble
8[59988]	20-22.5m.	17.5	Amphibolite schist
9[59989]	22.5-25m.	22.9	Amphibolite schist
10[59990]	25-27.5m.	12.3	Amphibolite schist
11[59991]	27.5-30m.	50.5	Amphibolite schist
12[59992]	30-32.5m.	41.4	Amphibolite schist
3v[400s]	30m.	10.6	Amphibolite schist
13[59993]	32.5-35m.	51.7	Amphibolite schist
14[59994]	35-37.5m.	57.7	Amphibolite schist
15[59995]	37.5-40m.	61.7	Amphibolite schist
4v[400s]	35m.	7.7	Amphibolite schist
5v[400s]	40m.	43.0	Amphibolite schist
16[59996]	40-42.5m.	39.7	Amphibolite schist
17[59997]	42.5-45m.	22.3	Amphibolite schist
18[59998]	45-47.5m.	30.2	Amphibolite schist
19[59999]	47.5-50m.	29.4	Amphibolite schist
20[60000]	50-52.5m.	23.6	Light marble
21~~[60001]~~ 59801	52.5-55m.	26.3	Light marble
22~~[60002]~~ 59802	55-57.5m.	15.9	Light marble
23~~[60003]~~ 59803	57.5-60m.	21.8	Light marble
24~~[60004]~~ 59804	60-62.5m.	24.8	Light marble
25~~[60005]~~ 59805	62.5-65m.	17.8	Light marble

Assays and results for claim 1077035

Previous results in trenching

sample	Location	Vermiculite
8 [59988]	20-22.5 m.	17.5
9 [59989]	22.5-25 m.	22.9
10 [59990]	25-27.5 m.	12.3
11 [59991]	27.5-30 m.	50.5
12 [59992]	30-32.5 m.	41.4
3v [400s.]	30 m.	10.6
13 [59993]	32.5-35 m.	51.7
14 [59994]	35-37.5 m.	57.7
15 [59995]	37.5-40 m.	61.7
4v [400s]	35 m.	7.7
5v [400s]	40 m.	43.0
16 [59996]	40-42.5 m.	39.7
17 [59997]	42.5-45 m.	22.3
18 [59998]	45-47.5 m.	30.2
19 [59999]	47.5-50 m.	29.4

APPENDIX B

CAVENDISH TOWNSHIP

Goshawk Mines Ltd. Vermiculite Property

Location and Access: The property is located approximately 56 km north of Peterborough, Ontario on parts of lots 19-23, concessions III and IV, Cavendish Township, Peterborough County. NTS 31D/9.

Highway 507 runs within 3.2 km of the property and cottage roads from this highway bisect the claim group. The claim group consists of eleven wholly owned contiguous unpatented claims; bounded on the north by Catchacoma Lake, the east by Catchacoma Narrows and on the south by Mississauga Lake (Archibald 1976; 1977a, 1977b)

History

Vermiculite was first discovered and subsequently staked in 1950 by H.G. Greene. Periodically the property was test-pitted and stripped in a haphazard manner, mainly over the east end of the claim group.

Globex Minerals Inc. leased the ground in 1973 and during 1974 conducted limited auger and diamond drilling.

In 1975, Goshawk Mines Ltd. purchased 100% interest in the claims. During 1975-1977 the company conducted a exploration programme which included trenching, power augering, diamond drilling and soil sampling.

Geology

The geology of the property is shown in Figure 12 and described by Archibald (1977b) as follows:

"The claim group is underlain mainly by Grenville limestone which has been altered to a marble. Areas can be seen in this marble with disseminated flakes of amber coloured mica which has been altered to pseudo-vermiculite and vermiculite. In some areas, the mica is heavily concentrated in thick, flat dipping bands of schist, locally striking east-west.

To the south, the claim group overlies the Anstruther granite batholith in the form of granite gneiss. Bordering this mass is a band of dark paragneiss, which has been altered to biotite schist and amphibolite. Narrow lenses of this amphibolite are also found within the marble.

The limestone occurs as a series of east-west trending ridges with steep north faces and gentle south dipping slopes. This bedding varies from flat lying to thirty degrees, dipping generally to the south.

In areas of vermiculite-rich limestone, the tops of the ridges appear to have weathered in place to an average depth of ten feet, leaving many of the lower depression areas in relatively unweathered state due to the protection afforded by the high ground water table. These depressions are often filled with concentrations of loose, raw vermiculite that has migrated off the nearby hillside."

Flakes are up to 1/2 inch in diameter but generally less than 1/8 inch; and vary from amber, green, and black, to silver in colour.

Augering and diamond drilling has indicated that the largest concentration of vermiculite lies in the free state near surface; three zones were roughly defined (Zone A, Zone B, Zone C). Zone A covers an area 457 m (1500 ft.) long by 122 m (400 ft.) wide on the east side of the property. Exploration primarily concentrated on this (54,500 tons or 93,309 cu. yds.) zone. Archibald (1977a) estimated that a minimum of 49,400 tonnes of vermiculite, averaging 11.9% exfoliated vermiculite was contained

14

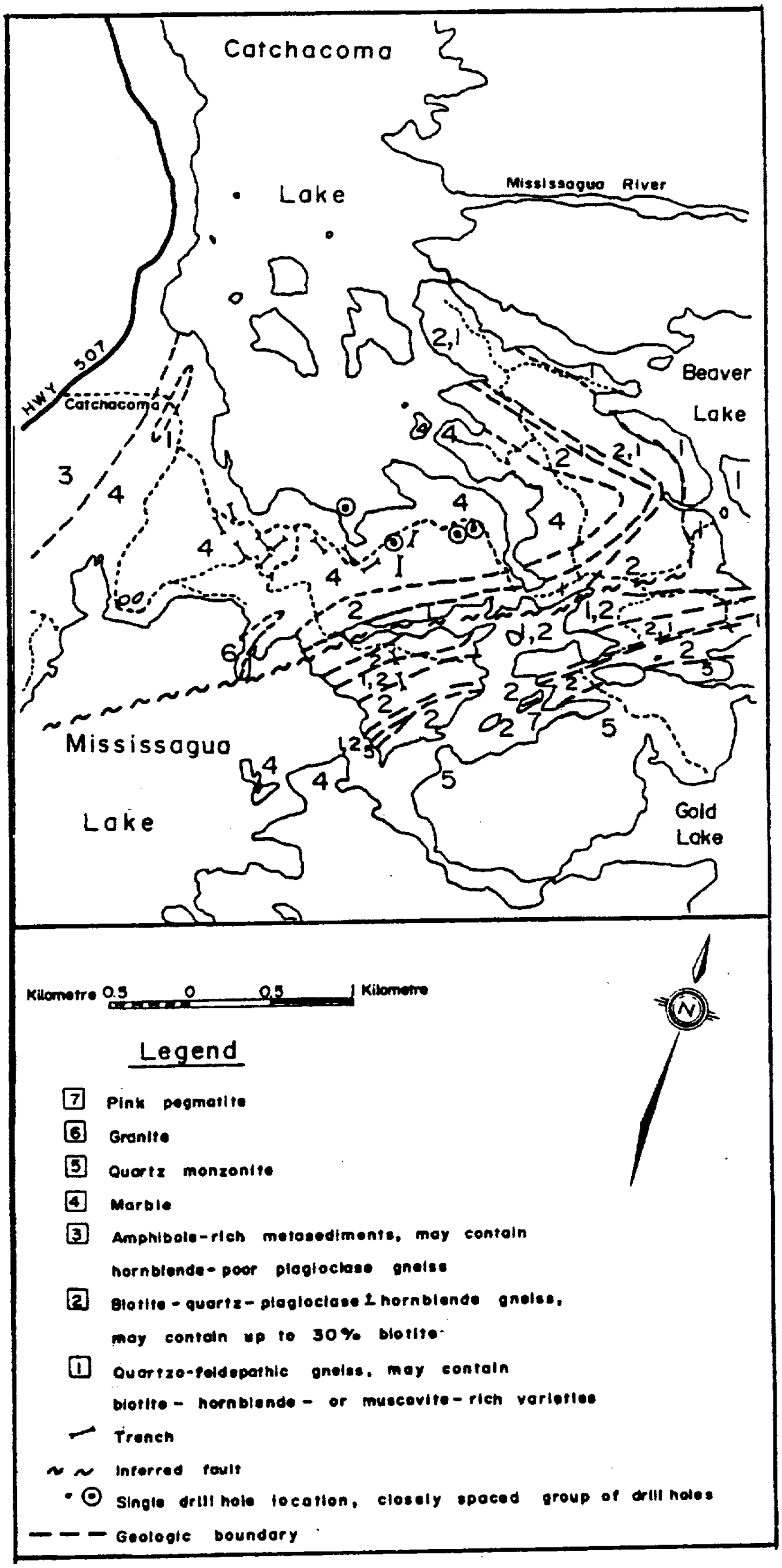


Figure 12, Geology of the Goshawk Mines Ltd. property
(after Bright 1981, OGS 1983)

within the topsoil. Zone B consists of four separate bodies over a strike length of 610 m (2,000 ft.) in the central portion of the property. Zone C is located at the west end of the property and appears to be fairly good grade vermiculite (Archibald 1977b). Sufficient work was not conducted on Zones B and C to fully access them.

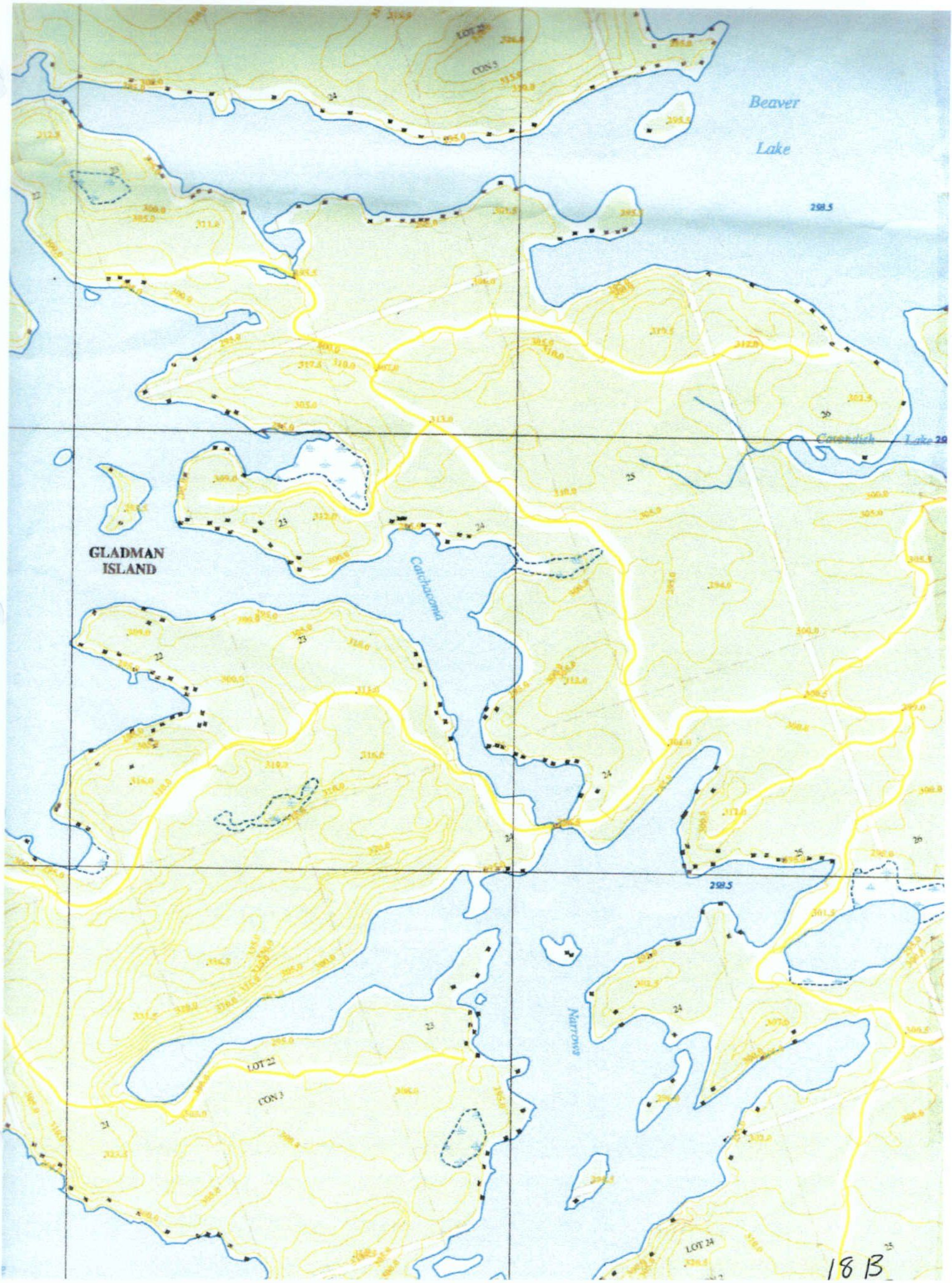
The concentration of vermiculite in bedrock is generally less than 5%, and decreases with depth.

<u>Comments</u>

Testing conducted by Goshawk Mines Ltd. has indicated that the vermiculite does not absorb water (low wetability), as a result, it is unsuitable for agricultural purposes. However, this quality is desirable for use as insulation, in wallboard, plasters and similar products which cannot tolerate moisture; but, since the exfoliated material is fine-grained, it would only be applicable for wallboard or plaster aggregate. The bulk density of the majority of the material is a little too high for current specifications but should this problem be overcome, the deposit is in a favourable location to compete for domestic markets.

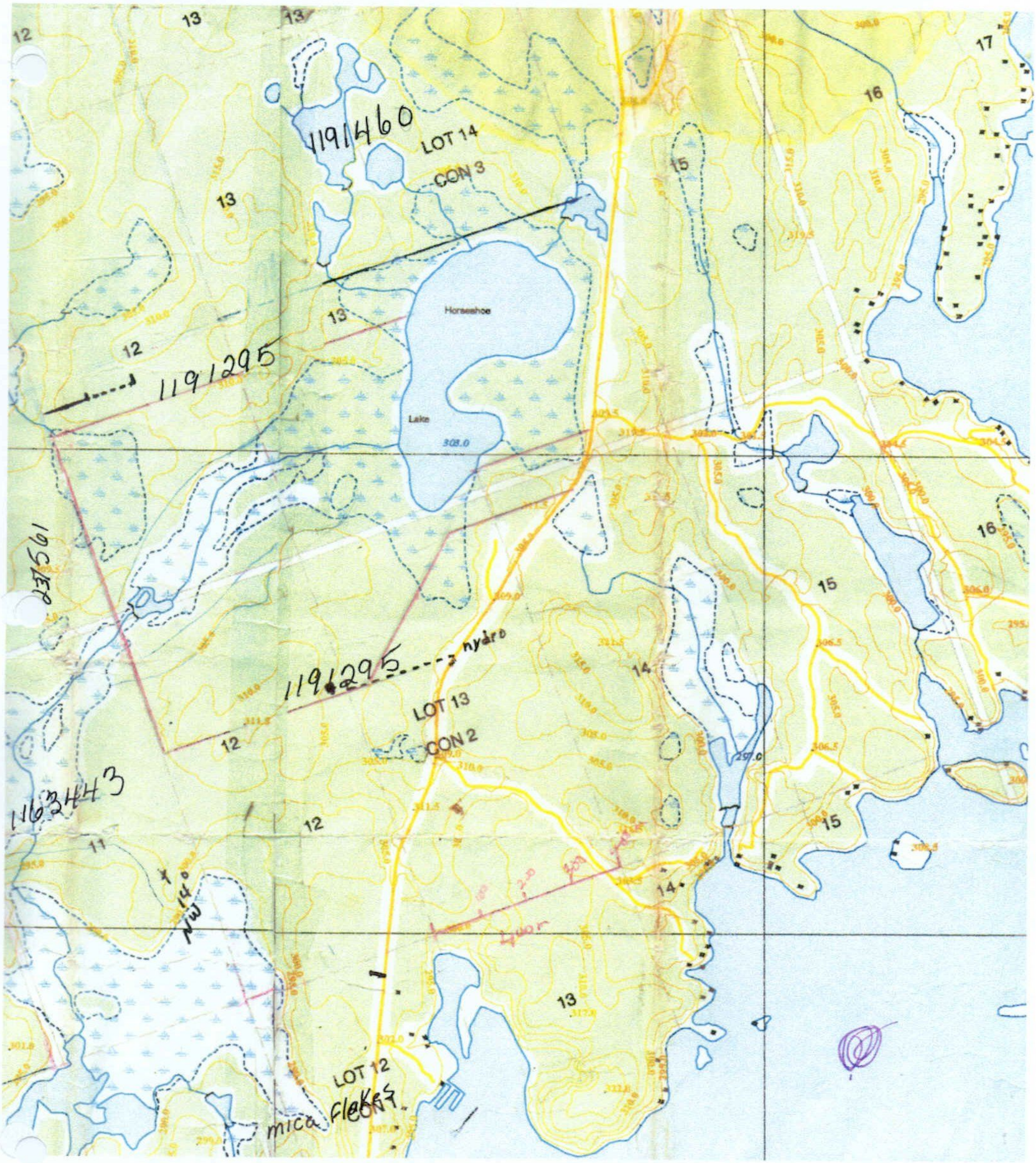

COMSTOCK
ISLAND
CATCHACOMA
LOT 17
CON 6
LOT 16
CON 5
LOT 15
CON 4
1077035

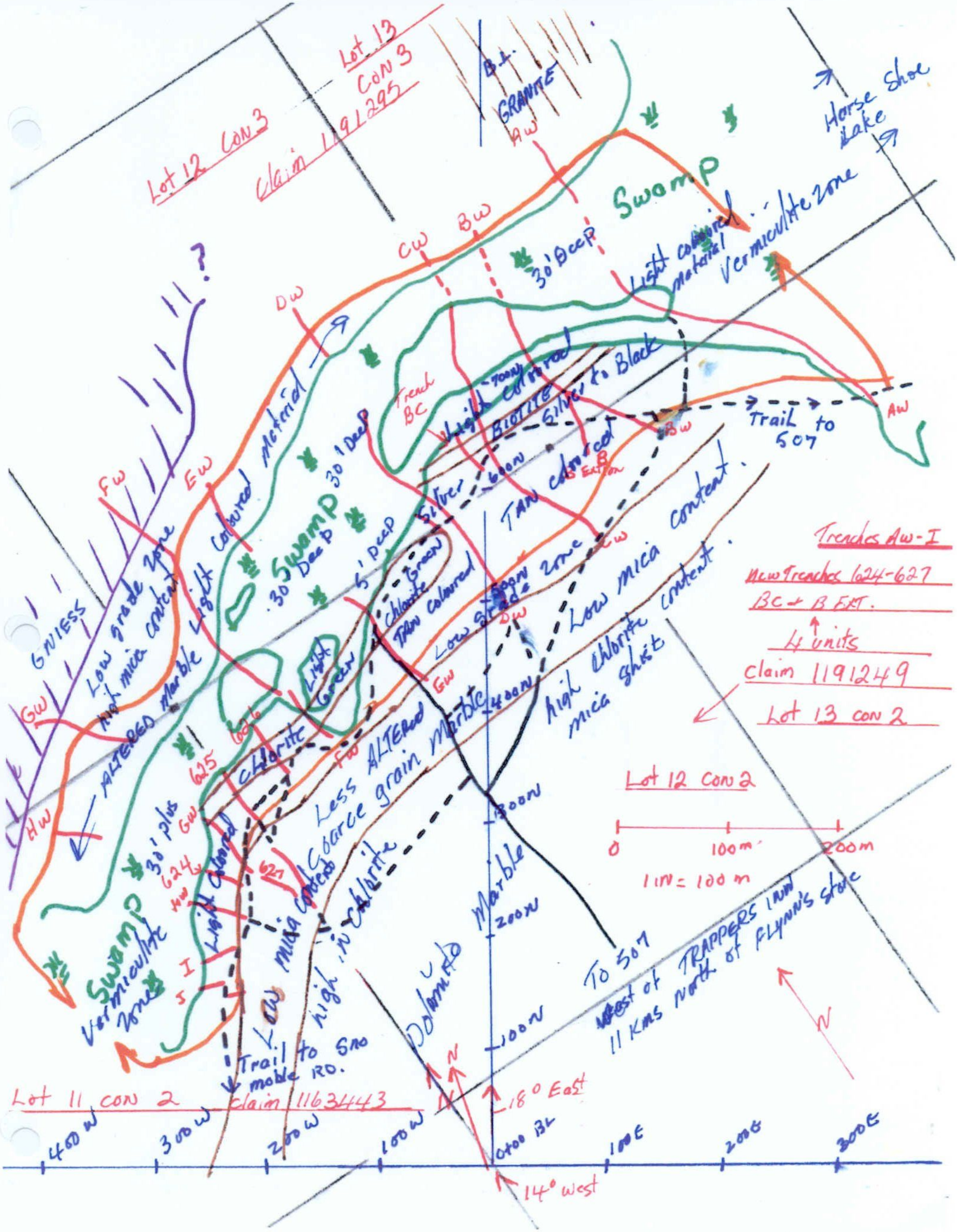
HAYWOOD
ISLAND
COMSTOCK
ISLAND
EDDIS
ISLAND
MORROW
ISLAND
CATCHACOMA
298.5
Mississagua
Lake

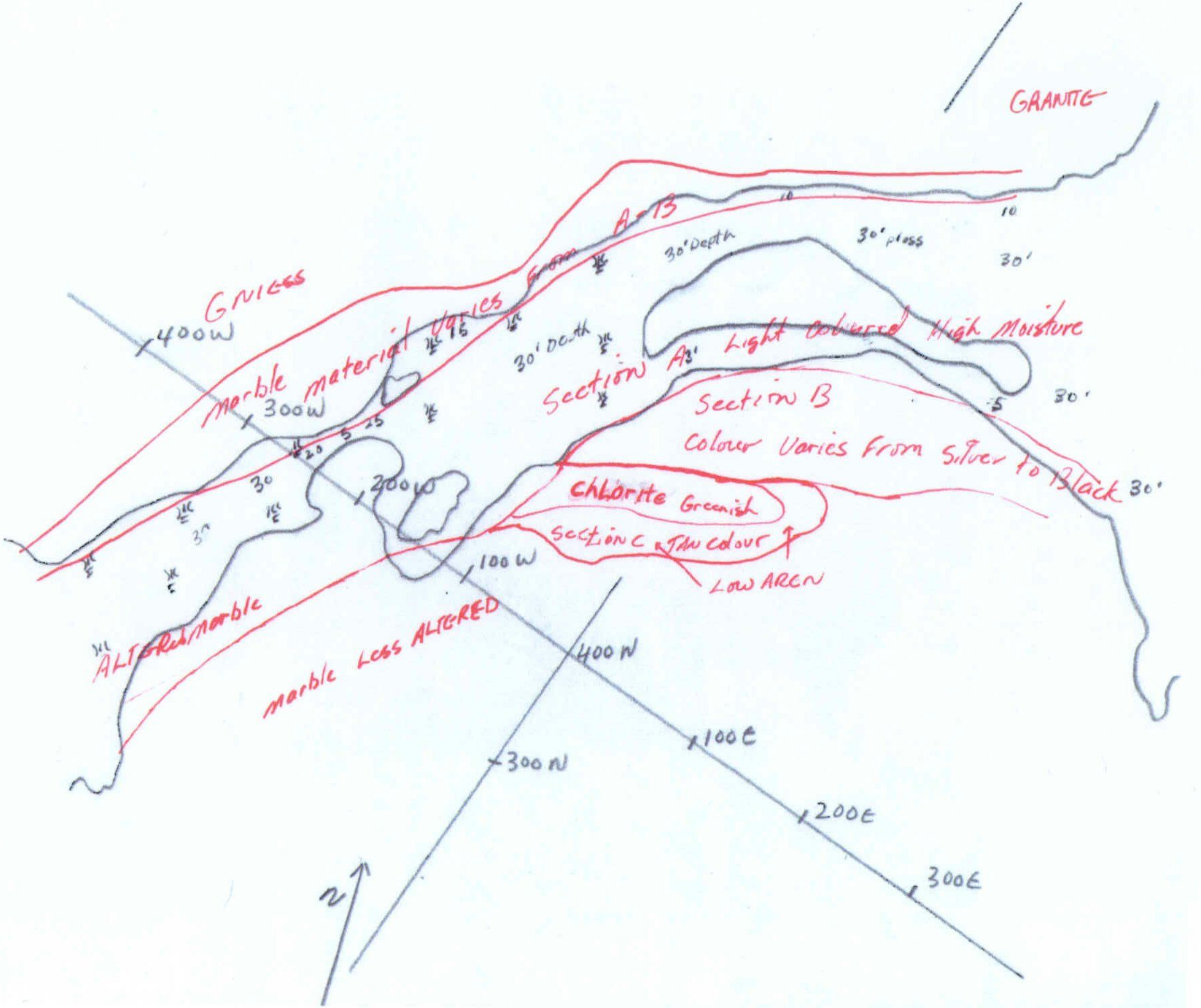

Beaver
Lake
Cavendish
Lake
GLADMAN
ISLAND
Catchacoma
Narrows
LOT 22
CON 3
LOT 24
CON 5

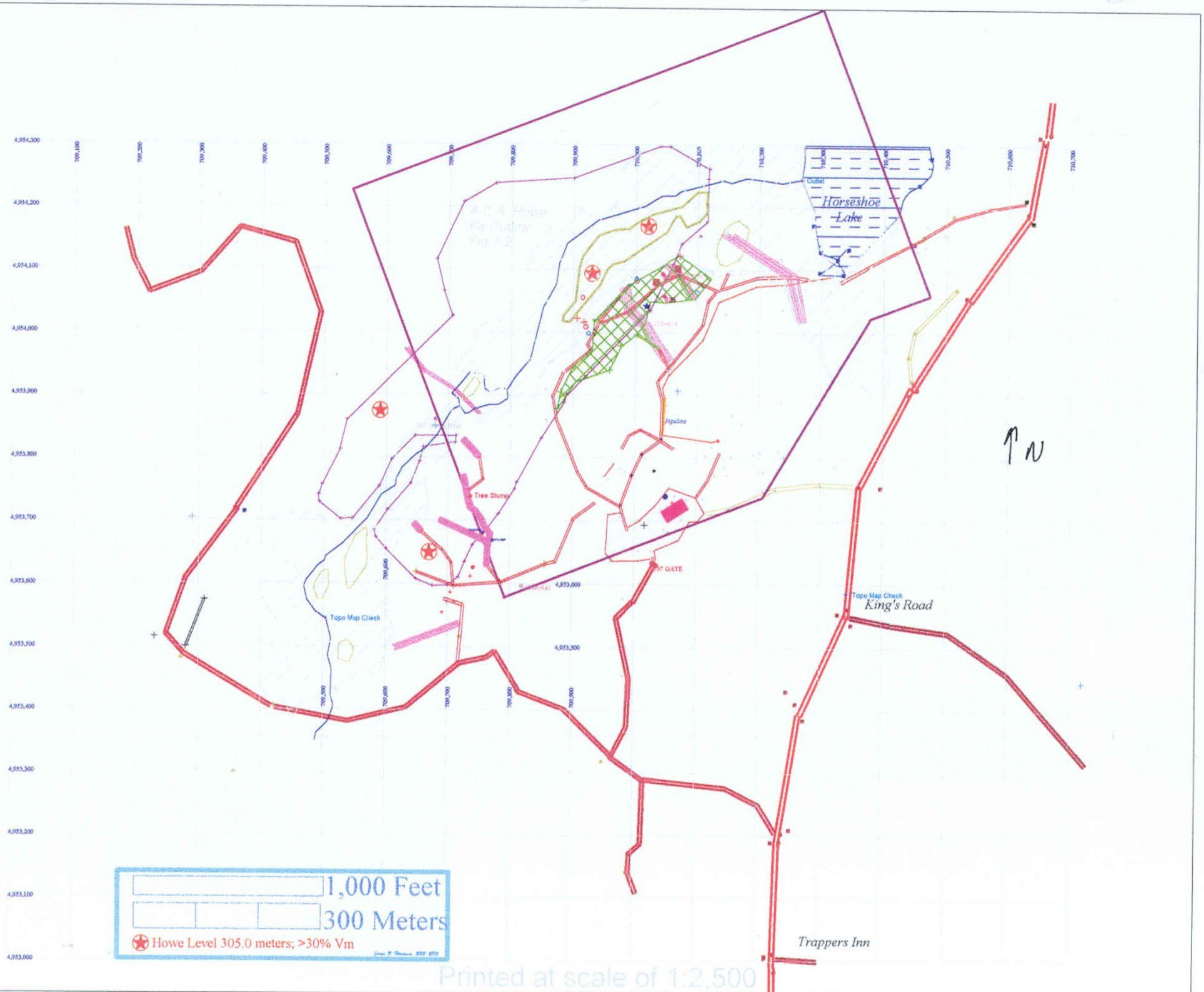
18 B

19 B


1191460
LOT 14
CON 3
Horseshoe
Lake
308.0
1191295
1191295
hydro
LOT 13
CON 2
1163443
NW 140
LOT 12
CON 1
mica flakes
400m


Lot 13
CON 3
Claim 1191295
Lot 12 CON 3
B.L.
GRANITE
AW
Horse Shoe Lake
Swamp
BW
CW
DW
EW
FW
GW
HW
30' Deep
Light coloured material
Vermiculite zone
Low grade zone
high mica content
Light coloured material
ALTERED Marble
GNIESS
Trench BC
Light coloured
BIOTITE
Silver to Black
TAN coloured
B Exton
Trail to 507
Green chlorite
TAN coloured
Light Green
Chlorite
Low grade zone
Low mica content.
high chlorite mica shist
Less ALTERED Coarce grain Marble
Low mica content
high in chlorite
Light coloured
30' plus
Swamp
Vermiculite Zone
Dolomite Marble
To 507
West of TRAPPERS INN
11 Kms north of FLYNN's store
Trenches Aw-I
New Trenches 624-627
BC + B EXT.
4 units
Claim 1191249
Lot 13 CON 2
Lot 12 CON 2
0
100m
200m
1IN = 100 m
N
Trail to Sno mobile RD.
Lot 11 CON 2
Claim 1163443
18° East
14° West
400W
300W
200W
100W
0+00 BL
100E
200E
300E
625
626
624
627
I
J


GRANITE
GNIESS
Marble material Varies from A-B
Section A' Light Coloured High Moisture
Section B
Colour Varies from Silver to Black
Chlorite Greenish
Section C TAN colour
LOW AREA
ALTERED marble
marble LESS ALTERED
30' Depth
30' Depth
30' plus
400W
300W
200W
100W
400W
300N
100E
200E
300E
N


Outlet
Horseshoe Lake
Pipeline
Tree Stump
GATE
Topo Map Check
Topo Map Check
King's Road
Trappers Inn
↑N
1,000 Feet
300 Meters
Howe Level 305.0 meters; >30% Vm
Printed at scale of 1:2,500

Page 23

Ore

triplea@sympatico.ca

Ore	Date Assayed	Weight % +3.350 mm	Weight % -3.35 mm + 1 mm	Weight % -1 mm +0.6 mm	Weight % -0.6 mm +0.212 mm	Weight % -0.212 mm	Weight % -1 mm +0.212 mm	Vermiculite Assays, % -1 mm +0.6 mm	Vermiculite Assays, % -0.6 mm +0.212 mm	Vermiculite Assays, % +0.212 mm	Vermiculite Assays, % -1 mm +0.212 mm
Type A	June 21	-	14.2	20.4	41.5	23.9	76.1	10.2	38.6	26.6	23.5
	June 11						74.5				26.5
Type B	June 21	16.9	8.7	9.3	37.3	27.9	72.1	19.2	48.4	44.6	34.0
	June 11						74.3				44.6
High Biotite B	June 21	19.2	13.2	11.9	37.0	18.7	81.3	41.0	67.3	60.0	53.8
	June 11						80.9				60.0
Type C	June 21	7.7	12.5	7.9	34.3	37.5	62.5	6.8	32.6	21.7	21.7
	June 11						58.1				21.7
Type D	June 21	42.9	14.2	7.1	17.3	18.5	81.5	5.0	18.3	14.0	14.0
	June 11						82.8				14.0
Bulk Sample	June 21	-	12.7	19.3	64.3	3.7	96.3	11.2	33.8	32.3	23.7
North Zone	June 23	3.6	25.0	22.7	38.7	10.0	90.0	64.1	49.6	53.9	46.3

Ore	Date Assayed	Vermiculite Distribution,% for Whole Ore -1 mm +0.6 mm	Vermiculite Distribution,% for Whole Ore -0.6 mm +0.212 mm	Vermiculite Distribution,% for -1 mm + 0.212 mm -1 mm +0.6 mm	Vermiculite Distribution,% for -1 mm + 0.212 mm -0.6 mm +0.212 mm	Bag Yields, mL/g of Ore -1 mm +0.6 mm	Bag Yields, mL/g of Ore -0.6 mm +0.212 mm	Bag Yields, mL/g of Ore -1 mm +0.212 mm	Bag Yields, mL/g of Vm Present -1 mm +0.6 mm	Bag Yields, mL/g of Vm Present -0.6 mm +0.212 mm	Bag Yields, mL/g of Vm Present -1 mm +0.212 mm
Type A	June 21	7.9	54.6	12.6	88.2	1.7	4.3	3.0	17.7	12.1	13.4
	June 11							3.2			13.0
Type B	June 21	4.0	40.4	7.3	73.3	3.0	5.0	4.0	16.3	11.6	12.9
	June 11							5.0			11.3
High Biotite B	June 21	7.2	36.7	13.1	66.5	4.7	7.3	6.0	12.2	12.3	12.3
	June 11							6.0			11.0
Type C	June 21	2.4	51.5	4.5	94.0	1.8	2.9	2.4	29.6	9.9	12.5
	June 11							2.5			12.9
Type D	June 21	2.6	22.6	6.7	58.7	1.3	2.4	2.0	27.0	14.2	15.6
	June 11							1.8			14.3
Bulk Sample	June 21	6.7	67.3	8.0	80.5	1.9	3.5	2.8	18.1	11.3	13.7
North Zone	June 23	28.5	52.0	35.4	64.6	7.7	5.9	6.5	13.1	13.1	13.1

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore A from pit - same as 6-28 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Distr V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	250.0	14.3%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	1055.0	60.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	447.0	25.5%											
Totals		1752.0	100.0%											
Direct Assay														
+70 calc		1305.0	74.5%											
70 direct assay:				238.0	220.9	22.6%	0.76	3.2	25.6	58.6	162.3	26.5%		

Bulk Sample: 0.5 mm 85.7%
0.25 mm 85.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 9

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Ore B from pit - same as 6-29 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	2420.0	16.9%											
10	2.000													
12	1.700													
18	1.000	1810.0	12.6%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	6400.0	44.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	3680.0	25.7%											
Totals		14310.0	100.0%											
Direct Assay														
+70 calc		10630.0	74.3%											
70 direct assay:				323.4	292.8	21.3%	1.63	5.0	40.4	144.8	179.8	44.6%		

Bulk Sample: 0.5 mm 70.4%
+0.25 mm 70.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 10

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

Page 26

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore B with high Biotite from pit - same as 6-30 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Distr. Vm
O'Size (3 mesh)	6.700	1445.5	19.2%											
6	3.350													
10	2.000													
12	1.700													
18	1.000	1010.6	13.4%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	3640.6	48.3%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	1436.7	19.1%											
Totals		7533.4	100.0%											
Direct Assay														
+70 calc		6096.7	80.9%											
70 direct assay:				466.7	418.1	10.4%	2.82	6.0	48.4	256.5	171.1	[illegible]		

Bulk Sample: +0.5 mm 67.4%
+0.25 mm 67.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 11

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

page 27

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore C from pit - same as 6-31 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOI (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Distr. V_m
O'Size (3 mesh)	6.700	73.0												
6	3.350	90.0	9.5%											
10	2.000													
12	1.700													
18	1.000	86.9	9.2%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	373.4	39.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	324.0	34.2%											
Totals		947.3	92.3%											
Direct Assay														
+70 calc		623.3	58.1%											
70 direct assay:				373.4	333.3	36.2%	0.94	2.5	26.2	72.7	262.7	21.7%		

Bulk Sample: +0.5 mm 73.6%
+0.25 mm 73.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

* Possible Grade After Adjustment of LOE

Book 6 Sheet 12

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

28

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore D from pit (between C and D trenches) - same as 6-32 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade V_m (%)*	*Adj. Grade V_m (%)**	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	1904.8	43.1%											
10	2.000													
12	1.700													
18	1.000	713.8	16.1%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	1046.8	23.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	759.2	17.2%											
Totals		4424.6	100.0%											
Direct Assay														
+70 calc		3665.4	82.8%											
70 direct assay:				405.6	367.6	42.0%	0.74	1.8	14.6	51.6	317.0	14.0%		

Bulk Sample: <0.5 mm 40.8%
<0.25 mm 40.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 13

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

29

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore A from pit - same as 6-9 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n Vm
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	190.0	14.2%											
20	0.850													
25	0.710													
30	0.600	272.9	20.4%	272.9	260.2	33.2%	0.475	1.7	13.9	26.8	234.7	10.2%		11.5
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	555.5	41.5%	250.0	226.4	21.5%	1.07	4.3	34.3	88.2	140.2	38.6%		88.5
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	319.8	23.9%											
Totals		1338.2	100.0%	522.9	486.6	24.5%	1.55	3.0	23.7	115.0	374.9	23.5%		100.0
Direct Assay														
+70 calc		1018.4	76.1%	522.9	486.6	24.5%	1.55	3.0	23.7	115.0	374.9	23.5%		100.0
70 direct assay:														

Bulk Sample: +0.5 mm 65.4%
+0.25 mm 65.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 28

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

30

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore B from pit - same as 6-10 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	203.8	16.9%											
10	2.000													
12	1.700													
18	1.000	104.9	8.7%											
20	0.850													
25	0.710													
30	0.600	111.8	9.3%	226.2	212.8	24.0%	0.67	3.0	23.7	41.0	172.4	19.2%		[illegible]
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	449.3	37.3%	250.0	219.1	22.7%	1.24	5.0	39.7	106.8	114.0	48.4%		[illegible]
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	336.3	27.9%											
Totals		1206.1	100.0%	476.2	431.9	23.3%	1.91	4.0	32.1	147.8	286.4	34.0%		100.0
Direct Assay														
+70 calc		869.8	72.1%	476.2	431.9	23.3%	1.91	4.0	32.1	147.8	286.4	34.0%		100.0
70 direct assay:														

Bulk Sample: +0.5 mm 65.1%
+0.25 mm 65.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 29

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore B with high Biotite from pit - same as 6-11 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	238.0	19.2%											
10	2.000													
12	1.700													
18	1.000	164.1	13.2%											
20	0.850													
25	0.710													
30	0.600	147.1	11.9%	250.0	234.1	14.2%	1.18	4.7	37.8	96.4	138.3	41.1%		16.4
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	458.0	36.9%	250.0	223.5	15.0%	1.835	7.3	58.8	149.5	72.8	67.3%		83.6
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	232.4	18.7%											
Totals		1239.6	100.0%	500.0	457.6	14.7%	3.02	6.0	48.3	245.9	211.1	53.8%		100.0
Direct Assay														
+70 calc		1007.2	81.3%	500.0	457.6	14.7%	3.02	6.0	48.3	245.9	211.1	53.8%		100.0
70 direct assay:														

Bulk Sample: <0.5 mm 55.7%
<0.25 mm 55.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* Possible Grade After Adjustment of LOE

Book 6 Sheet 30

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore C from pit - same as 6-12 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700	83.5	7.7%											
6	3.350													
10	2.000													
12	1.700													
18	1.000	136.0	12.5%											
20	0.850													
25	0.710													
30	0.600	86.1	7.9%	179.9	161.2	62.8%	0.32	1.8	14.2	10.8	150.1	6.7%		4.5
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	372.3	34.3%	250.0	220.9	29.1%	0.72	2.9	23.1	72.5	150.0	32.6%		95.5
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	407.2	37.5%											
Totals		1085.1	100.0%	429.9	382.1	36.8%	1.04	2.4	19.4	83.3	300.1	21.7%		100.0
Direct Assay														
+70 calc		677.9	62.5%	429.9	382.1	36.8%	1.04	2.4	19.4	83.3	300.1	21.7%		100.0
70 direct assay:														

Bulk Sample: +0.5 mm 71.8%
+0.25 mm 71.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 31

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore D from pit (between C and D Trenches) - same as 6-13 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	698.4	43.0%											
10	2.000													
12	1.700													
18	1.000	230.4	14.2%											
20	0.850													
25	0.710													
30	0.600	115.1	7.1%	115.1	108.2	56.1%	0.146	1.3	10.2	5.4	102.8	5.0%		11.1
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	280.5	17.3%	250.0	230.6	32.0%	0.6	2.4	19.2	42.3	189.3	18.3%		88.9
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	299.8	18.5%											
Totals		1624.2	100.0%	365.1	338.8	36.0%	0.75	2.0	16.4	47.7	292.1	14.0%		100.0
Direct Assay														
+70 calc		1324.4	81.5%	365.1	338.8	36.0%	0.75	2.0	16.4	47.7	292.1	14.0%		100.0
70 direct assay:														

Bulk Sample:
<0.5 mm 35.7%
<0.25 mm 35.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 32

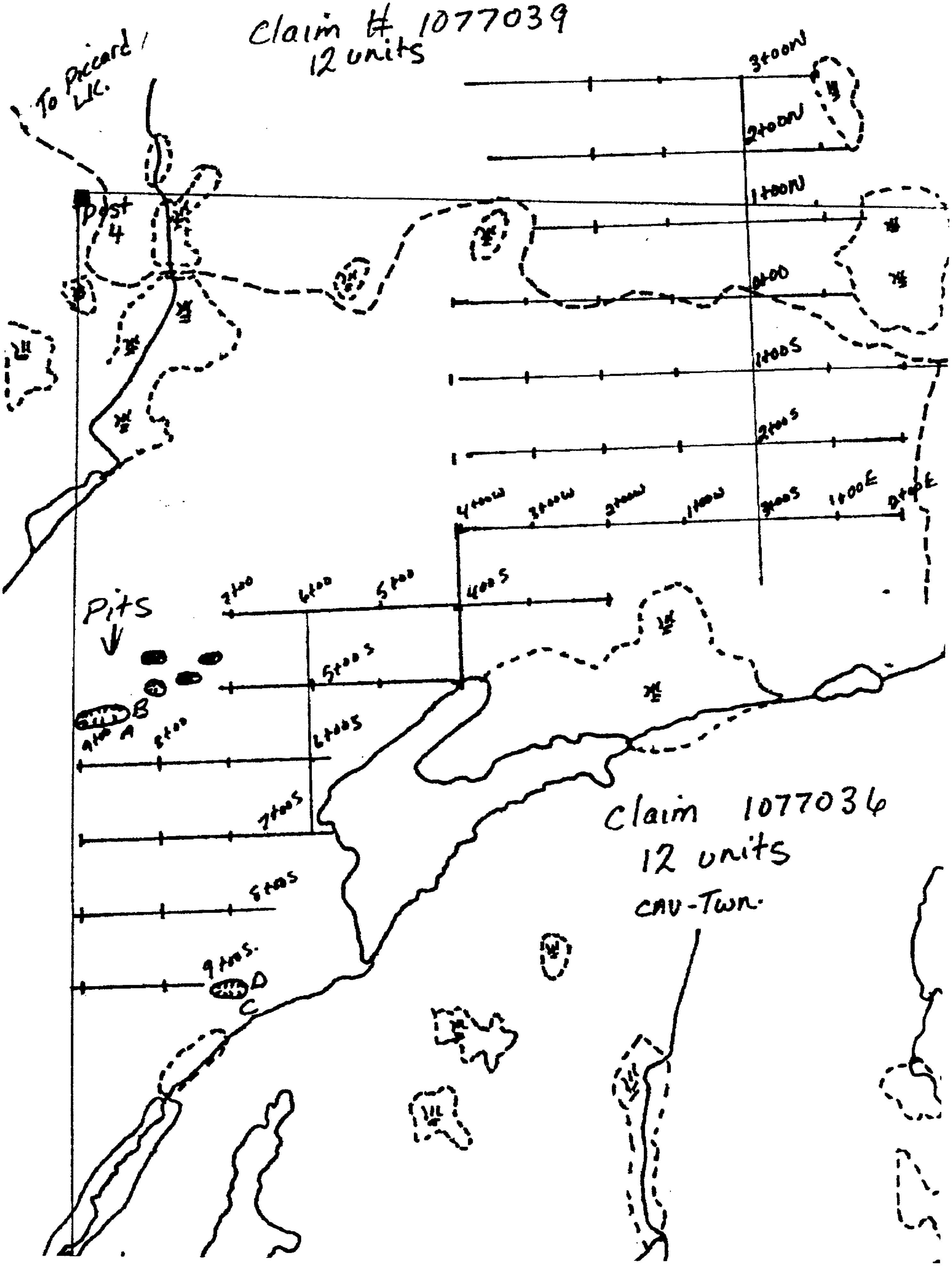
Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

34


12
13
14
15
16
17
11
10



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12 units
To Piccard Lk.
Post 4
3+00N
2+00N
1+00N
0+00
1+00S
2+00S
4+00W
3+00W
2+00W
1+00W
3+00S
1+00E
2+00E
Pits
7+00
6+00
5+00
4+00S
5+00S
6+00S
B
A
8+00
7+00S
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D
C
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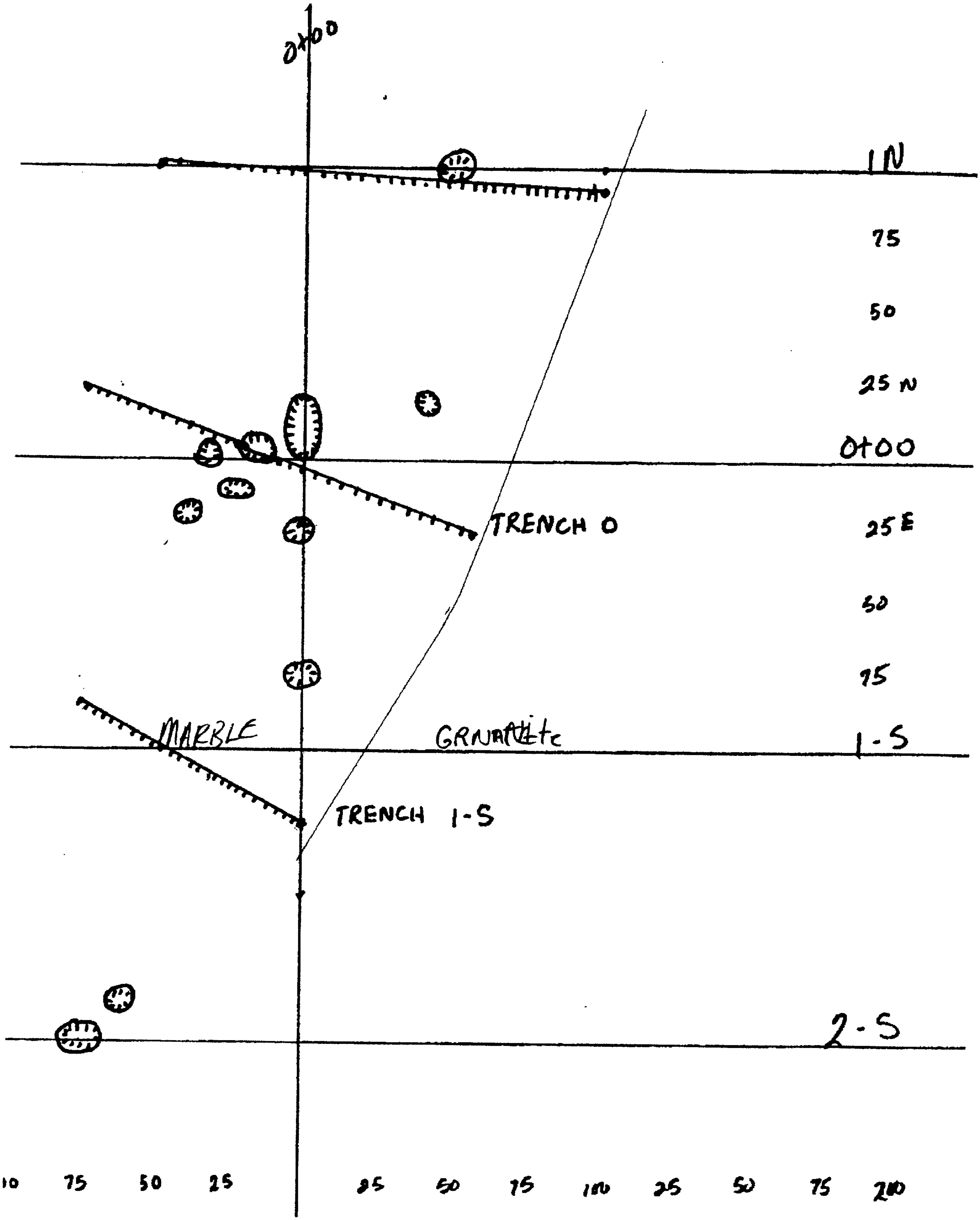
12 units
CAV-Twn.


0+00
1N
75
50
25 N
0+00
25 E
50
75
1-S
2-S
TRENCH 0
TRENCH 1-S
MARBLE
GRNAtite
10
75
50
25
25
50
75
100
25
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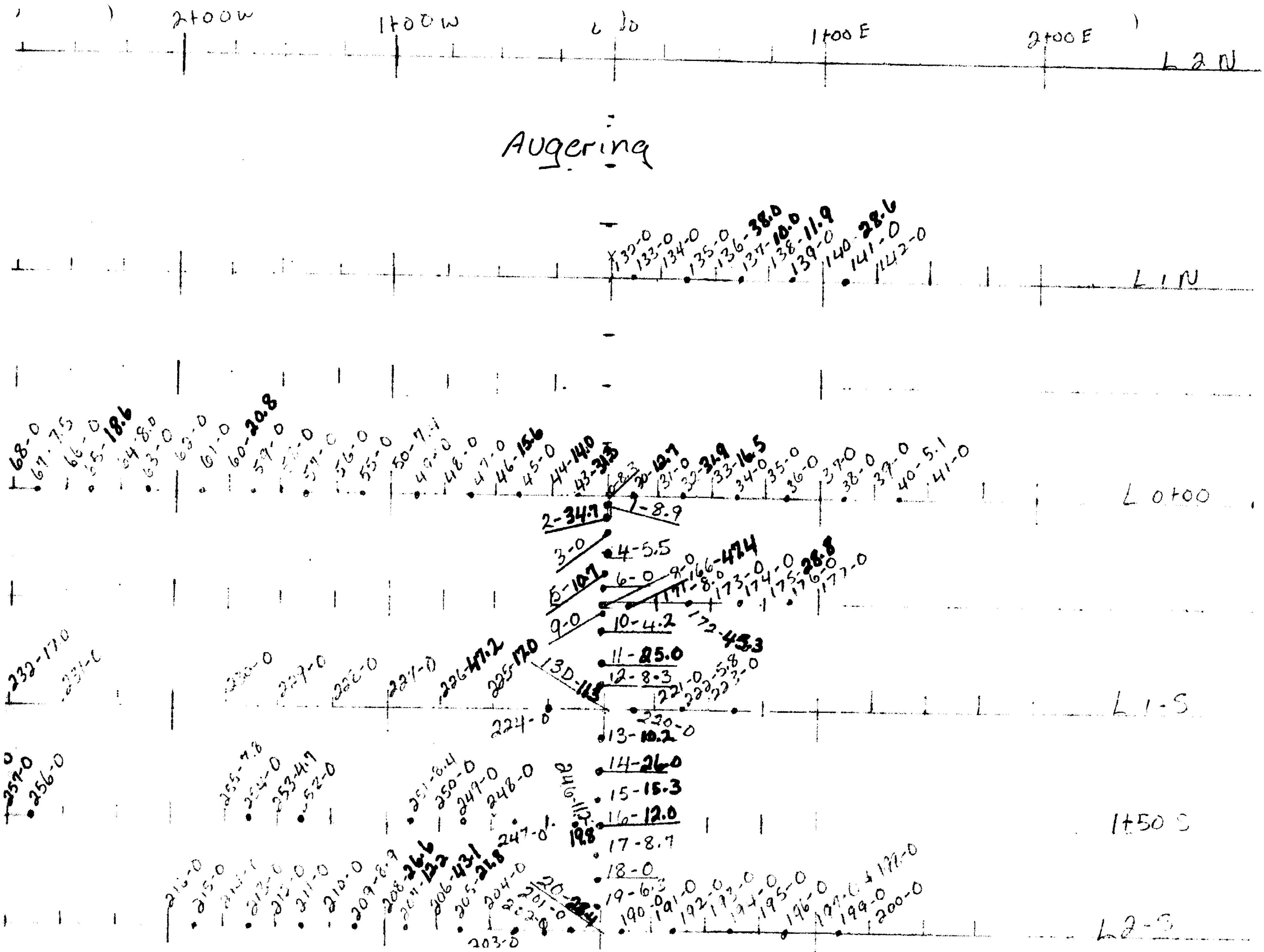
200


2+00W
1+00W
1+00E
2+00E
L2N
Augering
L1N
L0+00
L1S
1+50S
L2S

Trench 0

Sample #	Location	Vermiculite	Rock type
1[59956]	0 - 5 m.	8.5	gray marble
2[59957]	5 - 10m.	20.0	gray marble
3[59958]	10-15m.	8.4	gray-brown marble
4[59959]	15-20m.	5.2	gray-brown marble
5[59960]	20-25m.	20.0	foliated marble
6[59961]	25-30m.	8.3	amphiboite, well foliated
7[59962]	30-35m.	3.9	amphiboite , well foliated
8[59963]	35-40m.	2.7	blue-gray marble
9[59964]	40-45m.	11.2	weathered amphibiolite
10[59965]	45-50m.	5.4	light marble
11[59966]	55-60m.	6.0	light marble, narrow veins of high percent vermiculite
12[59967]	60-65 m.	14.0	light marble, narrow veins of high percent vermiculite
13[59968]	65-70m.	21.2	light marble, narrow veins of high percent vermiculite
14[59969]	70-75m.	9.0	light marble, narrow veins of high percent vermiculite
15[59970]	75-80m.	22.9	light marble, narrow veins of high percent vermiculite
16[59971]	80-85m.	3.8	blue gray marble
17[59972]	85-90m.	13.2	gray marble
18[59973]	90-95m.	13.4	light gray marble
19[59974]	95-100m.	3.5	light gray marble
20[59975]	100-105m.	10.0	light gray marble
21[59976]	105-110m.	10.5	light gray marble
22[59977]	110-115m.	10.4	light gray marble
23[59978]	115-120m.	5.5	light marble ,coarse grain
24[59979]	120-125m.	2.3	light marble, coarse grain very brittle
25[59980]	125-130m.	1.0	light marble, coarse grain very brittle

Ore

triplea@sympatico.ca

Ore	Date Assayed	Weight %						Vermiculite Assays, %			
		+3.350 mm	-3.35 mm + 1 mm	-1 mm +0.6 mm	-0.6 mm +0.212 mm	-0.212 mm	-1 mm +0.212 mm	-1 mm +0.6 mm	-0.6 mm +0.212 mm	+0.212 mm	-1 mm +0.212 mm
Type A	June 21	-	14.2	20.4	41.5	23.9	76.1	10.2	38.6	26.6	23.5
	June 11						74.5				26.5
Type B	June 21	16.9	8.7	9.3	37.3	27.9	72.1	19.2	48.4	44.6	34.0
	June 11						74.3				44.6
High Biotite B	June 21	19.2	13.2	11.9	37.0	18.7	81.3	41.0	67.3	60.0	53.8
	June 11						80.9				60.0
Type C	June 21	7.7	12.5	7.9	34.3	37.5	62.5	6.8	32.6	21.7	21.7
	June 11						58.1				21.7
Type D	June 21	42.9	14.2	7.1	17.3	18.5	81.5	5.0	18.3	14.0	14.0
	June 11						82.8				14.0
Bulk Sample	June 21	-	12.7	19.3	64.3	3.7	96.3	11.2	33.8	32.3	23.7
North Zone	June 23	3.6	25.0	22.7	38.7	10.0	90.0	64.1	49.6	53.9	46.3

Ore	Date Assayed	Vermiculite Distribution,%				Bag Yields, mL/g of Ore			Bag Yields, mL/g of Vm Present		
		for Whole Ore		for -1 mm + 0.212 mm							
		-1 mm +0.6 mm	-0.6 mm +0.212 mm	-1 mm +0.6 mm	-0.6 mm +0.212 mm	-1 mm +0.6 mm	-0.6 mm +0.212 mm	-1 mm +0.212 mm	-1 mm +0.6 mm	-0.6 mm +0.212 mm	-1 mm +0.212 mm
Type A	June 21	7.9	54.6	12.6	88.2	1.7	4.3	3.0	17.7	12.1	13.4
	June 11							3.2			13.0
Type B	June 21	4.0	40.4	7.3	73.3	3.0	5.0	4.0	16.3	11.6	12.9
	June 11							5.0			11.3
High Biotite B	June 21	7.2	36.7	13.1	66.5	4.7	7.3	6.0	12.2	12.3	12.3
	June 11							6.0			11.0
Type C	June 21	2.4	51.5	4.5	94.0	1.8	2.9	2.4	29.6	9.9	12.5
	June 11							2.5			12.9
Type D	June 21	2.6	22.6	6.7	58.7	1.3	2.4	2.0	27.0	14.2	15.6
	June 11							1.8			14.3
Bulk Sample	June 21	6.7	67.3	8.0	80.5	1.9	3.5	2.8	18.1	11.3	13.7
North Zone	June 23	28.5	52.0	35.4	64.6	7.7	5.9	6.5	13.1	13.1	13.1

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: **Date:**

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212													
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	#N/A													
Totals		0.0	0.0%	0.0	0.0		0.00	#DIV/0!	#DIV/0!	0.0	0.0	#DIV/0!		0.0
Direct Assay												0.0%		
+70 calc		0.0	0.0%	0.0	0.0		0.00	#DIV/0!	#DIV/0!	0.0	0.0	#DIV/0!		0.0
70 direct assay:														

Bulk Sample: <0.5 mm 0.0%
<0.25 mm 0.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: ---

*** Possible Grade After Adjustment of LOE**

			Book		Sheet	
Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan					
Exfoliated vermiculite colour is	white light tan brown gray black greenish					
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan					

ASTM Sieve	Size (mm)	Weight	*Dist'n*
O'Size (3 mesh)	6.700		
6	3.350	22.0	9.5
10	2.000	33.0	14.2
12	1.700	44.0	19.0
18	1.000	55.0	23.7
20	0.850	66.0	28.4
25	0.710		
30	0.600		
35	0.500		
40	0.425		
45	0.355		
50	0.300		
60	0.250		
70	0.212		
100	0.150		
140	0.104		
200	0.074		
325	0.045		
Pan	-0.85	12.0	5.2
Totals		232.0	100.0

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: 2nd Stage Middlings - 5:00 pm **Date:** 6/3/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n Vm
O'Size (3 mesh)	6.700												
6	3.350												
10	2.000												
12	1.700												
18	1.000												
20	0.850												
25	0.710	1.5	0.2%										
30	0.600	10.0	1.7%	23.0	17.4	34.4%	0.098	4.3	34.1	6.7	70.9%		4.4
35	0.500	32.6	5.4%	64.3						31.1	51.6%		10.5
40	0.425	37.8	6.3%	73.4						40.1	45.4%		10.7
45	0.355	47.7	7.9%	93.9						54.1	42.4%		12.6
50	0.300	98.6	16.3%	190.9						125.4	34.3%		21.1
60	0.250												
70	0.212	254.5	42.1%	250.0						186.1	25.6%		40.6
100	0.150												
140	0.104												
200	0.074												
325	0.045												
Pan	-0.212	121.5	20.1%										
Totals		604.2	100.0%	695.5	17.4					443.5	36.2%		100.0
Direct Assay				250.0						175.8	29.7%		
+70 calc		482.7	79.9%	695.5	17.4					443.5	36.2%		100.0
70 direct assay:													

Bulk Sample:

<0.5 mm	86.4%
<0.25 mm	62.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: —

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 77

Significant Organics in	o'size ... 18 20 25 30 35 ... 45 ... 70 100 ... 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	... 12 ... 20 25 30 35 ... 45 50 ... 70 ... 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Second Stage #4 Concentrate - Winnower 12, 2:30 pm **Date:** 6/8/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500	27.5	5.5%											
40	0.425	55.8	11.1%											
45	0.355	133.7	26.7%											
50	0.300	174.1	34.7%											
60	0.250	75.0	15.0%											
70	0.212	24.5	4.9%											
100	0.150	8.8	1.8%											
140	0.104													
200	0.074													
325	0.045													
Pan	-0.15	2.1	0.4%											
Totals		501.5	100.0%											
Direct Assay														
+70 calc		490.6	97.8%											
70 direct assay:														

Bulk Sample: <0.5 mm 83.4%
<0.25 mm 7.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: After Derrick rotation changed.

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 79A

Significant Organics in
Exfoliated vermiculite colour is white light tan brown grey black greenish
Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Second Stage #4 Concentrate - Winnower 9, 2:30 pm **Date:** 6/8/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500	25.9	5.1%											
40	0.425	49.9	9.9%											
45	0.355	107.9	21.4%											
50	0.300	164.0	32.5%											
60	0.250	96.9	19.2%											
70	0.212	39.4	7.8%											
100	0.150	16.5	3.3%											
140	0.104													
200	0.074													
325	0.045													
Pan	-0.15	3.6	0.7%											
Totals		504.1	100.0%											
Direct Assay														
+70 calc		484.0	96.0%											
70 direct assay:														

Bulk Sample:

	<0.5 mm	85.0%
	<0.25 mm	11.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: After Derrick rotation changed.

*** Possible Grade After Adjustment of LOE .**

Book 5 **Sheet** 80

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Second Stage #4 Concentrate - Winnower 12, 3:05 pm **Date:** 6/8/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade Vm (%)*	*Adj. Grade Vm (%)**	% Dist'n V_m
O'Size (3 mesh)	**6.700**													
6	**3.350**													
10	**2.000**													
12	**1.700**													
18	**1.000**													
20	**0.850**													
25	**0.710**													
30	**0.600**													
35	**0.500**	**30.5**	6.1%	**58.0**	**48.7**	33.8%	**0.5**	8.6	69.0	**10.0**	**30.5**	24.7%		2.2
40	**0.425**	**55.2**	11.0%	**111.0**	**92.3**	20.4%	**0.88**	7.9	63.5	**74.1**	**19.2**	79.4%		12.8
45	**0.355**	**132.0**	26.4%	**265.7**	**220.0**	21.5%	**1.81**	6.8	54.6	**166.6**	**53.4**	75.7%		29.3
50	**0.300**	**170.6**	34.1%	**344.7**	**287.2**	20.7%	**1.92**	5.6	44.6	**219.8**	**67.4**	76.5%		38.2
60	**0.250**	**74.9**	15.0%	**149.9**	**125.4**	23.2%	**0.8**	5.3	42.7	**82.4**	**44.3**	65.0%		14.3
70	**0.212**	**25.8**	5.2%	**50.3**	**42.0**	31.9%	**0.2**	4.0	31.8	**17.5**	**24.3**	41.9%		3.2
100	**0.150**	**10.4**	2.1%											
140	**0.104**													
200	**0.074**													
325	**0.045**													
Pan	**-0.15**	**1.3**	0.3%											
Totals		500.7	100.0%	979.6	815.6	22.1%	6.11	6.2	50.0	570.4	239.1	70.5%		100.0
Direct Assay														
+70 calc		489.0	97.7%	979.6	815.6	22.1%	6.11	6.2	50.0	570.4	239.1	70.5%		100.0
70 direct assay:														

Bulk Sample: <0.5 mm 82.9%
<0.25 mm 7.5%

Wet Weight: ***Dry Weight:*** ***Moisture:***

COMMENTS: From Winnower 9 screen fractions taken at 2:30 and 3:05 pm.

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 81

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore (Standard 1) from October, 2003 **Date:** 6/9/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700	145.4	14.6%											
18	1.000													
20	0.850													
25	0.710	187.5	18.8%											
30	0.600	55.8	5.6%											
35	0.500	70.9	7.1%											
40	0.425	66.4	6.6%											
45	0.355													
50	0.300	136.3	13.6%											
60	0.250													
70	0.212	134.1	13.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	202.3	20.3%											
Totals		998.7	100.0%											
Direct Assay														
+70 calc		796.4	79.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 47.3%
<0.25 mm 33.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* Possible Grade After Adjustment of LOE

Book 5 **Sheet** 82A

Significant Organics in o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is white light tan brown gray black greenish
Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Second Stage #4 Concentrate - Winnower 9, 3:05 pm **Date:** 6/8/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500	14.8	2.9%	40.7	35.7	15.0%	0.35	8.6	68.9	26.9	7.4	78.4%		3.4
40	0.425	35.5	7.0%	85.6	73.3	17.3%	0.7	8.2	65.5	48.4	14.6	76.8%		7.9
45	0.355	104.4	20.7%	212.3	178.9	19.2%	1.5	7.1	56.6	136.9	38.2	78.2%		23.7
50	0.300	173.4	34.3%	327.4	287.6	15.5%	1.86	5.7	45.5	217.7	70.2	75.6%		38.1
60	0.250	98.8	19.6%	195.7	167.5	19.4%	0.97	5.0	39.7	115.7	50.4	69.7%		20.0
70	0.212	46.6	9.2%	86.0	73.0	26.2%	0.3	3.5	27.9	37.1	36.4	50.5%		6.8
100	0.150	27.1	5.4%											
140	0.104													
200	0.074													
325	0.045													
Pan	-0.15	4.4	0.9%											
Totals		505.0	100.0%	947.7	816.0	18.0%	5.68	5.9	48.0	582.7	217.2	72.8%		100.0
Direct Assay														
+70 calc		473.5	93.8%	947.7	816.0	18.0%	5.68	5.9	48.0	582.7	217.2	72.8%		100.0
70 direct assay:														

Bulk Sample:
<0.5 mm 90.0%
<0.25 mm 15.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: From Winnower 9 screen fractions taken at 2:30 and 3:05 pm.

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*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 82

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Sweco Feed A **Date:** 6/9/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	0.3	0.0%											
20	0.850	1.3	0.1%											
25	0.710	23.0	2.3%											
30	0.600	45.6	4.6%											
35	0.500	95.5	9.6%											
40	0.425	103.8	10.4%											
45	0.355	103.5	10.4%											
50	0.300	131.9	13.2%											
60	0.250	127.9	12.8%											
70	0.212	113.3	11.3%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	252.4	25.3%											
Totals		998.5	100.0%											
Direct Assay														
+70 calc		746.1	74.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 73.0%
<0.25 mm 36.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rotapped for 2 minutes. For the -1 mm + 0.212 mm material, 50.2% is coarser than 0.355 mm (#45).

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet 83**

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Sweco Feed B **Date:** 6/9/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850	1.1	0.1%											
25	0.710	24.3	2.4%											
30	0.600	51.9	5.2%											
35	0.500	107.7	10.8%											
40	0.425	109.1	10.9%											
45	0.355	107.6	10.8%											
50	0.300	142.2	14.3%											
60	0.250	125.4	12.6%											
70	0.212	102.8	10.3%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	225.6	22.6%											
Totals		997.7	100.0%											
Direct Assay														
+70 calc		772.1	77.4%											
70 direct assay:														

Bulk Sample:
<0.5 mm 70.5%
<0.25 mm 32.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rotapped for 2 minutes. For the -1 mm + 0.212 mm material, 52% is coarser than 0.355 mm (#45).

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 84

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: 2nd Stage Winnower Feed - #4s **Date:** 6/9/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710	8.4	1.4%											
30	0.600	32.9	5.5%											
35	0.500	106.2	17.7%											
40	0.425	89.6	14.9%											
45	0.355	94.9	15.8%											
50	0.300	112.5	18.8%											
60	0.250													
70	0.212	122.1	20.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	32.8	5.5%											
Totals		599.4	100.0%											
Direct Assay														
+70 calc		566.6	94.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 60.4%
<0.25 mm 25.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

* Possible Grade After Adjustment of LOE

Book 5 **Sheet** 85

Significant Organics in o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: 2nd Stage Winnower Feed - #4s **Date:** 6/9/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710	0.1	0.0%											
30	0.600	0.1	0.0%											
35	0.500	0.4	0.1%											
40	0.425	0.7	0.1%											
45	0.355	1.6	0.3%											
50	0.300	48.8	8.1%											
60	0.250	207.5	34.5%											
70	0.212	143.5	23.9%											
100	0.150	12.6	2.1%											
140	0.104													
200	0.074													
325	0.045													
Pan	-0.15	185.5	30.9%											
Totals		600.8	100.0%											
Direct Assay														
+70 calc		402.7	67.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 99.8%
<0.25 mm 56.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

* **Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 86

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 7 Feed (after Sweco 1 screen changed (#3s run) **Date:** 6/10/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.1	0.0%											
35	0.500	0.5	0.1%											
40	0.425	0.6	0.1%											
45	0.355	14.3	2.4%											
50	0.300	168.7	28.1%											
60	0.250	197.8	33.0%											
70	0.212	126.0	21.0%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	92.2	15.4%											
Totals		600.2	100.0%											
Direct Assay														
+70 calc		508.0	84.6%											
70 direct assay:														

Bulk Sample: <0.5 mm 99.8%
<0.25 mm 36.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

* Possible Grade After Adjustment of LOE

Book 5 **Sheet** 87

Significant Organics in o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: 2nd Stage Winnower Feed #4s - #3s run **Date:** 6/10/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	0.9	0.1%											
10	2.000	1.4	0.2%											
12	1.700	0.7	0.1%											
18	1.000	14.3	2.3%											
20	0.850	28.6	4.7%											
25	0.710	102.2	16.8%											
30	0.600	95.9	15.7%											
35	0.500	138.4	22.7%											
40	0.425	85.4	14.0%											
45	0.355	73.8	12.1%											
50	0.300	46.6	7.6%											
60	0.250	9.3	1.5%											
70	0.212	10.1	1.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	1.7	0.3%											
Totals		609.3	100.0%											
Direct Assay														
+70 calc		607.6	99.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 23.2%
<0.25 mm 1.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 88

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: 2nd Stage Winnower Feed #4s - #3s run **Date:** 6/10/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n Vm
O'Size (3 mesh)	6.700													
6	3.350	0.9	0.1%											
10	2.000	1.4	0.2%											
12	1.700	0.7	0.1%											
18	1.000	14.3	2.3%											
20	0.850	28.6	4.7%											
25	0.710	102.2	16.8%											
30	0.600	95.9	15.7%											
35	0.500	138.4	22.7%											
40	0.425	85.4	14.0%											
45	0.355	73.8	12.1%											
50	0.300	46.6	7.6%											
60	0.250	9.3	1.5%											
70	0.212	10.1	1.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	1.7	0.3%											
Totals		609.3	100.0%											
Direct Assay														
+70 calc		607.6	99.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 23.2%
<0.25 mm 1.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

* Possible Grade After Adjustment of LOE

Book 5 **Sheet** 88

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Product - 15 tph **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n Vm
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	129.1	13.0%											
20	0.850	39.7	4.0%											
25	0.710													
30	0.600													
35	0.500	292.6	29.4%											
40	0.425													
45	0.355													
50	0.300	364.7	36.6%											
60	0.250													
70	0.212	140.1	14.1%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	30.1	3.0%											
Totals		996.3	100.0%											
Direct Assay														
+70 calc		966.2	97.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 53.7%
<0.25 mm 17.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: ~185 F out of dryer.

* **Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 89

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 5 Feed - no screen change (#3s run) **Date:** 6/10/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	0.4	0.1%											
10	2.000	2.5	0.4%											
12	1.700	1.4	0.2%											
18	1.000	35.1	5.8%											
20	0.850	42.4	7.0%											
25	0.710	100.1	16.5%											
30	0.600	71.8	11.8%											
35	0.500	100.7	16.6%											
40	0.425	88.3	14.6%											
45	0.355	98.4	16.2%											
50	0.300	49.6	8.2%											
60	0.250	11.4	1.9%											
70	0.212	1.8	0.3%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	2.8	0.5%											
Totals		606.7	100.0%											
Direct Assay														
+70 calc		603.9	99.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 27.0%
<0.25 mm 0.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: ~185 F out of dryer.

* **Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 91

Significant Organics in
Exfoliated vermiculite colour is
Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 8 Feed - after screen change (#3s run) **Date:** 6/10/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	0.5	0.1%											
10	2.000	1.0	0.2%											
12	1.700	0.7	0.1%											
18	1.000	47.5	8.0%											
20	0.850	83.1	14.0%											
25	0.710	179.9	30.3%											
30	0.600	114.9	19.3%											
35	0.500	59.5	10.0%											
40	0.425	42.9	7.2%											
45	0.355	40.3	6.8%											
50	0.300	19.2	3.2%											
60	0.250													
70	0.212	2.4	0.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	2.8	0.5%											
Totals		594.7	100.0%											
Direct Assay														
+70 calc		591.9	99.5%											
70 direct assay:														

Bulk Sample:

<0.5 mm	10.9%
<0.25 mm	0.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: ~185 F out of dryer.

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 92

Significant Organics in

Exfoliated vermiculite colour is white light tan brown grey black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Second Stage Middlings (from Bin 3 Run) **Date:** 6/10/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	0.6	0.1%											
10	2.000	1.4	0.2%											
12	1.700	0.8	0.1%											
18	1.000	15.8	2.7%											
20	0.850	22.1	3.7%											
25	0.710	66.7	11.2%											
30	0.600	75.2	12.6%											
35	0.500	87.9	14.7%	-18 + 40:										
40	0.425	58.3	9.8%	328.0	297.8	29.8%	1	3.0	24.4	74.9	226.8	24.8%		53.2
45	0.355	45.0	7.5%											
50	0.300	56.2	9.4%											
60	0.250	93.6	15.7%	-40 + 70:										
70	0.212	49.4	8.3%	244.3	223.0	27.2%	0.69	2.8	22.6	57.5	166.0	25.7%		46.8
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	23.1	3.9%											
Totals		596.1	100.0%	572.3	520.8	28.7%	1.69	3.0	23.7	132.4	392.8	25.2%		100.0
Direct Assay														
+70 calc		573.0	96.1%	572.3	520.8	28.7%	1.69	3.0	23.7	132.4	392.8	25.2%		100.0
70 direct assay:														

Bulk Sample:

<0.5 mm	44.8%
<0.25 mm	12.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* Possible Grade After Adjustment of LOE

Book 5 **Sheet** 93

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Product - 15 tph **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	129.1	13.0%											
20	0.850	39.7	4.0%											
25	0.710													
30	0.600	166.9	16.8%	345.3	333.1	3.5%	0.63	1.8	14.6					
35	0.500	128.2	12.9%	248.9	236.6	4.9%	0.66	2.7	21.2					
40	0.425													
45	0.355	233.0	23.5%	468.2	434.4	7.2%	1.7	3.6	29.1					
50	0.300	122.6	12.3%	243.9	222.2	8.9%	0.92	3.8	30.2					
60	0.250													
70	0.212	143.6	14.5%	272.0	246.0	9.6%	1.01	3.7	29.7					
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	30.1	3.0%											
Totals		993.2	100.0%	1578.3	1472.3	6.7%	4.92	3.1	25.0					
Direct Assay														
+70 calc		963.1	97.0%	1578.3	1472.3	6.7%	4.92	3.1	25.0					
70 direct assay:														

Bulk Sample: <0.5 mm 53.3%
<0.25 mm 17.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Bag yields using the muffle furnace with 15 grams and 1600 F:

-35 + 45:	13.1	42	2.8
-45 + 50:	12.7	48	3.2
-50 + 70:	12.7	47	3.1

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 94

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Feed - 15 tph **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V'm (%)	Adj. Grade V'm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	162.8	16.3%											
20	0.850	51.8	5.2%											
25	0.710													
30	0.600	142.1	14.2%	284.7	277.2	2.6%	0.62	2.2	17.4					
35	0.500	101.5	10.1%	204.3	195.2	4.5%	0.69	3.4	27.1					
40	0.425													
45	0.355	218.5	21.8%	224.6	207.7	7.5%	1.005	4.5	35.8					
50	0.300	123.1	12.3%	249.8	227.7	8.8%	1.365	5.5	43.8					
60	0.250													
70	0.212	146.9	14.7%	293.7	258.3	12.1%	1.205	4.1	32.9					
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	53.4	5.3%											
Totals		1000.1	100.0%					4.0						
Direct Assay														
+70 calc		946.7	94.7%	1257.1	1166.1	-92.8%	4.89	4.0	31.1					
70 direct assay:				600.4	555.8	20.1%	2.47	4.1	32.9	180.8	378.7	32.3%		

Bulk Sample: <0.5 mm 54.2%
<0.25 mm 20.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Air dried.

* **Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 95

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 Concentrate - 1st pass of #3s through Swecos & Winnowers **Date:** 6/10/04

ASTM	Size	Total	Dist'n	Assay	After Exfoliation			Bag Yield		V_m	Rock	Grade	Adj. Grade	% Dist'n
Sieve	(mm)	Wt (gm)	Wt (%)	Wt (gm)	Wt (gm)	LOE (%)	Vol (L)	(mL/gm)	Bags/ton	Wt (gm)	Wt (gm)	V_m (%)	V_m (%)*	V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	11.0	2.2%											
35	0.500	199.0	39.6%											
40	0.425	208.9	41.6%											
45	0.355	68.6	13.7%											
50	0.300	12.4	2.5%											
60	0.250	0.9	0.2%											
70	0.212	0.2	0.0%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	1.2	0.2%											
Totals		502.2	100.0%											
Direct Assay														
+70 calc		501.0	99.8%											
70 direct assay:														

Bulk Sample: <0.5 mm 16.6%
<0.25 mm 0.3%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 96

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: #5 Concentrate, with 48 mesh, screened on the portable screen **Date:** 6/14/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.8	0.1%											
35	0.500	0.8	0.1%											
40	0.425	1.0	0.2%											
45	0.355	39.5	6.5%											
50	0.300	240.8	39.8%											
60	0.250	192.9	31.9%											
70	0.212	87.5	14.5%											
100	0.150	35.5	5.9%											
140	0.104	4.4	0.7%											
200	0.074													
325	0.045													
Pan	-0.104	1.1	0.2%											
Totals		604.3	100.0%											
Direct Assay														
+70 calc		563.3	93.2%											
70 direct assay:				250.0	217.4	19.9%	1.185	4.7	38.0	132.0	85.9	60.6%		

Bulk Sample: <0.5 mm 99.6%
<0.25 mm 21.3%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

* Possible Grade After Adjustment of LOE

Book 5 Sheet 97

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: #5 Concentrate, before screening on the portable screen **Date:** 6/14/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710	0.5	0.1%											
30	0.600	0.7	0.1%											
35	0.500	1.4	0.2%											
40	0.425	23.4	3.9%											
45	0.355	117.1	19.5%											
50	0.300	206.6	34.3%											
60	0.250	138.3	23.0%											
70	0.212	80.8	13.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	33.0	5.5%											
Totals		601.8	100.0%											
Direct Assay														
+70 calc		568.8	94.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 95.7%
<0.25 mm 18.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 5 **Sheet** 98

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: **#5 Concentrate, -48 +65 on the portable screen** **Date:** 6/14/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425	6.4	1.0%											
45	0.355	149.2	23.6%											
50	0.300	243.2	38.4%											
60	0.250	147.4	23.3%											
70	0.212	48.8	7.7%											
100	0.150	34.4	5.4%											
140	0.104	2.7	0.4%											
200	0.074													
325	0.045													
Pan	-0.104	0.8	0.1%											
Totals		632.9	100.0%											
Direct Assay														
+70 calc		595.0	94.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 99.0%
<0.25 mm 13.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* **Possible Grade After Adjustment of LOE**

Book **5** **Sheet** **99**

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 5 **Date:** 6/14/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade Vm (%)*	*Adj. Grade Vm (%)**	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425	32.4	5.3%											
45	0.355	117.3	19.4%											
50	0.300	186.9	30.8%											
60	0.250	155.6	25.7%											
70	0.212	75.1	12.4%											
100	0.150	32.1	5.3%											
140	0.104	5.1	0.8%											
200	0.074													
325	0.045													
Pan	-0.104	1.4	0.2%											
Totals		605.9	100.0%											
Direct Assay														
+70 calc		567.3	93.6%											
70 direct assay:														

Bulk Sample: <0.5 mm 94.7%
<0.25 mm 18.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book **5** **Sheet** **100**

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 **Date:** 6/14/04

ASTM Sieve	**Size (mm)**	**Total Wt (gm)**	*Dist'n Wt (%)*	**Assay Wt (gm)**	After Exfoliation **Wt (gm)**	LOE (%)	**Vol (L)**	Bag Yield (mL/gm)	Bags/ton	**V_m Wt (gm)**	**Rock Wt (gm)**	*Grade Vm (%)*	*Adj. Grade Vm (%)**	% Dist'n V_m
O'Size (3 mesh)	**6.700**													
6	**3.350**													
10	**2.000**													
12	**1.700**													
18	**1.000**													
20	**0.850**													
25	**0.710**													
30	**0.600**	**3.6**	0.7%											
35	**0.500**	**127.9**	25.5%											
40	**0.425**	**231.0**	46.0%											
45	**0.355**	**93.2**	18.6%											
50	**0.300**	**29.4**	5.9%											
60	**0.250**	**9.1**	1.8%											
70	**0.212**	**4.7**	0.9%											
100	**0.150**													
140	**0.104**													
200	**0.074**													
325	**0.045**													
Pan	**-0.212**	**2.9**	0.6%											
Totals		501.8	100.0%											
Direct Assay														
+70 calc		498.9	99.4%											
70 direct assay:														

Bulk Sample: <0.5 mm 27.8%
<0.25 mm 1.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 1

Significant Organics in	
Exfoliated vermiculite colour is	white gray greenish
Composite grains or excessive fines in	pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 5 -30 + 65 mesh (screened on the portable screen) **Date:** 6/15/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500	0.5	0.1%											
40	0.425	17.6	2.9%											
45	0.355	125.6	20.8%											
50	0.300	212.6	35.2%											
60	0.250	164.7	27.3%											
70	0.212	63.6	10.5%											
100	0.150	15.0	2.5%											
140	0.104	2.0	0.3%											
200	0.074													
325	0.045													
Pan	-0.104	2.0	0.3%											
Totals		603.6	100.0%											
Direct Assay														
+70 calc		584.6	96.9%											
70 direct assay:														

Bulk Sample:

<0.5 mm	97.0%
<0.25 mm	13.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 2

Significant Organics in o/size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

Exfoliated vermiculite colour is white light tan brown grey black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Sweco 1 Undersize (8:30 am) **Date:** 6/15/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355	0.5	0.1%											
50	0.300	0.6	0.1%											
60	0.250	0.9	0.1%											
70	0.212	15.0	1.8%											
100	0.150	356.5	42.8%											
140	0.104	181.5	21.8%											
200	0.074													
325	0.045													
Pan	-0.104	278.0	33.4%											
Totals		833.0	100.0%											
Direct Assay														
+70 calc		17.0	2.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 100.0% <0.25 mm 99.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

* Possible Grade After Adjustment of LOE

Book 6 Sheet 3

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 5 -24 + 65 mesh (screened on the portable screen) **Date:** 6/15/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.1	0.2%											
35	0.500	23.7	3.9%											
40	0.425	120.5	20.1%											
45	0.355	203.0	33.8%											
50	0.300	165.6	27.6%											
60	0.250	65.3	10.9%											
70	0.212	20.2	3.4%											
100	0.150	0.8	0.1%											
140	0.104													
200	0.074													
325	0.045													
Pan	-0.150	0.3	0.0%											
Totals		600.5	100.0%											
Direct Assay														
+70 calc		599.4	99.8%											
70 direct assay:														

Bulk Sample: <0.5 mm 75.8%
<0.25 mm 3.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 4

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Bins 4 and 5. in a ratio of 1:4. **Date:** 6/15/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade V_m (%)*	*Adj. Grade V_m (%)**	% Dist'n V_m
O'Size (3 mesh)	**6.700**													
6	**3.350**													
10	**2.000**													
12	**1.700**													
18	**1.000**													
20	**0.850**													
25	**0.710**													
30	**0.600**	**1.0**	0.1%											
35	**0.500**	**73.2**	4.4%											
40	**0.425**	**388.1**	23.2%											
45	**0.355**	**496.5**	29.7%											
50	**0.300**	**346.8**	20.8%											
60	**0.250**	**209.5**	12.5%											
70	**0.212**	**114.4**	6.8%											
100	**0.150**													
140	**0.104**													
200	**0.074**													
325	**0.045**													
Pan	**-0.212**	**41.5**	2.5%											
Totals		1671.0	100.0%											
Direct Assay														
+70 calc		1629.5	97.5%											
70 direct assay:				**500.0**	**435.9**	16.4%	**3.85**	7.7	61.7	**313.8**	**108.8**	74.3%		

Bulk Sample: <0.5 mm 72.3%
<0.25 mm 9.3%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rotapped each 800 gram portion for 4 minutes.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 5

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bins 3,4 and 5, in a ratio of 0.5:1:4. **Date:** 6/15/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	62.5	2.5%											
35	0.500	169.3	6.8%											
40	0.425	268.1	10.8%											
45	0.355	434.8	17.5%											
50	0.300	685.5	27.6%											
60	0.250	509.9	20.5%											
70	0.212	232.0	9.3%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	123.1	5.0%											
Totals		2485.2	100.0%											
Direct Assay														
+70 calc		2362.1	95.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 79.9%; <0.25 mm 14.3%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rotapped each 800 gram portion for 4 minutes.

*** Possible Grade After Adjustment of LOE**

Book 6 **6**

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bins 3,4 and 5, in a ratio of 0.5:1:6. **Date:** 6/15/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	99.6	2.6%											
35	0.500	465.0	12.0%											
40	0.425	631.7	16.2%											
45	0.355	726.5	18.7%											
50	0.300	889.8	22.9%											
60	0.250	603.8	15.5%											
70	0.212	291.4	7.5%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	180.0	4.6%											
Totals		3887.8	100.0%											
Direct Assay														
+70 calc		3707.8	95.4%											
70 direct assay:														

Bulk Sample: <0.5 mm 69.2%
<0.25 mm 12.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rotapped each 1000 gram portion for 4 minutes.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 7

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Concentrate Sweco Feed **Date:** 6/15/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.3	0.6%											
35	0.500	11.7	2.0%											
40	0.425	38.3	6.7%											
45	0.355	105.4	18.4%											
50	0.300	132.7	23.2%											
60	0.250	194.9	34.0%											
70	0.212	51.7	9.0%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	34.8	6.1%											
Totals		572.8	100.0%											
Direct Assay														
+70 calc		538.0	93.9%											
70 direct assay:														

Bulk Sample: <0.5 mm 90.7%
<0.25 mm 15.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

* Possible Grade After Adjustment of LOE

Book 6 Sheet 8

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore A from pit - same as 6-28 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	250.0	14.3%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	1055.0	60.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	447.0	25.5%											
Totals		1752.0	100.0%											
Direct Assay														
+70 calc		1305.0	74.5%											
70 direct assay:				238.0	220.9	22.6%	0.76	3.2	25.6	58.6	162.3	26.5%		

Bulk Sample: <0.5 mm 85.7%
<0.25 mm 85.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 9

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Ore B from pit - same as 6-29 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	2420.0	16.9%											
10	2.000													
12	1.700													
18	1.000	1810.0	12.6%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	6400.0	44.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	3680.0	25.7%											
Totals		14310.0	100.0%											
Direct Assay														
+70 calc		10630.0	74.3%											
70 direct assay:				323.4	292.8	21.3%	1.63	5.0	40.4	144.8	179.8	44.6%		

Bulk Sample: <0.5 mm 70.4%
<0.25 mm 70.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 10

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore B with high Biotite from pit - same as 6-30 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700	1445.5	19.2%											
6	3.350													
10	2.000													
12	1.700													
18	1.000	1010.6	13.4%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	3640.6	48.3%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	1436.7	19.1%											
Totals		7533.4	100.0%											
Direct Assay														
+70 calc		6096.7	80.9%											
70 direct assay:				466.7	418.1	16.4%	2.82	6.0	48.4	256.5	171.1	60.0%		

Bulk Sample:

<0.5 mm	67.4%
<0.25 mm	67.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 11

Significant Organics in	+size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Ore C from pit - same as 6-31 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700	73.0												
6	3.350	90.0	9.5%											
10	2.000													
12	1.700													
18	1.000	86.9	9.2%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	373.4	39.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	324.0	34.2%											
Totals		947.3	92.3%											
Direct Assay														
+70 calc		623.3	58.1%											
70 direct assay:				373.4	333.3	36.2%	0.94	2.5	20.2	72.7	262.7	21.7%		

Bulk Sample: <0.5 mm 73.6%
<0.25 mm 73.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

*** Possible Grade After Adjustment of LOE**

Book 6 Sheet 12

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Ore D from pit (between C and D trenches) - same as 6-32 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	1904.8	43.1%											
10	2.000													
12	1.700													
18	1.000	713.8	16.1%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	1046.8	23.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	759.2	17.2%											
Totals		4424.6	100.0%											
Direct Assay														
+70 calc		3665.4	82.8%											
70 direct assay:				405.6	367.6	42.9%	0.74	1.8	14.6	51.6	317.0	14.0%		

Bulk Sample:

<0.5 mm	40.8%
<0.25 mm	40.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 13

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Feed - 10 tph **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n Vm
O'Size (3 mesh)	6.700												
6	3.350												
10	2.000												
12	1.700												
18	1.000	153.4	16.7%										
20	0.850												
25	0.710												
30	0.600												
35	0.500												
40	0.425												
45	0.355												
50	0.300												
60	0.250												
70	0.212	732.0	79.9%										
100	0.150												
140	0.104												
200	0.074												
325	0.045												
Pan	-0.212	30.5	3.3%										
Totals		915.9	100.0%										
Direct Assay													
+70 calc		885.4	96.7%										
70 direct assay:				299.5	237.3	57.9%	1.105	3.7	29.6	192.0	35.9%		

Bulk Sample: <0.5 mm 83.3%
<0.25 mm 83.3%

Wet Weight: 997.5 *Dry Weight:* 918.7 *Moisture:* 7.9

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 14

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Feed - 5 tph **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700												
6	3.350												
10	2.000												
12	1.700												
18	1.000	186.1	17.1%										
20	0.850												
25	0.710												
30	0.600												
35	0.500												
40	0.425												
45	0.355												
50	0.300												
60	0.250												
70	0.212	868.9	79.9%										
100	0.150												
140	0.104												
200	0.074												
325	0.045												
Pan	-0.212	32.0	2.9%										
Totals		1087.0	100.0%										
Direct Assay													
+70 calc		1055.0	97.1%										
70 direct assay:				381.5	352.9	21.2%	1.38	3.6	29.0	246.5	35.4%		

Bulk Sample:

	<0.5 mm	82.9%
	<0.25 mm	82.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 15

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 3 Concentrate - running 2nd stage middlings **Date:** 6/16/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	1.0	0.2%											
20	0.850	0.8	0.2%											
25	0.710	55.4	11.2%											
30	0.600	210.7	42.7%											
35	0.500	155.8	31.6%											
40	0.425	38.6	7.8%											
45	0.355	10.7	2.2%											
50	0.300	5.5	1.1%											
60	0.250	5.6	1.1%											
70	0.212	4.3	0.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	5.2	1.1%											
Totals		493.6	100.0%											
Direct Assay														
+70 calc		488.4	98.9%											
70 direct assay:				255.0	216.6	17.2%	2.4	9.4	75.4	187.9	31.2	85.8%		

Bulk Sample:

<0.5 mm	6.3%
<0.25 mm	1.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: 4 minute rotap.D6

*** Possible Grade After Adjustment of LOE**

Book 6 Sheet 16

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 Concentrate - running 2nd stage middlings **Date:** 6/16/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500	2.8	0.6%											
40	0.425	163.0	35.2%											
45	0.355	187.1	40.4%											
50	0.300	73.4	15.9%											
60	0.250	27.4	5.9%											
70	0.212	6.8	1.5%											
100	0.150	1.4	0.3%											
140	0.104													
200	0.074													
325	0.045													
Pan	-0.150	1.0	0.2%											
Totals		462.9	100.0%											
Direct Assay														
+70 calc		460.5	99.5%											
70 direct assay:				264.8	228.1	16.0%	2.275	8.6	68.8	200.5	34.9	85.2%		

Bulk Sample:
<0.5 mm 64.2%
<0.25 mm 2.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: 4 minute rotap. By muffle furnace, 15 grams at 1600 F: Bag Yield = 4.6 mL/gram

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 17

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 5 Concentrate - running 2nd stage middlings **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500	0.7	0.2%											
40	0.425	16.7	3.8%											
45	0.355	58.5	13.3%											
50	0.300	125.9	28.7%											
60	0.250	128.7	29.3%											
70	0.212	64.3	14.6%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	44.6	10.2%											
Totals		439.4	100.0%											
Direct Assay														
+70 calc		394.8	89.8%											
70 direct assay:				303.7	259.6	19.8%	1.905	6.3	50.2	185.0	80.5	69.7%		

Bulk Sample: <0.5 mm 96.0%
<0.25 mm 24.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: 4 minute rotap. By muffle furnace, 15 grams at 1600 F: Bag Yield = 4.6 mL/gram

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 18

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 Concentrate 2:20 pm (after concentrate Sweco screen changed) **Date:** 6/17/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.7	0.3%											
35	0.500	9.1	1.8%											
40	0.425	28.3	5.6%	118.2	96.0	22.7%	0.9	7.6	61.0	78.4	20.3	79.4%	75.1%	6.3
45	0.355	96.9	19.3%	292.1	253.8	16.0%	2.19	7.5	60.0	200.9	52.2	79.4%		22.7
50	0.300	171.9	34.3%	343.0	291.2	19.6%	2.335	6.8	54.5	212.0	79.0	72.9%	70.0%	35.5
60	0.250	124.9	24.9%	252.7	220.9	17.3%	1.68	6.6	53.2	159.9	69.0	69.9%	68.2%	25.1
70	0.212	50.5	10.1%	149.2	125.8	20.4%	0.8	5.4	42.9	91.0	34.5	72.5%	69.3%	10.3
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	18.5	3.7%											
Totals		501.8	100.0%	1155.2	987.7	18.6%	7.91	6.8	54.8	742.2	255.0	74.4%	72.1%	100.0
Direct Assay														
+70 calc		483.3	96.3%	1155.2	987.7	18.6%	7.91	6.8	54.8	742.2	255.0	74.4%	72.1%	100.0
70 direct assay:				301.5	253.4	20.8%	1.9	6.3	50.5	188.5	70.7	72.7%	69.3%	

Bulk Sample: <0.5 mm 92.2%
<0.25 mm 13.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: —

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 20

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Product - 10 tph **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n Vm
O'Size (3 mesh)	6.700												
6	3.350												
10	2.000												
12	1.700												
18	1.000	305.0	30.2%										
20	0.850												
25	0.710												
30	0.600												
35	0.500												
40	0.425												
45	0.355												
50	0.300												
60	0.250												
70	0.212	664.8	65.9%										
100	0.150												
140	0.104												
200	0.074												
325	0.045												
Pan	-0.212	39.5	3.9%										
Totals		1009.3	100.0%										
Direct Assay													
+70 calc		969.8	96.1%										
70 direct assay:				316.0	293.6	20.5%	1.141	3.6	28.9	206.9	34.5%		

Bulk Sample: <0.5 mm 69.8%
<0.25 mm 69.8%

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bucket Elevator 3 - Halls Midsize **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	0.3	0.1%											
20	0.850	0.7	0.1%											
25	0.710	16.8	2.8%											
30	0.600	31.2	5.2%											
35	0.500	58.1	9.7%											
40	0.425	72.8	12.1%											
45	0.355	61.8	10.3%											
50	0.300	81.8	13.6%											
60	0.250	84.2	14.0%											
70	0.212	56.4	9.4%											
100	0.150	83.4	13.9%											
140	0.104	42.6	7.1%											
200	0.074													
325	0.045													
Pan	-0.104	9.9	1.7%											
Totals		600.0												
Direct Assay														
+70 calc														
70 direct assay:														

Bulk Sample: <0.5 mm 70.0%
<0.25 mm 32.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 21

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Small Winnower Concentrate - Vermiculite from back wall **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700	2.0	0.4%											
18	1.000	9.3	1.9%											
20	0.850	7.3	1.5%											
25	0.710	13.4	2.7%											
30	0.600	8.8	1.8%											
35	0.500	14.4	2.9%											
40	0.425	24.9	5.0%											
45	0.355	96.3	19.2%											
50	0.300	131.0	26.1%											
60	0.250	110.1	21.9%											
70	0.212	50.9	10.1%											
100	0.150	28.8	5.7%											
140	0.104	3.4	0.7%											
200	0.074													
325	0.045													
Pan	-0.104	1.1	0.2%											
Totals		501.7												
Direct Assay														
+70 calc														
70 direct assay:														

Bulk Sample:

	<0.5 mm	84.0%
	<0.25 mm	16.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 22

Significant Organics in	
Exfoliated vermiculite colour is	
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Small Winnower Concentrate - Rock from Conc pipe **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700	3.7	0.7%											
18	1.000	61.3	12.1%											
20	0.850	85.2	16.8%											
25	0.710	183.5	36.2%											
30	0.600	93.1	18.3%											
35	0.500	26.5	5.2%											
40	0.425	5.8	1.1%											
45	0.355													
50	0.300													
60	0.250													
70	0.212													
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.425	48.5	9.6%											
Totals		507.6												
Direct Assay														
+70 calc														
70 direct assay:														

Bulk Sample: <0.5 mm 9.6%
<0.25 mm 9.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 23

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 3 (screened on small screen - finer than 6-245 **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212													
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan														
Totals														
Direct Assay				250.0	207.0	19.3%	1.84	7.4	58.9	166.5	27.6	85.8%	83.1%	
+70 calc														
70 direct assay:														

Bulk Sample: <0.5 mm 0.0%
<0.25 mm 0.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 24

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 3 (screened on small screen - coarser than 6-24) **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212													
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan														
Totals														
Direct Assay				250.0	204.1	20.5%	2.03	8.1	65.0	177.1	26.3	87.1%	83.8%	
+70 calc														
70 direct assay:														

Bulk Sample:

<0.5 mm	0.0%
<0.25 mm	0.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 25

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 5 **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212													
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan														
Totals		0.0	0.0%	0.0	0.0		0.00							
Direct Assay				**250.0**	**213.2**	14.7%	**1.13**	4.5						
+70 calc		0.0	0.0%	0.0	0.0		0.00							
70 direct assay:														

Bulk Sample: <0.5 mm 0.0%
<0.25 mm 0.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 26

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Product - 15 tph from June 11 (6-94) **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	126.6	12.7%											
20	0.850													
25	0.710													
30	0.600	193.5	19.4%	193.5	185.5	28.1%	0.377	1.9	15.6	20.8	165.0	11.2%		9.1
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	643.3	64.3%	250.0	226.5	23.7%	0.87	3.5	27.9	77.0	150.7	33.8%		90.9
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	36.6	3.7%											
Totals		1000.0	100.0%	443.5	412.0	24.6%	1.25	3.1	22.5	97.8	315.7	23.7%		100.0
Direct Assay														
+70 calc		963.4	96.3%	443.5	412.0	24.6%	1.25	3.1	22.5	97.8	315.7	23.7%		100.0
70 direct assay:														

Bulk Sample: <0.5 mm 68.0%
<0.25 mm 68.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 27

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore A from pit - same as 6-9 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n BT (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	190.0	14.2%											
20	0.850													
25	0.710													
30	0.600	272.9	20.4%	272.9	260.2	33.2%	0.475	1.7	13.9	26.8	234.7	10.2%		11.5
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	555.5	41.5%	250.0	226.4	21.5%	1.07	4.3	34.3	88.2	140.2	38.6%		88.5
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	319.8	23.9%											
Totals		1338.2	100.0%	522.9	486.6	24.5%	1.55	3.4	23.7	115.0	374.9	23.5%		100.0
Direct Assay														
+70 calc		1018.4	76.1%	522.9	486.6	24.5%	1.55	3.4	23.7	115.0	374.9	23.5%		100.0
70 direct assay:														

Bulk Sample: <0.5 mm 65.4%
<0.25 mm 65.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 28

Significant Organics in [illegible]

Exfoliated vermiculite colour is [illegible]

Composite grains or excessive fines in [illegible]

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: **Ore B from pit - same as 6-10** **Date:** **6/21/04**

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	203.8	16.9%											
10	2.000													
12	1.700													
18	1.000	104.9	8.7%											
20	0.850													
25	0.710													
30	0.600	111.8	9.3%	226.2	212.8	24.9%	0.67	3.0	23.7	41.0	172.4	19.2%		9.0
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	449.3	37.3%	250.0	219.1	22.7%	1.24	5.0	39.7	106.8	114.0	48.4%		91.0
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	336.3	27.9%											
Totals		1206.1	100.0%	476.2	431.9	23.3%	1.91	4.0	32.1	147.8	286.4	34.0%		100.0
Direct Assay														
+70 calc		869.8	72.1%	476.2	431.9	23.3%	1.91	4.0	32.1	147.8	286.4	34.0%		100.0
70 direct assay:														

Bulk Sample: <0.5 mm 65.1%
<0.25 mm 65.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* **Possible Grade After Adjustment of LOE**

Book **6** **Sheet** **29**

Significant Organics in
Exfoliated vermiculite colour is
Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Ore B with high Biotite from pit - same as 6-11 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	238.0	19.2%											
10	2.000													
12	1.700													
18	1.000	164.1	13.2%											
20	0.850													
25	0.710													
30	0.600	147.1	11.9%	250.0	234.1	14.2%	1.18	4.7	37.8	96.4	138.3	41.1%		16.4
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	458.0	36.9%	250.0	223.5	15.0%	1.835	7.3	58.8	149.5	72.8	67.3%		83.6
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	232.4	18.7%											
Totals		1239.6	100.0%	500.0	457.6	14.7%	3.02	6.0	48.3	245.9	211.1	53.8%		100.0
Direct Assay														
+70 calc		1007.2	81.3%	500.0	457.6	14.7%	3.02	6.0	48.3	245.9	211.1	53.8%		100.0
70 direct assay:														

Bulk Sample:

<0.5 mm	55.7%
<0.25 mm	55.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 30

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore C from pit - same as 6-12

Date: 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700	83.5	7.7%											
6	3.350													
10	2.000													
12	1.700													
18	1.000	136.0	12.5%											
20	0.850													
25	0.710													
30	0.600	86.1	7.9%	179.9	161.2	62.8%	0.32	1.8	14.2	10.8	150.1	6.7%		4.5
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	372.3	34.3%	250.0	220.9	29.1%	0.72	2.9	23.1	72.5	150.0	32.6%		95.5
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	407.2	37.5%											
Totals		1085.1	100.0%	429.9	382.1	36.8%	1.04	2.4	19.4	83.3	300.1	21.7%		100.0
Direct Assay														
+70 calc		677.9	62.5%	429.9	382.1	36.8%	1.04	2.4	19.4	83.3	300.1	21.7%		100.0
70 direct assay:														

Bulk Sample:

<0.5 mm	71.8%
<0.25 mm	71.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 31

Significant Organics in
Exfoliated vermiculite colour is
Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore D from pit (between C and D Trenches) - same as 6-13 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	698.4	43.0%											
10	2.000													
12	1.700													
18	1.000	230.4	14.2%											
20	0.850													
25	0.710													
30	0.600	115.1	7.1%	115.1	108.2	56.1%	0.146	1.3	10.2	5.4	102.8	5.0%		10.1
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	280.5	17.3%	250.0	230.6	32.0%	0.6	2.4	19.2	42.3	189.3	18.3%		89.9
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	299.8	18.5%											
Totals		1624.2	100.0%	365.1	338.8	36.0%	0.75	2.0	16.4	47.7	292.1	14.0%		100.0
Direct Assay														
+70 calc		1324.4	81.5%	365.1	338.8	36.0%	0.75	2.0	16.4	47.7	292.1	14.0%		100.0
70 direct assay:														

Bulk Sample:
<0.5 mm 35.7%
<0.25 mm 35.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 32

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 12:45 pm - while feeding mids and other concs Bag 4-13 **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.7	0.5%											
35	0.500	12.3	2.4%											
40	0.425	73.7	14.6%											
45	0.355	149.6	29.6%											
50	0.300	139.6	27.6%											
60	0.250	83.2	16.5%											
70	0.212	33.9	6.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	10.0	2.0%											
Totals		505.0	100.0%											
Direct Assay				250.0	209.3	19.0%	1.58	6.3	50.6	176.1	35.3	83.3%	80.8%	
+70 calc		495.0	98.0%											
70 direct assay:														

Bulk Sample:

	<0.5 mm	82.4%
	<0.25 mm	8.7%

Wet Weight: ***Dry Weight:*** ***Moisture:***

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 33

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: #4 Winnower Tails **Date:** 6/18/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	16.7	2.4%											
20	0.850	35.9	5.1%											
25	0.710	182.4	25.7%											
30	0.600	172.2	24.3%											
35	0.500	212.7	30.0%											
40	0.425	39.0	5.5%											
45	0.355	12.2	1.7%											
50	0.300	6.2	0.9%											
60	0.250	3.8	0.5%											
70	0.212	1.7	0.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	25.9	3.7%											
Totals		708.7	100.0%											
Direct Assay														
+70 calc		682.8	96.3%											
70 direct assay:														

Bulk Sample:
<0.5 mm 7.0%
<0.25 mm 3.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rotapped 2 minutes.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 34

Significant Organics in
Exfoliated vermiculite colour is white light tan brown gray black greenish
Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 5:00 pm - running middlings **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.3	0.7%											
35	0.500	16.7	3.3%											
40	0.425	104.9	21.0%											
45	0.355	141.5	28.3%											
50	0.300	120.7	24.1%											
60	0.250	70.8	14.1%											
70	0.212	30.9	6.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	11.7	2.3%											
Totals		500.5	100.0%											
Direct Assay														
+70 calc		488.8	97.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 75.0%
<0.25 mm 8.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rotapped 2 minutes.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 35

Significant Organics in o'size 30 35 40 45

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: 4 Conc Bag 4-14 **Date:** 6/22/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.4	0.1%											
35	0.500	0.6	0.1%											
40	0.425	19.3	3.9%											
45	0.355	88.4	17.7%											
50	0.300	174.4	34.9%											
60	0.250	136.8	27.3%											
70	0.212	56.1	11.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	24.2	4.8%											
Totals		500.2	100.0%											
Direct Assay				250.0	213.0	17.8%	1.9	7.6	60.9	174.2	42.0	80.6%	78.7%	
+70 calc		476.0	95.2%											
70 direct assay:														

Bulk Sample: <0.5 mm 95.9%
<0.25 mm 16.1%

Wet Weight: 250 *Dry Weight:* 234.5 *Moisture:* 6.2 (eated at 90 C)

COMMENTS: Not too much wood in sample.

Also did the following determinations:

	Assay Wt (gm)	Wt (gm)	Vol (L)	mL/gm	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)
Heated first at 90 C	250.0	212.5	1.53	6.1	170.0	43.5	79.6%
Muffle Furnace	250.0	211.8	1.485	5.9	168.2	45.6	78.6%
Later, when Windy	250.0	209.5	1.53	6.1	-	-	-

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 36

Significant Organics in o'size 35 10 15

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: 4 Conc Bag 4-15 **Date:** 6/23/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.4	0.7%											
35	0.500	124.1	24.8%											
40	0.425	189.8	37.9%											
45	0.355	82.1	16.4%											
50	0.300	47.4	9.5%											
60	0.250	32.7	6.5%											
70	0.212	14.5	2.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	6.8	1.4%											
Totals		500.8	100.0%											
Direct Assay				250.0	215.1	16.2%	2.4	9.6	76.9	181.5	34.4	84.1%	83.0%	
+70 calc		494.0	98.6%											
70 direct assay:														

Bulk Sample:

	<0.5 mm	36.6%
	<0.25 mm	4.3%

Wet Weight: 250 *Dry Weight:* 234.5 *Moisture:* 6.2 (eated at 90 C)

COMMENTS: Lots of wood.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 37

Significant Organics in	o'size 30 35 40 45
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: 4 Conc Bag 4-16 **Date:** 6/23/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.2	0.0%											
35	0.500	1.2	0.2%											
40	0.425	16.4	3.3%											
45	0.355	77.7	15.5%											
50	0.300	164.3	32.8%											
60	0.250	149.4	29.8%											
70	0.212	63.1	12.6%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	28.6	5.7%											
Totals		500.9	100.0%											
Direct Assay				250.0	211.5	19.6%	1.5	6.0	48.1	160.7	53.2	75.1%	72.3%	
+70 calc		472.3	94.3%											
70 direct assay:														

Bulk Sample: <0.5 mm 96.4%
<0.25 mm 18.3%

Wet Weight: 250 *Dry Weight:* 234.5 *Moisture:* 6.2 (eated at 90 C)

COMMENTS: Finer than most recent Bin 4 products. Organics lighter.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 38

Significant Organics in	o/size 30 35 40 45-325
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 3 **Date:** 6/23/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	1.2	0.2%											
20	0.850	3.0	0.6%											
25	0.710	63.9	12.6%											
30	0.600	173.1	34.2%											
35	0.500	176.2	34.9%											
40	0.425	49.4	9.8%											
45	0.355	16.6	3.3%											
50	0.300	9.0	1.8%											
60	0.250	6.1	1.2%											
70	0.212	3.4	0.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	3.6	0.7%											
Totals		505.5	100.0%											
Direct Assay				250.0	210.4		2.352	9.4		187.2	20.9	90.0%		
-18 +70 calc		501.9	99.3%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 7.7%
<0.25 mm 1.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Heavy organics.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 39

Significant Organics in	o'size 18 20 25 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Hall Screen +2 mm **Date:** 6/24/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212													
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan														
Totals														
Direct Assay				250.0	234.6					8.2	228.0	3.5%		
+70 calc														
70 direct assay:														

Bulk Sample:

	<0.5 mm	0.0%
	<0.25 mm	0.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 40

Significant Organics in o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Hall Screen -1 mm **Date:** 6/24/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	1.7	0.3%											
20	0.850	24.0	4.8%											
25	0.710	46.5	9.4%											
30	0.600	42.0	8.4%											
35	0.500	59.4	11.9%											
40	0.425	50.1	10.1%											
45	0.355	49.5	10.0%											
50	0.300	50.8	10.2%											
60	0.250	47.5	9.6%											
70	0.212	30.4	6.1%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	95.4	19.2%											
Totals		497.3	100.0%											
Direct Assay														
-18 +70 calc		401.9	80.8%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 55.0%
<0.25 mm 25.3%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Screened on small screen.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 41

Significant Organics in o/size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 ~1:00 pm **Date:** 6/24/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212													
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan														
Totals														
Direct Assay				250.0	215.1					160.6	54.5	74.7%		
-18 +70 calc														
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 0.0%
<0.25 mm 0.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 43

Significant Organics in
Exfoliated vermiculite colour is white light tan brown gray black greenish
Composite grains or excessive fines in 6 10 12 18 20 25 30 35 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 11:00 am, after the #4/#5 screen was changed on the Concentrate Sweco   **Date:** 6/28/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	6.6	1.3%											
35	0.500	21.3	4.3%											
40	0.425	49.4	9.9%											
45	0.355	126.4	25.3%											
50	0.300	155.9	31.2%											
60	0.250	97.0	19.4%											
70	0.212	28.5	5.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	15.1	3.0%											
Totals		500.2	100.0%											
Direct Assay				250.0	210.3	21.9%	1.265	5.1	40.5	143.0	68.8	67.5%	63.6%	
+70 calc		485.1	97.0%											
70 direct assay:														

Bulk Sample:
<0.5 mm 84.5%
<0.25 mm 8.7%

Wet Weight: *Dry Weight:*   *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6   **Sheet** 44

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 12:45 am, after the #4/#5 screen was changed on the Concentrate Sweco **Date:** 6/28/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	9.1	1.4%											
35	0.500	32.3	4.9%											
40	0.425	63.7	9.7%											
45	0.355	129.4	19.7%											
50	0.300	278.5	42.4%											
60	0.250	116.1	17.7%											
70	0.212	22.8	3.5%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	5.1	0.8%											
Totals		657.0	100.0%											
Direct Assay				250.0	209.8	20.0%	1.47	5.9	47.1	161.0	48.8	76.7%	73.7%	
+70 calc		651.9	99.2%											
70 direct assay:														

Bulk Sample: <0.5 mm 84.0%
<0.25 mm 4.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 105.2 wet grams, 48.8 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 45

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 5 -1:00 Pm, after the #4/#5 screen was changed on the Concentrate Sweco **Date:** 6/28/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
.45	0.355	0.3	0.1%											
50	0.300	5.9	1.2%											
60	0.250	215.5	43.1%											
70	0.212	153.3	30.7%											
100	0.150	108.2	21.6%											
140	0.104	15.5	3.1%											
200	0.074													
325	0.045													
Pan	-0.104	1.1	0.2%											
Totals		499.8	100.0%											
Direct Assay				250.0	215.4	24.6%	0.72	2.9	23.1	106.2	109.5	49.2%		
+70 calc		375.0	75.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 100.0%
<0.25 mm 55.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 192.0 wet grams, 109.5 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 46

Significant Organics in o'size 3 35 40 45 50

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 2:20 pm, after the #4/#5 screen was changed on the Concentrate Sweco **Date:** 6/28/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.0	0.6%											
35	0.500	12.8	2.5%											
40	0.425	33.3	6.6%											
45	0.355	92.8	18.5%											
50	0.300	205.7	41.0%											
60	0.250	122.2	24.3%											
70	0.212	24.7	4.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	7.7	1.5%											
Totals		502.2	100.0%											
Direct Assay				250.0	212.7	18.5%	1.53	6.1	49.0	164.2	48.5	77.2%	74.9%	
+70 calc		494.5	98.5%											
70 direct assay:														

Bulk Sample:

<0.5 mm	90.2%
<0.25 mm	6.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 101.5 wet grams, 48.5 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 47

Significant Organics in o'size 30 35 40 45 50

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 4:00 pm, after the #4/#5 screen was changed on the Concentrate Sweco **Date:** 6/28/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	5.6	1.1%											
35	0.500	18.3	3.7%											
40	0.425	43.2	8.6%											
45	0.355	105.0	21.0%											
50	0.300	177.1	35.4%											
60	0.250	105.6	21.1%											
70	0.212	31.9	6.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	13.0	2.6%											
Totals		499.7	100.0%											
Direct Assay				250.0	216.5	16.5%	1.75	7.0	56.1	169.0	47.5	78.1%	76.8%	
+70 calc		486.7	97.4%											
70 direct assay:														

Bulk Sample: <0.5 mm 86.6%
<0.25 mm 9.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 101.2 wet grams, 47.5 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 48

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 4:30 am, after the #4/#5 screen was changed on the Concentrate Sweco **Date:** 6/28/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	4.5	0.9%											
35	0.500	17.3	3.5%											
40	0.425	36.9	7.4%											
45	0.355	86.9	17.4%											
50	0.300	182.7	36.5%											
60	0.250	122.7	24.5%											
70	0.212	33.6	6.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	15.8	3.2%											
Totals		500.4	100.0%											
Direct Assay				250.0	213.7	18.7%	1.64	6.6	52.5	157.9	55.8	73.9%	71.5%	
+70 calc		484.6	96.8%											
70 direct assay:														

Bulk Sample: <0.5 mm 88.3%
<0.25 mm 9.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 112.8 wet grams, 55.8 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 49

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Filter Baghouse **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250	26.3	27.9%											
70	0.212	4.4	4.7%											
100	0.150	7.5	8.0%											
140	0.104	8.0	8.5%											
200	0.074													
325	0.045													
Pan	-0.104	48.1	51.0%											
Totals		94.3	100.0%											
Direct Assay														
+70 calc		30.7	32.6%											
70 direct assay:														

Bulk Sample:

	<0.5 mm	100.0%
	<0.25 mm	72.1%

Wet Weight: ***Dry Weight:*** ***Moisture:***

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 50

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Mikropulse Baghouse **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250	40.3	16.1%	}										
70	0.212	9.9	4.0%	195.0	177.1	9.2%	0.62	3.2	25.5					
100	0.150	8.5	3.4%											
140	0.104	6.6	2.6%											
200	0.074													
325	0.045													
Pan	-0.104	184.5	73.9%											
Totals		249.8	100.0%											
Direct Assay														
+70 calc		50.2	20.1%											
70 direct assay:														

Bulk Sample: <0.5 mm 100.0%
<0.25 mm 83.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 140.0 wet grams, ???? dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 51

Significant Organics in o'size 30 35 40 45 50
Exfoliated vermiculite colour is white light tan brown gray black greenish
Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 10:25 am, after the last 2 of the 4 Swecos were changed. **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	9.1	2.0%											
35	0.500	21.1	4.6%											
40	0.425	47.3	10.3%											
45	0.355	100.5	21.9%											
50	0.300	158.7	34.6%											
60	0.250	97.6	21.3%											
70	0.212	18.0	3.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	6.0	1.3%											
Totals		458.3	100.0%											
Direct Assay				250.0	210.0	21.4%	1.4	5.6	44.9		63.5	74.6%	70.9%	
+70 calc		452.3	98.7%											
70 direct assay:														

Bulk Sample:

<0.5 mm	83.1%
<0.25 mm	5.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 140.0 wet grams, 63.5 dry grams. The bag yield was low because some of the winnower middling trays were overflowing into the concentrate trays.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 52

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 10:25 am, after the last 2 of the 4 Swecos were changed. **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.3	0.7%											
35	0.500	14.0	2.8%											
40	0.425	42.9	8.5%											
45	0.355	114.6	22.8%											
50	0.300	176.2	35.0%											
60	0.250	101.2	20.1%											
70	0.212	33.6	6.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	17.5	3.5%											
Totals		503.3	100.0%											
Direct Assay				250.0	213.1	17.2%	1.805	7.2	57.8		35.0	86.0%	84.4%	
+70 calc		485.8	96.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 88.0%; <0.25 mm 10.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 74.0 wet grams, 35.0 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 53

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Cyclone Underflow **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300	44.3	4.2%											
60	0.250	60.8	5.8%	+70										
70	0.212	53.6	5.1%	158.7	133.0	18.3%	0.975	6.1	49.2		18.1	88.6%		100.0
100	0.150	121.0	11.5%											
140	0.104	171.4	16.3%											
200	0.074													
325	0.045													
Pan	-0.104	600.2	57.1%											
Totals		1051.3	100.0%					6.1						
Direct Assay														
+70 calc		158.7	15.1%					6.1						
70 direct assay:														

Bulk Sample:

	<0.5 mm	100.0%
	<0.25 mm	90.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: The three minus 70 fractions also felt and looked high grade.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 54

Significant Organics in	o'size	6	10	12	18	20	25	30	35	40	45	50	60	70	100	140	200	325	pan
Exfoliated vermiculite colour is	white	light tan	brown	gray	black	greenish													
Composite grains or excessive fines in		6	10	12	18	20	25	30	35	40	45	50	60	70	100	140	200	325	pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Waste to Slurry Box **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	53.8	6.5%											
20	0.850	31.7	3.8%											
25	0.710	55.0	6.6%											
30	0.600	48.8	5.9%											
35	0.500	59.2	7.1%											
40	0.425	58.5	7.0%											
45	0.355	70.0	8.4%											
50	0.300	66.0	7.9%											
60	0.250	70.3	8.4%											
70	0.212	56.7	6.8%											
100	0.150	109.4	13.1%											
140	0.104	64.1	7.7%	-										
200	0.074													
325	0.045													
Pan	-0.104	89.6	10.8%											
Totals		833.1	100.0%											
Direct Assay														
+70 calc		570.0	68.4%											
70 direct assay:														

Bulk Sample:
<0.5 mm 63.1%
<0.25 mm 38.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 55

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 2:00 pm, after the last 2 of the 4 Swecos were changed. **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	4.3	0.9%											
35	0.500	14.2	2.8%											
40	0.425	41.6	8.3%											
45	0.355	110.3	22.1%											
50	0.300	180.0	36.1%											
60	0.250	109.6	22.0%											
70	0.212	26.0	5.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	12.5	2.5%											
Totals		498.5	100.0%											
Direct Assay				250.0	215.2	19.1%	1.4	5.6	44.9		67.4	73.0%	70.5%	
+70 calc		486.0	97.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 87.9%
<0.25 mm 7.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 159.0 wet grams, 67.4 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 56

Significant Organics in	o'size 30 35 40 45 50
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 3:15 pm, after the last 2 of the 4 Swecos were changed. **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.8	0.8%											
35	0.500	14.1	2.8%											
40	0.425	38.2	7.6%											
45	0.355	102.7	20.5%											
50	0.300	171.2	34.2%											
60	0.250	119.6	23.9%											
70	0.212	35.9	7.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	15.1	3.0%											
Totals		500.6	100.0%											
Direct Assay				250.0	213.9	18.2%	1.62	6.5	51.9		51.4	79.4%	77.4%	
+70 calc		485.5	97.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 88.8%
<0.25 mm 10.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 107.0 wet grams, 51.4 dry grams.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 57

Significant Organics in o'size 30 35 40 45 50

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: **Bin 4 - 4:30 pm, after the last 2 of the 4 Swecos were changed.** **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.2	0.6%											
35	0.500	14.7	2.9%											
40	0.425	43.6	8.7%											
45	0.355	118.9	23.7%											
50	0.300	169.2	33.7%											
60	0.250	104.2	20.8%											
70	0.212	32.7	6.5%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	15.3	3.0%											
Totals		501.8	100.0%											
Direct Assay				250.0	214.0	17.3%	1.7	6.8	54.5		42.2	83.1%	81.5%	
+70 calc		486.5	97.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 87.7%
<0.25 mm 9.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Rock = 107.2 wet grams, 42.2 dry grams.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 58

Significant Organics in o'size 30 35 40 45 50

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: 2nd Stage Middlings - 5:00 pm **Date:** 6/29/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	28.3	4.7%											
35	0.500	80.3	13.4%	296.9	272.7	19.8%	1.245	4.2	33.6		174.4	41.3%		16.8
40	0.425	111.9	18.7%	321.7	304.7	16.5%	1.03	3.2	25.6		218.4	32.1%		18.3
45	0.355	120.0	20.1%	334.0	315.4	16.8%	1.13	3.4	27.1		223.1	33.2%		20.2
50	0.300	100.5	16.8%	329.5	304.4	21.3%	1.2	3.6	29.2		211.5	35.8%		18.3
60	0.250	87.1	14.6%	252.5	230.7	22.1%	0.835	3.3	26.5		154.0	39.0%		17.3
70	0.212	44.0	7.4%	134.2	120.9	24.3%	0.375	2.8	22.4		79.5	40.8%		9.1
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	26.4	4.4%											
Totals		598.5	100.0%	1668.8	1548.8	19.7%	5.82	3.5	27.9		1060.9	36.4%		100.0
Direct Assay														
+70 calc		572.1	95.6%	1668.8	1548.8	19.7%	5.82	3.5	27.9		1060.9	36.4%		100.0
70 direct assay:				270.3	250.9	19.0%	1	3.7	29.6		168.3	37.7%		

Bulk Sample:

<0.5 mm 63.2%
<0.25 mm 11.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 59

Significant Organics in 325 pan

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Derrick Oversize **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	50.0	8.4%											
35	0.500	111.6	18.8%											
40	0.425	137.5	23.1%											
45	0.355	135.2	22.7%											
50	0.300	93.8	15.8%											
60	0.250	48.8	8.2%											
70	0.212	14.0	2.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	4.1	0.7%											
Totals		595.0	100.0%											
Direct Assay														
+70 calc		590.9	99.3%											
70 direct assay:														

Bulk Sample:

<0.5 mm	49.7%
<0.25 mm	3.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 60

Significant Organics in	O'Size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Derrick Undersize **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.4	0.1%											
35	0.500	1.0	0.2%											
40	0.425	1.3	0.2%											
45	0.355	5.9	1.0%											
50	0.300	130.7	21.7%											
60	0.250	263.5	43.8%											
70	0.212	109.6	18.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	89.4	14.9%											
Totals		601.8	100.0%											
Direct Assay														
+70 calc		512.4	85.1%											
70 direct assay:														

Bulk Sample: <0.5 mm 99.6%
<0.25 mm 33.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 61

Significant Organics in	o'size 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-17 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.1	0.4%											
35	0.500	5.2	2.0%											
40	0.425	14.1	5.6%											
45	0.355	37.6	14.8%											
50	0.300	77.0	30.4%											
60	0.250	68.1	26.8%											
70	0.212	23.9	9.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	26.7	10.5%											
Totals		253.7	100.0%											
Direct Assay				250.0	209.1	19.7%	1.27	5.1	40.7		42.2	83.1%	80.3%	
+70 calc		227.0	89.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 92.0%
<0.25 mm 19.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Pipe sampled.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 62

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-18 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.3	0.5%											
35	0.500	6.5	2.4%											
40	0.425	18.5	6.8%											
45	0.355	45.3	16.6%											
50	0.300	83.4	30.5%											
60	0.250	77.4	28.4%											
70	0.212	21.6	7.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	19.0	7.0%											
Totals		273.0	100.0%											
Direct Assay				250.0	209.8	19.9%	1.42	5.7	45.5		47.7	80.9%	78.0%	
+70 calc		254.0	93.0%											
70 direct assay:														

Bulk Sample:

	<0.5 mm	90.4%
	<0.25 mm	14.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Pipe sampled.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 63

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 10:25 am **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.8	0.7%											
35	0.500	8.2	3.3%											
40	0.425	21.8	8.7%											
45	0.355	53.7	21.5%											
50	0.300	86.8	34.7%											
60	0.250	59.0	23.6%											
70	0.212	14.7	5.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	4.1	1.6%											
Totals		250.1	100.0%											
Direct Assay				250.0	213.2	17.3%	1.52	6.1	48.7		36.9	85.2%	83.6%	
+70 calc		246.0	98.4%											
70 direct assay:														

Bulk Sample: <0.5 mm 87.3%
<0.25 mm 7.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Screening with 500 grams gave 0.9%, 3.4+D6%, 9.9%, 26.1%, 34.4%, 18.9%, 4.7% and 1.6% for 30, 35, 40, 45, 50, 60 and 70 screen fractions respectively.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 64

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-19 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.9	0.8%											
35	0.500	8.4	3.4%											
40	0.425	17.3	6.9%											
45	0.355	38.1	15.2%											
50	0.300	81.9	32.7%											
60	0.250	69.2	27.6%											
70	0.212	17.9	7.1%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	15.7	6.3%											
Totals		250.4	100.0%											
Direct Assay				250.0	215.4	18.1%	1.6	6.4	51.3		59.0	76.4%	74.3%	
+70 calc		234.7	93.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 89.0%
<0.25 mm 13.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Pipe sampled.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 65

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-20 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.7	0.7%											
35	0.500	7.4	2.9%											
40	0.425	18.3	7.3%											
45	0.355	41.8	16.6%											
50	0.300	72.7	28.9%											
60	0.250	64.6	25.7%											
70	0.212	23.9	9.5%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	21.1	8.4%											
Totals		251.5	100.0%											
Direct Assay				251.8	215.1	18.4%	1.46	5.8	46.4		52.8	79.0%	76.8%	
+70 calc		230.4	91.6%											
70 direct assay:														

Bulk Sample: <0.5 mm 89.1%
<0.25 mm 17.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Pipe sampled.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 66

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-21 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.8	1.2%											
35	0.500	10.1	4.2%											
40	0.425	19.1	8.0%											
45	0.355	39.8	16.7%											
50	0.300	73.7	30.8%											
60	0.250	58.0	24.3%											
70	0.212	16.3	6.8%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	19.2	8.0%											
Totals		239.0	100.0%											
Direct Assay				235.0	199.8	18.1%	1.52	6.5	51.8		40.9	82.6%	80.5%	
+70 calc		219.8	92.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 86.6%
<0.25 mm 14.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Pipe sampled.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 67

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-22 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.4	0.5%											
35	0.500	8.1	3.0%											
40	0.425	21.0	7.8%											
45	0.355	50.0	18.5%											
50	0.300	89.1	33.0%											
60	0.250	64.5	23.9%											
70	0.212	18.7	6.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	17.5	6.5%											
Totals		270.3	100.0%											
Direct Assay				250.0	211.9	18.2%	1.63	6.5	52.2		40.8	83.7%	81.6%	
+70 calc		252.8	93.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 88.7%
<0.25 mm 13.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Pipe sampled. Screening for 1 minute gave 0.9%, 4.6%, 12.8%, 25.3%, 32.6%, 14.8%, 3.9% and 5.1% for 30, 35, 40, 45, 50, 60 and 70 screen fractions respectively.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 68

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-23 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.2	0.1%											
35	0.500	0.3	0.1%											
40	0.425	11.4	3.4%											
45	0.355	40.6	12.1%											
50	0.300	93.6	27.9%											
60	0.250	105.5	31.5%											
70	0.212	51.9	15.5%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	31.5	9.4%											
Totals		335.0	100.0%											
Direct Assay				250.0	220.4	15.5%	1.64	6.6	52.5		[redacted]	76.4%		
+70 calc		303.5	90.6%											
70 direct assay:														

Bulk Sample: <0.5 mm 96.4%
<0.25 mm 24.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Pipe sampled. Fine.

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 69

Significant Organics in	o/size 30 35 40 45
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 3:30 pm **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.8	0.6%											
35	0.500	9.9	2.0%											
40	0.425	24.5	4.9%											
45	0.355	74.6	14.8%											
50	0.300	215.0	42.7%											
60	0.250	120.3	23.9%											
70	0.212	36.2	7.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	19.9	4.0%											
Totals		503.2	100.0%											
Direct Assay				250.0	219.8	15.6%	1.69	6.8	54.1		56.4	77.4%		
+70 calc		483.3	96.0%											
70 direct assay:														

Bulk Sample: <0.5 mm 92.6%
<0.25 mm 11.1%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 70

Significant Organics in o'size 30 35 40 45

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in 6 10 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 4:00 **Date:** 6/30/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.1	0.4%											
35	0.500	11.5	2.3%											
40	0.425	32.1	6.4%											
45	0.355	86.5	17.3%											
50	0.300	176.5	35.3%											
60	0.250	117.2	23.5%											
70	0.212	43.9	8.8%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	29.6	5.9%											
Totals		499.4	100.0%											
Direct Assay				250.0	217.5	16.9%	1.745	7.0	55.9		57.8	76.9%	75.4%	
+70 calc		469.8	94.1%											
70 direct assay:														

Bulk Sample: <0.5 mm 90.8%
<0.25 mm 14.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: —

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 71

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-24 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.6	0.6%											
35	0.500	7.6	3.0%											
40	0.425	20.2	8.0%											
45	0.355	47.7	18.9%											
50	0.300	80.1	31.7%											
60	0.250	56.2	22.3%											
70	0.212	19.8	7.8%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	19.3	7.6%											
Totals		252.5	100.0%											
Direct Assay				250.0	221.0	14.7%	1.77	7.1	56.7		52.2	79.1%		
+70 calc		233.2	92.4%											
70 direct assay:														

Bulk Sample: <0.5 mm 88.4%
<0.25 mm 15.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 72

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-25 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.4	0.6%											
35	0.500	7.1	2.8%											
40	0.425	18.4	7.4%											
45	0.355	43.8	17.5%											
50	0.300	80.8	32.4%											
60	0.250	63.3	25.4%											
70	0.212	18.7	7.5%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	16.2	6.5%											
Totals		249.7	100.0%											
Direct Assay				250.0	215.0	17.4%	1.77	7.1	56.7		48.4	80.6%	79.0%	
+70 calc		233.5	93.5%											
70 direct assay:														

Bulk Sample:

	<0.5 mm	89.2%
	<0.25 mm	14.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 73

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-26 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.0	0.4%											
35	0.500	6.8	2.7%											
40	0.425	17.2	6.9%											
45	0.355	39.0	15.6%											
50	0.300	76.0	30.4%											
60	0.250	62.4	24.9%											
70	0.212	29.8	11.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	18.1	7.2%											
Totals		250.3	100.0%											
Direct Assay				250.4	208.9	18.7%	1.71	6.8	54.7		27.9	88.9%	86.5%	
+70 calc		232.2	92.8%											
70 direct assay:														

Bulk Sample: <0.5 mm 90.0%
<0.25 mm 19.1%

Wet Weight: *Dry Weight:* *Moistur:*

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 74

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-27 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	24.7	9.8%											
35	0.500	75.8	30.1%											
40	0.425	59.2	23.5%											
45	0.355	30.9	12.3%											
50	0.300	20.9	8.3%											
60	0.250	13.4	5.3%											
70	0.212	7.9	3.1%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	18.9	7.5%											
Totals		251.7	100.0%											
Direct Assay				250.7	206.9	20.5%	1.87	7.5	59.7		37.3	85.1%	81.9%	
+70 calc		232.8	92.5%											
70 direct assay:														

Bulk Sample:

<0.5 mm	36.6%
<0.25 mm	10.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Was Bag 10a, but pipe sampled now.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 75

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-28 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.0	0.4%											
35	0.500	5.1	1.9%											
40	0.425	14.1	5.2%											
45	0.355	37.4	13.8%											
50	0.300	92.3	34.1%											
60	0.250	68.1	25.2%											
70	0.212	31.7	11.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	20.7	7.7%											
Totals		270.4	100.0%											
Direct Assay				250.5	212.2	19.1%	1.52	6.1	48.6		50.0	80.0%	77.5%	
+70 calc		249.7	92.3%											
70 direct assay:														

Bulk Sample: <0.5 mm 92.5%
<0.25 mm 19.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 76

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-29 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.4	0.2%											
35	0.500	2.0	0.8%											
40	0.425	10.1	4.0%											
45	0.355	34.6	13.8%											
50	0.300	98.3	39.1%											
60	0.250	70.8	28.2%											
70	0.212	21.8	8.7%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	13.4	5.3%											
Totals		251.4	100.0%											
Direct Assay				251.1	210.1	18.4%	1.52	6.1	48.5		28.0	88.8%	86.7%	
+70 calc		238.0	94.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 95.0%
<0.25 mm 14.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 77

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 10:00 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	0.3	0.1%											
35	0.500	1.5	0.6%											
40	0.425	10.5	4.2%											
45	0.355	36.0	14.3%											
50	0.300	92.0	36.6%											
60	0.250	73.4	29.2%											
70	0.212	26.2	10.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	11.4	4.5%											
Totals		251.3	100.0%											
Direct Assay				250.0	210.4	-18.6%	1.62	6.5	51.9		37.6	85.0%	82.6%	
+70 calc		239.9	95.5%											
70 direct assay:														

Bulk Sample: <0.5 mm 95.1%
<0.25 mm 15.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: —

* **Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 78

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 9 Concentrate

Date: 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.5	0.3%											
35	0.500	7.8	1.5%											
40	0.425	21.8	4.3%											
45	0.355	63.0	12.5%											
50	0.300	165.8	32.9%											
60	0.250	144.3	28.6%											
70	0.212	66.5	13.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	34.0	6.7%											
Totals		504.7	100.0%											
Direct Assay				249.0	215.9	17.3%	1.545	6.2	49.7		57.3	77.0%	75.4%	
+70 calc		470.7	93.3%											
70 direct assay:														

Bulk Sample:

<0.5 mm	93.8%
<0.25 mm	19.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 79

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 6 Concentrate **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade Vm (%)*	*Adj. Grade Vm (%)**	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.6	0.5%											
35	0.500	13.8	2.7%											
40	0.425	56.2	11.0%											
45	0.355	111.5	21.9%											
50	0.300	168.8	33.2%											
60	0.250	81.5	16.0%											
70	0.212	42.9	8.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	31.6	6.2%											
Totals		508.9	100.0%											
Direct Assay				250.0	213.7	17.3%	1.8	7.2	57.7		39.7	84.1%	82.5%	
+70 calc		477.3	93.8%											
70 direct assay:														

Bulk Sample: <0.5 mm 85.7%
<0.25 mm 14.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: —

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 80

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 12:00 **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.2	0.6%											
35	0.500	13.6	2.7%											
40	0.425	41.6	8.3%											
45	0.355	115.7	23.1%											
50	0.300	168.3	33.7%											
60	0.250	99.8	20.0%											
70	0.212	36.1	7.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	21.7	4.3%											
Totals		500.0	100.0%											
Direct Assay				250.0	219.3	14.2%	1.84	7.4	58.9		33.8	86.5%		
+70 calc		478.3	95.7%											
70 direct assay:														

Bulk Sample: <0.5 mm 88.3%
<0.25 mm 11.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 81

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Cyclone Underflow **Date:** 7/1/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425	1.5	0.2%											
45	0.355	3.6	0.4%											
50	0.300	11.7	1.2%											
60	0.250	29.3	2.9%	+70										
70	0.212	53.7	5.4%	95.0	81.0	16.5%	0.5	5.3	42.2		9.9	89.6%		100.0
100	0.150	201.4	20.1%											
140	0.104	277.6	27.8%											
200	0.074													
325	0.045													
Pan	-0.104	421.2	42.1%											
Totals		1000.0	100.0%											
Direct Assay														
+70 calc		99.8	10.0%											
70 direct assay:														

Bulk Sample:

<0.5 mm	99.9%
<0.25 mm	95.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Taken from the end of the augur from the cyclone airlock.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 83

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Second Stage Middlings - 9:50 am **Date:** 7/6/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	12.9	2.1%											
35	0.500	60.3	10.0%	+35 228.6	214.8	18.5%	0.705	3.1	24.7		154.1	32.6%	30.3%	11.9
40	0.425	140.4	23.4%	250.0	239.2	16.2%	0.56	2.2	17.9		183.4	26.6%	25.5%	23.3
45	0.355	183.1	30.5%	250.0	235.2	25.2%	0.625	2.5	20.0		191.3	23.5%		27.0
50	0.300	93.8	15.6%	262.1	246.2	20.1%	0.725	2.8	22.2		182.8	30.3%		18.4
60	0.250	52.9	8.8%	152.4	140.3	22.4%	0.423	2.8	22.2		98.5	35.4%		12.1
70	0.212	32.7	5.4%	92.4	88.1	15.5%	0.25	2.7	21.7		64.7	30.0%		6.4
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	25.1	4.2%											
Totals		601.2	100.0%	1235.5	1163.8	19.9%	3.29	2.6	21.3		874.8	29.2%		100.0
Direct Assay														
+70 calc		576.1	95.8%	1235.5	1163.8	19.9%	3.29	2.6	21.3		874.8	29.2%		100.0
70 direct assay:														

Bulk Sample:

	<0.5 mm	64.5%
	<0.25 mm	9.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 97

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Second Stage 4s Middlings - 9:58 am **Date:** 7/6/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	67.1	11.1%	131.7	120.3	18.8%	0.6	4.6	36.5		71.2	45.9%	43.5%	16.8
35	0.500	78.7	13.1%	200.3	187.8	18.9%	0.67	3.3	26.8		134.0	33.1%	30.7%	13.8
40	0.425	136.9	22.7%	250.0	233.7	22.2%	0.7	2.8	22.4		176.7	29.3%		23.0
45	0.355	185.3	30.8%	250.0	234.5	22.0%	0.68	2.7	21.8		179.7	28.1%		29.[illegible]
50	0.300	95.1	15.8%	217.0	204.2	20.3%	0.62	2.9	22.9		154.0	29.0%		15.8
60	0.250	25.4	4.2%											
70	0.212	3.2	0.5%	63.7	+60 & +70 59.6	18.5%	0.2	3.1	25.1		41.5	34.9%		0.6
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	10.2	1.7%											
Totals		601.9	100.0%	1112.7	1040.1	20.4%	3.47	3.1	25.0		757.1	32.0%	28.8%	100.0
Direct Assay														
+70 calc		591.7	98.3%	1112.7	1040.1	20.4%	3.47	3.1	25.0		757.1	32.0%	28.8%	100.0
70 direct assay:														

Bulk Sample: <0.5 mm 53.0%
<0.25 mm 2.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 98

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 7 Concentrate (5s) **Date:** 7/6/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425	0.2	0.0%											
45	0.355	4.5	0.9%											
50	0.300	76.1	15.2%											
60	0.250	188.2	37.5%											
70	0.212	123.4	24.6%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	109.7	21.8%											
Totals		502.1	100.0%											
Direct Assay				250.0	205.6	19.7%	1.31	5.2	42.0		24.5	90.2%	87.4%	
+70 calc		392.4	78.2%											
70 direct assay:				391.9	323.2	19.1%	2.18	5.6	44.6		33.0	91.6%	89.0%	

Bulk Sample: <0.5 mm 100.0%
<0.25 mm 46.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 100

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 10 Concentrate (5s) **Date:** 7/6/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425	0.1	0.0%											
45	0.355	0.3	0.1%											
50	0.300	19.3	3.9%											
60	0.250	132.7	26.5%											
70	0.212	114.1	22.8%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	234.7	46.8%											
Totals		501.2	100.0%											
Direct Assay				250.0	221.5	17.5%	1.295	5.2	41.5		87.6	65.0%	63.2%	
+70 calc		266.5	53.2%											
70 direct assay:				266.6	224.6	18.1%	1.515	5.7	45.5		34.0	87.2%	85.2%	

Bulk Sample: <0.5 mm 100.0%
<0.25 mm 69.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 1

Significant Organics in size

Exfoliated vermiculite colour is white light brown gray black greenish

Composite grains or excessive fines in 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 6 Concentrate (4s) **Date:** 7/6/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.4	0.3%											
35	0.500	6.8	1.4%											
40	0.425	17.8	3.6%											
45	0.355	49.4	9.9%											
50	0.300	101.6	20.3%											
60	0.250	108.9	21.7%											
70	0.212	72.0	14.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	143.1	28.6%											
Totals		501.0	100.0%											
Direct Assay				250.0	214.0	20.5%	1.17	4.7	37.5		74.5	70.2%	66.9%	
+70 calc		357.9	71.4%											
70 direct assay:				357.8	305.5	17.9%	2.525	7.1	56.5		65.7	81.6%	79.7%	

Bulk Sample: <0.5 mm 94.8%
<0.25 mm 42.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 2

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Winnower 9 Concentrate (4s) **Date:** 7/6/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	4.6	0.9%											
35	0.500	15.9	3.2%											
40	0.425	42.9	8.5%											
45	0.355	141.9	28.2%											
50	0.300	185.8	36.9%											
60	0.250	76.6	15.2%											
70	0.212	25.8	5.1%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	9.4	1.9%											
Totals		502.9	100.0%											
Direct Assay				250.0	214.7	17.3%	1.725	6.9	55.3		45.9	81.6%	80.0%	
+70 calc		493.5	98.1%											
70 direct assay:														

Bulk Sample: <0.5 mm 87.4%
<0.25 mm 7.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 3

Significant Organics in
Exfoliated vermiculite colour is
Composite gra 3

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 3-2 (partial bag only) **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	21.2	5.3%											
35	0.500	33.8	8.5%											
40	0.425	51.6	13.0%											
45	0.355	83.0	20.9%											
50	0.300	91.6	23.1%											
60	0.250	52.0	13.1%											
70	0.212	28.3	7.1%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	35.4	8.9%											
Totals		396.9	100.0%											
Direct Assay				250.0	209.2	18.2%	1.82	7.3	58.3		26.2	89.5%	87.4%	
+70 calc		361.5	91.1%											
-18 + 70 direct assay:														

Bulk Sample:

	<0.5 mm	73.1%
	<0.25 mm	16.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 4

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 3-1 (partial bag only) **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	111.1	32.8%											
35	0.500	163.7	48.3%											
40	0.425	32.3	9.5%											
45	0.355	11.2	3.3%											
50	0.300	7.7	2.3%											
60	0.250	3.5	1.0%											
70	0.212	4.9	1.4%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	4.8	1.4%											
Totals		339.2	100.0%											
Direct Assay				250.0	206.8	18.9%	2.22	8.9	71.1		22.0	91.2%	88.7%	
+70 calc		334.4	98.6%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 9.5%
<0.25 mm 2.9%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 5

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-34 **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade Vm (%)*	*Adj. Grade Vm (%)**	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.1	0.4%											
35	0.500	10.8	2.2%											
40	0.425	31.4	6.3%											
45	0.355	87.7	17.5%											
50	0.300	150.7	30.1%											
60	0.250	109.0	21.8%											
70	0.212	46.6	9.3%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	61.8	12.4%											
Totals		500.1	100.0%											
Direct Assay				250.0	214.1	18.7%	1.49	6.0	47.7		57.7	76.9%	74.6%	
+70 calc		438.3	87.6%											
-18 + 70 direct assay:														

Bulk Sample:

<0.5 mm	91.1%
<0.25 mm	21.7%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

* **Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 6

Significant Organics in

Exfoliated vermiculite colour is white light tan brown grey black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Cyclone Underflow **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade Vm (%)*	*Adj. Grade Vm (%)**	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250	37.8	3.8%	+60 & +70										
70	0.212	37.1	3.7%	75.9	62.1	20.7%	0.49	6.5	51.7		9.2	87.9%		100.0
100	0.150	137.0	13.7%											
140	0.104	216.5	21.6%											
200	0.074													
325	0.045													
Pan	-0.104	572.7	57.2%											
Totals		1001.1	100.0%											
Direct Assay														
+70 calc		74.9	7.5%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 100.0%
<0.25 mm 96.2%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 7

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 8:40 pm **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.7	0.5%											
35	0.500	12.3	2.5%											
40	0.425	36.0	7.2%											
45	0.355	108.2	21.7%											
50	0.300	191.4	38.3%											
60	0.250	111.2	22.3%											
70	0.212	29.8	6.0%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	7.9	1.6%											
Totals		499.5	100.0%											
Direct Assay				250.0	213.0	17.3%	1.9	7.6	60.9		36.6	85.4%	83.7%	
+70 calc		491.6	98.4%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 89.8%
<0.25 mm 7.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 8

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-35 **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.6	0.5%											
35	0.500	12.6	2.5%											
40	0.425	33.5	6.7%											
45	0.355	85.8	17.2%											
50	0.300	162.0	32.4%											
60	0.250	118.5	23.7%											
70	0.212	40.2	8.0%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	44.6	8.9%											
Totals		499.8	100.0%											
Direct Assay				250.0	214.1	18.2%	1.85	7.4	59.3		53.0	78.8%	76.7%	
+70 calc		455.2	91.1%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 90.3% <0.25 mm 17.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: --

* **Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 9

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore - Dryer Product, 1:50 pm **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	*Dist'n Wt (%)*	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	*Grade Vm (%)*	*Adj. Grade Vm (%)**	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	40.0	5.4%											
10	2.000	37.9	5.1%											
12	1.700	12.3	1.7%											
18	1.000	59.5	8.1%											
20	0.850	23.1	3.1%											
25	0.710	37.4	5.1%											
30	0.600	39.2	5.3%											
35	0.500	64.7	8.8%											
40	0.425	65.2	8.9%											
45	0.355	76.1	10.3%											
50	0.300	88.0	12.0%											
60	0.250	91.0	12.4%											
70	0.212	72.6	9.9%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	29.2	4.0%											
Totals		736.2	100.0%											
Direct Assay														
+70 calc		707.0	96.0%											
-18 + 70 direct assay:				250.0	231.8	22.8%	0.61	2.4	19.5		170.2	31.9%	27.5%	

Bulk Sample: <0.5 mm 48.5%
<0.25 mm 13.8%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 11

Significant Organics in	o'size 6 8 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	6 8 12 18 20 25 30 35 40 45 50 60 70 100 140 200 325 pan

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 2:20 pm   **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	2.2	0.8%											
35	0.500	8.7	3.1%											
40	0.425	22.5	8.0%											
45	0.355	58.9	20.8%											
50	0.300	93.2	33.0%											
60	0.250	64.5	22.8%											
70	0.212	21.5	7.6%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	11.0	3.9%											
Totals		282.5	100.0%											
Direct Assay				250.0	211.3	18.1%	1.61	6.4	51.6		36.6	85.4%	83.3%	
+70 calc		271.5	96.1%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 88.2%; <0.25 mm 11.5%

Wet Weight: *Dry Weight:*   *Moisture:*

COMMENTS: —

*** Possible Grade After Adjustment of LOE**

Book 7   **Sheet** 12

Significant Organics in

Exfoliated vermiculite colour is   white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore - Dryer Product, 3:10 pm **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	90.4	8.5%											
10	2.000	103.7	9.7%											
12	1.700	32.1	3.0%											
18	1.000	139.6	13.1%											
20	0.850	45.0	4.2%											
25	0.710	65.0	6.1%											
30	0.600	59.0	5.5%											
35	0.500	79.9	7.5%											
40	0.425	67.0	6.3%											
45	0.355	66.4	6.2%											
50	0.300	62.2	5.8%											
60	0.250	59.6	5.6%											
70	0.212	44.4	4.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	154.9	14.5%											
Totals		1069.2	100.0%											
Direct Assay														
+70 calc		914.3	85.5%											
-18 + 70 direct assay:				250.0	237.4	24.3%	0.49	2.0	15.7		198.2	20.7%	15.6%	

Bulk Sample: <0.5 mm 36.2%
<0.25 mm 18.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Quite stony.

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 13

Significant Organics in

Exfoliated vermiculite colour is white light tan brown gray black greenish

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-36 **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	1.7	0.6%											
35	0.500	7.3	2.5%											
40	0.425	17.3	5.9%											
45	0.355	42.6	14.6%											
50	0.300	96.1	33.0%											
60	0.250	75.6	26.0%											
70	0.212	23.9	8.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	26.6	9.1%											
Totals		291.1	100.0%											
Direct Assay				289.1	240.1	19.5%	1.805	6.2	50.0		38.1	86.8%	84.1%	
+70 calc		264.5	90.9%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 91.0%
<0.25 mm 17.3%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 14

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 4:30 pm **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.1	0.6%											
35	0.500	12.4	2.5%											
40	0.425	35.0	7.0%											
45	0.355	102.5	20.5%											
50	0.300	163.6	32.8%											
60	0.250	105.6	21.2%											
70	0.212	41.0	8.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	36.0	7.2%											
Totals		499.2	100.0%											
Direct Assay				250.0	212.7	19.0%	1.48	5.9	47.4		53.9	78.4%	75.9%	
+70 calc		463.2	92.8%											
-18 + 70 direct assay:														

Bulk Sample:
<0.5 mm 89.9%
<0.25 mm 15.4%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: –

*** Possible Grade After Adjustment of LOE**

Book 7 Sheet 15

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Ore - Dryer Product, 4:35 pm **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350	33.4	4.0%											
10	2.000	48.2	5.7%											
12	1.700	17.5	2.1%											
18	1.000	88.4	10.5%											
20	0.850	30.8	3.7%											
25	0.710	47.1	5.6%											
30	0.600	42.0	5.0%											
35	0.500	58.2	6.9%											
40	0.425	52.9	6.3%											
45	0.355	58.8	7.0%											
50	0.300	66.5	7.9%											
60	0.250	67.6	8.0%											
70	0.212	48.9	5.8%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	182.9	21.7%											
Totals		843.2	100.0%											
Direct Assay														
+70 calc		660.3	78.3%											
-18 + 70 direct assay:				250.0	234.2	20.3%	0.715	2.9	22.9		172.0	31.2%	28.1%	

Bulk Sample: <0.5 mm 50.4%
<0.25 mm 27.5%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS:

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 16

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bin 4 - 3:40 pm **Date:** 7/7/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600	3.6	1.1%											
35	0.500	13.2	4.1%											
40	0.425	33.4	10.3%											
45	0.355	78.7	24.3%											
50	0.300	106.2	32.8%											
60	0.250	65.4	20.2%											
70	0.212	16.6	5.1%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	6.9	2.1%											
Totals		324.0	100.0%											
Direct Assay				250.0	213.7	17.4%	1.68	6.7	53.8		41.2	83.5%	81.8%	
+70 calc		317.1	97.9%											
-18 + 70 direct assay:														

Bulk Sample: <0.5 mm 84.5%
<0.25 mm 7.3%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: ---

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 17

Significant Organics in	
Exfoliated vermiculite colour is	white light tan brown gray black greenish
Composite grains or excessive fines in	

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Bag 4-37 **Date:** 7/8/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	LOE (%)	Vol (L)	Bag Yield (mL/gm)	Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade Vm (%)	Adj. Grade Vm (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000													
20	0.850													
25	0.710													
30	0.600													
35	0.500	0.8	0.1%											
40	0.425	22.5	4.0%											
45	0.355	99.2	17.7%											
50	0.300	176.7	31.5%											
60	0.250	141.0	25.1%											
70	0.212	64.9	11.6%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	56.4	10.0%											
Totals		561.5	100.0%											
Direct Assay				250.0	213.7	17.4%	1.68	6.7	53.8		41.2	83.5%	81.8%	
+70 calc		505.1	90.0%											
-18 + 70 direct assay:														

Bulk Sample:
<0.5 mm 95.9%
<0.25 mm 21.6%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Fine. (Older production).

*** Possible Grade After Adjustment of LOE**

Book 7 **Sheet** 18

Significant Organics in
Exfoliated vermiculite colour is
Composite grains or excessive fines in

4 Concentrate

Date	Time	Details		Size, ASTM #/mm							%Vm		Bag Yield	
				30 0.600	35 0.500	40 0.425	45 0.355	50 0.300	60 0.250	70 0.212	w/o corr	with corr	mL/gm	Bags per ton
21-May	-	Bin 4		-	43.2%	15.7%	8.7%	9.8%		13.8%	80.3%	-	7.0	56.1
28-May	-	Bin 4		-	38.5%	31.3%	14.8%	7.7%		4.6%	-	-	-	-
27-May	-	Bag 10A		-	49.1%	13.5%	7.8%	9.0%		12.4%	-	-	7.8	62.5
1-Jun	-	Bin 4		-	42.4%	28.4%	11.9%	5.6%	0.0%	8.9%	-	-	7.1	56.9
8-Jun	-	Winnower 12		-	6.1%	11.0%	26.4%	34.1%	15.0%	5.2%	-	-	-	-
8-Jun	-	Winnower 9		-	2.9%	7.0%	20.7%	34.3%	19.6%	9.2%	-	-	-	-
10-Jun	-	Bin 4	#3s Run	2.2%	39.6%	41.6%	13.7%	2.5%	0.2%	0.0%	-	-	-	-
14-Jun	-	Bin 4		0.7%	25.5%	46.0%	18.6%	5.9%	1.8%	0.9%	-	-	-	-
16-Jun	-	Bin 4	Middlings Run	-	0.6%	35.2%	40.4%	15.9%	5.9%	1.5%	-	-	-	-
17-Jun	-	Bin 4	Sweco Change	0.3%	1.8%	5.6%	19.3%	34.3%	24.9%	10.1%	-	-	-	-
21-Jun	12:45	Bin 4	Middl, etc Run	0.5%	2.4%	14.6%	29.6%	27.6%	16.5%	6.7%	83.3%	80.8%	6.3	50.6
21-Jun	-	Bin 4	Middlings Run	0.7%	3.3%	21.0%	28.3%	24.1%	14.1%	6.2%	-	-	-	-
22-Jun	-	Bag 4-14		0.1%	0.1%	3.9%	17.7%	34.9%	27.3%	11.2%	80.6%	78.7%	7.6	60.9
23-Jun	-	Bag 4-15		0.7%	24.8%	37.9%	16.4%	9.5%	6.5%	2.9%	84.1%	83.0%	9.6	76.9
23-Jun	-	Bag 4-16		0.0%	0.2%	3.3%	15.5%	32.8%	29.8%	12.6%	75.1%	72.3%	6.0	48.1
24-Jun	1:00	Bin 4		-	-	-	-	-	-	-	74.7%	-	-	-
28-Jun	11:00	Bin 4	With Screening	1.3%	4.3%	9.9%	25.3%	31.2%	19.4%	5.7%	67.5%	63.6%	5.1	40.5
28-Jun	12:45	Bin 4	With Screening	1.4%	4.9%	9.7%	19.7%	42.4%	17.7%	3.5%	76.7%	73.7%	5.9	47.1
28-Jun	2:20	Bin 4	With Screening	0.6%	2.5%	6.6%	18.5%	41.0%	24.3%	4.9%	77.2%	74.9%	6.1	49.0
28-Jun	4:00	Bin 4	With Screening	1.1%	3.7%	8.6%	21.0%	35.4%	21.1%	6.4%	78.1%	76.8%	7.0	56.1
28-Jun	4:30	Bin 4	With Screening	0.9%	3.5%	7.4%	17.4%	36.5%	24.5%	6.7%	73.9%	71.5%	6.6	52.5
29-Jun	10:25	Bin 4	Sweco Change	2.0%	4.6%	10.3%	21.9%	34.6%	21.3%	3.9%	74.6%	70.9%	5.6	44.9
29-Jun	10:25	Bin 4	Sweco Change	0.7%	2.8%	8.5%	22.8%	35.0%	20.1%	6.7%	86.0%	84.4%	7.2	57.8
29-Jun	2:00	Bin 4	Sweco Change	0.9%	2.8%	8.3%	22.1%	36.1%	22.0%	5.2%	73.0%	70.5%	5.6	44.9
29-Jun	3:15	Bin 4	Sweco Change	0.8%	2.8%	7.6%	20.5%	34.2%	23.9%	7.2%	79.4%	77.4%	6.5	51.9
29-Jun	4:30	Bin 4	Sweco Change	0.6%	2.9%	8.7%	23.7%	33.7%	20.8%	6.5%	83.1%	81.5%	6.8	54.5
30-Jun	-	Bag 4-17		0.4%	2.0%	5.6%	14.8%	30.4%	26.8%	9.4%	83.1%	80.3%	5.1	40.7
30-Jun	-	Bag 4-18		0.5%	2.4%	6.8%	16.6%	30.5%	28.4%	7.9%	80.9%	78.0%	5.7	45.5
30-Jun	10:25	Bin 4		0.7%	3.3%	8.7%	21.5%	34.7%	23.6%	5.9%	85.2%	83.6%	6.1	48.7
30-Jun	-	Bag 4-19		0.8%	3.4%	6.9%	15.2%	32.7%	27.6%	7.1%	76.4%	74.3%	6.4	51.3
30-Jun	-	Bag 4-20		0.7%	2.9%	7.3%	16.6%	28.9%	25.7%	9.5%	79.0%	76.8%	5.8	46.4
30-Jun	-	Bag 4-21		1.2%	4.2%	8.0%	16.7%	30.8%	24.3%	6.8%	82.6%	80.5%	6.5	51.8
30-Jun	-	Bag 4-22		0.5%	3.0%	7.8%	18.5%	33.0%	23.9%	6.9%	83.7%	81.6%	6.5	52.2
30-Jun	-	Bag 4-23		0.1%	0.1%	3.4%	12.1%	27.9%	31.5%	15.5%	76.4%	-	6.6	52.5
30-Jun	3:30	Bin 4		0.6%	2.0%	4.9%	14.8%	42.7%	23.9%	7.2%	77.4%	-	6.8	54.1
30-Jun	4:00	Bin 4		0.4%	2.3%	6.4%	17.3%	35.4%	23.5%	8.8%	76.9%	75.4%	7.0	55.9
1-Jul	10:00	Bin 4		0.1%	0.6%	4.2%	14.3%	36.6%	29.2%	10.4%	85.0%	82.6%	6.5	51.9
1-Jul	-	Winnower 9		0.3%	1.5%	4.3%	12.5%	32.9%	28.6%	13.2%	77.0%	75.4%	6.2	49.7
1-Jul	-	Winnower 6		0.5%	2.7%	11.0%	21.9%	33.2%	16.0%	8.4%	84.1%	82.5%	7.2	57.7
1-Jul	12:00	Bin 4		0.6%	2.7%	8.3%	23.1%	33.7%	20.0%	7.2%	86.5%	-	7.4	58.9
1-Jul	3:10	Bin 4		1.0%	3.2%	8.0%	19.8%	33.8%	21.6%	7.4%	82.1%	79.5%	5.8	46.8
5-Jul	-	Bag 4-30		0.9%	3.4%	8.4%	17.8%	30.3%	22.4%	7.7%	85.6%	84.0%	7.2	57.8
5-Jul	9:00	Bin 4		1.0%	4.0%	11.0%	27.0%	31.5%	16.3%	5.6%	83.5%	81.7%	7.6	60.9
5-Jul	-	Bag 4-31		0.6%	3.3%	8.4%	19.6%	31.0%	22.0%	7.8%	87.6%	-	7.4	58.9
5-Jul	12:20	Bin 4		1.2%	3.9%	9.2%	21.6%	33.6%	19.7%	6.6%	83.1%	79.6%	6.3	50.8
5-Jul	-	Bag 4-32		0.7%	2.8%	7.4%	18.6%	31.1%	21.7%	8.9%	91.5%	-	8.8	70.6
5-Jul	2:20	Bin 4		1.0%	4.0%	11.4%	28.8%	29.9%	15.7%	5.6%	89.8%	-	8.7	69.7
5-Jul	-	Bag 4-33		0.5%	2.5%	7.8%	22.2%	31.3%	18.4%	8.3%	88.1%	-	7.6	60.9

Second Stage Middlings

Conc	Size, ASTM #/mm							%V_m			Bag Yield		Page
	30	35	40	45	50	60	70	overall	+40	-40 + 70	mm/gm	Bags per ton	
	0.6	0.5	0.425	0.355	0.3	0.25	0.212		+0.425	-0.425 + 0.212			
26-May	-	1.0%	4.3%	10.9%	24.2%	-	53.3%	-	-	-	-	-	5-63
01-Jun	-	5.2%	5.4%	14.8%	34.8%		34.7%	-	-	-	3.0	24.0	5-70
01-Jun		12.5%	9.7%	17.2%	28.6%		28.5%	-	-	-	3.0	-	5-71
03-Jun		20.5%	16.0%	12.3%	15.2%		28.2%	-	-	-	-	-	5-75
03-Jun	1.7%	5.4%	6.3%	7.9%	16.3%		42.1%	29.7	-	-	-	-	5-77
10-Jun	12.6%	14.7%	9.8%	7.5%	9.4%	15.7%	8.3%	-	25.1	26.0	3.0	24.0	5-93
29-Jun	4.7%	13.4%	18.7%	20.1%	16.8%	14.6%	7.4%	36.4	36.5	36.4	3.7	29.6	6-59

COMMERCIAL VERMICULITE ANALYSIS DATA
Vermiculite Assay - Regis Resources Screen Series

Sample: Dryer Product - 15 tph from June 11 (6-94) **Date:** 6/21/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (mL/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	126.6	12.7%											
20	0.850													
25	0.710													
30	0.600	193.5	19.4%	193.5	185.5	28.1%	0.377	1.9	15.6	20.8	165.0	11.2%		[illegible]
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	643.3	64.3%	250.0	226.5	23.7%	0.87	3.5	27.9	77.0	150.7	33.8%		[illegible]
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	36.6	3.7%											
Totals		1000.0	100.0%	443.5	412.0	24.6%	1.25	2.8	22.5	97.8	315.7	23.7%		100
Direct Assay														
+70 calc		963.4	96.3%	443.5	412.0	24.6%	1.25	2.8	22.5	97.8	315.7	23.7%		100
70 direct assay:														

Bulk Sample: 0.5 mm 68.0%
-0.25 mm 68.0%

Wet Weight: *Dry Weight:* *Moisture:*

COMMENTS: Check vermiculite distribution in the -18 + 30 and -30 +70 fractions.

* Possible Grade After Adjustment of LOE

Book 6 **Sheet** 27

Significant Organics in

Exfoliated vermiculite colour is

Composite grains or excessive fines in

COMMERCIAL VERMICULITE ANALYSIS DATA

Vermiculite Assay - Regis Resources Screen Series

Sample: Ore A from pit - same as 6-28 **Date:** 6/11/04

ASTM Sieve	Size (mm)	Total Wt (gm)	Dist'n Wt (%)	Assay Wt (gm)	After Exfoliation Wt (gm)	After Exfoliation LOE (%)	After Exfoliation Vol (L)	Bag Yield (ml/gm)	Bag Yield Bags/ton	V_m Wt (gm)	Rock Wt (gm)	Grade V_m (%)	Adj. Grade V_m (%)*	% Dist'n V_m
O'Size (3 mesh)	6.700													
6	3.350													
10	2.000													
12	1.700													
18	1.000	250.0	14.3%											
20	0.850													
25	0.710													
30	0.600													
35	0.500													
40	0.425													
45	0.355													
50	0.300													
60	0.250													
70	0.212	1055.0	60.2%											
100	0.150													
140	0.104													
200	0.074													
325	0.045													
Pan	-0.212	447.0	25.5%											
Totals		1752.0	100.0%											
Direct Assay														
+70 calc		1305.0	74.5%											
70 direct assay:				230.0	220.9	22.6%	0.76	3.2	25.6	58.6	162.3	26.5%		

Bulk Sample:

<0.5 mm	85.7%
<0.25 mm	85.7%

Wet Weight: ***Dry Weight:*** ***Moisture:***

COMMENTS: Coned and quartered a quarter, removed +6 mesh. The overall assay is based on -18 + 70 material.

*** Possible Grade After Adjustment of LOE**

Book 6 **Sheet** 9

Significant Organics in	o'size	6	10	12	18	20 *	25	30	35	40	45	50	60	70	100	140	200	325	pan
Exfoliated vermiculite colour is	white	light tan	brown	gray	black	greenish													
Composite grains or excessive fines in		6	10	12	18	20	25	30	35	40	45	50	60	70	100	140	200	325	pan

Second Stage Middlings

Conc	Size, ASTM #/mm							%V_m			Bag Yield		Page
	30 0.6	35 0.5	40 0.425	45 0.355	50 0.3	60 0.25	70 0.212	overall	+40 +0.425	-40 + 70 -0.425 + 0.212	mm/gm	Bags per ton	
26-May	-	1.0%	4.3%	10.9%	24.2%	-	53.3%	-	-	-	-	-	5-63
01-Jun	-	5.2%	5.4%	14.8%	34.8%		34.7%	-	-	-	3.0	24.0	5-70
01-Jun		12.5%	9.7%	17.2%	28.6%		28.5%	-	-	-	3.0	-	5-71
03-Jun		20.5%	16.0%	12.3%	15.2%		28.2%	-	-	-	-	-	5-75
03-Jun	1.7%	5.4%	6.3%	7.9%	16.3%		42.1%	29.7	-	-	-	-	5-77
10-Jun	12.6%	14.7%	9.8%	7.5%	9.4%	15.7%	8.3%	-	25.1	26.0	3.0	24.0	5-93
29-Jun	4.7%	13.4%	18.7%	20.1%	16.8%	14.6%	7.4%	36.4	36.5	36.4	3.7	29.6	6-59

Section 3

Report from Chatfield Wicks

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
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Fax: (905) 896-1930

23 March 2003

Mr. Martin Shefsky
Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario, M4W 3B8

RE: VERMICULITE FROM THE CAVENDISH DEPOSIT

Dear Mr. Shefsky:

We have examined samples of vermiculite from the Cavendish deposit for the presence of amphibole asbestos and chrysotile asbestos.

Two samples were examined for determination of amphibole asbestos. In these tests no amphibole asbestos was detected. The detection limits for these analyses were 0.066% in a -10 to +12 mesh sample, and 0.0073% in a -12 to +40 mesh sample.

Additional samples were submitted to be examined for the presence of chrysotile asbestos. No chrysotile asbestos was detected in these samples. The detection limit for chrysotile asbestos in these measurements was approximately 0.000002%.

In summary, in the samples of vermiculite from the Cavendish deposit that were examined, no amphibole asbestos or chrysotile asbestos was detected.

Please do not hesitate to contact us if we can provide any additional information.

Yours sincerely,

E J Chatfield

Dr. Eric J. Chatfield
President
Chatfield Technical Consulting Limited

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Report Number 99M084

EXAMINATION OF TWO VERMICULITE SAMPLES FOR THE PRESENCE OF ASBESTOS-FORMING AMPHIBOLE FIBRES

Prepared For:

Mr. Martin Shefsky
Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

Dr. Eric J. Chatfield
President
Chatfield Technical Consulting Limited

2001-11-09

INTRODUCTION

Two samples of beneficiated vermiculite identified as Grade (-10 to +12) and Grade (-12 to +40) were submitted for determination of the concentrations of asbestos-forming amphibole fibres.

For each of the beneficiated vermiculite samples, a representative sub-sample was exfoliated in a muffle furnace at a temperature of 800°C. Most of the exfoliated vermiculite was then separated by water flotation. Magnetic particles were removed from the residue by use of a simple magnetic separator. For the larger grade sample (-10 to +12), suspected amphibole particles were separated from the residue manually during examination under a binocular microscope. For the smaller grade sample (-12 to +40), it was necessary to remove non-amphibole particles by a density separation procedure, prior to manual separation. For each sample, representative particles selected after these separation steps were examined by both scanning electron microscopy (SEM) and polarized light microscopy (PLM).

OVERVIEW OF ANALYTICAL METHOD

The analytical method is designed for routine screening of vermiculite for the possible presence of asbestos-forming amphiboles. The preparation and analysis techniques would require modification if the vermiculite is to be screened for the presence of chrysotile asbestos.

For samples consisting mostly of exfoliated vermiculite, flotation in water is used to separate the majority of the vermiculite. The particles which either sink or remain suspended in water are then further separated by centrifugation in a heavy liquid of density 2.75 g/cc. The heavy liquid used is 1,1,2,2 tetra-bromoethane with addition of anhydrous ethanol to adjust the density to 2.75 g/cc. The particles which sink in this heavy liquid have densities exceeding 2.75 g/cc. Since the amphiboles all have densities ranging between approximately 2.9 and 3.4 g/cc, the sinking fraction includes any amphibole particles present in the original sample. When strongly-magnetic particles, such as magnetite, are present, these are removed from the separated, high density fraction by use of a simple magnetic separation device. The residual material remaining after these procedures is weighed, and then examined by both PLM and SEM.

PLM is a standard technique for identification of mineral phases, but it is somewhat limited for identification of small proportions of amphibole particles in samples when these particles may have a wide range of refractive indices and compositions. The refractive indices of some of the amphiboles (e.g. tremolite-actinolite and anthophyllite) vary considerably depending on the iron content. Moreover, in many vermiculites which contain small quantities of amphibole, the amphibole species present often include some that are not asbestos-forming varieties. SEM, with energy dispersive x-ray analysis (EDXA), offers another approach for this routine examination. In the SEM, mineral fragments which do not have fibrous morphology or appropriate elemental compositions for asbestos-forming amphiboles are rejected from the analysis. Each mineral fragment which is observed to have the required fibre morphology (aspect ratio >3:1 and a prominent c-axis cleavage) is analyzed to determine its elemental composition. If the fragment contains the elements magnesium, silicon and iron in the correct proportions it is classified as an asbestos-forming magnesium-iron amphibole (either cummingtonite or anthophyllite), and if it also contains calcium in the correct proportion it is classified as tremolite or actinolite, depending on the amount of iron. If the calcium peak is lower than that for tremolite/actinolite, and peaks from sodium and potassium are present, the fragment is classified as richterite. If a significant peak from aluminum is present, the fragment is not an asbestos-forming amphibole. In some cases, correct classification can be made only by a detailed quantitative analysis of the elemental composition. Unfortunately, there are other mineral species with elemental compositions very close to those of the amphiboles, and a false-positive result from the SEM analysis can occur. PLM examination can discriminate some of these compositionally-similar mineral species from amphibole minerals. However, differences in chemical composition between, for example, the amphiboles actinolite and hornblende, do not always result in differences in the optical properties sufficient for reliable discrimination by PLM. The combination of SEM and PLM provides a reliable method of screening vermiculite for asbestos-forming amphibole fibres. The method does not provide the definitive identification obtainable by transmission electron microscopy (TEM), but if incorrect classifications occur they will generally be false-positive, rather than false-negative.

ANALYSIS

For each of these beneficiated vermiculite samples, a weighed sub-sample was exfoliated in a muffle furnace at a temperature of 800°C. Successive portions of the exfoliated vermiculite were added to a beaker containing approximately 1 litre of distilled water. After addition of each portion, the mixture was stirred and the material was allowed to separate, after which the floating fraction of vermiculite was removed. The procedure was repeated until all of the sub-sample had been added to the beaker. The water, with the settled and suspended particles, was then filtered using a 0.4 μm pore size polycarbonate filter. The filter was dried and then the particulate material was removed from the filter by ultrasonic treatment in filtered ethanol, and the ethanol was evaporated to dryness.

In the case of the larger size grade vermiculite sample (-10 to +12), magnetic fragments were removed by a simple magnetic separator. It was then possible to separate fragments of suspected amphibole manually from the residual material during examination under a binocular microscope. These fragments were then weighed.

For the smaller size grade vermiculite sample (-12 to +40), after removal of magnetic fragments, sufficient non-fibrous material remained that it was necessary to perform additional separation, which was done using density separation. The residual material remaining after removal of the magnetic fragments was transferred to two 15 mL centrifuge tubes. Approximately 15 mL of heavy liquid, consisting of 1,1,2,2 tetra-bromoetnane with the addition of sufficient ethanol to adjust the density to 2.75 g/cc, was added to each of the centrifuge tubes. The tubes were centrifuged to accelerate the separation of particles of density greater than 2.75 g/cc, after which the supernatant liquid and the floating particles were removed. The particulate which had sunk to the bottom of each centrifuge tube was suspended in ethanol, centrifuged again, and the supernatant ethanol was removed. The residual material in the two centrifuge tubes was combined, dried and weighed. Fragments of suspected amphibole were then separated manually during examination of the residue under a binocular microscope. These fragments were weighed.

During examination of the final residues under the binocular microscope, no fibrous particles were observed in either of the samples. Representative fragments of suspected amphibole from the final residue from each of the samples were examined by PLM and dispersion staining. When the fragments were crushed, it was observed that the resulting particles exhibited prominent c-axis cleavages, and these particles were then examined to determine their refractive indices and other optical properties. The optical properties were consistent with tremolite.

Representative fragments of the suspected amphibole from the final residue from each of the samples were mounted on SEM specimen stubs using double-sided adhesive tape. In order to make the SEM samples electrically conductive, a thin film of carbon was applied by vacuum evaporation. Energy dispersive x-ray spectra were then obtained from the fragments. Although the optical properties of these fragments were consistent with tremolite, the EDXA spectra of all but one of the fragments examined exhibited a substantial aluminum peak which indicated that these fragments were hornblende. For each sample, the amphibole fragments in the final residue were counted in order to obtain an estimate of the concentration of each of these amphibole minerals. The amphibole fragments in each of the size grades of vermiculite were all approximately the same size, and therefore the weight percent of various particle species could be determined according to the particle counts. Using the weights from the water flotation and separation procedures, the results of the SEM examinations were used to calculate the estimated concentrations of asbestos-forming amphibole particles in the original samples of beneficiated vermiculite.

RESULTS

No amphibole asbestos was detected in either of these samples. All of the amphibole fragments detected in the samples were prismatic or massive in nature. Only one particle in the sample identified as Grade (-10 to +12) had a composition consistent with tremolite. All other amphibole particles examined had compositions consistent with hornblende. Table 1 shows a summary of the concentrations of amphibole fragments and the upper 95% confidence limits for the concentrations of non-asbestiform tremolite. Since no amphibole asbestos was detected, if any is present in these samples the concentration is below the detection limit of the analysis. Therefore, for sample Grade (-10 to +12) the concentration of amphibole asbestos is less than 0.066 weight percent, at 95% confidence, and for sample Grade (-12 to +40) the concentration of amphibole asbestos is less than 0.0073 weight percent, at 95% confidence.

TABLE 1. RESULTS OF ANALYSES OF VERMICULITE SAMPLES FOR THE PRESENCE OF AMPHIBOLE ASBESTOS

Sample	Initial Weight of Sub-Sample (grams)	Weight of Amphibole Fragments in Sub-Sample (grams)	Estimated Concentration of Amphibole Fragments in Vermiculite Sample (Weight Percent)	Total Number of Amphibole Fragments in Sub-Sample	Number of Amphibole Fragments Examined	Number of Tremolite Fragments Detected	Upper 95% Confidence Limit of Non-Asbestiform Tremolite (Weight Percent)	Upper 95% Confidence Limit of Amphibole Asbestos (Weight Percent)
Grade (-10 to +12)	32.1674	0.4004	1.24	57	20	1	<0.35	None Detected <0.066
Grade (-12 to +40)	17.4793	0.0521	0.30	123	21	0	<0.043	None Detected <0.0073

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Mr. Stephen Shefsky
President
Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

RE: TRANSMISSION ELECTRON MICROSCOPY EXAMINATION OF VERMICULITE

Dear Mr. Shefsky:

We have examined the samples of vermiculite received on 2002-01-15 and 2002-02-27. Transmission electron microscopy (TEM) specimens were prepared from the samples. The predominant material in the samples is vermiculite, with a small proportion of thin, platy particles having compositions consistent with the serpentine mineral lizardite. These platy lizardite particles exhibit scrolling at their edges, the lizardite scrolls generally developing at 60° angles to each other. Some of the scrolls have detached from the edge of the plate on which they developed and these scrolls superficially resemble chrysotile. However, there are significant diagnostic differences. The ends of the lizardite scrolls often have a minor scroll at 60° to the axis of the main scroll. There is no central channel as is seen in chrysotile and the edges of the scroll often show details of the lizardite layers forming the scroll. Although electron diffraction patterns obtained from these scrolls have similarities with those from chrysotile, detailed examination shows significant diffraction features not found in chrysotile diffraction patterns, and indexing of the diffraction patterns from the scrolls shows them to be the serpentine mineral lizardite.

Lizardite, regardless of the scroll morphology, is not asbestos. The mechanism of formation of these scrolls has not yet been determined, but this mechanism does not appear to be capable of generating scrolls that exceed 5 micrometres (μm) in length. In an examination of 98 scrolls detached from the plates, the largest scroll observed was approximately 4.4 μm in length, and the estimated mass concentration of the scrolls in these vermiculite samples was approximately 2 parts per million.

Please do not hesitate to contact either of us if we can provide any additional information.

Yours sincerely,

E J Chatfield

Dr. Eric J. Chatfield
President
Chatfield Technical Consulting Limited

F J Wicks

Dr. Fred J. Wicks
Mineralogist

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Report Number 02C013

REVIEW OF RESULTS REPORTED IN RJ LEE GROUP, INC. JOB NO. ATH204168

Prepared for:

Mr. Michael P. Gross
Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario M4W 3B8

Submitted to:
Mr. Graham Farquharson
Strathcona Mineral Services Limited
20 Toronto Street, 12th Floor
Toronto, Ontario M5C 2B8

Dr. Eric J. Chatfield
President
Chatfield Technical Consulting Limited

Dr. Fred J. Wicks
Mineralogist

2002-05-14

SUMMARY

Vermiculite from the Cavendish deposit contains a small proportion of thin, platy particles of the serpentine mineral lizardite. In the transmission electron microscope (TEM), it can be seen that these platy lizardite particles frequently exhibit scrolling at their edges, the lizardite scrolls generally developing at 60° angles to each other. Some of the scrolls have detached from the edge of the sheet on which they developed and these scrolls superficially resemble chrysotile. However, there are significant diagnostic differences. The ends of the lizardite scrolls often have a minor scroll at 60° to the axis of the main scroll. There is no central channel as is seen in chrysotile and the edges of the scroll often show details of the lizardite layers forming the scroll. Although selected area electron diffraction (SAED) patterns obtained from these scrolls have some similarities with those from chrysotile, detailed examination shows significant diffraction features not found in chrysotile SAED patterns, and indexing some of the SAED patterns from the scrolls shows them to be the serpentine mineral lizardite.

RJ Lee Group, Inc. have analyzed samples of vermiculite understood to be from the Cavendish vermiculite deposit. In the RJ Lee Group, Inc. analyses, trace amounts of chrysotile were reported in two of the five samples analyzed. No asbestos was detected in the other three samples. RJ Lee Group, Inc. provided TEM images for two of the structures classified in their analyses as chrysotile. The TEM images clearly show evidence that these structures are actually scrolls of lizardite. In each case, the parent lizardite sheet is still attached to the scroll structure that was classified as chrysotile. The interpretation of the SAED patterns from these structures by RJ Lee Group, Inc. appears to involve diffraction spots that are diagnostic for serpentine, but not diagnostic for discrimination between scrolled lizardite and chrysotile.

On the basis of the data provided in the RJ Lee Group, Inc. report, attempts to reproduce the reported weight percent analytical sensitivities and the asbestos weight percentages in Table III were unsuccessful.

1 INTRODUCTION

Chatfield Technical Consulting Limited and Dr. Fred Wicks were requested by Regis Resources Inc. to review and comment on a report by RJ Lee Group, Inc. (RJ Lee Group, Inc. Job No. ATH204168). The report contains the results of analyses of five vermiculite samples, identified as Samples A2-A009070, B2-H017115, C2-H017113, D2-H017111 and E2-H017108, for the presence of asbestos. It is understood that these vermiculite samples were from the Cavendish vermiculite deposit, as were previous samples examined by Chatfield and Wicks.

In the RJ Lee Group, Inc. report, two chrysotile structures were reported in Sample A2-A009070 and three chrysotile structures were reported in Sample D2-H017111. A transmission electron microscope (TEM) micrograph and a selected area electron diffraction (SAED) pattern from one of the reported chrysotile structures in each of these two samples were provided. Two reference chrysotile SAED patterns were also supplied. In addition, for each of the two SAED patterns from the samples and for each of the two reference chrysotile SAED patterns, a calculation sheet giving measurements made on the SAED patterns and the interpretation of the measurements was included. No supporting identification data were provided for the other three chrysotile structures reported in the analyses of these two vermiculite samples. No asbestos structures were reported in any of the other three vermiculite samples. A TEM micrograph labelled "typical vermiculite flake and scrolls" was also provided.

2 GENERAL COMMENTS

The RJ Lee Group, Inc. report states that a representative portion of each as-received sample was prepared and analyzed following the ASTM D5756-95 protocol. This ASTM protocol is intended for analysis of dust collected from surfaces. Treatment of the sample with hydrochloric acid, as mentioned in the RJ Lee Group, Inc. report, is not specified in the ASTM protocol. The ASTM protocol requires ashing of the sample in a muffle furnace, but ashing of the sample is not mentioned in the RJ Lee Group, Inc. report. For calculation of the analytical sensitivity, the minimum fibre dimensions and the density for chrysotile specified in the ASTM protocol were not used in the RJ Lee Group, Inc. report.

On the basis of the information provided, the RJ Lee Group, Inc. report does not support the identification of the mineral structures as chrysotile, nor the quantification.

There appears to be an inconsistency in the sample numbering between the Count Sheet for Sample E2-H017108 and the fifth sample in Tables I, II and III, in which the sample number is quoted as E3-H017108.

3 BACKGROUND AND DIAGNOSTIC DATA RECORDED BY CHATFIELD AND WICKS

Vermiculite from the Cavendish deposit presents a difficult analytical problem, illustrated by the TEM micrograph shown in Figure 1. Vermiculite from this source contains a small proportion by weight of platy particles with a different composition from that of vermiculite. These platy particles were identified as lizardite (as discussed below). Unlike the vermiculite, the lizardite sheets frequently exhibit extensive scroll development at the edges, generally in directions parallel to the principal crystallographic directions (3 axes at 120° to each other). These scrolls are lizardite, and are not the same as the vermiculite scrolls that have been reported in vermiculite from Phalaborwa, RSA[1]. The lizardite scrolls appear to be fragile and to break across the scroll axis into shorter scrolls as they roll up (Figure 1). While the scrolls remain attached to the parent lizardite sheets, their origin is obvious and they need not be considered further. However, when these scrolls become detached from the lizardite sheets, on the basis of current routine analytical TEM methods for asbestos identification they may be mistaken as chrysotile fibres. Figure 2 shows an example of an isolated scroll, but this example, in common with almost all such scrolls, exhibits morphological features that indicate its origin as rolled-up lizardite.

The lizardite scrolls yield SAED patterns which can be similar to those from chrysotile. The usual criteria employed in interpretation of SAED patterns during routine asbestos analysis are diagnostic for serpentine, but are incapable of discriminating between these lizardite scrolls and chrysotile fibres.

It is necessary to recognize which of the features of a SAED pattern are diagnostic in discriminating between the different varieties of serpentine[2, 3, 4]. The line of diffraction spots that runs through the large black spot made by the electron beam is called the zero layer line. The line of diffraction spots on either side of the zero layer line is called the 1st layer line. Both of these lines contain diffraction spots that are common to **<u>all serpentine mineral particles that are elongate along the *a* crystallographic axis</u>** whether it is a chrysotile fibre, a bundle of chrysotile fibres, a lizardite scroll, or a bundle of lizardite splinters. There are some subtle

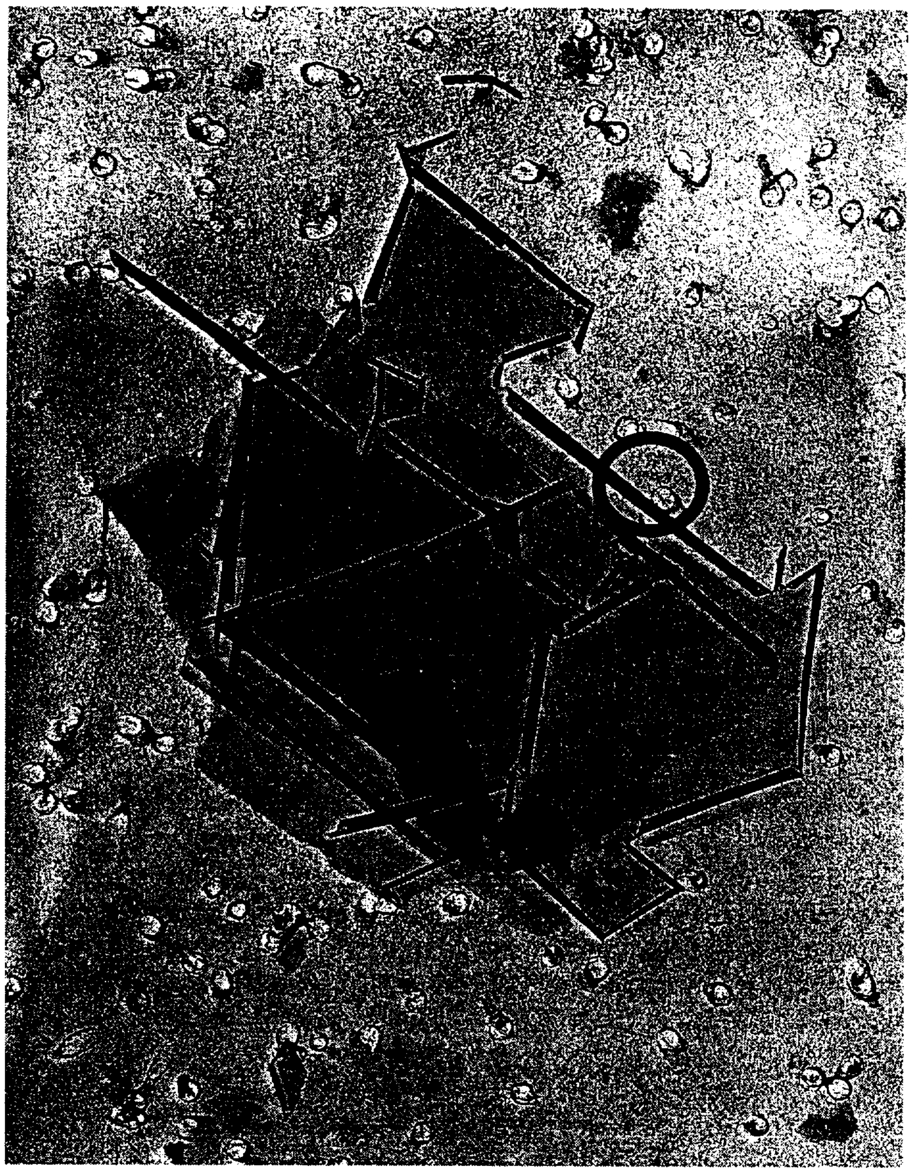

Figure 1. **TEM micrograph of a lizardite sheet with extensive scroll development at the edges, generally parallel to the principal crystallographic directions. The long scroll near the centre of the image has broken into two shorter scrolls. The SAED pattern in Figure 3 was obtained from the circled area.**

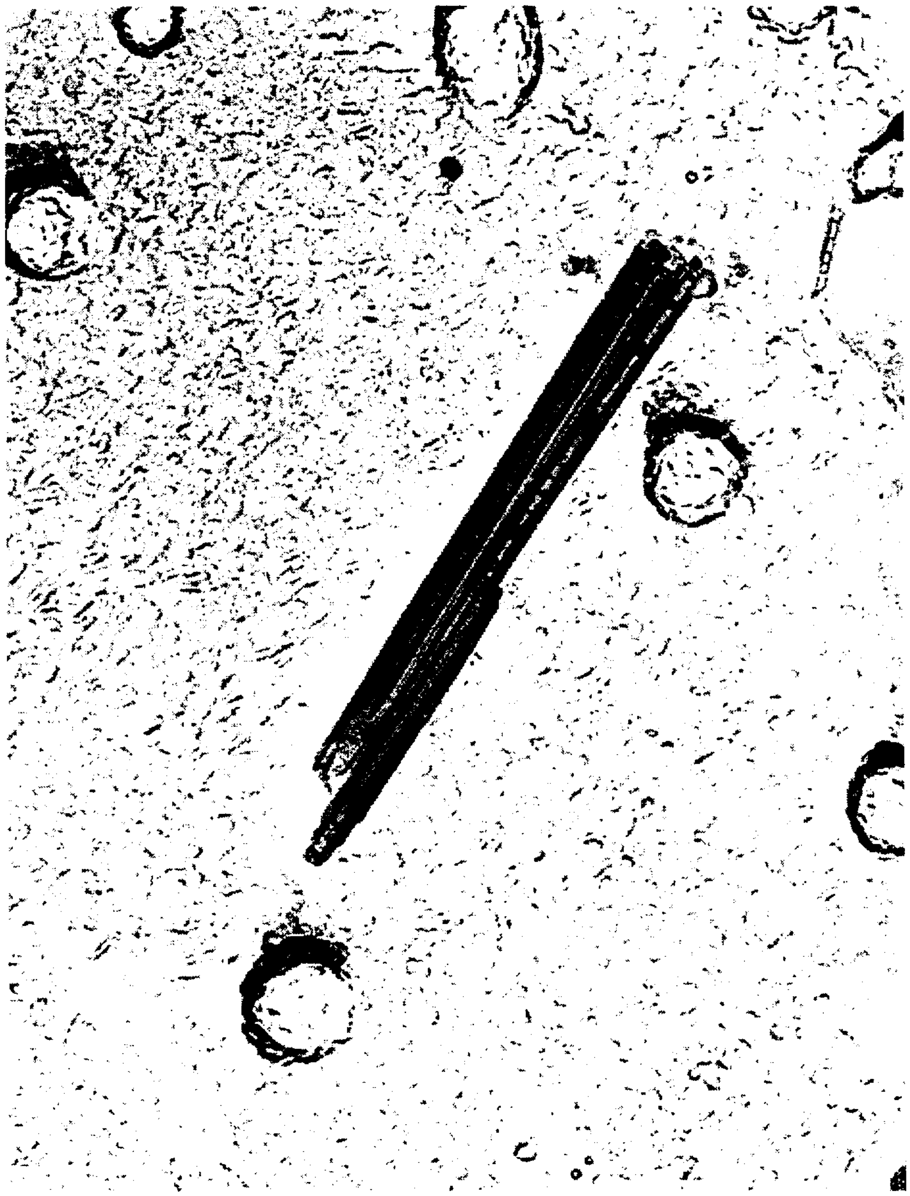

Figure 2. Lizardite scrolls formed by rolling up of opposite sides of a lizardite sheet.

differences in the details of this part of the SAED patterns of chrysotile and lizardite, but in the broad details this part of the patterns is quite similar.

Discrimination between the serpentine minerals can be achieved using the positions of the diffraction spots on the 2nd layer line. The diffraction information can also be used to understand the nature of the stacking of successive serpentine layers that make up a scroll or fibre. When these diffraction spots become smeared out into streaks it indicates that the mineral is not well-crystallized and that successive layers of a scroll are not organized with respect to one another. The 3rd and 4th layer lines, when they are present, can be used to add more detail to the description of the mineral particle which gave rise to the pattern.

The SAED pattern in Figure 3 was recorded from a scroll that forms one edge of the complexly-scrolled, thin, hexagonal sheet of lizardite shown in Figure 1. The diffraction spots and streaks on the zero layer and 1st layer lines indicate diffraction from a cylindrical scroll, although not a uniform cylindrical structure as would be generally found in chrysotile. The asymmetry of the intensities of the pairs of equivalent diffraction spots on the same layer line from one side of the pattern to the other is a feature typical of lizardite and not usually found in chrysotile fibre SAED patterns. For example in Figure 3, the 020 and 060 diffraction spots on the zero layer line are present on one side of the pattern but are absent on the other side. This asymmetry indicates lizardite. The angular separation of the 060 reflections into three positions of strong, medium and weak intensities, indicates that there is some lizardite in two slightly different positions to that in the main scroll. The simple series of evenly-spaced diffraction spots on the 2nd layer line indicate that this is a scroll of single-layered lizardite, or lizardite 1T. The continuous streaking and smearing of diffraction spots along the 2nd layer line indicate significant disorder, or stacking mistakes, between the lizardite layers. This disorder may be caused by the rolling of the layers into scrolls.

The complex SAED pattern in Figure 4 was recorded from a thin lizardite sheet and two sub-parallel, adjacent scrolls that formed by rolling of the edge of the sheet. Successive lizardite scrolls formed by repeated scrolling from the same edge of a lizardite sheet are a common feature of the scrolling mechanism (see Figure 1). The SAED pattern is made up of contributions from all three features. A characteristic hexagonal array of sharp diffraction spots was produced by the lizardite sheet [2, 3, 4]. Two SAED patterns from the scrolls are superimposed on the hexagonal pattern and are rotated approximately 13° with respect to one another. One pattern is much stronger than the other and is in perfect alignment with the SAED pattern of the lizardite sheet showing that it formed by rolling of the sheet to

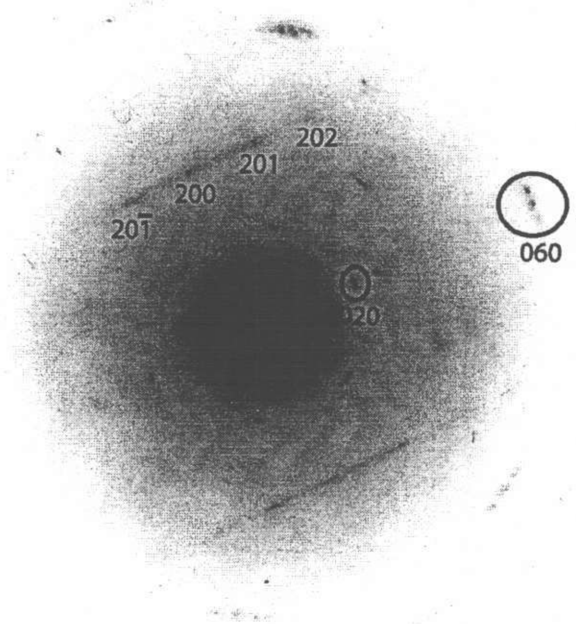

Figure 3. SAED pattern from a scroll on the edge of the thin hexagonal sheet of lizardite shown in Figure 1. The 002 and 060 diffraction spots occur only on the right side of the SAED pattern.

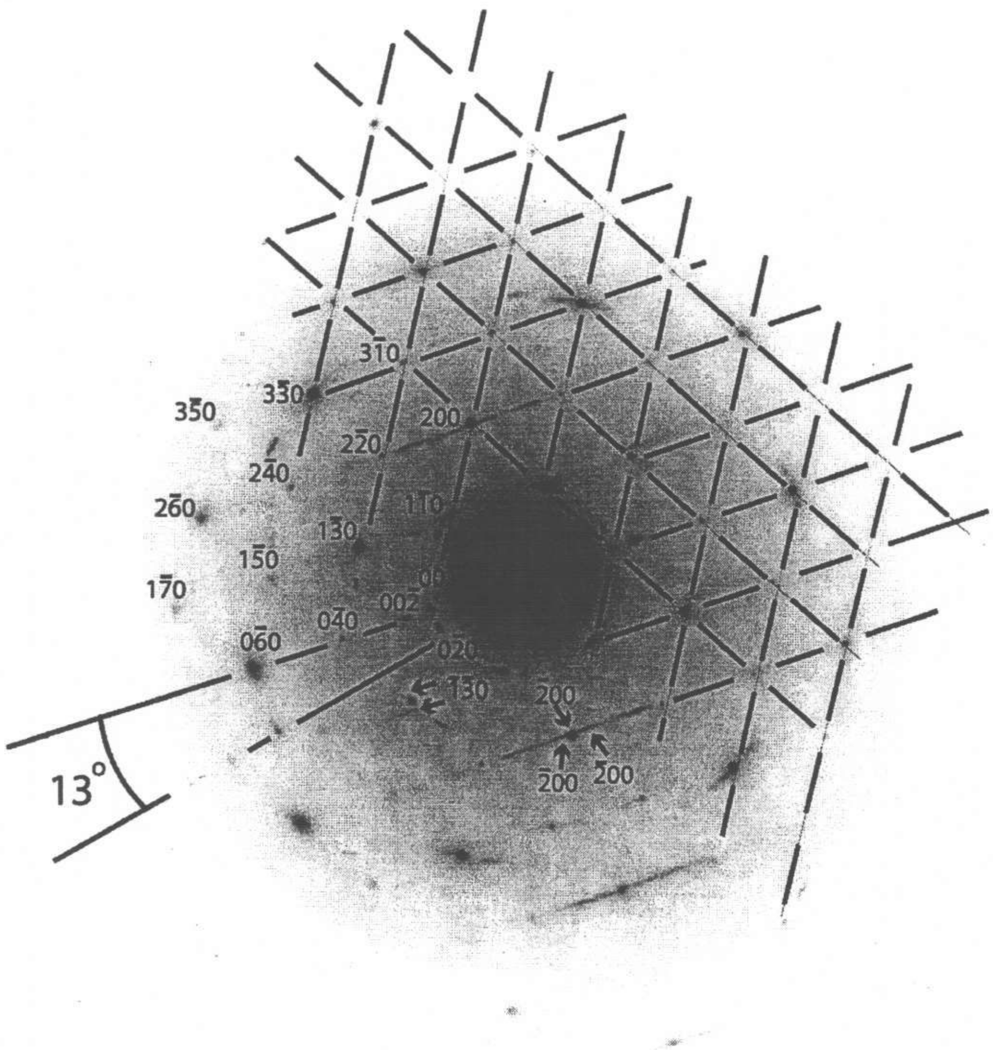

Figure 4. SAED pattern from a thin lizardite sheet and two scrolls from the rolling up of the edge of the sheet. The hexagonal pattern of lines on the top right hand side of the diffraction pattern highlights the sharp diffraction spots from the flat lizardite sheet. The streaky layer lines from the main lizardite scroll align with one of the hexagonal axes of the lizardite sheet.

form the lizardite scroll. One of the effects of the rolling of the lizardite sheet on the lizardite SAED pattern is demonstrated by this scroll. The normal, single, sharp $\bar{2}00$ diffraction spot from the lizardite sheet is clearly recorded but the $\bar{2}00$ diffraction spot from the scroll is divided into two elongate diffraction spots on either side of the first sharp $\bar{2}00$ spot. This division and elongation of spots occurs in other diffraction spots along the 2nd layer line and has some resemblance to the diffraction spots of clinochrysotile, the common polytype of chrysotile. The elongation of the diffraction spots and the diffuse streaking along the 2nd layer line indicate a considerable disorder to the structure. The other weak diffraction spots further out along the 2nd layer line indicate that the scroll has a one-layer structure similar to the parent lizardite sheet and not the two-layer structure of clinochrysotile [4, 5].

There is another feature in the SAED pattern shown in Figure 4. Diffuse diffraction streaks occur on either side of the main $\bar{1}\bar{3}0$ diffraction spots parallel to, and off the 1st layer line (see the two arrows near the lower left-hand $\bar{1}\bar{3}0$ spot in Figure 4). This feature appears to indicates that some, but not all, of the lizardite in this scroll has developed with a helical roll [3, 6]. This feature does not occur on all SAED patterns.

Other diffraction features occur in some of the scrolled lizardite that do not occur in chrysotile SAED patterns. In the SAED pattern shown in Figure 5, from an imperfectly rolled lizardite scroll, a series of 13ℓ diffraction spots follows the main 130 spot. This type of diffraction does not occur in patterns from chrysotile fibres. Also, the almost total absence of diffraction spots on one side of the SAED pattern would be very rare from a chrysotile fibre, but this can easily occur from an imperfectly rolled lizardite scroll. Occasionally a series of 11ℓ diffraction spots follows the 110 spot. This is typical of lizardite but impossible in diffraction from chrysotile [4].

The exact mechanism of how the lizardite layers roll into scrolls and align themselves within a scroll has not been determined, but the available evidence suggests it is variable and somewhat disorganized. Some of the lizardite may not be in a curved scroll but rather in a scroll formed by a series of polygonal sectors. Indeed some of our diffraction evidence, particularly the 11ℓ and 13ℓ diffraction spots (Figure 5), is similar to that recorded for polygonal serpentine [5, 7]. Polygonal serpentine structures occur in a variety of geological environments. Usually they form a cylindrical structure composed of either 15 or 30 polygonal sectors of

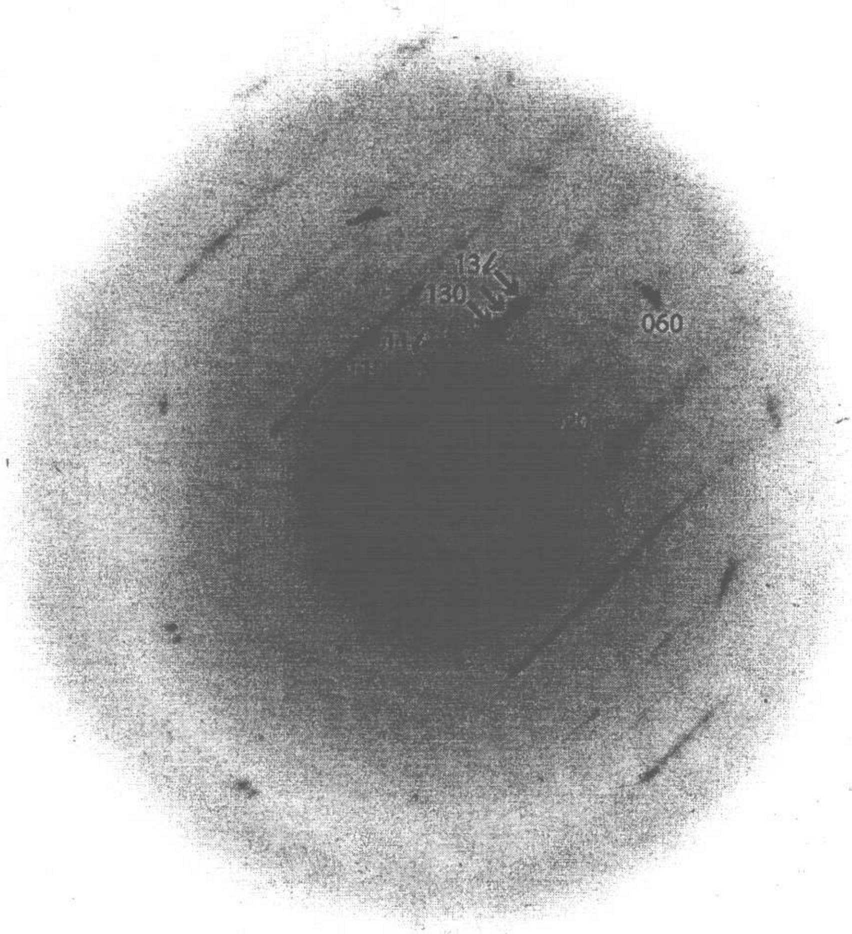

Figure 5. SAED pattern from an imperfectly rolled lizardite scroll. The 11ℓ and 13ℓ diffraction spots following the 110 and 130 diffraction spots do not occur in chrysotile diffraction patterns.

different lizardite polytypes. They are also found as incomplete cylindrical structures, usually within massive rocks where there is no space for the complete structure to form. It is quite possible that some of the lizardite scrolls in the Cavendish vermiculite have a polygonal, or partially polygonal, structure.

4 IDENTIFICATION OF THE MINERAL FIBRES BY RJ LEE GROUP, INC.

4.1 Reference SAED Patterns Provided by RJ Lee Group, Inc.

Two standard reference SAED patterns of chrysotile, "chry standard 1" (Figure 6) and "chry standard 2" (Figure 7), were provided with the RJ Lee Group, Inc. report. "Chry standard 1" is a simple, faint pattern with some sharp, diffraction spots. "Chry standard 2" has broader, more intense diffraction spots and is a much more complete and complex SAED pattern. This SAED pattern indicates that this fibre is different and structurally more complex than the fibre that produced "chry standard 1". It is not clear from the RJ Lee Group, Inc. report why two very different reference patterns of the same material were presented, whether the difference between these two patterns was considered to be significant, which of them was used as a reference SAED pattern in their analyses, and why that pattern was selected.

4.2 Fibre Identification by RJ Lee Group, Inc.

Figure 8 shows a TEM micrograph (40331) of one of the two structures reported as chrysotile by RJ Lee Group, Inc. in Sample A2-A009070. The lower left corner of the micrograph shows a sheet to which the reported fibre appears to be attached. There is a second, very thin sheet, attached to the top right-hand side of the reported fibre. Our studies presented in the earlier part of this report suggest that Figure 8 is an image of a lizardite scroll with two pieces of planar, parent lizardite sheet still attached. The SAED pattern (40316) presented in Figure 9 is a fairly weak, incomplete pattern with insufficient detail to be definitive. However, the morphology of this structure clearly establishes the reported fibre as a lizardite scroll.

Examination of the morphology of the scroll in Figure 8 shows features not found in chrysotile asbestos fibres. The scroll pinches and swells along its length. The sides are not parallel and show many small pieces of lizardite, in

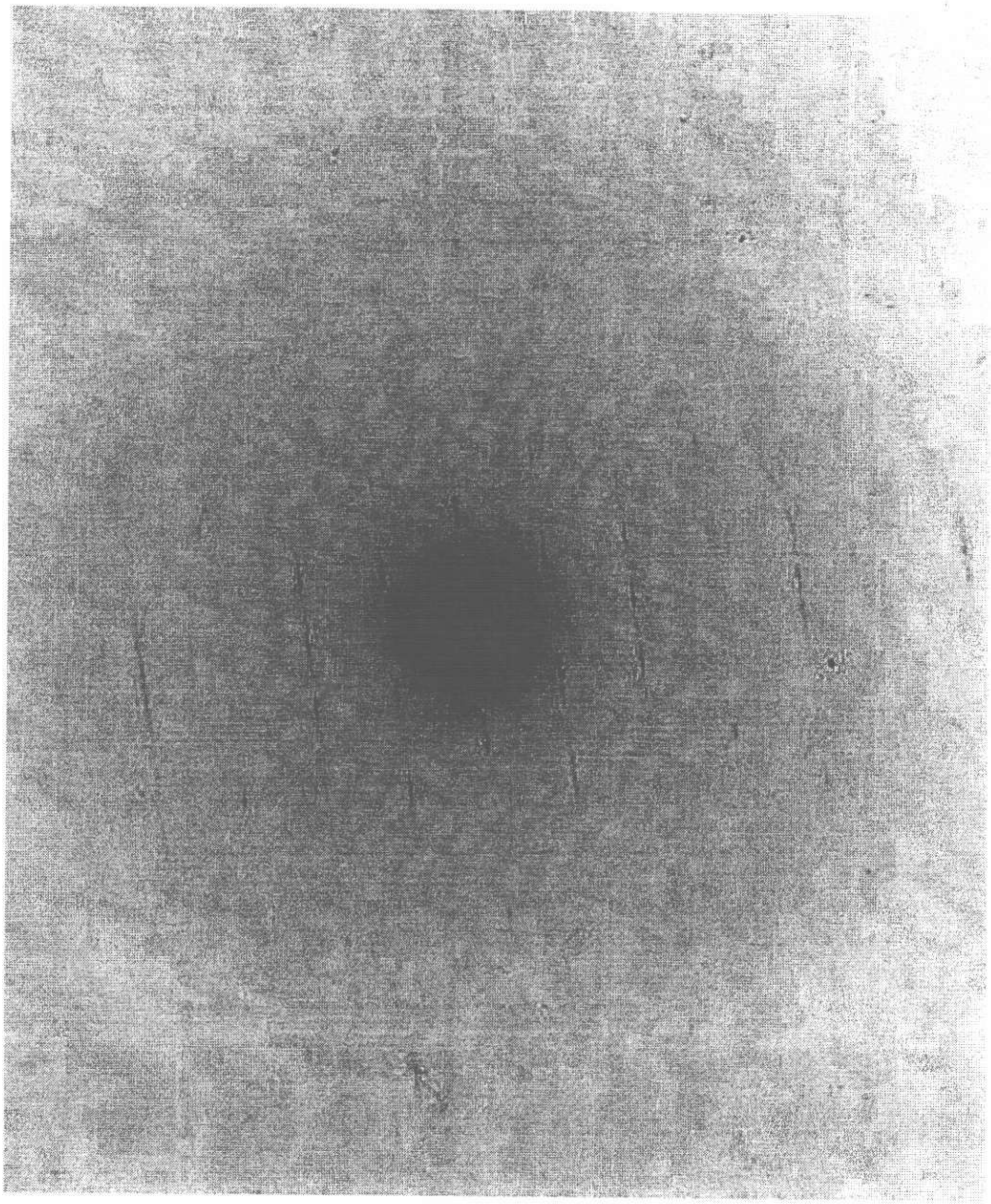

Figure 6. RJ Lee Group, Inc. reference SAED pattern identified as "chry standard 1".

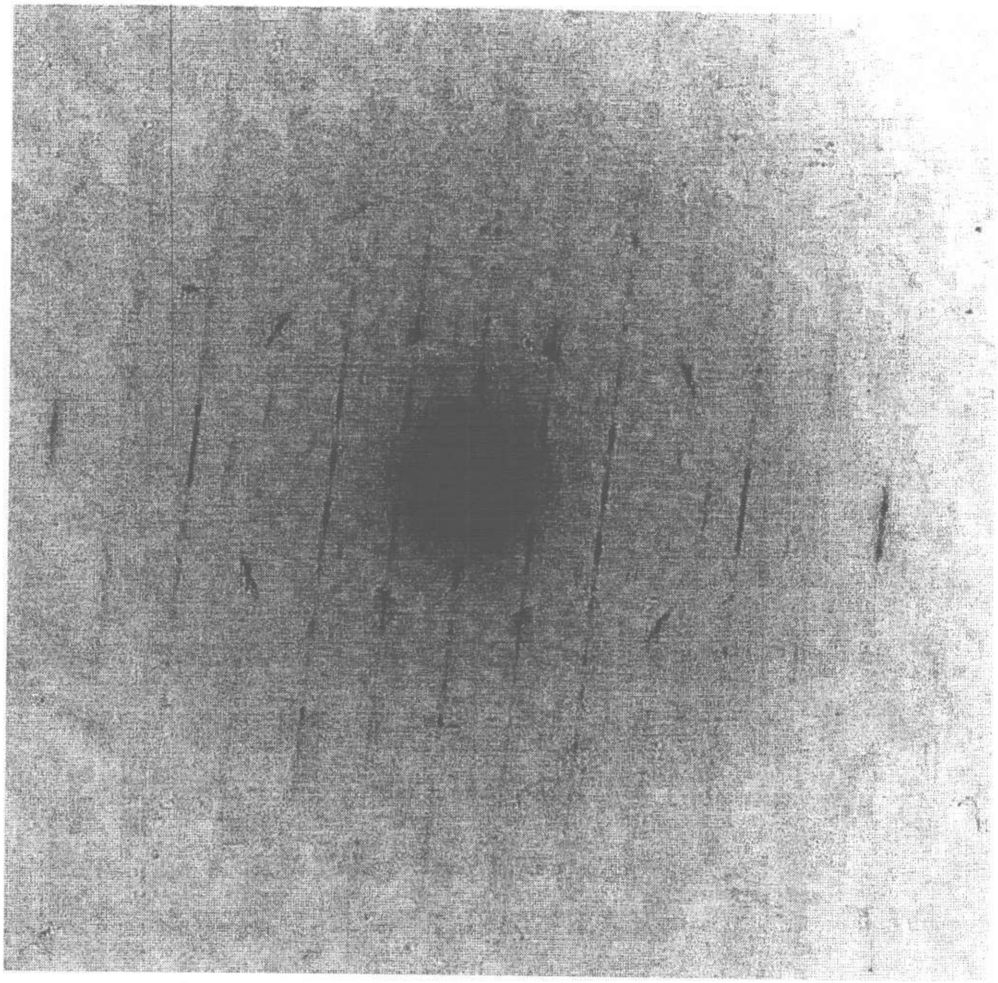

Figure 7. RJ Lee Group, Inc. reference SAED pattern identified as "chry standard 2".

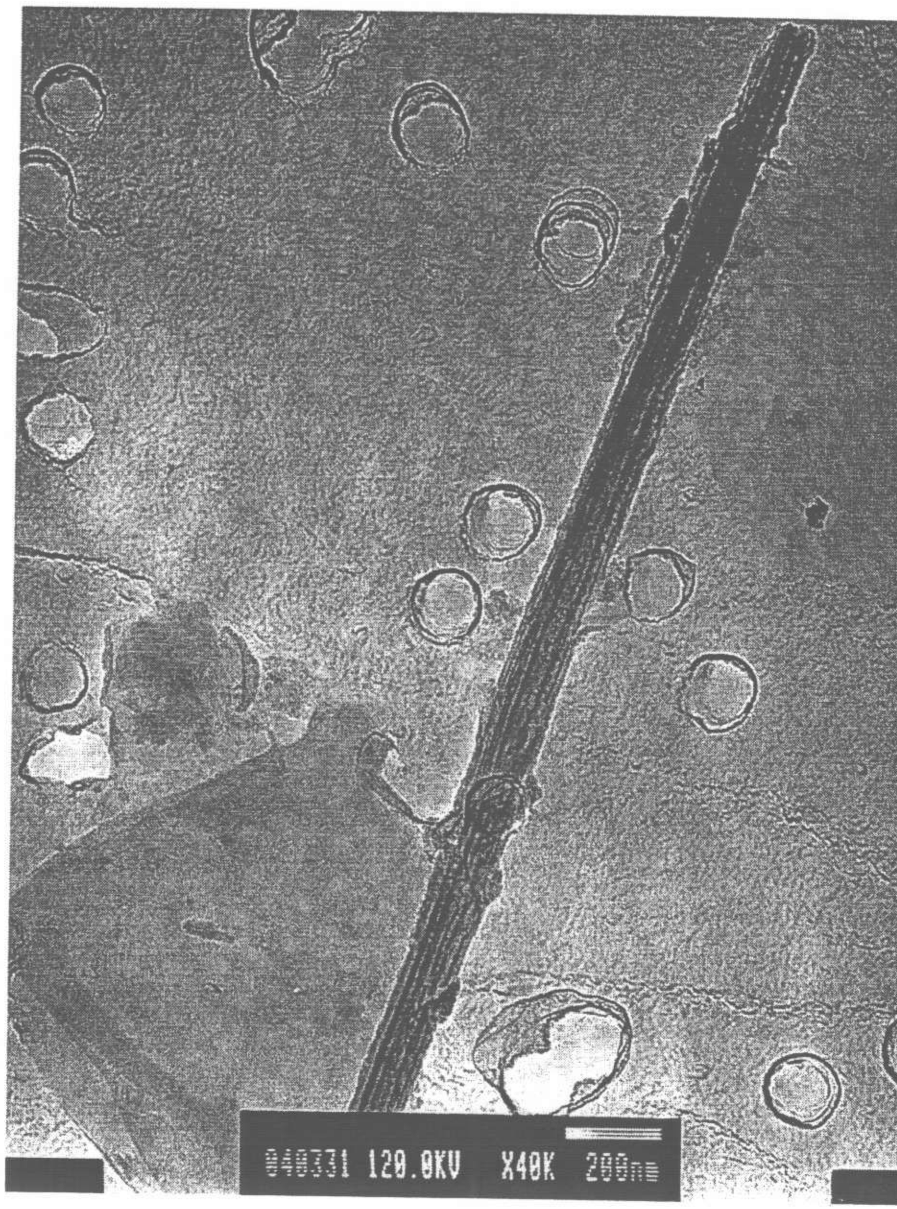

Figure 8. TEM micrograph showing lizardite scroll (reported as chrysotile in the RJ Lee Group, Inc. analysis of Sample A2-A009070).

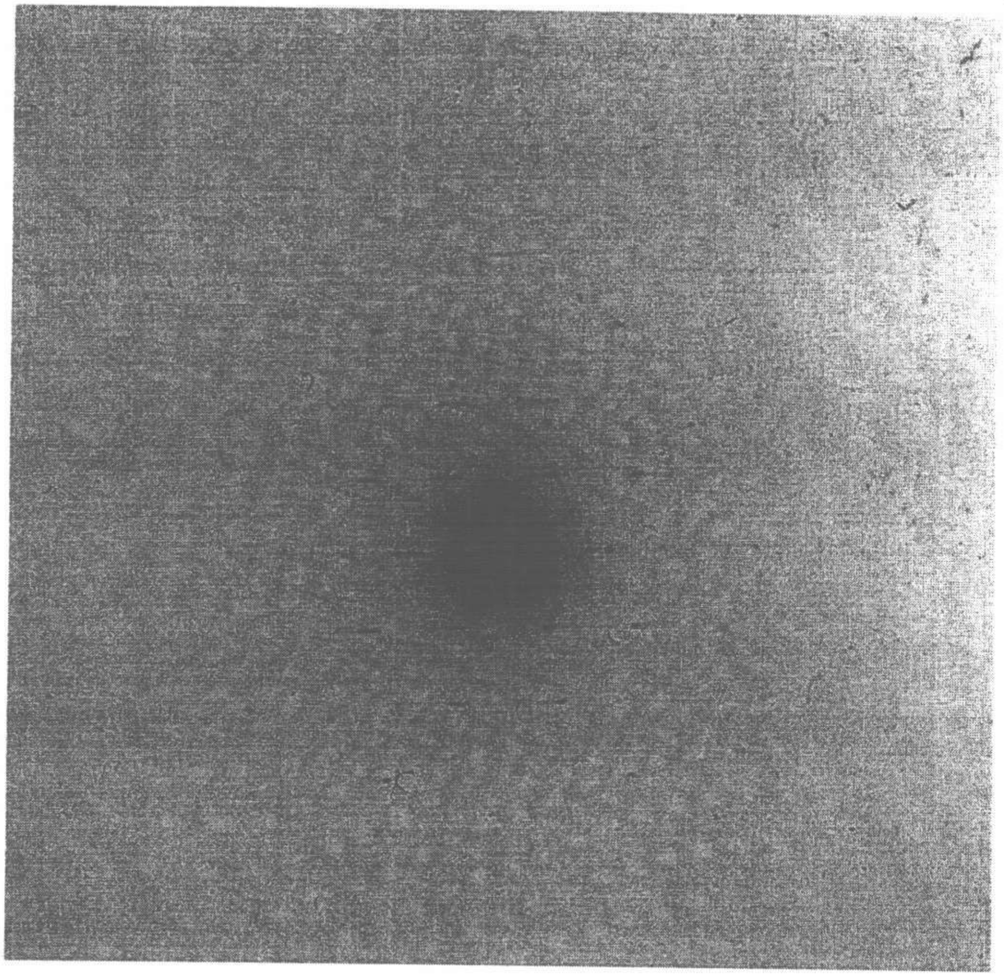

Figure 9. SAED pattern from structure shown in Figure 8, reported as chrysotile in the RJ Lee Group, Inc. analysis of Sample A2-A009070.

addition to the two much larger attached sheets, that are imperfectly rolled and hang off the edges of the scroll. There is no central channel as is found in a chrysotile fibre but there is a lot of fine detail parallel to the scroll length that probably is related to the scrolling or even to polygonal sectors within the scroll.

The micrographs provided by RJ Lee Group, Inc. show structures similar to the scrolls observed in the Chatfield and Wicks analyses of samples from the Cavendish vermiculite deposit. Figure 10 is a micrograph recorded by Chatfield and Wicks showing a collection of mostly parallel lizardite scrolls; there are also small scrolls in other directions following the hexagonal structural directions of the parent lizardite. These parallel scrolls are connected by the original sheet of lizardite, and some of the terminations of the longer scrolls are formed by small scrolls at 60° to the axis of the main scroll.

The structure in Figure 10 is similar to the structure shown in Figure 11 which is a TEM micrograph of one of the three structures reported as chrysotile fibres by RJ Lee Group, Inc. in Sample D2-H017111. The structure in Figure 11 consists of 3 scrolls with terminations formed by minor scrolls at 60° to the main scrolls. The two longer parallel structures are scrolls that have developed at the opposite sides of a sheet and have rolled up until they are in contact. The shorter parallel scroll has not rolled as much and is still joined by part of the original lizardite sheet to the other two structures. The morphology of this structure is not characteristic of chrysotile, in that the scrolls exhibit a progressive thinning towards each end and some of the ends of the scrolls exhibit 60° angular terminations.

SAED pattern (40323) in Figure 12 is a fairly intense SAED pattern from the scrolls shown in Figure 11. It shows splitting of the diffraction spots on the 2nd layer line as described by Chatfield and Wicks in Figure 4 and is typical of some lizardite scrolls. In addition there is the presence of 13ℓ diffraction spots following some of the 130 spots. The $\bar{1}30$ and $\bar{1}3\ell$ spots are identified in Figure 12. This feature does not occur in chrysotile SAED patterns.

The structures shown in both Figures 8 and 11 have clearly arisen as a result of rolling up of lizardite sheets, generally in accordance with preferred crystallographic directions. Once aware of the structural details of lizardite scrolls, this morphology would not be mistaken for chrysotile. Nevertheless, individual scroll components, when detached from the parent sheet, can exhibit morphology and SAED patterns superficially similar to those of chrysotile. However, close examination of individual lizardite scrolls, or groups of lizardite

Figure 10. Structure formed by scrolling at edges of a lizardite sheet, observed by Chatfield and Wicks.

Figure 11. TEM micrograph showing lizardite scrolls (reported as chrysotile in the RJ Lee Group, Inc. analysis of Sample D2-H017111).

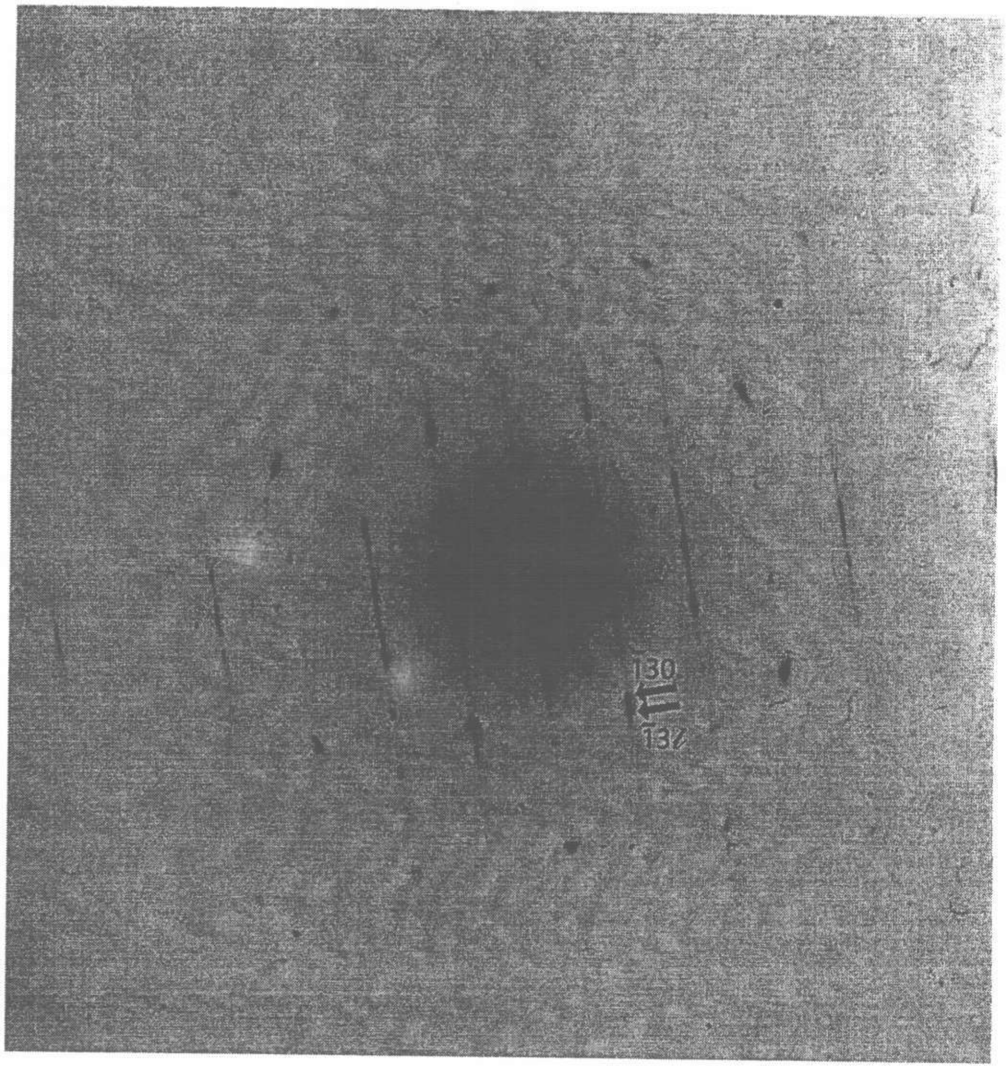

Figure 12. SAED pattern reported to have been obtained from structure shown in Figure 11 (classified as chrysotile in the RJ Lee Group, Inc. analysis of Sample D2-H017111). The arrows identify the $\bar{1}30$ and $\bar{1}3\ell$ diffraction spots.

scrolls, usually reveals morphological evidence of their origin. For example, close examination of the detached scrolls in Figure 2 shows the two main scrolls are not in contact and that a narrow part of the flat lizardite sheet from which they formed is still visible between the two scrolls. A third short scroll has rolled up against one of the longer ones and has a stepped termination showing the scrolling. The other terminations are slightly to very irregular. These types of terminations are not found on chrysotile fibres.

RJ Lee Group, Inc. have submitted a TEM micrograph (40321) labelled "typical vermiculite flake and scrolls". This image is very similar to the lizardite sheet and lizardite scrolls presented in Figure 1. An examination of the individual scrolls reveals all the features of lizardite scrolls that have been described above. This TEM micrograph (40321) is almost certainly a lizardite sheet with associated lizardite scrolls and not vermiculite, but no SAED patterns or chemistry are given to support the identification. (Vermiculite contains significant aluminum whereas lizardite does not.)

In addition to the morphological and diffraction differences there is one important physical difference between lizardite scrolls and chrysotile asbestos. Chrysotile asbestos fibres are unstable in the electron beam and the SAED patterns often rapidly fade during irradiation, sometimes even before they can be photographically recorded. In contrast, the lizardite scrolls are very stable in the electron beam regardless of the degree of irradiation in the TEM. This generally allows intense SAED patterns to be recorded. Once one is aware of this characteristic, it is a convenient identification aid.

4.3 Quantification of the Fibres Reported by RJ Lee Group, Inc.

Table III of the RJ Lee Group, Inc. report gives the quantitative results of the TEM examinations.

For calculation of the analytical sensitivity, the RJ Lee Group, Inc. report refers to a fibre 0.5 μm in length by 0.05 μm in width and a density for chrysotile of 2.66 x 10^{-3} ng/μm^3; the ASTM protocol specifies a minimum fibre dimension of 0.5 μm by 0.025 μm and a density for chrysotile of 2.55 Mg/m^3.

From the data provided in Tables I, II and III, and the count sheets forming Appendix A, we were unable to reproduce the weight percent analytical sensitivities and the weight percent concentrations reported in Table III.

The reported weight concentrations for the samples in which fibres were reported are quantitatively uncertain because of the low fibre counts; 3 fibres would usually be considered to be the limit of detection. Moreover, the quantification is even more uncertain because, for each of the two samples in which fibres were reported, the calculated weight percent is dominated by the contribution from one fibre. For Sample A2-A009070, one of the two fibres detected represents 87% of the total mass reported. The situation is similar for Sample D2-H017111, in which one of the three fibres detected represents 89% of the total mass reported.

5 CONCLUSIONS

The analytical data provided by RJ Lee Group, Inc. show that the mineral structures reported in the vermiculite samples are scrolls of lizardite, and are not chrysotile as reported in the RJ Lee Group, Inc. analyses. The TEM micrographs show that the structures reported as chrysotile appear to be attached to parent sheets of lizardite. The SAED patterns provided in support of the fibre identification were also found to be inconsistent with chrysotile, when features of the SAED pattern that are diagnostic for discrimination between lizardite and chrysotile are examined. The RJ Lee Group, Inc. interpretation of the SAED patterns involves only measurement of the spacing of the 002 and 110 diffraction spots, and the spacing between the zero and the 1st layer lines. The interpretation provided by RJ Lee Group, Inc. does not take account of diffraction spot positions on the second or higher layer lines, possible 13ℓ and the 11ℓ diffraction spots on the 1st layer line, or extinction of 020 and 060 diffraction spots on the zero layer line. The RJ Lee Group, Inc. method for interpretation of SAED patterns for identification of chrysotile may be sufficient for situations in which the presence of fibres originating from commercial chrysotile is involved, and the fibres exhibit the morphological features of chrysotile. However, a more detailed approach is required for examination of the mineral structures present in this vermiculite deposit. Diagnostic information for discrimination between lizardite and chrysotile is present on the second layer lines, and further diagnostic information is available by observation of asymmetries in the SAED patterns.

On the basis of the data provided in the RJ Lee Group, Inc. report, attempts to reproduce the weight percent analytical sensitivities and the reported asbestos weight percentages in Table III were unsuccessful.

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CURRICULUM VITAE July 28, 2003

COPY

NAME:	WICKS, Frederick John
APPOINTMENT TO ROM STAFF:	January 1, 1970, Tenure 1980
APPOINTMENT STATUS:	Retired, July 1, 2003
DATE OF BIRTH:	November 22, 1937
PLACE OF BIRTH:	Winnipeg, Manitoba
CITIZENSHIP:	Canadian
MARITAL STATUS:	Divorced
SPOUSE'S NAME:	Diane Lois Wicks
NUMBER OF DEPENDENTS:	Claire Elizabeth (daughter)

EDUCATION:

1960	B.Sc. (Hon)	University of Manitoba
1965	M.Sc.	University of Manitoba
1969	D.Phil.	Oxford University

M.Sc. thesis: **"Differential Thermal Analysis of the Sediments of the Lake Agassiz Basin in Metropolitan Winnipeg, Manitoba."** Supervisors: G.A. Russell and R.B. Ferguson

D.Phil. thesis: **"X-ray and Optical Studies on the Serpentine Minerals."** Supervisors: J. Zussman and E. J. W. Whittaker

1st Interest: Mineralogy 2nd Interest: Crystal Chemistry

WORK EXPERIENCE:

1996-2003 (Mar-June)	Head, Department of Earth Sciences, Royal Ontario Museum.
1998-2003 (Apr-June)	Cross-appointment to the Dept of Geology, University of Toronto as Professor.
1992-96 (Jul.-Mar)	Curator of Mineralogy, Department of Mineralogy, Royal Ontario Museum.
1987-92 (Jul.-June)	Curator-in-charge, Department of Mineralogy, Royal Ontario Museum.
1980-87 (Jul.-June)	Curator of Mineralogy, Department of Mineralogy & Geology, Royal Ontario Museum.
1980-98 (April-Mar.)	Cross-appointment to the Dept. of Geology, University of Toronto as Associate Professor.
1977 (April-)	Adjunct Professor to Department of Geological Sciences, University of Manitoba.
1975-80 (July-June)	Associate Curator of Mineralogy, Dept. of Mineralogy & Geology, Royal Ontario Museum.
1970-75 (Jan.-June)	Assistant Curator of Mineralogy, Department of Mineralogy , Royal Ontario Museum.
1968 (Sept.-Dec.)	Lecturer in crystallography, Department of Geology, Polytechnical Institute, Oxford.
1967 (June-Dec.)	Mineralogist, Geological Survey of Canada, Ottawa.

1963-65 (May-Sept.)	Geologist and Clay Mineralogist, Manitoba Highways Branch, Winnipeg.
1962 (May-October)	Clay Mineral Consultant for: (1) Manitoba Highways Branch, Winnipeg. (2) Winnipeg Supply & Fuel Co., Winnipeg. (3) Manitoba Mines Branch, Winnipeg.
1961 (April-Sept.)	Exploration Geologist, Giant Yellowknife Mines Limited, Northwest Territories.
1960 (April-Sept.)	Exploration Geologist, Giant Yellowknife Mines Limited, Northwest Territories.
1959 (May-Sept.)	Senior Assistant, Manitoba Mines Branch, Thompson, Manitoba.
1958 (May-August)	Junior Assistant, Pan American Petroleum Corporation, Calgary, Alberta.
1956 (May-Sept.)	Junior Assistant, Falconbridge Nickel Mines Ltd., Kenora, Ontario.

ACADEMIC INTERESTS:

Atomic Force Microscopy

The recently developed atomic force microscope (AFM) is the newest area of my research program. We have used the instrument to produce some of the first images ever recorded of the individual atoms that make up the surfaces of minerals with layered structures. As the AFM can be used in water and other fluids it can be used to study the atomic changes that take place during reactions at mineral surfaces. The results of these studies will give a greater understanding of mineral surfaces and reactions at mineral surfaces, and are relevant to many industrial problems involving minerals and other solid materials.

Serpentine Minerals

The serpentine minerals and other layer silicates continue to be my main field of interest. My studies range from the crystal structure and crystal chemistry of the various serpentine minerals to detailed field and petrographic analysis aimed at determining the genesis of serpentine, chrysotile asbestos and related minerals. The experimental techniques depend heavily on X-ray diffraction, electron microscope and electron microprobe studies. My research results have often been of interest to mining companies, but my more recent work has centered on health and environmental problems of chrysotile asbestos.

Microbeam X-ray Diffraction and Thermoanalytical Techniques

The development of microbeam X-ray diffraction and thermoanalytical techniques for studying very small samples is another area of my research program. Specialized microbeam cameras and diffractometers, standard X-ray cameras and a Mettler thermoanalyzer at the ROM has been modified for analysis of very small samples. The addition of a quadrupole mass spectrometer and computer operation and data collection to the thermoanalyzer have modernized the instrument and provide identification of the gases evolved during thermoanalysis. These developments have given our laboratory world recognition.

Emerald and Sapphire Deposits

The study of the mineralogy and geochemistry of gem deposits is an ideal area for joint museum and university research. With the exceptions of diamonds, few gem deposits have been studied by modern geological methods. Our systematic study of the Colombian emerald deposits has produced a better understanding of these deposits, and new studies on the sapphire deposits of Montana have similar potential. These projects combining the strengths of the ROM collections and expertise with the University of Toronto equipment and expertise, to produce unique research projects. The research results are being used by the gem mining industry to develop exploration techniques. This success illustrates the potential for further research in this area.

MUSEUM EXPERIENCE PRIOR TO ROM: None.

STUDIES OF MUSEUM COLLECTIONS CARRIED OUT AT OTHER MUSEUMS:

I have visited over 80 museums since joining the ROM in 1970. My most extensive trip (September, 1987) took me to the Smithsonian Institution, University of Delaware Minerals Museum, Paterson Museum, New Jersey, Franklin Mineral Museum, New Jersey and Harvard Mineralogical Museum. I examined their collections of manganese serpentine specimens from Franklin, New Jersey and brought samples back for study at the ROM. The most recent trip was to the National Museum of Wales in Cardiff to assess the gallery work of Haley/Sharpe Design, and to the Natural History Museum, London to assess their recently opened Earth Science Galleries.

COLLECTION MANAGEMENT AND EXPANSION, ROM:

Present Activities: I initiated a major effort to get all the Earth Sciences Collections catalogued on a custom-designed database system. The use of relational databases is a tremendous time saver, gives much better control over the specimens, and allows the collections to be electronically search and analyzed in different ways for specific projects. Currently the mineral, gem and meteorite collections are completed, and the petrology collection is partly entered. Software is being developed by the geochronology group linking data on geochronology mineral separates with ages and locations on a geographical information system.

Acquisition of display specimens for the mineral, gem and meteorite collections has been a high priority. We have been fortunate to have a generous patrons and have been successful in obtaining grants from the ROM Foundation and from other organizations. Thus, in addition to making major purchases at mineral shows, such as the Tucson Gem and Mineral Show, we have had $1,000,000 worth of jewelery donated by Mrs. Rose Torno, $3,000,000 worth of rare and unusual meteorites donated by Dr. David Gregory, and purchased a $365,000US collection of spectacular Canadian minerals with funds awarded by the Lousie Hawley Stone Foundation. These donations and purchases give the ROM Collections world recognition.

My research program, particularly the Colombian emerald and Montana sapphire research projects, has attracted several gifts and purchases so that our collection is much stronger in beryl, particularly gem beryl crystals, and gem corundum than it was before. The growth through research has happened with all our research projects particularly in the thermoanalysis studies of new minerals.

Activities during the three previous years:: A considerable effort has go into the organization and cataloguing of my research collection of asbestos and serpentinite specimens so that they can be incorporated into the mineral and petrology collections. The most recent studies are on serpentine mineral standards for X-ray diffraction patterns. The objective of this work is to make the collection more useful as a source of reference material for ourselves and other scientists.

GALLERY & EXHIBITS:

Gallery: Since March 1996 the Earth Sciences Gallery has become my, and the Department's, dominate project. In order to get the required staff in place it was my responsibility, as department Head, to get Terri Ottaway promoted to assistant curator and Don Davis appointed as a contract curator. This gave us the critical, but minimal number of staff for the job. My next and continuing task is to get the technical staff involved in and committed to work on the Gallery project. There is a residue of old style attitudes that have to be redirected. Thus, my role in the Gallery project is more one of motivator and trouble shooter, rather than totally hands on gallery development.

During the period 1985 to 1991, a significant part of my time was spent organizing and promoting the fund raising for the Earth Sciences Gallery. The objective was to raise $5,600,000 from the mining and jewellery industries, Provincial and Federal ministries in the resource and museum fields, foundations, and professional and amateur associations. However, firstly Mr. Peter Munro, President and Chief Executive

Officer of the Dickenson Group of Companies, the leader of our campaign, when he became ill, and secondly, in this hiatus, the Pinch Campaign to raise $5,000,000 from the mining industry was launched by the Canadian Museum of Nature in Ottawa. This blocked our fund raising in the mining industry. We focused our efforts on the jewellery industry to raise funds for the S. R. Perren Gem and Gold Room. This campaign consisted of two parts, the first (1986-1988), under the direction of Mr. Gerald Levenston, a former ROM Trustee and retired diamond dealer, was directed at the family, friends and business associates of Mr. Perren and raised $270,000. At Mr. Levenston's urging, the second part (1989-1990), a jewellery auction held by Sotheby's (Canada) Inc. was undertaken. This was chaired by Mrs. Marion Bradshaw, a ROM Trustee, and raised a further $100,000. The combined efforts of all parties raised a total of $1,400,000 ($350,000 from the jewellery industry for the Perren Room, $50,000 from the mining industry for the Earth Sciences Gallery, and $1,000,000 acquired by Mr. Eddie Goodman, Chairman of the ROM Board from the McLaughlin Trust). These funds were used for the Magnificent Minerals Exhibit and the Perren Gem Room. The fund raising effort was done by the Mineralogy Department, with help from the Development Office and the Board.

This intense commitment of time ended in January 1991 when two members of the mining industry, Mr. Robert Yeoman of Anteries Mining Co. Ltd. and Dr. Joe Brummer, a consultant, took over the campaign working directly with the Development Office. There formed a new Fund Raising Committee and raised the $4.6 million for the current Gallery project.

Exhibits: I have been involved in a number of temporary exhibits such as:

- a display of rubies and sapphires for the Tucson Gem and Mineral Show, Feb. 1996.
- a display of casts and pseudomorphs for the Tucson Gem and Mineral Show, Feb. 1995.
- a display at the Tucson Gem and Mineral Show, February 1992.
- a series of mineral exhibits in support of the Prospectors and Developers Lecture series, Feb./March 1988.
- adviser in gemstones and one of the brokers for the loan of important privately owned gemstones for the ROM show *"Eye of the Beholder"*, April 1987.
- various small displays in the old mineral gallery.
- teaching exhibits on asbestos deposits for the Ore Deposits Workshop, held for the mining industry by the University of Toronto, Geology Department, in December 1978, '79, '80 and '81.
- various small displays for organizations like the Sportsmen's Show, the Engineers Club, and the Walker Mineralogical Club.

FIELDWORK, EXCAVATIONS AND RESEARCH PROJECTS:

Current Research Projects:

There has been a shift in emphasis in my current research program from field to laboratory and collection based studies. This is not a dramatic change, as my field, laboratory and collection work are interdependent, and it is a change of focus that has been a common occurrence in my research program through the years. It is based, in part, on the fact that problems found in the field have to be solved in the laboratory and the laboratory solutions have to be tested in the field. The interests of my graduate students and colleagues are an additional factor. My most recent associates, Dr. D.S. O'Hanley, PDF, Dr. E.S. Schandl, Ph.D. student and then PDF, Mr. Wan Pu, Visiting Scientist, and T.L. Ottaway, M.Sc. student, Ray Eby, PDF, and Mary Garland-Kruys Ph. D. student have all had a strong interest in field studies and presented me with the opportunity to solve some long term field-related problems (See list of Publications).

Support for my laboratory programs has come in the form of equipment and operating grants from NSERC (see list of research grants). Also, I have been fortunate to have access to two excellent ROM technicians, Mr. R.A. Ramik and Mr. M.E. Back, who have given me strong support in my laboratory studies. As a result of this we have been able to replace the old electronics and computerize the operation of the **thermoanalyzer**, and to computerize the operation of the **microbeam X-ray diffractometer**. The mineral characterization laboratory at the ROM has specialized in microanalytical techniques of mineral purification, identification and analysis. Our expertise has been recognized by other mineralogists in the form of joint research projects (See list of publications), by NSERC in the form of grants, and by a gift from Dr. M. Grynpas, Mount Sinai Hospital, of the microbeam X-ray diffractometer. This gift was important because it allowed us to obtain NSERC funds to computerize the diffractometer and thus enter the modern world of computer analysis of our X-ray diffraction data. Most recently we have modified our equipment to read photographic, X-ray diffraction films and to feed the results into our computer for analysis. This is a development few laboratories have done and it gives us a new special area of expertise with exciting potential for new studies. Thus the mineral characterization laboratory, even with the old equipment (the most recent significant equipment purchase from the operating budget was in 1978), functions more or less at modern standards in the specialized area of microanalysis. This fills two critical needs of the department; 1) to supply data that can be used for mineral identification and classification of minerals in the Mineral Collection, and 2) to supply data for our research projects.

In 1991, NSERC funding to Dr. G. S. Henderson as principle investigator along with Dr. J. J. Fawcett and myself, has allowed us to establish a join U of T - ROM laboratory for the **atomic force microscope** and **scanning tunnelling microscope** studies of minerals. This work has attracted visiting scientists such as Dr Marino Maggetti, Fribourg, Switzerland, PDF Igor Sokolov, and Ph. D. student C. Peskleway. This is the first such laboratory for mineral studies in Canada and has provided exciting opportunities for the study of mineral surfaces and reactions on mineral surfaces.

GRANTS FOR FIELDWORK, EXCAVATIONS OR RESEARCH:

2002-06	NSERC Research Grant Application of mineral studies to geological problems	$120,000
2002	ROM Foundation Villiumite gemstone	$10,000
2002	ROM Foundation Serpentine minerals - thermal expansion	$10,000
2001	ROM Foundation Geochemical characterization of gem tourmalines	$10,000
2000-02	NSERC Operating Grant Mineralogical aspects of industrial materials	$120,000
1997-98	Teck Corporation Sapphire deposit of Montana	$25,000
1997	ROM Foundation Tanzanite crystal (with T. L. Ottaway)	$13,015
1997	ROM Foundation Gem storage cabinets (with T. L. Ottaway)	$2,730
1997	ROM Foundation X-ray generator (with M. back & R. Ramik)	$12,500
1996	ROM Foundation Barite roses dispaly specimen (turned over by R. Gait on retirement)	$4,950
1996-99	NSERC Operating Grant (three year extension) Mineralogical Aspects of Industrial Materials	$87,720
1995	Department of Museum Volunteers Research Fund X-ray diffraction software	$5,000
1995-97	American Gem Corporation Sapphire deposit of Montana	$80,000
1995-96	NSERC Operating Grant (one year extension) Mineralogical Aspects of Industrial Materials	$29,240
1995	ROM Foundation	$2,500

	System for Analysis of X-ray data	
1993-94	EMR/NSERC Research Partnership Program AFM Study of Treated Asbestos	$6,000
1993	Museum Volunteers Acquisition and Research Fund Collecting and Research in Australia	$5,000
1992-95	NSERC Operating Grant Mineralogical Aspects of Industrial Materials	$87,720
1992-93	EMR/NSERC Research Partnership Program AFM Study of Layer Silicates	$6,000
1991-92	EMR/NSERC Research Partnership Program An Integrated Model for Serpentinization	$6,000
1991-92	NSERC Equipment Grant Computer Control for the Microbeam Diffractometer	$43,442
1990-91	EMR/NSERC Research Agreements Program Fluid Inclusion in Rodingites	$7,500
1990	ROM Future Fund Display Specimen Acquisition	$9,000
1989-92	NSERC Operating Grant Mineralogical Aspects of Industrial Materials	82,500
1989-90	NSERC Equipment Grant Computer Operation of the Thermoanalyzer	$23,113
1989-90	International Centre for Diffraction Data Research Grant Serpentine Mineral Diffraction Patterns	US$6,000
1989-90	The Asbestos Institute, Montreal, Research Grant Relationship of Fiber Quality and Serpentinization	$32,200
1989	ROM Future Fund Display Specimen Acquisition	$8,000
1988	Shea & Gardner, Washington, D.C. Research Grant Tremolite Distribution at the Cassiar and Clinton Creek mines	$10,000
1987-88	Energy Mines and Resources Canada Research Grant Serpentinites of the Manitoba Nickel Belt	$8,500
1987	Cassiar Mining Corporation Research Grant Structure and Mineralization at the Cassiar Asbestos Mine, B.C.	$7,850
1987	Shea & Gardner, Washington, D.C. Research Grant Tremolite Distribution at the Cassiar and Clinton Creek mines	$12,500
1986-87	Cassiar Mining Corporation Research Grant Structure and Mineralization at the Cassiar Asbestos Mine, B.C.	$35,000
1986-89	NSERC Operating Grant Studies of Serpentine Minerals	$64,239
1986-87	Energy Mines and Resources Canada Research Grant Serpentinites of the Manitoba Nickel Belt	$8,500
1985-86	Kidd Creek Mines Research Grant Talc/Carbonate Alteration, Timmins, Ont.	$15,000
1985-86	Energy Mines and Resources Canada Research Grant Serpentinites of the Manitoba Nickel Belt	$8,500
1984-85	NSERC Equipment Grant Modification of the Thermoanalyzer	$12,907
1984-86	NSERC Operating Grant Studies of Serpentine Minerals	$44,000
1984-85	Ontario Geological Survey Research Grant Asbestos Deposits of the Abitibi Greenstone Belt, Ontario	$29,450

1984-85	Energy Mines and Resources Canada Research Grant Asbestos Deposits of the Eastern Townships, Quebec	$7,500
1983-87	The Birks Family Foundation Emerald Deposit of Colombia	$5,000
1983-84	NSERC Operating Grant Studies on Serpentine Minerals	$13,250
1983-84	Ontario Geological Survey Research Grant Asbestos Deposits of the Abitibi Greenstone Belt, Ontario	$26,140
1983-84	Energy Mines and Resources Canada Research Grant Asbestos Deposits of the Eastern Townships, Quebec	$7,500
1982-83	Ontario Geological Survey Research Grant Asbestos Deposit of the Abitibi Greenstone Belt, Ontario	$25,025
1982-83	Energy Mines and Resources Canada Research Grant Asbestos Deposits of the Eastern Townships, Quebec	$7,500
1981-82	New Technology Employment Program Grant Serpentine Mineral Standards	$12,090
1976	Asbestos Corporation Research Grant Mineralogy of the Asbestos Hill Mine, Labrador	$1,100
1971-72	Department of University Affairs of Ontario Research Grant Heating Stage for the Optical Microscope	$2,000
1970-71	Department of University Affairs of Ontario Research Grant	$2,000

as co-investigator with others at the University of Toronto

2000-01	NSERC Equipment Grant - Dr. T. Krogh, Scanning Electron Microscope upgrade	$68,266
1998-99	NSERC Equipment Grant - Dr. Henderson, Atomic Force Microscope	$36,034
1997-98	NSERC Equipment Grant - Dr. Spooner, Fluid Inclusion Equipment	$13,218
1995-1996	NSERC Equipment Grant - Dr. Henderson, Atomic Force Microscope	$47,000
1991-1992	NSERC Equipment Grant - Dr. Henderson, Atomic Force Microscope	$132,677
1985-1986	NSERC Equipment Grant - Dr. Spooner, Fluid Inclusion Lab	$84,000
1984-1985	NSERC Equipment Grant - Dr. Spooner, Fluid Inclusion Lab	$19,250
1983-1984	NSERC Equipment Grant - Dr. Spooner, Fluid Inclusion Lab	$75,000
1983-1984	BILD Equipment Grant - Dr. Spooner, Fluid Inclusion Lab	$75,000
1983-1984	NSERC Equipment Grant - Dr. Norris, Scanning Electron Microscope	$171,435

COMMITTEES, ROM:

2002-03	Curatorial Co-ordinator for Earth Sciences with Haley/Sharpe Design
2001-03	Science Editorial Committee
2000	Search Committee for President and CEO
1999-03	Program Review Committee
2000	Master Plan - Business Subcommittee
1997	Member Collections and Research Strategic Imperative Group
1996-1999	Curatorial Co-ordinator Earth Gallery Team
1995	Member of the Consultive Group on Efficiency and Effectiveness
1992-94	Member of the Disposal Committee
1987-90	Member Library Serial Working Group (October)
1985-91	Fund Raiser for the McLauglin Earth Sciences Gallery
1985-87	Member of the Science Cooperative Field Studies Committee (March-July)
1983-90	Adviser to the Associate Director - Curatorial (November- September)
1983-90	Observer, Curatorial Program Review Committee (May- September)

1980-82	Member Promotion Committee (September-September)
1977-81	Departmental representative to the Project Office (March-March)
1974-77	Member Extension Committee (February-March)
1974-76	Member Grievance Committee (March-March)
1974-76	Chairman Library Committee* (January-November)
1973	Acting Chairman Library Committee (September-December)

* My position as Chairman ended with a report on the requirements of a new ROM Library. The Library built in the new ROM Curatorial Centre was based on this report.

NON-UNIVERSITY TEACHING AND PUBLIC LECTURING:

Interviews:

2000 Interviewed by Julian Siggers for the Discover Channel upon the arrival of the Charles Key Canadian Collection.

1990 Interviewed by Ann Rhomer, CITY-TV (May)

1990 Interviewed by Rosemary Secton, The Globe & Mail, January 11, 1990

1987 Interviewed by Paul Peregal CIUT FM (January).

Public Lectures:

2001	"The Charles Canadian Collection." Walker Mineralogy Club, Toronto.
2001	"The Charles Canadian Collection." Talk at an open house for Ontario Mineral Clubs, ROM, Toronto.
1991(Jan)	Meet the Curators in Mineralogy
1986-91	Lectures on the McLaughlin Earth Sciences Gallery to potential donor groups.
1986	Lecture on the McLaughlin Earth Sciences Gallery to the student Geological discussion group University of Toronto (February).
1980	"Problems Relating to Asbestos-Scientific and Otherwise." Walker Mineralogy Club, Toronto.
1978	Talk on mineralogy to Grades 5 and 6, Institute of Child Study, University of Toronto.
1973-76	Lecture and demonstration (one of eight sessions) on clay mineralogy, Extension Course in "Ceramics for the Collector" ROM/University of Toronto (each February).
1971-77	Popular talks to the Walker Mineralogical Club, Gem & Mineral Club of Scarborough and the Brampton Mineral Club.

APPOINTMENTS (UNIVERSITY OR EQUIVALENT):

1983-	Appointment to the Graduate School, University of Toronto as member continuing (November).
1980-	Cross-appointment to the Department of Geology, Univ. of Toronto as Associate Professor (April).
1980-83	Appointment to the Graduate School, University of Toronto for a 3-year session (October-October).
1977-	Adjunct Professor to Department of Geological Sciences, University of Manitoba (April).

TEACHING (UNIVERSITY OR EQUIVALENT):

University of Toronto

Graduate:

1997	Advanced mineralogy/mineral chemistry GLG3615H, with Prof. Grant Henderson.
1986	Seminars in Mineralogy: Crystal Structures and chemistry of GLG 3614H the chlorite group -- with Dr. J. A. Mandarino
1975-88	A lecture on thermal analysis in Prof. J. C. Rucklidge, Instrumental Methods of Analysis, Course 2402H.

Undergraduate:

1981-83 A lecture on serpentine minerals in Prof. J. C. Rucklidge, Course 422, Mineralogy.

Research Institutions and Professional Associations
Invited Lectures

2000 **Asbestos, Workers, Scientists, Doctors, Politicians, Lawyers, Reporters and the Public: What Happened?** GAC/MAC Annual Meeting, Calgary, Alberta.

1998 **Advances in Atomic Force Microscope Techniques for Atomic-Scale Resolution.** at the Dept. of Earth and Planetary Science, Kyushu University, Fukuoka, Japan.

1996 **Facets of a New Frontier** MAC Presidential Address, MAC Annual Meeting, Winnipeg, Manitoba.

1996 **Mineral Studies Using the Atomic Force Microscope** at the Dept. of Geological Sciences,McMaster University, Hamilton.

1994 **Mineral Studies Using the Atomic Force Microscope** at the Dept. of Geological Sciences, McGill University, Montreal.

1993 **Atomic force microscope studies of clay and other minerals** at the Centre of microscopy and Microanalysis, University of Queensland, Brisbane, Australia.

1993 **The potential uses of the atomic force microscope in applied mineralogy** at the International Congress of Applied Mineralogy, Fremantle, West Australia.

1993 **Recent studies in atomic force microscopy as related to applied mineralogy** at the workshops at CSIRO in Perth, after the International Congress of Applied Mineralogy, Australia.

1992 **Atomic Force Microscope Studies of Layer Silicates** at the National Institute for Research in Inorganic Materials, Tsukuba, Japan.

1988 **Serpentine Minerals: Crystal Structures and Petrology** at the Mineral. Soc. Amer. Short Course 19, Denver, Colorado.

1992 Lecture and seminar on atomic force microscopy: "**Atomic Force Microscope Studies of Lizardite and Related Minerals**", at the National Institute for Research in Inorganic Materials, Tsukuba, Japan, in conjunction with the National Institute of Industrial Health, Kawasaki, Japan and the Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan.

1988 Lecture on Serpentine Minerals: "**Crystal Structures and Petrology**" at the Mineralogical Society of America short course on "**Hydrous phyllosilicates (exclusive of micas)**", Denver, Colorado (October).

1987 Lecture on Thermogravimetric and Evolved Gas Analysis at the Clay Mineral Society workshop on "**Advanced techniques of Thermal Analysis**", Socorro, New Mexico (October).

1985 Lecture on "**Crystal Structures and Chemistry of the Serpentine Minerals**" and Seminar on "**Gem Deposits and the Potential for Gem Mining in Canada**". at Tohoku University, Sendai, Japan (May).

1985 Lecture series at the State Bureau of Building Materials, Beijing, People's Republic of China (May).
"**Crystal Structures and Chemistry of the Serpentine Minerals.**"
"**Geology and Mineralogy of Quebec and Ontario Chrysotile Asbestos Deposits.**"
"**Exploration Guidelines of Gemstones.**"
"**Ultramafic Rock-Water Reactions: Retrograde and Prograde Serpentinization, and Deformation of the Serpentine Minerals.**"

1985 A Short Course on Serpentine Minerals and Chrysotile Asbestos Deposits, at the Sichuan Institute of Building Materials, Mianyang, People's Republic of China (May).
"**Crystal Structures and Chemistry of the Serpentine Minerals.**"
"**Microbeam X-ray Diffraction Patterns of Serpentine Minerals.**"
"**Ultramafic Rock-Water Reactions: Retrograde and Prograde Serpentinization.**"

	"Microbeam Camera Specimen Preparation and the Interpretation of Microbeam, Guinier and Fibre Diffraction Patterns on the Serpentine Minerals" (A lab session).
	"Guides to Chrysotile Asbestos Deposits Exploration."
	"Deformation of Serpentine Minerals."
	"Environmental and Health Aspects of Asbestos."
1982	**"Serpentinization and the Talc-Carbonate Alteration of Ultramafic Rocks"** Kidd Creek Mines, Ltd. (Exploration Division) Timmins (July).
1982	**"The Crystal Structure and Crystal Chemistry of Chrysotile and Other Serpentine Minerals"** University of Sherbrooke, Quebec (February).
1981	Staff member on graduate geology student Field Trip, University of Toronto.
1979	Lecturer on asbestos for the Mineralogical Association of Canada Short Course on Asbestos, Quebec City.
1978-81	Lecturer on asbestos for the University of Toronto. Ore Deposits Workshop, for the mining industry.
1978	An invited lecture on mineralogy and geology to University of Toronto Egyptology students.
1971-80	Graduate seminars at the Universities of McGill, McMaster, Oxford, Manchester. Professional seminars at the Manitoba Mines Branch, Falconbridge Nickel Mines, INCO and the Geological Survey of Canada (once or twice per year).
1968	Lecturer, in first year crystallography, Department of Geology, Polytechnical Institute, Oxford.

GRADUATE STUDENT SUPERVISION:

Supervisor M. Sc. and Ph. D.

2000-02	Tetsuya Kato, Ph. D. Thesis, **Crystal Chemistry of Zircon,** University of Toronto, withdrew.
1996-	Clayton Peskleway, Ph. D. thesis, **Surface Reactions of the Aluminum Hydroxide Minerals**, University of Toronto.
1995-	Mary Garland-Kruys, Ph. D. thesis, **Alluvial Sapphire Deposits of Western Montana**, University of Toronto.
1995-96	Jean-Claude St. Amour, M. Sc. thesis, **Structural Studies of Alkali and Alkaline-Earth Silicate Melts Containing Titanium**, University of Toronto (in the absence of Dr G. S. Henderson on sabbatical).
1983-90	Terri L. Ottaway, M.Sc. thesis, **Mineralogy and Geochemistry of the Emerald Deposits at Muzo, Colombia**, University of Toronto.
1983-89	Eva S. Schandl, Ph.D. thesis, **Metasomatic Alterations of the Komatiites and Associated Volcanic Rocks of the Hemingway Township near Timmins, Ontario**, University of Toronto.
1980-82	Judit Ozoray, M.Sc. thesis, **Serpentinization and Metamorphism in the Proterozoic Cape Smith Foldbelt, New Quebec**. Department of Geological Sciences, McGill University, Montreal.

Supervision Post Doctoral Fellows

1996-	Dr. Igor Yu. Sokolov, Post Doctoral Fellow, **Theoretical and Applied Studies on Atomic Force Microscopy.**
1992-93	Dr. Ray K. Eby, Post Doctoral Fellow, **Atomic Force Microscope Studies of Minerals with Layered Structures.**
1989-92	Dr. Eva S. Schandl, Post Doctoral Fellow, **Temperature and Pressure Regimes of Serpentinization.**
1986-90	Dr. David S. O'Hanley, Post Doctoral Fellow, **Origin of Chrysotile Asbestos Veins at the Cassiar/McDame Deposit. British Columbia.**

Supervision of a Visiting Scientist

2001 Prof. Seiichiro Uehara, . Dept. of Earth and Planetary Science, Kyushu University, Fukuoka, Japan. **Studies of serpentine minerals, particularly antigorite.**

1995 Prof. Marino Maggetti, Institut de Minéralogie et Pétrographie Université de Fribourg Suisse, **AFM study of lizardite, and ancient and modern ceramics.**

1982-84 Wan Pu, Sichuan Institute of Building Materials, Mianyang, Sichuan, People's Republic of China, **Chrysotile asbestos deposits in Canada.**

Supervision of Summer Students

1995 Marie Klebatz, **AFM Studies of Gibbsite.**

Member of Thesis Committees

1994-95 Jian-Jie Liang, M. Sc. thesis, **Reitveld Structure of Layer Silicates by X-ray and Neutron Diffraction.** University of Manitoba.

1992-94 Gordon A. Vrdoljak, M. Sc. thesis, **Atomic Force Microscope Study of Absorption on the Surface of Chlorite.** University of Toronto.

1989-93 Peter C. Burns, Ph. D. thesis, **Copper Oxysalts Minerals: Cu^{2+} Coordination Polyhedra and the Cooperative Jahn-Teller Effect.** University of Manitoba.

1986-88 Raymond K. Eby, M.Sc. thesis, **Copper Oxysalts: The John-Teller effects and its structural implications.** University of Manitoba.

1985-90 Anne V. Thomas, Ph.D. thesis, **The Compositions and Significance of Solid-Liquid-Vapour Inclusions in the Tanco Granitic Pegmatite, S.E. Manitoba.** University of Toronto.

1982-84 Peter J. N. Renders, M.Sc. thesis, **Low Temperature and Low Pressure Phase Equilibria Study in the Systems BeO-$A1_20_3$-$Si0_2$.** University of Toronto.

1982-84 Anne V. Thomas, M.Sc. thesis, **Petrology of Ta-Sn Mineralization in Tanco Pegmatite, S.E. Manitoba.** University of Toronto.

Member of Ph.D. Examination Committees

1993 Peter C. Burns, Ph. D. thesis, **Copper Oxysalts Minerals: Cu^{2+} Coordination Polyhedra and the Cooperative Jahn-Teller Effect.** University of Manitoba.

1993 Richard G. Cresswell, Ph. D. thesis, **^{14}C Terrestrial Ages and Weathering Activities in Meteorites from CO and CO_2 Fractions from Step-Wise Temperature Extractions.** University of Toronto.

1990 Anne V. Thomas, Ph.D. thesis, **The Composition and Significance of Solid-Liquid-Vapour Inclusions from the Tanco Zoned Granitic Pegmatite, S.E. Manitoba.** University of Toronto.

1990 Chairman for Ph.D. thesis in Electrical Engineering.

1985 Barbara W. Murck, Ph.D. thesis, **Factors Influencing the Formation of Chromite Seams.** University of Toronto.

1984 Andrew H. MacDonald, Ph.D. thesis, **Diffusion rates through serpentinized peridotite, University of Western Ontario.** London, Ontario.

1983 Sarah-Jane Barnes, Ph.D. thesis, **The Origin of the Fractionation of Platinum Group Elements in Archean Komatiites of the Abitibi Greenstone Belt, Northern Ontario, Canada.** University of Toronto.

Outside Advisor

1984-86 R. L. Allen, M.Sc. student, Queen's University, Kingston, Ontario

1984-85 L. F. Keough, B.Sc. student, University of Western Ontario, London, Ontario

1982-85 G. E. Spinnler, Ph.D. student, University of Arizona, Tempe, Arizona

1982-84	M. B. Hanish, M.Sc. student, Queen's University, Kingston, Ontario
1981-83	A. MacDonald, Ph.D. student, University of Western Ontario, London, Ontario
1980	J. Ozoray, M.Sc. student, McGill University, Montreal, Quebec
1973-74	Z. L. Mandziuk, M.Sc. student, University of Toronto
1971-72	J. B. Moody, Ph.D. student, McGill University, Montreal, Quebec
	N. W. Bliss, Ph.D. student, McGill University, Montreal, Quebec

Note: I was not the principal supervisor for any of these students, but they all came to the ROM because of the specialized equipment -- microbream X-ray diffraction, thermoanalyzer and heating stage -- that we have in the Mineralogy Department.

COMMITTEES, UNIVERSITY OR EQUIVALENT:

University

1998	Member of the Tenure Review Committee for Prof. Dan Shultz, Dept. of Geology, University of Toronto.
1994	Member of the Tenure Committee for Prof. Grant S Henderson, Dept. of Geology, University of Toronto.
1988	Member of the Mineralogy Search Committee, Department of Geology, Univ. of Toronto (October-April).
1987-89	Member of the Mineralogy Curriculum Committee, Department of Geology, Univ. of Toronto (May).

Government

1997	**Chair** Nomination Committee for New Membership of the Solid Earth Sciences Grant Selection Committee (08) of the Natural Sciences and Engineering Research Council of Canada (**NSERC**).
1995-98	Member Solid Earth Sciences Grant Selection Committee (08) of the Natural Sciences and Engineering Research Council of Canada (**NSERC**).
1997	Invited Member of the International Organizing Committee & Sessional Chair for the "*Health Effects of Chrysotile Asbestos: Contributions of Science to Risk Management Decisions*" an International Workshop held in Montreal September 14-16, 1997.
1982-83	Mineralogical Consultant to The Royal Commission on Matters of Health and Safety Arising from the use of Asbestos in Ontario.

PROFESSIONAL ORGANIZATIONS:

Memberships:

Mineralogical Association of Canada (Honourary Life Member)
Geological Association of Canada (Fellow)
Mineralogical Society of America (Fellow)
Clay Minerals Society

Offices Held:

1998	Member Mineralogical Society of America Nomination Committee
1996-97	Past President, Mineralogical Association of Canada.
1994-95	President, Mineralogical Association of Canada.
1992-	Member of the Organizing Committee for the International Mineralogical Association 17^{th} General Meeting in Toronto 1998.

1992-93	Vice-President, Mineralogical Association of Canada, and Editor of the Newsletter.
1989	Member Mineralogical Society of America Award Selection Committee
1987-	Member Nomenclature Committee of the Clay Minerals Society
1987-91	Vice-Chairman for the Joint Annual GAC/MAC meeting in Toronto, May 1991
1987-88	Chairman of the Committee for the New Cover Design for the Canadian Mineralogist
1985-87	Associate Editor of the Canadian Mineralogist
1986	Chairman of the Hawley Award Selection Committee of the Mineralogical Association of Canada
1986	Member of the Executive Committee of the Mineralogical Association of Canada (1 year term)
1979	Member of the Hawley Award Selection Committee of the Mineralogical Association of Canada
1978-79	Guest Editor of the Canadian Mineralogist Vol. 17, Part 4, Nov. 1979. An issue devoted to the 1978 Symposium on Serpentine Mineralogy, Petrology and Paragenesis
1977-79	Member of the Nominating Committee of the Mineralogical Association of Canada
1977-78	Organizer of the Mineralogical Association of Canada Symposium on Serpentine Mineralogy and Petrology for the GSA/GAC/MAC Joint Annual Meeting 22-26 October 1978, Toronto
1977-78	Member of the Program Committee for the Geological Society of America/Geological Association of Canada/Mineralogical Association of Canada Joint Annual Meeting.
1976-77	Membership Chairman, the Mineralogical Association of Canada
1974-75	Secretary, Mineralogical Association of Canada
1973	Secretary, Protemp Mineralogical Association of Canada
1973-75	Editor of the Mineralogical Association of Canada Newsletter

Service:

1972-	Reviewed numerous manuscripts for professional journals.

HONOURS AND AWARDS:

1965	Elected **Fellow** of the Geological Association of Canada
1966-67	**Edgar Pam Fellowship**, Institute of Mining and Metallurgy, London
1977	**Hawley Award** of the Mineralogical Association of Canada, with E. J. W. Whittaker, for the best paper published in the Canadian Mineralogist during 1975 and 1976
1977	Honourary life member of the Mineralogical Association of Canada
1978	**Hawley Award** of the Mineralogical Association of Canada, with E.J.W. Whittaker, for best paper published in the Canadian Mineralogist during 1977
1978	Elected **Fellow** of the Mineralogical Society of America
1979	Honoured by the naming of a new mineral "Wicksite" in acknowledgement of contributions to mineralogy
1996	**Hawley Award** of the Mineralogical Association of Canada, with D. S. O'Hanley, for best paper published in the Canadian Mineralogist during 1995

LANGUAGES:

English, speak, read and write
French, read

SPECIAL SKILLS:

.OBBIES:

Collecting Japanese swords, armour and works of art.

PAPERS PRESENTED AT CONFERENCES AND BRIEFS TO GOVERNMENT:

Wicks, F. J. & Whitehead, M. B. (1965) **Lime Stabilization of Lake Agassiz Clays**. Presented at the Annual Western Meeting of Canadian Institute of Mining & Metallurgy.

Wicks, F. J. & Zussman, J. (1966) **X-ray Microbeam Investigation of the Nature of "αserpentine" and "serpophite"**. Presented at the 1st Conference on the Physics and Chemistry of Asbestos Minerals, Oxford. Extended Abstract in Conference proceedings.

Wicks, F. J. (1971) **Studies on the Mineralogy of Serpentine Textures**. Presented at the 1970 Annual Meeting of Geological Association of Canada and Mineralogical Association of Canada, Winnipeg. Abstract in *Canadian Mineralogist* 10, 921-922.

Wicks, F. J. & Plant, A. G. (1972) **Some Electron Microprobe Observations on Serpentine Minerals**. Presented at the 1971 Annual Meeting of Geological Association of Canada and Mineralogical Association of Canada, Sudbury. Abstract in *Canadian Mineralogist* **11**, 581-582.

Springer, G. & **Wicks, F. J.** (1972) **Re-examination of Hydrous Nickel Silicates**. Presented at the International Geological Congress, Montreal.

Lamarche, R.B. & **Wicks, F. J.** (1975) **Where to Look for New Asbestos Deposits**. Presented at the 3rd Conference on the Physics and Chemistry of Asbestos, Quebec Extended abstract in Conference proceedings.

Wicks, F. J. & Plant, A. G. (1978) **Electron and X-ray Microbeam Studies of Serpentine Textures and Serpentinization**. Presented at the Joint Annual Meeting of the Geological Society of America, Geological Association of Canada and Mineralogical Association of Canada. Abstract in *GAC/MAC* Program with Abstracts, **3**, 516.

Wicks, F. J. (1979) **Serpentine Mineral Textures in Chrysotile Asbestos Serpentinites**. Presented at the 2nd Conference on the Physics and Chemistry of Asbestos Minerals, Louvain. Extended abstract in Conference proceedings.

Wicks, F. J. & Ramik, R. A. (1981) **Thermal Analysis and Evolved Gas Analysis at the Royal Ontario Museum**. Presented at the Joint Annual Meeting of the GAC/MAC, Calgary. Abstract in *GAC\MAC Program with Abstracts* **6**, A-61.

Wicks, F. J., Schandl, E. S., Ozoray, J. & Wan, P. (1982) **Mineralogy of Chrysotile Asbestos Deposits in Ontario**. Poster Session. Ontario Geological Survey Geoscience Research Seminar and Open House December 1982.

Schandl, E. S. & **Wicks, F. J.** (1983) **Rodingites in the Ultramafic Rocks of the Abitibi Belt, Ontario**. Presented at the Joint Annual Meeting GAC/MAC, Victoria. Abstract in *GAC\MAC Program with Abstracts* **8**, A-61.

Wicks, F. J. (1983) **Deformation Histories as Recorded by Serpentinites**. Presented at the Joint Annual Meeting GAC/MAC, Victoria. Abstract in *GAC\MAC Program with Abstracts* **8**, A-74.

Schandl, E. S. & **Wicks, F. J.** (1983) **Rodingites in the Ultramafic Rocks of the Abitibi Belt, Ontario**. Ontario Geological Survey Geoscience Research Seminar and Open House December 1983.

Wicks, F. J., Wan, P. & Schandl, E. S. (1983) **Mineralogy and geochemistry of the chrysotile asbestos deposits of the eastern townships, Quebec.** Abstract in *1983 Progress Summary Research Agreements Program, Energy, Mines and Resources, Canada,* 108.

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Wicks, F.J. & Chatfield, E.J. **Scrolling of Thin Lizardite Layers: A Strain Relief Mechanism.** For Candian *Mineralogist.*

Chatfield, E.J. & **Wicks, F.J. Criteria for Distinguishing Lizardite Scrolls from Chrysotille Asbestos.**

Wicks, F. J. & Hawthorne, F. C. **A critical review of powder X-ray diffraction methods used in environmental & health studies.** Two versions of this paper are being prepared, a short version for submission to *Science* and a longer version for submission to an environmental health journal.

Wicks, F. J., Dunn, P. J, Back, M. E. & Ramik, R. A. **Maufite discredited: a rare mixture of lizardite and chlorite.** Approved by the Commission of New Minerals and Mineral Names, International Mineralogical Association April 1993. For submission to the *American Mineralogist.*

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Wicks, F. J. editor (1979) **Serpentine mineralogy, petrology and paragenesis.** (The proceeding of a Symposium of 15 papers sponsored by the Mineralogical Association of Canada at the GSA/GAC/MAC Joint-Annual Meeting, October 25, 1978 Toronto.) *Canadian Mineralogist,* **17, Part 4** 673-888.

Papers Published from the Thermoanalysis Laboratory:

Since 1976 a total of 79 papers containing thermoanalyses from our laboratory have been published in refered journals. My thermoanalysis technican or myself have been coauthors on some, but not all, of these papers.

Non-Refereed Publications:

Articles:

Wicks, F. J., Schandl, E. S., Ozoray, J. & Wan, P. (1983) **Grant 138 Mineralogy and geochemistry of the chrysotile asbestos deposits in Ontario.** in Geoscience Research Grant Program Summary of Research 1982-83. *Ontario Geological Survey Miscellaneous Paper,* **113**, 193-199.

Wicks, F. J., Wan, P. & Hedjran, K. (1984) **Grant 138 Mineralogy and geochemistry of the chrysotile asbestos deposits of Ontario: Munro mine and Garrison deposit.**. in Geoscience Research Grant Program Summary of Research 1983-84. *Ontario Geological Survey Miscellaneous Paper,* **121**, 99-110.

Ozoray, J., **Wicks, F. J.** & Higgins, M. P. (1985) **Grant 138 Mineralogy and geochemistry of the chrysotile asbestos deposits of Ontario: A progress report on the stable isotope & boron survey**, in Geoscience Research Grant Program Summary of Research 1984-85. *Ontario Geological Survey Miscellaneous Paper,* **127**, 25-29.

Wicks, F. J. (1986) **Mineralogy and geochemistry of the chrysotile asbestos deposits of Ontario**. Ont. Geol. Surv. Open File Rpt. 112pp.

Wicks, F. J. (in press): Definitions of serpentine and serpentinite in the 8th edition of *The Encyclopedia of Science.* McGraw-Hill, New York.

Wicks, F. J. (accepted): The use of atomic force and scanning tunneling microscopy in mineralogy. *1997 Yearbook of Science and Technology* McGraw-Hill, New York.

Books and/or chapters in books:

Wicks, F. J. (1978 reprinted in 1979, 1980, 1981) **Asbestos Deposits.** Section F in Ore Deposits Workshop, University of Toronto, 86-114.

MISCELLANEOUS:

Internal Reports:

Wicks, F. J. (1995) **Status of the reference X-ray powder diffraction patterns for the serpentine minerals - 1994.** Royal Ontario Museum Mineralogy Department - Internal Report.

Confidential Company Reports:

Wicks, F. J. (1983) **Revision of the draft for the mineralogical section of the Report of the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario.**

Wicks, F. J. (1983) **A critical Review of the Ph.D. Thesis by ____________ at ____________ University.** A 48 page report for the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario.

O'Hanley, D. S. & Wicks, F. J. (1987) **Inspection of the Cassiar, Clinton Creek and Caley Asbestos Mines for the presence of amphibole fiber: Report of field observations.** For Shea and Gardner, Washington, D. C.

O'Hanley, D. S. & Wicks, F. J. (1988) **Inspection of the Cassiar and the Clinton Creek chrysotile asbestos mines for the presence of amphibole fiber: Final Report.** For Shea and Gardner, Washington, D. C.

O'Hanley, D. S., & Wicks, F. J. (1989) **A development of a method for the determination of fiber quality.** For the Asbestos Institute, Montreal, Quebec.

Wicks, F. J. **A review of powder x-ray diffraction methods used in environmental & health studies.** Private report for Dr. E. B. Ilgren, Consultant, Bryn Mawr, Pennsylvania.

Chatfield, E. J. & Wicks, F. J. (2002) Review **of the Results Reported in R.J. Lee Group, Inc. Job No. ATH204168.** Prepared for Regis Resources Inc. Toronto, Ontario, Canada.

Wicks, F. J. (2003) Mineralogy **and Petrology Report for the Horwood Lake Project.** Prepared for Strathcona Mineral Services Limited, Toronto, Ontario, Canada.

Wicks, F. J. (2003) **Horwood Lake Project, Supplementary Report.** Prepared for Strathcona Mineral Services Limited, Toronto, Ontario, Canada.

I have written 31 confidential company reports, five of which have been later published in professional journals.

ERIC J. CHATFIELD: CURRICULUM VITAE

COPY

CURRENT AT 2002-08-20

Date of Birth:	21 November, 1936
Place of Birth:	Oakthorpe, Leicestershire, United Kingdom
Citizenship:	Canadian
Home Address:	2071 Dickson Road Mississauga Ontario Canada L5B 1Y8
Telephone Numbers:	Home: (905) 848-6953 Business: (905) 896-7611 Facsimile: (905) 896-1930
E-Mail:	echatfield@ejchatfield.com
Present Position:	President / Principal Analyst Chatfield Technical Consulting Limited 2071 Dickson Road Mississauga Ontario Canada L5B 1Y8

Academic Record

1948 - 1955: Ashby de-la Zouch Boys' Grammar School
Ashby de-la Zouch, Leicestershire
United Kingdom

School Examinations:

1953: General Certificate of Education (Ordinary Level):
English Language
French
Latin

1954: General Certificate of Education (Advanced Level):
Chemistry
Mathematics
Physics

General Certificate of Education (Scholarship Level):
Chemistry
Physics

A State Scholarship was awarded on the basis of the above examination results

1955 - 1958: St. Catharine's College, Cambridge University
Cambridge
United Kingdom

An open scholarship was awarded on the basis of entrance examinations

University Examinations:

1957: Natural Sciences Tripos Part I (Honours):
Chemistry
Mineralogy and Crystallography
Physics
Mathematics

1958: Natural Sciences Tripos Part II (Honours):
Physics

1958: Graduated B.A.

1962: Graduated M.A.

1971: Graduated Ph.D.

The Ph.D. was taken externally under the special regulations of Cambridge University, in which published work is submitted as a thesis, followed by an oral examination. The thesis consisted of publications on studies of particulate aerosols produced by combustion or vaporization of plutonium-alkali metal mixtures.

Professional Record

1986 - Present: President and Principal Analyst of Chatfield Technical Consulting Limited

- New company formed to continue to provide high quality optical and electron microscopy analyses formerly provided while employed at Ontario Research Foundation (1968 - 1986). The company performs TEM, SEM, PLM and PCM particulate analyses, principally asbestos, for a number of clients. In addition to routine analyses, the company conducts research into new methods of analysis: the relationship between direct and indirect TEM preparation has been investigated; a new method for analysis of asbestos-containing floor tile has been developed to provide quantitative results and to overcome the problem of false-negative results obtained by PLM analysis; a new method for reliable quantification of low concentrations of asbestos in building materials has been developed, including statistical interpretation of analytical results; and, an analytical method based on PLM and SEM has been developed for screening vermiculite samples for the presence of amphibole fibers.

Consultant to Ontario Research Foundation

- Asbestos Determination
- Electron Microscopy

Consultant to U.S. Environmental Protection Agency

- Airborne Asbestos Monitoring. Prepared the standard operating procedure (SOP) for analysis of air samples from abatement projects
- Member of Select Committee on Asbestos Analysis convened to define the TEM analytical method for the Asbestos Hazards Emergency Response Act (AHERA)
- Principal author of analytical method manual: Interim Superfund Method for Determination of Asbestos in Ambient Air
- Perform TEM and PCM asbestos analyses
- Prepare standards for quality assurance in asbestos analyses
- Prepare analytical method manual for determination of asbestos in vermiculite and vermiculite-containing products

Consultant to National Institute of Standards and Technology (formerly National Bureau of Standards)

- Laboratory Assessor for the NVLAP Laboratory Accreditation Program for Bulk Asbestos Analysis
- Laboratory Assessor for the NVLAP Laboratory Accreditation Program for Airborne Asbestos Analysis by TEM

Consultant to Nissei Sangyo (Manufacturers of Hitachi electron microscopes) on materials applications

Lecturer on asbestos analysis

- Chief Lecturer for Asbestos Analysis Training Course sponsored by Hitachi

Consultant on asbestos analysis laboratory set-up, operation and equipment requirements

Professional Record (Cont'd)

Consultant to University of Toronto Department of Anatomy Electron Microscope Unit on materials applications

Expert witness on behalf of several defendants in asbestos property damage suits

Expert witness on behalf of several defendants in asbestos personal injury suits

Consultant to The Asbestos Institute
- Two missions to the United Arab Emirates, the Sultanate of Oman, Kuwait, and Turkey, to give seminars on measurement and identification of asbestos

Convener, ISO/TC 146/SC 3/WG1
- Determination of asbestos fibre content in ambient atmospheres; preparation of International Standard for Transmission Electron Microscopy Direct-Transfer Method, International Standard for Transmission Electron Microscopy Indirect-Transfer Method and Draft International Standard for Scanning Electron Microscopy Method

Consultant to Health Effects Institute - Asbestos Research
- Member of the Literature Review Panel
- Member of the Steering Committee for TEM Analyses

Member of the Editorial Advisory Board of Asbestos Issues magazine

Member, Der Verband der Chemischen Industrie e.V. (VCI) Working Group to develop a standard procedure for measurement of asbestos in parenteral medicines

Consultant to Hong Kong Laboratory Accreditation Scheme (HOKLAS)
- Technical Advisor on asbestos analysis laboratory set-up, operation and methods
- Laboratory Assessor for asbestos analysis laboratories (PLM, PCM and TEM)

Convener, ISO/TC 146/SC 6/WG4
- Determination of asbestos/mineral fibres in indoor air; development of a sampling strategy document

Consultant to Ground Zero Elected Officials Task Force; Chairman U.S. Congressman Jerrold Nadler
- Technical Advisor on characterization of particulate found in apartments after destruction of the World Trade Center

Professional Record (Cont'd)

1968 - 1986: Head of the Electron Optics Laboratory
Ontario Research Foundation
Sheridan Park Research Community
Mississauga, Ontario, Canada L5K 1B3

Initially appointed as Associate Research Scientist, with successive promotions to position of Assistant Director.

Research Topics:

(a) Development and evaluation of methods for identification and quantification of asbestos and other mineral fibers in air, water and mineral products. Most of this work was under contract with the U.S. Environmental Protection Agency and with the Federal Government of Canada. In 1982, my group completed a 3-year, $480,000 contract with the EPA to develop a reference analytical technique for determination of asbestos in drinking water, based on electron microscopy. This document is the EPA accepted method for this type of analysis. It is also acknowledged that the identification criteria in this document provide the best state-of-the-art procedures for determination of asbestos, and these criteria have been incorporated by others in methods relating to inhalation or ingestion of asbestos.

(b) Development of methods for determination of asbestos in bulk samples of building materials. In response to requests for this type of analysis, I established the PLM method, with additional confirmation of species identification by dispersion staining, as a routine service in 1977. Where necessary, SEM-EDXA was used to examine particularly difficult samples. Initially, I performed all of the analyses, and as the volume of work increased, I trained several technicians in the procedure. After basic training, technicians were not considered qualified to perform analyses independently until they had completed analysis of a series of approximately 200 samples, performed in parallel with me, and for which they had demonstrated complete agreement with me on both classification and identification. Some variance in individual estimates of quantification was considered acceptable.

(c) Development of a new instrument, based on light scattering by magnetically-aligned asbestos fibers, which is capable of detecting 0.2 ng of asbestos. This instrument can currently provide discrimination between different varieties of mineral fiber, provide some information on their size distributions, and is capable of significant further development. Eventually, the instrument could be applied to both occupational and environmental monitoring.

(d) Design and execution of environmental and occupational surveys for asbestos. In 1977, the National Survey for Asbestos Fibres in Canadian Drinking Water Supplies was conducted by my group. In this survey, the water systems of 71 Canadian municipalities were studied to evaluate the fate of asbestos which occurs in the water supply and to determine locations where asbestos enters the supply during the water

Professional Record (Cont'd)

handling. I was involved with measurement of asbestos fibers in ambient atmospheres, particularly in buildings insulated with asbestos. In 1984, a study was conducted on behalf of Manville Corporation to measure the release of fibers to the ambient atmosphere from a landfill area which was still in use and which had been used for some time to dispose of materials containing asbestos and man-made mineral fibers. In 1985, a study was conducted for Johns-Manville Canada to measure release of fibers to the ambient atmosphere at a site where they were undertaking rehabilitation of an abandoned landfill area previously used for disposal of materials containing asbestos. I also consulted for a number of companies in assessing the potential inhalation hazards associated with fiber contamination in mineral products such as vermiculite and talc.

(e) Consultant to the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario. As part of this consulting assignment, I provided two advisory reports published by the Commission, concerning measurement techniques for asbestos in both occupational and ambient atmospheres. I also participated as an expert witness at the Royal Commission hearings, and reviewed portions of the draft of the Commission's final report.

(f) Ambient airborne particulate studies, using optical and electron microscopy. This work is often conducted on behalf of specific industrial clients who wish to monitor particulate emissions from their operations.

(g) In 1984, I participated in EPA meetings to examine the possible approaches to final monitoring of buildings from which asbestos insulation has been removed. At that time I advocated the use of TEM, as the only definitive method. TEM has since been specified as the method of choice for analysis of air samples collected for the purpose of building clearance.

(h) As a result of the large number of medico-legal cases which have developed in connection with asbestos, a requirement has arisen for analysis of lung tissue to detect the loading and variety of mineral fibers present. The large number of individuals who have been exposed to these materials has led to uncertainty as to the compensation which is justified when a death or disability occurs due to lung cancer. The methods currently used for tissue analysis are very unreliable, with a great deal of inter-laboratory variation. Accordingly, I initiated a research program to develop reliable methods for quantification of mineral particles in human lung tissue.

Professional Record (Cont'd)

1958 - 1968: Nuclear Safety Section
United Kingdom Atomic Energy Authority
Aldermaston, Berkshire
United Kingdom

Initially appointed as Scientific Officer, and promoted in 1965 to Senior Scientific Officer.

Research Topics:

(a) Laboratory studies of the rate of release and particle size distribution of particulate aerosols generated by oxidation of plutonium under conditions ranging from ambient temperatures to the ignition point. It was shown that, under some conditions, the oxide particles could all be in the respirable size range.

(b) Investigation, primarily by electron microscopy and diffraction, of the particulate aerosols generated by explosive vaporization of plutonium-alkali metal mixtures in oxygen. The objective of this work was to examine the materials which would be released to the atmosphere as airborne particles in the event of a melt-down of a sodium-cooled fast reactor fuelled by plutonium. It was shown that in these particles the plutonium had been converted to a hexavalent plutonate anion. When dispersed in aqueous media, the material was shown to be soluble, and then to hydrolyse to a colloidal dispersion of hydroxide particles with sizes less than 5 nm. Inhalation experiments with mice were conducted, and it was found that the plutonium initially deposited in the lungs was rapidly translocated to other organs.

(c) Design and execution of field work, conducted in both Australia and Nevada, to investigate the dispersion of airborne particulate aerosols from simulated nuclear accidents.

(d) Design, execution and interpretation of a radiological survey of the United Kingdom nuclear weapon test sites in Australia. Recommendation of de-contamination procedures to be followed prior to re-opening of the test range areas for public access.

Recorded Testimony Related to Asbestos Measurement

1981 July 09	Sworn Expert Testimony before the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario. Counsel J.I. Laskin; Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario, 180 Dundas Street West, Toronto, Ontario, Canada M5G 1Z8.
1984 July 06	Testimony at the OSHA Rulemaking Hearing on Revisions to the Asbestos Standard, on Behalf of the Asbestos Information Association (North America). Attorneys T.B. Hardy and H.D. Peterson; Kirkland & Ellis, 655 Fifteenth Street, N.W., Washington, D.C. 20005.
1985 Dec 11	Deposition on behalf of U.S. Gypsum Co. (Defendant): U.S. District Court of the Eastern District of Tennessee, Eastern Division, No. 2-83-329; Sherry Wolfe et al. (Washington County Board of Education, Tennessee) v. U.S. Gypsum Co., National Gypsum Company and W.R. Grace & Co. Attorneys J.D. Pagliaro and D.J. Valenza; Morgan, Lewis & Bockius, 2000 One Logan Square, Philadelphia, PA 19103.
1986 Jan 28	Deposition on behalf of U.S. Gypsum Co. (Defendant): U.S. District Court for The Middle District of Georgia, Macon Division, Civil Action No. 85-126-3-MAC; The Corporation of Mercer University v. National Gypsum Company, et al. Attorneys J.D. Pagliaro and D.J. Valenza; Morgan, Lewis & Bockius, 2000 One Logan Square, Philadelphia, PA 19103.
1986 June 25	Deposition on behalf of U.S. Gypsum Co. (Defendant): Circuit Court of Jackson County, Missouri, Case No. N/A; School District of Independence, Missouri, No. 30 v. U.S. Gypsum Company. Attorney J.D. Pagliaro; Morgan, Lewis & Bockius, 2000 One Logan Square, Philadelphia, PA 19103.
1986 Oct 30	Deposition on behalf of U.S. Mineral Products Company (Defendant): U.S. District Court for The District of New Hampshire, Civil Action C 83-143-P; City of Manchester v. U.S. Mineral Products Company, et al. Attorneys J.T. Broderick, Jr. and R.C. Nelson; Devine, Millimet, Stahl & Branch, 111 Amherst Street Box 719, Manchester, N.H. 03105.
1986 Dec 15	Deposition on behalf of United States Mineral Products Company, Inc. (Defendant): U.S. District Court for The Western District of North Carolina, Greensboro Division, C-85-1256-G; Burlington City Board of Education v. United States Mineral Products Company, Inc. Attorneys J.A. Gardner, III and G.C. York; Hedrick, Eatman, Gardner & Kincheloe, 741 Kenilworth Avenue, Suite 300, Charlotte, North Carolina 28204.
1988 Apr 13	Deposition on behalf of United States Mineral Products Company (Defendant): U.S. District Court for The District of New Hampshire, Civil Action No. C-87-207-L; New Hampshire-Vermont Health Service Corporation, d/b/a Blue Cross/Blue Shield of New Hampshire v. United States Mineral Products Company, Inc. Attorneys J.T. Broderick, Jr. and R.C. Nelson; Devine, Millimet, Stahl & Branch, 111 Amherst Street Box 719, Manchester, N.H. 03105.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1988 Sept 27	Deposition on behalf of KenTile (Defendant): Court of Common Pleas of Allegheny County, PA, Civil Division No. GD 86-8810; Wunderley and Wunderley v. KenTile et al. Attorney George N. Stewart; Zimmer, Kunz, Loughren, Hart, Lazaroff, Trenor, Banyas & Conaway, P.C., One Oxford Centre, Pittsburgh, PA 15219.
1989 Aug 26	Deposition on behalf of Keene Corporation (Defendant): The Circuit Court for Anne Arundel County, Maryland, Civil Action No. 1108600; State of Maryland vs. Keene Corporation, et al. Attorney Thomas F. McDonough, Esquire; Royston, Mueller, McLean & Reid, 102 West Pennsylvania Avenue, Towson, MD 21204.
1990 Jan 29	Deposition on behalf of U.S. Mineral Products (Defendant): The Circuit Court for Anne Arundel County, Civil Action No. 1108600; State of Maryland vs. Keene Corporation, et al. Attorney Lenox G. Cooper, Esquire; Bastian, Clague & Clancy, Suite N-220, Little Falls Mall, 4701 Sangamore Road, Bethesda, Maryland 20816.
1990 Mar 13	Deposition on behalf of United States Mineral Products (Defendant): Commonwealth of Massachusetts, Suffolk, S.S., Superior Court, No. 82254; City of Boston, et al. vs. Keene Corporation, et al. Attorney Richard P. Melick, Esquire; Melick & Porter, One Joy Street, Boston, Massachusetts 02108.
1990 Aug 17	Deposition on behalf of U.S. Mineral Products Company (Defendant): U.S. District Court, Eastern District of Louisiana, C/A No. 88-4336, Section "C", Magistrate (2); State of Louisiana ex rel Board of Commissioners of The Port of New Orleans vs. W.R. Grace & Company - Connecticut and U.S. Mineral Products Company. Attorney Stephen M. Little, Esq.; Blue, Williams & Buckley, 3421 North Causeway Blvd., Ninth Floor, Metairie, Louisiana 70002.
1990 Nov 14	Continuation of Deposition on behalf of United States Mineral Products Company (Defendant): U.S. District Court for The District of New Hampshire, Civil Action No. C-87-207-L; New Hampshire-Vermont Health Service Corporation, d/b/a Blue Cross/Blue Shield of New Hampshire v. United States Mineral Products Company, Inc. Attorneys J.T. Broderick, Jr. and S.E. Merrill; Merrill & Broderick, 707 Chestnut Street, Manchester, N.H. 03105.
1990 Nov 26	Continuation of Deposition on behalf of United States Mineral Products (Defendant): Commonwealth of Massachusetts, Suffolk, S.S., Superior Court, No. 82254; City of Boston, et al. vs. Keene Corporation, et al. Attorney Richard P. Melick, Esquire; Melick & Porter, One Joy Street, Boston, Massachusetts 02108.
1990 Nov 27	Expert Witness Testimony at Trial on behalf of United States Mineral Products (Defendant): Commonwealth of Massachusetts, Suffolk, S.S., Superior Court, No. 82254; City of Boston, et al. vs. Keene Corporation, et al. Attorney Richard P. Melick, Esquire; Melick & Porter, One Joy Street, Boston, Massachusetts 02108.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1990 Dec 15	Continuation of Deposition on behalf of United States Mineral Products Company (Defendant): U.S. District Court for The District of New Hampshire, Civil Action No. C-87-207-L; New Hampshire-Vermont Health Service Corporation, d/b/a Blue Cross/Blue Shield of New Hampshire v. United States Mineral Products Company, Inc. Attorneys J.T. Broderick, Jr. and S.E. Merrill; Merrill & Broderick, 707 Chestnut Street, Manchester, N.H. 03105.
1990 Dec 19	Expert Witness Testimony at Trial on behalf of United States Mineral Products Company (Defendant): U.S. District Court for The District of New Hampshire, Civil Action No. C-87-207-L; New Hampshire-Vermont Health Service Corporation, d/b/a Blue Cross/Blue Shield of New Hampshire v. United States Mineral Products Company, Inc. Attorneys J.T. Broderick, Jr. and S.E. Merrill; Merrill & Broderick, 707 Chestnut Street, Manchester, N.H. 03105.
1991 Mar 07	Deposition on behalf of U.S. Mineral Products Company (Defendant): U.S. District Court for The Eastern District of Pennsylvania, No. 830268; Asbestos School Litigation. Attorneys Stephen J. Imbriglia and Carl H. Delacato, Jr.; Hecker Brown Sherry and Johnson, 1700 Two Logan Square, 18th and Arch Streets, Philadelphia, PA 19103.
1991 Sep 16	Deposition on behalf of U.S. Mineral Products Co. (Defendant): U.S. District Court Central District of California, Case No. 89 3843 TJH (Tx); State Farm Mutual Automobile Insurance Company vs. U.S. Mineral Products Co. Attorney Stephen J. Imbriglia; Hecker Brown Sherry and Johnson, 1700 Two Logan Square, 18th and Arch Streets, Philadelphia, PA 19103.
1991 Dec 09	Deposition on behalf of United States Mineral Products Company (Defendant): U.S. District Court for The District of New Hampshire, Civil Action No. C-87-207-L; New Hampshire-Vermont Health Service Corporation, d/b/a Blue Cross/Blue Shield of New Hampshire v. United States Mineral Products Company. Attorney J.T. Broderick, Jr.; Merrill & Broderick, 707 Chestnut Street, Manchester, N.H. 03105.
1992 Mar 19	Deposition on behalf of U.S. Mineral Products Company (Defendant): U.S. District Court, Eastern District of Texas, Beaumont Division, Case No. B-87-00507; Dayton Independent School District, et al vs. U.S. Mineral Products Company, et al. Attorneys Peter C. Kennedy; Hecker Brown Sherry and Johnson, 1700 Two Logan Square, 18th and Arch Streets, Philadelphia, PA 19103, and David A. Livingston; Livingston & Markle, 200 Waugh on the Bayou, 55 Waugh Drive, Houston, TX 77007.
1992 Jun 15	Expert Witness Testimony at Trial on behalf of U.S. Mineral Products (Defendant): Superior Court of the State of California for the County of Los Angeles, Case No. Sec 77762; H & H Cerritos v. U.S. Mineral Products et al. Attorney Jill A. Franklin; Schaffer & Lax, 5757 Wilshire Blvd., Suite 600, Los Angeles, California 90036-3664.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1992 Nov 02 — Affidavit on behalf of Les Industries Cafco Ltee/Industries Cafco Ltd. and United States Mineral Products Company (Defendants): Supreme Court of British Columbia, No. C900884, Vancouver Registry; G.W.L. Properties Ltd. and Bentall Properties Ltd. v. W.R. Grace & Co. of Canada Ltd. et al. Counsel Eric A. Dolden; Freeman & Company, 885 West Georgia Street, 19th Floor, Vancouver, British Columbia V6C 3H4.

1993 Jan 05 — Deposition on behalf of United States Mineral Products Company (Defendant): United States District Court for the Western District of Kentucky, Louisville Division, Civil Action File No. 91-0126 L-B; Farm Credit Bank of Louisville vs. United States Mineral Products Company. Attorney Stephen J. Imbriglia; Hecker Brown Sherry and Johnson, 1700 Two Logan Square, 18th and Arch Streets, Philadelphia, PA 19103.

1993 Jan 19 — Deposition on behalf of U.S. Mineral Products Company (Defendant): Superior Court of the State of California, County of Los Angeles, Case No. C 683 086; Trizec Properties, Inc. and Marina Airport Buildings, Ltd. v. United States Gypsum Company et al. Attorney Kevin J. McNaughton; Schaffer & Lax, 5757 Wilshire Boulevard, Suite 600, Los Angeles, California 90036-3664.

1993 Mar 04 — Deposition on behalf of Westinghouse (Defendant): The Circuit Court of Jackson County, Mississippi; Asbestos Personal Injury Cases Abrams Lead Nos. 88-5422 (2), 89-5088 (2), 89-5121 (2), 90-5427 (2), 88-5420 (2), 89-5252 (2), 90-5069 (2), 90-5322 (2), 89-5153 (2), 90-5352 (2), 89-5268 (2), 90-5045 (2), 90-5274 (2), 88-5181 (2), 91-5187 (2), 91-5098 (2), 91-5000 (2), 90-5387 (2), 91-5119 (2), 90-5369 (2), 91-5135 (2), and 90-5178 (2). Attorney David H. Worrell Jr.; McGuire Woods Battle & Boothe, One James Center, 901 East Cary Street, Richmond, Virginia 23219-4030.

1993 Apr 13 — Expert Witness Testimony at Trial on behalf of Fibreboard Corporation (Defendant): The Court of Common Pleas, Hamilton County, Ohio, Case No. A8405380; Cincinnati Board of Education vs. Armstrong World Industries, Inc., et al. Attorney Thomas L. Eagen, Jr.; Cash, Cash, Eagen & Kessel, 1000 Tri-State Building, 432 Walnut Street, Cincinnati, Ohio 45202.

1993 Jun 29 — Expert Witness Testimony at Trial on behalf of Westinghouse (Defendant): The Circuit Court of Jackson County, Mississippi; Asbestos Personal Injury Cases Abrams Lead Nos. 88-5422 (2), 89-5088 (2), 89-5121 (2), 90-5427 (2), 88-5420 (2), 89-5252 (2), 90-5069 (2), 90-5322 (2), 89-5153 (2), 90-5352 (2), 89-5268 (2), 90-5045 (2), 90-5274 (2), 88-5181 (2), 91-5187 (2), 91-5098 (2), 91-5000 (2), 90-5387 (2), 91-5119 (2), 90-5369 (2), 91-5135 (2), and 90-5178 (2). Attorney James F. Stutts; McGuire Woods Battle & Boothe, One James Center, 901 East Cary Street, Richmond, Virginia 23219-4030.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1993 Aug 20 — Affidavit on behalf of Westinghouse Electric Corporation (Defendant): The Court of Common Pleas of Delaware County; Asbestos Cases No. 86-8499 & 86-8199, 86-8119, 86-8415, 87-7986, 86-8625, 86-8498, and 86-8624. Attorney T. William Alvey, III; McGuire Woods Battle & Boothe, One James Center, 901 East Cary Street, Richmond, Virginia 23219-4030.

1994 Jan 07 — Deposition on behalf of United States Mineral Products Company (Defendant): The Commonwealth of Massachusetts, Suffolk County Superior Court, C.A. No. 90-3791-A; Commonwealth of Massachusetts v. Owens-Corning Fiberglas Corporation, et al. Attorney Stephen J. Imbriglia; Hecker Brown Sherry and Johnson, 1700 Two Logan Square, 18th and Arch Streets, Philadelphia, PA 19103.

1994 Mar 21 — Deposition on behalf of Westinghouse Electric Company (Defendant): In Re: Baltimore City Personal Injury Asbestos Litigation in The Circuit Court for Baltimore City, CA No. 93076701; ABATE, et al. vs. ACandS, INC., et al. "Post-Abate/Consolidation II" (Asbestos Personal Injury Cases Filed after October 1, 1990. Attorneys James F. Stutts and Morton A. Sacks; McGuire Woods Battle & Boothe, One James Center, 901 East Cary Street, Richmond, Virginia 23219-4030.

1994 Mar 23 — Deposition on behalf of U.S. Mineral Wool (Defendant): State of Wisconsin: Circuit Court: Milwaukee County, Case No. 92-CV-012266; Glendale-River Hills School District vs. U.S. Mineral Wool, AAER Sprayed Insulation, and Asbestospray Corporation. Attorney J.T. Broderick, Jr.; Broderick & Dean, 707 Chestnut Street, Manchester, N.H. 03105.

1994 May 23 — Deposition on behalf of U.S. Mineral Products Co. (Defendant): Superior Court of the State of California for the County of Los Angeles, Case No. C 728 817; Sunset Vine Tower Ltd., a California general partnership, v. Carey Canada, Inc., et al. Attorneys Kevin J. McNaughton and Jill A. Franklin; Schaffer & Lax, 5757 Wilshire Boulevard, Suite 600, Los Angeles, California 90036-3664.

1994 May 24 — Continuation of Deposition on behalf of U.S. Mineral Products Co. (Defendant): Superior Court of the State of California for the County of Los Angeles, Case No. C 728 817; Sunset Vine Tower Ltd., a California general partnership, v. Carey Canada, Inc., et al. Attorneys Kevin J. McNaughton and Jill A. Franklin; Schaffer & Lax, 5757 Wilshire Boulevard, Suite 600, Los Angeles, California 90036-3664.

1994 May 25 — Expert Witness Testimony at Trial on behalf of U.S. Mineral Products Co. (Defendant): Superior Court of the State of California for the County of Los Angeles, Case No. C 728 817; Sunset Vine Tower Ltd., a California general partnership, v. Carey Canada, Inc., et al. Attorneys Kevin J. McNaughton and Jill A. Franklin; Schaffer & Lax, 5757 Wilshire Boulevard, Suite 600, Los Angeles, California 90036-3664.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1994 Jun 15 — Deposition on behalf of United States Mineral Products (Defendant): State of Michigan in the Circuit Court for the County of Wayne, No. 84-429634-NP; Board of Education of the School District for The City of Detroit vs. The Celotex Corporation, et al. Attorney Carolyn Sullivan, Esquire; Melick & Porter, One Joy Street, Boston, Massachusetts 02108.

1994 Sep 01 — Expert Witness Testimony at Trial on behalf of Westinghouse Electric Company (Defendant): In Re: Baltimore City Personal Injury and Wrongful Death Asbestos Cases in The Circuit Court for Baltimore City, CA No. 93076701; ABATE, et al. vs. ACandS, INC., et al., Cross-Claim Proceedings. Attorney Melissa K. Force; McGuire Woods Battle & Boothe, The Blaustein Building, One North Charles Street, Baltimore, Maryland 21201-3793.

1995 Aug 15 — Deposition on behalf of Union Carbide (Defendant), and on behalf of United States Mineral Products Company (Defendant): State of Illinois, County of Cook, SS: in the Circuit Court of Cook County, Illinois, County Department - Law Division, No. 92 L 9934: Board of Education of the City of Chicago vs. A, C and S., Inc., et al.; No. 92 L 9933: Evanston Community Consolidated School District No. 65, et al., vs. A, C and S., Inc., et al.; No. 92 L 9932: Board of Education of High School District No. 211, et al., vs. Abitibi Asbestos Mining Co., Ltd., et al.; No. 92 L 9927: Board of Education of Township High Schools, et al., vs. A, C & S., Inc., et al. Attorney, on behalf of Union Carbide, Matthew E. Norton; Burke, Weaver & Prell, 55 West Monroe Street, Chicago, Illinois 60603, and Attorney, on behalf of United States Mineral Products Company, Peter C. Kennedy; Hecker Brown Sherry and Johnson, 1700 Two Logan Square, 18th and Arch Streets, Philadelphia, PA 19103.

1996 May 06 — Deposition on behalf of Kaiser Aluminum & Chemical Corporation (Defendant), and on behalf of Westinghouse (Defendant): In the District Court of Orange County, Texas, 128th Judicial District: No. A-920967-C: Robert L. Abernathy, et al. vs. A. C. & S., Inc., et al.; No. A-920961-C: Ina Sue Bailey, et al. vs. A. C. & S., Inc., et al.; No. A-930553-C: Edsel Dewell Cardwell, et al., vs. A. C. & S., Inc., et al.; No. A-930810-C: Ben Grady Gilbert, et ux, vs. A. C. & S., Inc., et al. Attorney, on behalf of Kaiser Aluminum & Chemical Corporation, Jack L. Harvey; Wharton Levin Ehrmantraut Klein & Nash, P.A., 104 West Street, P.O. Box 551, Annapolis, Maryland 21404, and Attorney, on behalf of Westinghouse, Robert E. Thackston, Jenkens & Gilchrist, P.C., Fountain Place, 1445 Ross Avenue, Suite 3200, Dallas, Texas 75202-2799.

1996 Aug 14 — Deposition on behalf of United States Mineral Products Company (Defendant): In The Common Pleas Court of Montgomery County, Ohio, Case No. 91-3339; NCR Corporation vs United States Mineral Products Company. Attorneys Paul F. Slater; Danaher, Tedford, Lagnese & Neal, 20 Exchange Place, 31st Floor, New York, New York 10005, and Gary W. Gottschlich; Porter, Wright, Morris & Arthur, P.O. Box 1805, 1600 One South Main Street, Dayton, Ohio 45401-1805.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1996 Sep 06	Deposition on behalf of Owens-Corning Fiberglas Corp. (Defendant): Superior Court of New Jersey, Law Division: Middlesex County, Docket No. L-1133-93; Ronald F. Pecyno, Sr. and Josephine Pecyno, his wife v. The Anchor Packing Co., et al. Attorney Andrew Constantine; Tucker, Goldstein & Constantine, Cherry Hill Plaza, Suite 507, 1415 Route 70 East, Cherry Hill, New Jersey 08034-2210.
1996 Oct 17	Deposition on behalf of U.S. Mineral Products (Defendant): United States District Court, District of New Jersey, Civil Action Nos. 87-4227 (HAA) and 87-4238 (HAA); The Prudential Insurance Company of America, et als. vs United States Gypsum Company, et als. Attorney Marissa Banez; Danaher, Tedford, Lagnese & Neal, 20 Exchange Place, New York, New York 10005.
1997 Jan 15	Deposition on behalf of U.S. Mineral Products (Defendant): United States District Court, Southern District of New York, 91 CIV. 0310 (CLB)(MDF); The Port Authority of New York and New Jersey, (formerly known as "The Port of New York Authority") and Port Authority Trans-Hudson Corporation vs. Allied Corporation (individually and as a subsidiary of "Allied-Signal, Inc."), et al. Attorney Paul F. Slater; Danaher, Tedford, Lagnese & Neal, 20 Exchange Place, New York, New York 10005.
1997 Jan 16	Continuation of Deposition on behalf of U.S. Mineral Products (Defendant): United States District Court, Southern District of New York, 91 CIV. 0310 (CLB)(MDF); The Port Authority of New York and New Jersey, (formerly known as "The Port of New York Authority") and Port Authority Trans-Hudson Corporation vs. Allied Corporation (individually and as a subsidiary of "Allied-Signal, Inc."), et al. Attorney Paul F. Slater; Danaher, Tedford, Lagnese & Neal, 20 Exchange Place, New York, New York 10005.
1997 Oct 07	Deposition on behalf of Kaiser Aluminum & Chemical Corporation and Mallinckrodt, Inc. (Defendants): In the Circuit Court of Monongalia County, West Virginia; In Re: Mon Mass II. Attorney Jack L. Harvey; Wharton Levin Ehrmantraut Klein & Nash, P.A., 104 West Street, P.O. Box 551, Annapolis, Maryland 21404.
1997 Nov 19	Deposition on behalf of A. C. & S., Inc. (Defendant): In The Superior Court of The State of Delaware In and For New Castle County; In Re: Asbestos Litigation Sparco Trial Group, C.A. No. 96C-02-142. Attorney Wayne A. Marvel; Maron, Marvel & Wilks, P.A., 1201 North Market Street, Wilmington, Delaware 19899.
1997 Dec 03	Deposition on behalf of United States Mineral Products Company (Defendant): The Court of Common Pleas, Cuyahoga County, Ohio, Case No. 187471; Ohio Hospital Association against Armstrong World Industries, Inc., et al. Attorney Paul F. Slater; Danaher, Tedford, Lagnese & Neal, 20 Exchange Place, New York, New York 10005.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1997 Dec 12 Affidavit on behalf of Owens-Illinois: Supreme Court of the State of New York, County of New York; Index No. 44559/84, The City of New York, et al., against Keene Corporation, et al., Index No. 19280/87, The City of New York, et al., against AAER Sprayed Insulations, Inc., A Division of Rogers Insulating & Roofing Company, Inc., et al.; Index No. 19288/87, The City of New York against AAER Sprayed Insulations, Inc., A Division of Rogers Insulating & Roofing Company, Inc., et al. Attorney Daniel T. Ellis; Fuller & Henry P.L.L., 1 SeaGate, Toledo, Ohio 43604.

1998 Jan 19 Deposition on behalf of Owens Corning Fiberglas (Defendant): Superior Court of New Jersey, Law Division: Camden County, Docket No. L-11092-93; Joseph Marianna, Sr. v. Owens Corning Fiberglas, et al. Attorney Darren H. Goldstein; c/o Kelley Jasons McGuire & Spinelli, L.L.P., Suite 1400, One Penn Center, 1617 JFK Boulevard, Philadelphia, PA 19103.

1998 Oct 14 Deposition on behalf of Union Carbide Chemicals and Plastics Company, Inc. (Defendant and Third-Party Plaintiff): The United States District Court for the Eastern District of Pennsylvania, In Re: Asbestos Products Liability Litigation (No. VI), Civil Action No. MDL 875; Conwed Corporation vs. Union Carbide Chemicals and Plastics Company, Inc., vs. Owens-Corning Fiberglas Corporation, et al. Attorney Trevor J. Will; Foley & Lardner, Firstar Center, 777 East Wisconsin Avenue, Milwaukee, Wisconsin 53202.

1998 Nov 13 Deposition on behalf of Kaiser Gypsum Company, Inc. (Defendant): In The Superior Court of The State of California In and For The County of San Francisco; No. 968557: Frank DeNola, et al., v. Asbestos Defendants (BHC), et al. Attorney Allan D. Gutsche; Jackson & Wallace, 580 California Street, 15th Floor, San Francisco, California 94104.

1998 Nov 20 Continuation of deposition on behalf of Kaiser Gypsum Company, Inc. (Defendant): In The Superior Court of The State of California In and For The County of San Francisco; No. 968557: Frank DeNola, et al., v. Asbestos Defendants (BHC), et al. Attorneys Edward E. Hartley; Dillingham & Murphy, LLP, 225 Bush Street, Sixth Floor, San Francisco, California 94104-4207, and Bruce A. Fichelson; Jackson & Wallace, 580 California Street, 15th Floor, San Francisco, California 94104.

1998 Dec 03 Expert Witness Testimony at Trial on behalf of Kaiser Gypsum Company, Inc. (Defendant): In The Superior Court of The State of California In and For The County of San Francisco; No. 968557: Frank DeNola, et al., v. Asbestos Defendants (BHC), et al. Attorneys Edward E. Hartley; Dillingham & Murphy, LLP, 225 Bush Street, Sixth Floor, San Francisco, California 94104-4207, and Allan D. Gutsche; Jackson & Wallace, 580 California Street, 15th Floor, San Francisco, California 94104.

1999 Aug 27 Deposition on behalf of Defendant: Asbestos Litigation Limited to: Sharon Edwards; C.A. No. 96C-12-039. Attorney Wayne A. Marvel; Maron, Marvel & Wilks, P.A., 1300 North Broom Street, Wilmington, Delaware 19899-0288.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

1999 Oct 15	Expert Witness Testimony at Trial on behalf of Rhone-Poulenc AG Company (formerly Benjamin-Foster, Division of AMCHEM Products) (Defendant): Civil District Court For The Parish of Orleans, State of Louisiana, Number 95-18815, Division "A"; Barry Hoerner, et al. versus ANCO Insulations, Inc., et al. Attorneys Janet L. MacDonell and André C. Broussard, Jr.; Deutsch, Kerrigan & Stiles, L.L.P., 755 Magazine Street, New Orleans, Louisiana 70130-3672.
1999 Nov 24	Certification on behalf of Southdown, Inc. (Defendant): Superior Court of New Jersey, Chancery Division - Sussex County, Docket No. SSX C-38-99, Civil Action; Township of Sparta v. Southdown, Inc. and New Jersey Department of Environmental Protection. Attorney Sy Gruza; Beveridge & Diamond, Park 80 West Plaza II, Suite 200, Saddle Brook, New Jersey 07663-5836.
2000 Feb 23	Certification on behalf of Southdown, Inc. (Defendant): Superior Court of New Jersey, Chancery Division - Sussex County, Docket No. SSX C-38-99, Civil Action; Township of Sparta v. Southdown, Inc. Attorney Sy Gruza; Beveridge & Diamond, Park 80 West Plaza II, Suite 200, Saddle Brook, New Jersey 07663-5836.
2000 May 10	Deposition on behalf of Rhone-Poulenc AG Company (formerly Benjamin-Foster, Division of AMCHEM Products) (Defendant): Civil District Court For The Parish of Orleans, State of Louisiana, Number 98-18635, Division "J", Sect. No. 13; Claude Trosclair, Jr., et al. versus ACANDS, Inc., et al. Attorney André C. Broussard, Jr.; Deutsch, Kerrigan & Stiles, L.L.P., 755 Magazine Street, New Orleans, Louisiana 70130-3672.
2000 Oct 23	Certification on behalf of Southdown, Inc. (Defendant): Superior Court of New Jersey, Chancery Division - Sussex County, Docket No. SSXC-38-99, Civil Action; Township of Sparta v. Southdown, Inc., and New Jersey Department of Environmental Protection. Attorney Thomas Campion; Drinker Biddle & Shanley, LLP, 500 Campus Drive, Florham Park, New Jersey 07932, and Attorneys J. Kevin Buster and Michael R. Powers; King & Spalding, 191 Peachtree Street, Atlanta, Georgia 30303.
2001 Jan 16	Affidavit on behalf of A.W. Chesterton Company (Defendant): In The Circuit Court for the Twenty-Second Judicial Circuit (City of St. Louis, MO), No. 002-1219; Joseph Unger vs. ACandS, Inc., et al. Attorney John J. Kurowski; Kurowski & Bailey, P.C., 24 Bronze Pointe, Belleville (Swansea), Illinois 62226.
2001 Jan 30	Deposition on behalf of DaimlerChrysler Corporation (Defendant): Virginia: In The Circuit Court for The City of Newport News; Civil Action No. 24242C-23: Edith King vs. Allied Signal, Inc., et al. Attorney Susan F. Demaris; Clark Hill, PLC, 500 Woodward Avenue, Suite 3500, Detroit, Michigan 48226.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

2001 Feb 25 — Declaration on behalf of Kaiser Gypsum Company, Inc.(Defendant): Superior Court of the State of California, In and For The County of San Francisco, Case No. 314384; Roy Duane Lee vs. A.P. Green Industries, Inc., et al. Attorney Allan D. Gutsche; Jackson & Wallace, LLP, 580 California Street, 15th Floor, San Francisco, CA 94104, and Attorney Edward E. Hartley; Dillingham & Murphy, LLP, 225 Bush Street, Sixth Floor, San Francisco, CA 94104.

2001 Mar 15 — Expert Witness Testimony at Trial on behalf of Kaiser Gypsum Company, Inc.(Defendant): Superior Court of the State of California, In and For The County of San Francisco, Case No. 314384; Roy Duane Lee vs. A.P. Green Industries, Inc., et al. Attorney Gordon May; Jackson & Wallace, LLP, 580 California Street, 15th Floor, San Francisco, CA 94104, and Attorney Edward E. Hartley; Dillingham & Murphy, LLP, 225 Bush Street, Sixth Floor, San Francisco, CA 94104.

2001 Mar 27 — Deposition on behalf of John Crane, Inc. (Defendant): In The Superior Court of Fulton County, State of Georgia, Civil Action No. E-53257: Laila A. Jones vs. Owens-Corning Fiberglas Corp., et al., And Civil Action No. E-56394: Lois T. Highsmith vs. Owens Corning, et al. Attorney Margaret O'Sullivan Byrne; Daniel J. O'Connell & Associates, P.C., 217 North McLean Boulevard, Suite 2C, Elgin, Illinois 60123.

2001 Mar 28 — Deposition on behalf of John Crane, Inc. (Defendant): Attorney Daniel J. O'Connell; Daniel J. O'Connell & Associates, P.C., 217 North McLean Boulevard, Suite 2C, Elgin, Illinois 60123.

2001 Apr 09 — Testimony on behalf of John Crane, Inc. (Defendant): Attorney Margaret O'Sullivan Byrne; Daniel J. O'Connell & Associates, P.C., 217 North McLean Boulevard, Suite 2C, Elgin, Illinois 60123.

2001 Jul 30 — Affidavit for Attorney Joseph Blizzard; Jenkens & Gilchrist, P.C., Fountain Place, 1445 Ross Avenue, Suite 3200, Dallas, Texas 75202-2799.

2001 Aug 17 — Affidavit on behalf of Sears, Roebuck and Company (Defendant and Counterplaintiff): In The Circuit Court, Twentieth Judicial Circuit, St. Clair County, Illinois, No. 97-L-305A; Jerry Lee Benton McAllister, et al. v. Sears, Roebuck and Company, et al., and Sears, Roebuck and Company, et al. v. Russ McCullough d/b/a Flooring Enterprises v. Dan Campbell. Attorney Curtis R. Bailey; Kurowski & Bailey, P.C., 24 Bronze Pointe, Belleville (Swansea), Illinois 62226.

2001 Aug 30 — Deposition on behalf of A.W. Chesterton Company (Defendant): In The Circuit Court for Baltimore City, In Re: Baltimore City Asbestos Litigation, September 2001, Consol. No.: 24-X-00-000379, Lead Case No.: 24-X-00-000060; Betty Lou Cole, et al. vs. ACandS, Inc., et al. Attorney Curtis R. Bailey; Kurowski & Bailey, P.C., 24 Bronze Pointe, Belleville (Swansea), Illinois 62226.

2001 Aug 31 — Affidavit on behalf of Defendants: Attorney John J. Kurowski; Kurowski & Bailey, P.C., 24 Bronze Pointe, Belleville (Swansea), Illinois 62226.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

2001 Oct 02 — Declaration on behalf of Aventis Cropscience USA, Inc., Chevron U.S.A. Inc., and Union Oil Company of California, dba UNOCAL (Defendants): Superior Court of the State of California For The City and County of San Francisco, No. 317803; Vernon E. Turley and Judith Turley v. A.P. Green Industries, Inc., et al. Attorney William E. Steimle; Filice Brown Eassa & McLeod LLP, 1999 Harrison Street, Eighteenth Floor, Oakland, CA 94612.

2001 Oct 16 — Expert Witness Testimony at Trial on behalf of Old Colony Properties Inc. (Plaintiff): Ontario Superior Court of Justice, Court File No. 4987/98; Between: Old Colony Properties Inc. (Plaintiff) and Her Majesty the Queen in Right of Ontario (Defendant). Expert Witness Testimony at Trial on behalf of Old Colony Properties Inc. (Defendant): Ontario Superior Court of Justice, Court File No. 2910/97; Between: Power Vac Services, Division of 708734 Ontario Limited (Plaintiff, Defendant by Counterclaim) and Old Colony Properties Inc. (Defendant, Plaintiff by Counterclaim). Attorney Michael J. Winward; Mackesy, Smye, Turnbull, Grilli, Jones, Winward & Mahler, 117 Hughson Street South, Hamilton, Ontario L8N 1G7.

2001 Oct 31 — Deposition on behalf of A.W. Chesterton Company (Defendant): In The Circuit Court for Baltimore City, In Re: Personal Injury and Wrongful Death Asbestos Litigation, Case No: 24-X-00000258, November 2001 Trial Group, Consolidated No.: 24-X-00000381; Charles Cargille, et al. v. ACandS, Inc., et al. Attorney Curtis R. Bailey; Kurowski & Bailey, P.C., 24 Bronze Pointe, Belleville (Swansea), Illinois 62226.

2001 Nov 17 — Affidavit on behalf of T H Agriculture & Nutrition, LLC (Defendant): In The Circuit Court of Jackson County, Missouri at Kansas City, Case No. 00CV 207056, Division 14; Naomi Joy Gainer, et al. vs. ACandS, Inc., et al. Attorney Kelly A. Schwass; Spencer Fane Britt & Browne LLP, 1000 Walnut Street, Suite 1400, Kansas City, Missouri 64106.

2001 Nov 27 — Declaration on behalf of The Dow Chemical Company and Texaco Refining and Marketing Inc. (Defendants): Superior Court of the State of California For The City and County of San Francisco, No. 304154; Perry Colwell and Theresa Colwell v. Raybestos-Manhattan, Inc., et al. Attorney William E. Steimle; Filice Brown Eassa & McLeod LLP, 1999 Harrison Street, Eighteenth Floor, Oakland, CA 94612.

2002 Mar 08 — Appearance at Hearing at Joint Meeting of the New York City Committee(s) on Health, Environmental Protection and Lower Manhattan Redevelopment; Chairperson(s): Christine Quinn, Alan J. Gerson, James F. Gennaro; Oversight: Recommendations and Other Proposed and Implemented Solutions Related to the Environmental Impacts due to the World Trade Center Disaster.

2002 Jun 11 — Expert Witness Testimony at Trial on behalf of John Crane, Inc. (Defendant): In The Superior Court of Fulton County, State of Georgia, Case No. E-56394: Lois T. Highsmith, et al. vs. Owens Corning, et al. Attorney Daniel J. O'Connel; O'Connell & O'Sullivan, P.C., 217 North McLean Boulevard, Suite 2C, Elgin, Illinois 60123.

Recorded Testimony Related to Asbestos Measurement (Cont'd)

2002 Jun 20 — Testimony on behalf of National Stone, Sand & Gravel Association at the United States Department of Labor, Mine Safety and Health Administration, Hearing on Measuring and Controlling Asbestos Exposure.

2002 Aug 05 — Deposition on behalf of Chevron U.S.A., Inc. and Texaco Refining and Marketing, Inc. (Defendants): Superior Court of the State of California, County of San Francisco, No. 308735; Ruth B. McQuillin, et al. vs. A.P. Green Industries, Inc., et al. Attorney Jennifer Walker; Filice Brown Eassa & McLeod LLP, 1999 Harrison Street, Eighteenth Floor, Oakland, CA 94612.

2002 Aug 16 — Deposition on behalf of A.W. Chesterton Company (Defendant): In The District Court Bexar County, Texas, 288th Judicial District, Cause No. CI06058; G. Hill, et al. v. ACandS, Inc., et al. Attorney Curtis R. Bailey; Kurowski, Bailey & Shultz, P.C., 24 Bronze Pointe, Belleville (Swansea), Illinois 62226.

Publications Related to Asbestos Measurement

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3. Chatfield, E.J. and Pullan, H. (1974): Measuring Asbestos in the Environment. Canadian Research and Development 7, No.6, Nov./Dec., 23-27.

4. Chatfield, E.J. (1975): Asbestos Background Levels in Three Filter Media Used for Environmental Monitoring. Proceedings, 33rd Annual Conference, Electron Microscopy Society of America, 276-277.

5. Chatfield, E.J. and Glass, R.W. (1976): Analysis of Water Samples for Asbestos: Sample Storage and Technique Development Studies. Symposium on Electron Microscopy of Microfibers, U.S. Food and Drug Administration, 123-137, (Published 1977).

6. Chatfield, E.J. (1976): Particulate Matter Studies in SEM and TEM. Proceedings, Third Annual Meeting, Microscopical Society of Canada, 60-61.

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8. Chatfield, E.J. (1978): Identification and Measurement of Asbestos Fibers by Electron Microscopy, Parts I and II. Asbestos, 59(8), 4-13; 59(9), 6-12.

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44. Chatfield, E.J. (1987): Airborne Asbestos Levels in Canadian Public Buildings. In: Workshop on Asbestos Fibre Measurements in Building Atmospheres, E.J. Chatfield, Ed., Ontario Research Foundation, Sheridan Park Research Community, Mississauga, Ontario, Canada L5K 1B3, 177-201.

45. Chatfield, E.J. (1988): Measurement of Airborne Asbestos by Transmission Electron Microscopy. Hitachi Instrument News, the 13th Edition, 3-11.

46. Chatfield, E.J. (1989): Measurement of Airborne Asbestos by Transmission Electron Microscopy. Asbestos Abatement, Vol. 4 No. 4, January/February 1989, 29-42.

47. Chesson, J., Chatfield, E.J. and Rench, J. (1989): Quality Assurance Guidelines for Transmission Electron Microscopy Asbestos Laboratories. U.S. EPA Contract No. 68-02-4294. Design and Development Branch, Office of Toxic Substances, Office of Pesticides and Toxic Substances, U.S. Environmental Protection Agency, Washington, D.C. 20460.

48. Chatfield, E.J. and Berman, D.W. (1990): Superfund Method for the Determination of Asbestos in Ambient Air, Part 1: Method. U.S. EPA Contract No. 68-01-7290. Report EPA/540/2-90/005a. U.S. Environmental Protection Agency, Center for Environmental Research Information, Cincinnati, Ohio 45268.

49. Berman, D.W. and Chatfield, E.J. (1990): Superfund Method for the Determination of Asbestos in Ambient Air, Part 2: Technical Background Document. U.S. EPA Contract No. 68-01-7290. Report EPA/540/2-90/005b. U.S. Environmental Protection Agency, Center for Environmental Research Information, Cincinnati, Ohio 45268.

50. Chatfield, E.J. (1990): Analytical Protocol for Determination of Asbestos Contamination of Clothing and Other Fabrics. Microscope (1990) 38, 221-222.

51. Chatfield, E.J. (1990): Viewing Quality: Judging TEM Specimens. Asbestos Issues, Volume 3 Number 8, August 1990, 34-41.

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Publications Related to Asbestos Measurement (Cont'd)

55. Berman, D.W., Crump, K.S., Chatfield, E.J., Davis, J.M.G., and Jones, A.D. (1995): The Sizes, Shapes, and Mineralogy of Asbestos Structures that Induce Lung Tumors or Mesothelioma in AF/HAN Rats Following Inhalation. Risk Analysis, Vol. 15, No. 2, 181-195.

56. Fowler, D.P. and Chatfield, E.J. (1997): Surface Sampling for Asbestos Risk Assessment. Proceedings, Inhaled Particles VIII, British Occupational Hygiene Society. Annals of Occupational Hygiene, Vol. 41, Supplement 1, pp. 279-286.

57. Ilgren, E.B. and Chatfield, E.J. (1997): Coalinga Fibre - A Short, Amphibole-Free Chrysotile; Part 1: Evidence for a Lack of Fibrogenic Activity. Indoor Built Environment, 6:264-276.

58. Ilgren, E.B. and Chatfield, E.J. (1998): Coalinga Fibre - A Short, Amphibole-Free Chrysotile; Part 2: Evidence for a Lack of Tumourigenic Activity. Indoor Built Environment, 7:18-31.

59. Ilgren, E.B. and Chatfield, E.J. (1998): Coalinga Fibre - A Short, Amphibole-Free Chrysotile; Part 3: Lack of Biopersistence. Indoor Built Environment, 7:98-109.

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62. Chatfield, E.J. (2000): A Rapid Procedure for Preparation of Transmission Electron Microscopy Specimens from Polycarbonate Filters. In: Advances in Environmental Measurement Methods for Asbestos, ASTM STP 1342, M.E. Beard and H.L. Rook, Eds. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, pp. 242-249.

63. Chatfield, E.J. (2000): Measurements of Chrysotile Fiber Retention Efficiencies for Polycarbonate and Mixed Cellulose Ester Filters. In: Advances in Environmental Measurement Methods for Asbestos, ASTM STP 1342, M.E. Beard and H.L. Rook, Eds. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, pp. 250-265.

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Publications Related to Asbestos Measurement (Cont'd)

65. Collins, G.B., Britton, P.W., Clark, P.J., Brackett, K.A., and Chatfield, E.J. (2000): Asbestos in Drinking Water Performance Evaluation Studies. In: Advances in Environmental Measurement Methods for Asbestos, ASTM STP 1342, M.E. Beard and H.L. Rook, Eds. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, pp. 273-287.

Other Publications

1. Chatfield, E.J. (1967): A Battery Operated Sequential Air Concentration and Deposition Sampler. Atmospheric Environment 1, 509.

2. Chatfield, E.J. (1967): A Simple Particle Size Comparator. J. Sci. Inst. 44, 615.

3. Chatfield, E.J. (1967): A Technique for Accurate Specimen Temperature Measurement in a Thermobalance. J. Sci. Inst. 44, 649.

4. Chatfield, E.J. (1968): The Generation of Particulate Aerosols from Plutonium Surfaces. Atmospheric Environment 2, 97.

5. Chatfield, E.J. (1969): Some Studies of the Aerosols Produced by the Combustion or Vaporization of Plutonium-Alkali Metal Mixtures, I. Journal of Nuclear Materials 32, 228-246.

6. Chatfield, E.J. (1969): Some Studies of the Aerosols Produced by the Combustion or Vaporization of Plutonium-Alkali Metal Mixtures, II. Journal of Nuclear Materials 32, 247-267.

7. Chatfield, E.J. (1969): A Semi-Empirical Analysis of the Ignition Behaviour of Plutonium. Journal of Nuclear Materials 32, 218-227.

8. Pullan, H. and Chatfield, E.J. (1971): ORF Boosts Analytical Capabilities with Addition of Electron Microprobe. Canadian Research and Development, January, 21-26.

9. Chatfield, E.J. (1973): Applications of Microprobe Analysis in Microscopical Investigations. Canadian Research and Development 6, January, 33-35.

10. Chatfield, E.J. (1973): Image Analysis: Its Application to Microscopy. Bulletin, Microscopical Society of Canada 1, No.1, 8-9.

11. Chatfield, E.J. and de la Iglesia, F.A. (1973): TEM, SEM, HVEM, AEEM, STEM and STEAM: New Lexicography for Old Microscopists. Bulletin, Microscopical Society of Canada 1, No. 4, 8-9.

12. Chatfield, E.J., More, J. and Nielsen, V.H. (1974): Stereoscopic Scanning Electron Microscopy at TV Scan Rates. Proceedings, Seventh Annual SEM Symposium, IITRI, Chicago, 117-124.

13. Chatfield, E.J. and Pullan, H. (1974): Real Time 3-D Scanning Electron Microscopy: Its Potential and Applications. Canadian Research and Development 7, No.3, May/June, 17-19.

14. Chatfield, E.J. and Nielsen, V.H. (1974): A New System for Dynamic Stereo Observation in the SEM. Proceedings, Ninth Annual Conference, Microbeam Analysis Society, Carleton University, 28A-E.

15. Chatfield, E.J. (1974): Some Practical Applications of Microprobe Analysis. Proceedings, Ninth Annual Conference, Microbeam Analysis Society, Carleton University, 16-34.

Other Publications (Cont'd)

16. Barton, S.C., Chatfield, E.J., Nielsen, V.H. and Turner, E.N. (1975): An Automated Instrument for Continuously Monitoring Particulate Emissions. Pulp and Paper Canada 76(C): T104-107, March.

17. Chatfield, E.J. and Nielsen, V.H. (1975): Observation of Dynamic Deformation by Stereoscopic SEM. Proceedings, Tenth Annual Conference, Microbeam Analysis Society, 13A.

18. Chatfield, E.J. (1976): A New Dimension in the Microscope. Science Year, 128-137.

19. Chatfield, E.J. (1978): Introduction to Stereo Scanning Electron Microscopy. In: Principles and Techniques of Scanning Electron Microscopy; Biological Applications, Volume 6 (M.A. Hayat, Ed.), Van Nostrand Reinhold, New York, 47-88.

20. Chatfield, E.J. and Stott, W.R. (1979): A Precision SEM Image Analysis System with Full-Feature EDXA Characterization. Scanning Electron Microscopy/1979/II, 53-60.

Professional Affiliations

Memberships in Professional Associations

Member of the Institute of Physics (M.Inst.P.)

Fellow of the Royal Society of Chemistry (F.R.S.C.) (U.K.)

Fellow of the Chemical Institute of Canada (F.C.I.C.)

Memberships in Scientific Societies and Technical Committees

Past President of the Microscopical Society of Canada
(One of the 7 Founding Members)

Member of the Electron Microscopy Society of America

Member of the Microbeam Analysis Society

International Organization for Standardization
Convener of Working Group TC 146/SC 3/WG1, Environmental Asbestos Measurement
Convener of Working Group TC 146/SC 6/WG4, Indoor Air Asbestos/Mineral Fibre Sampling

Member of Canada-Commission of European Communities Bi-lateral Working Group on Asbestos Cooperation

Canadian Representative on the International Mineralogical Association Working Group on Electron Microscopy in Mineralogy

Member of the Ontario Ministry of the Environment Expert Committee on Asbestos Determination

Member of ASTM Section D22.05.07, Asbestos

Member of The Environmental Information Association

Member of The Aerosol Society

Member of The Image Analysis Group of Eastern Ontario

Patent:

U.S. Patent 3927320, December 16th 1975.
Method and Apparatus for Deriving from a Scanning Electron Microscope Signals that can be Displayed Stereoscopically.

Inventors: E.J. Chatfield and V.H. Nielsen

Awards:

Microbeam Analysis Society:
Victor Macres Award for Instrumentation, 1974.

Ontario Research Foundation:
W.R. Stadelman Award for Technical Excellence, 1984.

United States Environmental Protection Agency:
Tribute of Appreciation, 1987.

"In recognition of exceptional support in the development of the transmission electron microscopy methodology for measurement of airborne asbestos for the Asbestos Hazard Emergency Response Act (AHERA) regulation."

American Society for Testing and Materials:
Award of Appreciation, 1997.

"For outstanding contributions to Committee D-22 through the development of ASTM and international standards for sampling and analysis of asbestos in the environment and for continued support and participation in ASTM conferences."

Textbooks:

Introduction to Stereo Scanning Electron Microscopy. In: Principles and Techniques of Scanning Electron Microscopy; Biological Applications, Volume 6, (M.A. Hayat, Ed.). Van Nostrand Reinhold, New York, 1978, 47-88.

Measurement of Asbestos Fibres in the Workplace and in the General Environment. Mineralogical Association of Canada, Short Course in Mineralogical Techniques of Asbestos Determination, Québec, May 1979, 111-163. Mineralogical Association of Canada, Department of Mineralogy, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6.

Section 4

Records of Employment
Invoices

[illegible] Asset Management Canada Ltd
[illegible]
[illegible]

Job Transactions

[illegible]

Job	ID#	Src	Date	Memo	Account	US	CDN
310 Jlite Canada							
	9	CD	10/31/2003	Nanoparticle Consultancy LLC	6-5010	1990.54	2 631.10$
	12	CD	200401-22	Nanoparticle Consultancy LLC	6-5010	13904.72	18254.12
	15	CD	2/11/2004	Nanoparticle Consultancy LLC	6-5010	8046.91	10 694.34$
	16	CD	4/1/2004	Nanoparticle Consultancy LLC	6-5010	6373.65	8 556.63$
	17	CD	5/3/2004	Nanoparticle Consultancy LLC	6-5010	7151.53	9 856.95$
	20	CD	6/16/2004	Nanoparticle Consultancy LLC	6-5010	19583.91	26 589.07$
						$57,051.26	$58,328.09

Page 5

SGS

MARTIN SCHEFSKY
REGIS RESOURCES INC
69 BLUE FOREST DRIVE
TORONTO, ON M3H 4W6

INVOICE

Invoice Number	007642
Invoice Date	November 06, 2003
PROJECT	**10674-001**
PO Number	
Customer	RRI100
G.S.T. Number	89921 6352RT
Page	1 of 2
Manager	Hans Raabe

VERMITCULITE PROJECT - CONSULTING AND TESTWORK

		Quantity	Rate	Amount
Charges				
Consulting and Testing On-Site visit, Crushing/Grinding Testing and Reporting		1.00	3,000.00	**3,000.00**
Subtotal		**1.00**		**3,000.00**
Sales Tax	GST @ 7 %			**210.00**
Invoice Total In Canadian Funds				**$3,210.00**

COPY

MINING CONSULTANT

MICHAEL P. GROSS *M.S., P.Geol.*

11 Leno Mills Avenue
Richmond Hill, ON
L4S 1J3
Ph (905) 770-3861
Fax (905) 770-4348
E-mail mpgross@attcanada.net

INVOICE

20 January 2004

Mr. Stephen Shefsky, President
Regis Resources Inc.
Suite 400
60 Bloor Street West
Toronto, ON
M4W 3B8

Invoice # 01-01-04 -January Contract Services **GST # 89311 8992 RT0001**

Dear Stephen:

This invoice is for contract services per our Agreement for Professional Services.

		Current Due	Carry Forward
Fees:			
	Contract Services Per Agreement	$7,500.00	
	Transportation Allowance	$500.00	
	GST on the above	$560.00	
Expenses		$5,652.72	$0.00
	Total Due	**$14,212.72**	

Very truly yours,

Michael P. Gross

Michael P. Gross

Page 6

Reports from Chatfield and Wicks

CHATFIELD

invoice	date	total	amount credited	
01M098	Jan. 15/ 02	2,541.25	50%	$1,270.62
02C004	Mar. 20/02	535.00	50%	$267.50
02C009	Apr. 10/02	1070.00	50%	$535.00
02C012	Apr. 14/02	4012.50	50%	$2,006.25
02C013	July 31/03	15,098.48	50%	$7,549.24
03C010	Mar. 30/03	535.00	100%	$535.00
	Totals	23,792.23		$12,163.61
WICKS		11,400.00		$5,700.00
		7,950.00		$3,975.00
	Totals	19,350.00		$9,675.00
PAGE TOTAL		43,142.23		$21,838.61

Chadfield and Wicks work and reports cover samples taken from several areas of claims 1191249 - 1191295 - 1163443 - 1077035 - 1077036.

1191249- 1191295 - 1163443- Horse Shoe Lake Property

Horse Shoe Property samples were collected from small amounts of the rejects of all Trench samples. Trenches AW- HW

Most all of Trenches AW - CW in Lot 13 South half of Concession 3 Claim 1191295
North sections of Trenches DW - FW in Lot 12 South half Concession 3 Claim 1191295
South sections of Trenches DW - FW in Lot 12 North half of Concession 2 Claim 1191249
All of Trenches GW and HW in Lot 11 Concession 2 Claim 1163443

Northern Zone samples were taken from six pits each weighing 20 pounds. Those samples were riffled and a portion was sent for analysis. Centre of Trench 0 (line 0+00 - 0+00 area) in a 25 metre range. Lot 14 North half Concession 7. Claim 1077036

Kirks Property (Zone # 2) a sample from Trench 400 and was included with the North Zone sample. Lot 17 Concession 6. Claim 1077035

Most of the rejects were stored in a warehouses in Toronto. When Sentient Asset Management Canada Ltd. became involved, it was suggested that we redo several samples for fibres. Although several test were previously completed and others in the process of being completed we redone several others under their supervision.

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY

INVOICE

No. 02C012

ISSUED TO: Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

DATE: 2002-04-18

ATTENTION: Mr. Michael P. Gross

YOUR ORDER: Telephone Discussion 01 April 2002
and Subsequent Discussions

TERMS: PAYABLE ON RECEIPT

RE: SCROLLS IN CAVENDISH VERMICULITE

- EXAMINATION OF SCROLLS TO DETERMINE MINERAL SPECIES

PERIOD: 01 APRIL 2002 TO 18 APRIL 2002

CONSULTING BY DR. ERIC J. CHATFIELD IN COLLABORATION WITH DR. FRED WICKS

CONSULTING FEES - 15.0 Hours at $250.00 per hour	$3750.00
GST	$262.50
TOTAL INVOICE	$4012.50

PLEASE MAKE PAYMENT TO CHATFIELD TECHNICAL CONSULTING LIMITED
GST Registration Number 10093 0965 RT

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY

2004-06-29

Mr. Martin Shefsky
Regis Resources Inc.
44 Victoria Street, Suite 400
Toronto, Ontario
M5C 1Y2

RE: EXAMINATIONS OF VERMICULITE SAMPLES
- Invoices

Dear Mr. Shefsky:

I enclose our invoices as summarized in the attached table. These invoices include all charges to date.

As requested, also enclosed is a copy of my most recent Curriculum Vitae and a copy of the CV supplied by Dr. Fred Wicks.

Please contact us if we can provide any additional information.

Yours sincerely,

Eric Chatfield

Dr. Eric J. Chatfield
President

EXAMINATIONS OF VERMICULITE SAMPLES
INVOICES TO 29 JUNE 2004

01M098 VERMICULITE SAMPLES
- RECEIVED 2002 JANUARY 15, FROM LEX SCIENTIFIC INC.
. . . . $2541.25

02C004 EMSL ANALYTICAL, INC. REPORT NUMBER MI014665
Duplicate Copy - Payment of Original Not Received
. . . . $535.00

02C009 VERMICULITE SAMPLE
- RECEIVED 2002 FEBRUARY 27, FROM BUCKHORN
. . . . $1070.00

02C012 SCROLLS IN CAVENDISH VERMICULITE
- EXAMINATION OF SCROLLS
TO DETERMINE MINERAL SPECIES
. . . . $4012.50

02C013 LIZARDITE SCROLLS IN CAVENDISH VERMICULITE
- REVIEW OF RESULTS REPORTED
IN "RJ LEE GROUP, INC. JOB NO. ATH204168"
. . . . $15098.48

02C053 FOUR VERMICULITE SAMPLES (SANTA LUZIA)
- RECEIVED 2002 DECEMBER 02
. . . . $2407.50

03C010 VERMICULITE FROM THE CAVENDISH DEPOSIT
- SUMMARY REVIEW OF ANALYSES BY CHATFIELD
. . . . $535.00

TOTAL: $26199.73

Cost Breakdown for Invoice 02C012

CONSULTING:

15 Jan 02 to 15 Mar 02	Initial Examinations - preparation of TEM specimens - TEM examinations and documentation - telephone discussions Separate Invoices 01M098 and 02C009	
22 Mar 02	Telephone discussion with Dr. Fred Wicks	No Charge
26 Mar 02	Preliminary TEM examinations and discussions with Dr. Fred Wicks	No Charge
12 Apr 02	Reference Samples from Royal Ontario Museum (ROM) and Geological Survey of Canada (GSC) received from Dr. Wicks	No Charge
14-15 Apr 02	Preparation of TEM specimens from ROM and GSC Reference Samples	7.0 Hours
16-17 Apr 02	TEM examinations of Reference Samples Additional TEM examinations of Cavendish Samples	5.0 Hours
18 Apr 02	Discussion with Dr. Wicks TEM analyses by Chatfield Technical Measurements and interpretations by Dr. Wicks Preparation of Report 02C012	3.0 Hours

TOTAL . . . . 15.0 Hours

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY

INVOICE

No. 02C013

ISSUED TO: Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario M4W 3B8

DATE: 2003-07-31

ATTENTION: Mr. Michael P. Gross

YOUR ORDER: Telephone Discussion 19 April 2002
and Subsequent Discussions

TERMS: PAYABLE ON RECEIPT

RE: LIZARDITE SCROLLS IN CAVENDISH VERMICULITE
- REVIEW OF RESULTS REPORTED IN "RJ LEE GROUP, INC. JOB NO. ATH204168"
ANALYSES BY RJ LEE GROUP OF SAMPLES
SUBMITTED BY STRATHCONA MINERAL SERVICES LIMITED

PERIOD: 19 APRIL 2002 TO 31 MAY 2002

CONSULTING BY DR. ERIC J. CHATFIELD IN COLLABORATION WITH DR. FRED WICKS

CONSULTING FEES - 56.0 Hours at $250.00 per hour			$14000.00
GST (on Consulting Fees)			$980.00
EXPENSES - Courier Shipments (Copies of our Report 02C013)			
- To Regis Resources	No Charge		
- To RJ Lee Group 2002-05-24		$41.41	
- To Strathcona Mineral Services 2002-05-15		$14.47	
	GST	$1.01	
- Telephone Costs			
- To The Sentient Group		$23.27	
	GST	$1.63	
- To RJ Lee Group		$34.29	
	GST	$2.40	
- Total Expenses			$118.48
TOTAL INVOICE			$15098.48

PLEASE MAKE PAYMENT TO CHATFIELD TECHNICAL CONSULTING LIMITED

GST Registration Number 10093 0965 RT

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY

INVOICE

No. 03C010

ISSUED TO: Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

DATE: 2003-03-30

ATTENTION: Mr. Martin Shefsky

YOUR ORDER: Telephone Call 2003-01-15
and Subsequent Discussions

TERMS: PAYABLE ON RECEIPT

RE: VERMICULITE FROM THE CAVENDISH DEPOSIT
- SUMMARY REVIEW OF ANALYSES BY CHATFIELD TECHNICAL

CONSULTING BY DR. ERIC J. CHATFIELD

Preparation of Letter Summarizing Results of Examinations
by Chatfield Technical Consulting Limited
for the Presence of Asbestos in Vermiculite Samples from the Cavendish Deposit

CONSULTING FEES - 2.0 Hours at $250.00 per hour $500.00

GST $35.00

TOTAL INVOICE $535.00

PLEASE MAKE PAYMENT TO CHATFIELD TECHNICAL CONSULTING LIMITED
GST Registration Number 10093 0965 RT

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY INVOICE

No. 02C053

ISSUED TO: Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

DATE: 2003-02-20

ATTENTION: Mr. Martin Shefsky

YOUR ORDER: Verbal 2002-12-02
and Subsequent Discussions

TERMS: PAYABLE ON RECEIPT

**RE: FOUR VERMICULITE SAMPLES (SANTA LUZIA)
- RECEIVED 2002 DECEMBER 02**

CONSULTING BY DR. ERIC J. CHATFIELD

EXAMINATION FOR AMPHIBOLES IN FOUR SAMPLES OF VERMICULITE

- preparation of sub-samples by cone and quarter technique
- exfoliation of duplicate sub-samples from each sample
- preparation of TEM specimens
- estimation of concentration of amphiboles
- documentation of composition of amphiboles (EDXA)
- discussion of results (no report required)

9.0 Hours at $250.00 per hour $2250.00

GST $157.50

TOTAL INVOICE $2407.50

PLEASE MAKE PAYMENT TO CHATFIELD TECHNICAL CONSULTING LIMITED
GST Registration Number 10093 0965 RT

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY **INVOICE**

No. 01M098

ISSUED TO: Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

DATE: 2002-03-15

ATTENTION: Mr. Michael P. Gross

YOUR ORDER: Phone Message Jan 16, 2002
and Subsequent Discussions

TERMS: PAYABLE ON RECEIPT

RE: VERMICULITE SAMPLES
- RECEIVED 2002 JANUARY 15, FROM LEX SCIENTIFIC INC.

CONSULTING BY DR. ERIC J. CHATFIELD

TRANSMISSION ELECTRON MICROSCOPE EXAMINATION
OF FOUR SAMPLES OF VERMICULITE

- preparation of TEM specimens
- estimation of concentration of fine fibres
- documentation of composition of fine fibres (EDXA)
- documentation of structure of fine fibres (SAED)
- preliminary interpretation of SAED patterns
- telephone discussions (no report issued)

9.5 Hours at $250.00 per hour $2375.00

GST $166.25

TOTAL INVOICE $2541.25

PLEASE MAKE PAYMENT TO CHATFIELD TECHNICAL CONSULTING LIMITED
GST Registration Number 10093 0965 RT

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY

INVOICE

No. 02C004
DUPLICATE COPY

ISSUED TO: Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

DATE: 2002-03-20

ATTENTION: Mr. Michael P. Gross

YOUR ORDER: Memo Jan 18, 2002
and Subsequent Discussions

TERMS: PAYABLE ON RECEIPT

RE: EMSL ANALYTICAL, INC. REPORT NUMBER MI014665

REVIEW BY DR. ERIC J. CHATFIELD

CONSULTING FEES - 2.0 Hours at $250.00 per hour $500.00

GST $35.00

TOTAL INVOICE $535.00

PLEASE MAKE PAYMENT TO CHATFIELD TECHNICAL CONSULTING LIMITED
GST Registration Number 10093 0965 RT

CHATFIELD | TECHNICAL CONSULTING LIMITED

2071 Dickson Road
Mississauga, Ontario
CANADA L5B 1Y8
Telephone: (905) 896-7611
Fax: (905) 896-1930

COPY

INVOICE

No. 02C009

ISSUED TO: Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, Ontario
M4W 3B8

DATE: 2002-04-10

ATTENTION: Mr. Michael P. Gross

YOUR ORDER: Telephone Discussion 26 Feb 2002

TERMS: PAYABLE ON RECEIPT

RE: VERMICULITE SAMPLE
- RECEIVED 2002 FEBRUARY 27, FROM BUCKHORN SAND & GRAVEL

CONSULTING BY DR. ERIC J. CHATFIELD

TRANSMISSION ELECTRON MICROSCOPE EXAMINATION
OF SAMPLE OF VERMICULITE
- preparation of TEM specimens
- qualitative TEM examination for presence of fine fibres
- telephone discussion (no report issued)

4.0 Hours at $250.00 per hour $1000.00

GST $70.00

TOTAL INVOICE $1070.00

PLEASE MAKE PAYMENT TO CHATFIELD TECHNICAL CONSULTING LIMITED
GST Registration Number 10093 0965 RT

TOMBO CONSULTING INC.

TIME SHEET

Service to:
Regis Resources Inc.

Job:
Characterization of serpentine in Cavendish vermiculite samples

2002 Month	Day	Hours	Activity Description
March	22	1	Phone conversation with Chatfield regarding vermiculite TEM results - **no charge**
	26	6	Discussion with Chatfield and examination of TEM images of three vermiculite samples from Cavendish vermiculite deposit - **no charge**
April	12	2	Selecting reference serpentine specimens from Royal Ontario Museum (ROM) and Geological Survey of Canada (GSC) mineral collections. Deliver samples to Chatfield - **no charge**
	14	0.5	Phone conversation with Chatfield regarding analytical approach and scheduling - **no charge**
	16	6	Interpreting TEM images and SAED patterns from two samples of vermiculite received from Lex Scientific and one sample received from Regis Resources. Begin TEM of reference serpentine samples from the ROM and GSC collections and interpreting these images.
	17	3	Interpreting TEM images and SAED patterns and selecting additional material for analysis.
	18	4	Interpreting TEM images and SAED patterns. Preparing letter to Stephen Shefsky reporting preliminary results.
	26	3.5	RJ Lee Group TEM images and SAED patterns received by e-mail. Preliminary

TOMBO CONSULTING INC.

Service to:
Regis Resources Inc.

Job:
Characterization of serpentine in Cavendish vermiculite samples

2002 Month	Day	Hours	Activity Description
			measurement of SAED patterns. Discussing initial observations with M. Gross.
April	30	5	Interpreting TEM images and SAED patterns including further examination of ROM & GSC reference samples and SAED patterns received from RJ Lee Group.
May	3	5	Interpreting newly acquired TEM images and SAED patterns of Cavendish vermiculite.

TOTAL TIME 26.5 HOURS @ $300CDN/hr = $7,950CDN

TOMBO CONSULTING INC.
80 Gothic Avenue
Toronto, Ontario
M6P 2V9
Canada
Dr. Fred J. Wicks, mineralogist
phone 416 604-0800 fax 416 586-5814 email fredw@rom.on.ca

INVOICE

August 6, 2003

Service to:
Regis Resources Inc.
60 Bloor Street West, Suite 400
Toronto, ON M4W 3B8

Attention: Mr. Stephen Shefsky, President

Job:
Characterization of serpentine in Cavendish vermiculite samples

Total time on project	36.0
Total time at no charge	9.5
Total time charged	**26.5 hours @ $300/hour = $7,950CDN**

(See attached time sheet for details)

TOMBO CONSULTING INC.

Service to:
Regis Resources Inc.

Job:
Review of the RJ Lee Group report ATH204168 on samples sent by Strathcona

2002 Month	Day	Hours	Activity Description
May	6	-	RJ Lee Group report on samples sent by Strathcona received from Regis Resources.
	7	11	Reviewing RJ Lee Group results, including plotting data and confirming measurements.
	10	3	Additional reviewing of RJ Lee Group results, including comparing RJ Lee Group data with results of our examinations.
	11	0.5	Preparing review report.
	12	0.5	Preparing review report.
	13	12	Preparing review report.
	14	11	Finalizing report "Review of Results Reported in RJ Lee Group, Inc. Job No. ATH204168".
Sept.	3	1	Discussing lizardite scrolling mechanism with Prof. Alain Baronnet, University of Marseille, France during the International Mineralogical Meeting in Edinburgh. Note: the source of the lizardite was not revealed. **- no charge**
Sept.	5	1	Discussing ideas on lizardite scrolling mechanism with Prof. Alain Baronnet and gave him a sample for high resolution TEM **- no charge**
	11	1	Showing lizardite scroll images and discussing scrolling mechanism with Dr. Gordon Cressey, Natural History Museum, London while on a research visit to the museum. Note: the source of the lizardite was not revealed. **- no charge**

TOMBO CONSULTING INC.

Service to:
Regis Resources Inc.

Job:
Review of the RJ Lee Group report ATH204168 on samples sent by Strathcona

2002 Month	Day	Hours	Activity Description
Dec.	30	-	Received confirming report and TEM image and SAED pattern from Prof. Alain Baronnet, University of Marseille - **no charge**

TOTAL TIME 38 HOURS @ $300CDN/hr = $11,400CDN

TOMBO CONSULTING INC.
80 Gothic Avenue
Toronto, Ontario
M6P 2V9
Canada

INVOICE

August 6, 2003

Dr. Fred J. Wicks, mineralogist
phone 416 604-0800 fax 416 586-5814 email fredw@rom.on.ca

Service to:
Regis Resources Inc
60 Bloor Street West, Suite 400
Toronto, Ontario,
M4W 3B8

Attention: Mr. Stephen Shefsky, President

Job:
Review of the RJ Lee Group report ATH204168 on samples sent by Strathcona

Total time on project	41.0
Total time at no charge	3.0
Total time charged	**38.0 hours @ $300/hour =$11,400CDN**

(See attached time sheet for details)

COPY

MINING CONSULTANT

MICHAEL P. GROSS *M.S., P.Geol.*

11 Leno Mills Avenue
Richmond Hill, ON
L4S 1J3
Ph (905) 770-3861
Fax (905) 770-4348
E-mail mpgross@attcanada.net

INVOICE

2 February 2004

Mr. Stephen Shefsky, President
Regis Resources Inc.
Suite 400
60 Bloor Street West
Toronto, ON
M4W 3B8

Invoice # 02-02-04 -Februsry Contract Services **GST # 89311 8992 RT0001**

Dear Stephen:

This invoice is for contract services per our Agreement for Professional Services.

Fees:		**Current Due**	**Carry Forward**
	Contract Services Per Agreement	$7,500.00	
	Transportation Allowance	$500.00	
	GST on the above	$560.00	
Expenses		$2,301.07	
	Total Due	**$10,861.07**	

Very truly yours,

Michael P. Gross

COPY

MINING CONSULTANT

MICHAEL P. GROSS *M.S., P.Geol.*

11 Leno Mills Avenue
Richmond Hill, ON
L4S 1J3
Ph (905) 770-3861
Fax (905) 770-4348
E-mail mpgross@attcanada.net

INVOICE

8 March 2004

Mr. Stephen Shefsky, President
Regis Resources Inc.
Suite 400
60 Bloor Street West
Toronto, ON
M4W 3B8

Invoice # 03-01-04 -March Contract Services **GST # 89311 8992 RT0001**

Dear Stephen:

This invoice is for contract services per our Agreement for Professional Services.

Fees:		**Current Due**	**Carry Forward**
	Contract Services Per Agreement	$7,500.00	
	Transportation Allowance	$500.00	
	GST on the above	$560.00	
Expenses		$9,498.39	$0.00
	Total Due	**$18,058.39**	

Very truly yours,

Michael P. Gross

Michael P. Gross

COPY

MINING CONSULTANT

MICHAEL P. GROSS *M.S., P.Geol.*

11 Leno Mills Avenue
Richmond Hill, ON
L4S 1J3
Ph (905) 770-3861
Fax (905) 770-4348
E-mail mpgross@attcanada.net

INVOICE

16 April 2004

Mr. Stephen Shefsky, President
Regis Resources Inc.
Suite 400
60 Bloor Street West
Toronto, ON
M4W 3B8

Invoice # 04-01-04 - April Contract Services **GST # 89311 8992 RT0001**

Dear Stephen:

This invoice is for contract services per our Agreement for Professional Services.

		Current Due	Carry Forward
Fees:			
	Contract Services Per Agreement	$7,500.00	
	Transportation Allowance	$500.00	
	GST on the above	$560.00	
Expenses		$6,702.36	$0.00
	Total Due	**$15,262.36**	

Very truly yours,

Michael P. Gross

Michael P. Gross

COPY

MINING CONSULTANT

MICHAEL P. GROSS *M.S., P.Geol.*

11 Leno Mills Avenue
Richmond Hill, ON
L4S 1J3
Ph (905) 770-3861
Fax (905) 770-4348
E-mail mpgross@attcanada.net

INVOICE

May 1, 2004

Mr. Stephen Shefsky, President
Regis Resources Inc.
Suite 400
60 Bloor Street West
Toronto, ON
M4W 3B8

Invoice # 05-01-04 - May Contract Services **GST # 89311 8992 RT0001**

Dear Stephen:

This invoice is for contract services per our Agreement for Professional Services.

Fees:		**Current Due**	**Carry Forward**
	Contract Services Per Agreement	$7,500.00	
	Transportation Allowance	$500.00	
	GST on the above	$560.00	
Expenses		$0.00	$0.00
	Total Due	**$8,560.00**	

Very truly yours,

Michael P. Gross

Michael P. Gross

COPY

MINING CONSULTANT

MICHAEL P. GROSS *M.S., P.Geol.*

11 Leno Mills Avenue
Richmond Hill, ON
L4S 1J3
Ph (905) 770-3861
Fax (905) 770-4348
E-mail mpgross@attcanada.net

INVOICE

June 1, 2004

Mr. Stephen Shefsky, President
Regis Resources Inc.
Suite 400
60 Bloor Street West
Toronto, ON
M4W 3B8

Invoice # 06-01-04 - June Contract Services **GST # 89311 8992 RT0001**

Dear Stephen:

This invoice is for contract services per our Agreement for Professional Services.

Fees:		**Current Due**	**Carry Forward**
	Contract Services Per Agreement	$7,500.00	
	Transportation Allowance	$500.00	
	GST on the above	$560.00	
Expenses		$0.00	$0.00
	Total Due	**$8,560.00**	

Very truly yours,

Michael P. Gross

Michael P. Gross

Brunelle Rickard
16-700 Parkhill Rd. West
Peterborough, Ont.
) 7W9
5) 741-1723
(/05) 927-1838 Cell

S.I.N.# 489-924-167

$16.00/hr

START DATE 01-Nov-02
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15	864.00	35.55	17.11	77.00	53.20	0.00	182.86	681.14	8
JAN 15 - 31	2,061.00	94.80	40.81	295.60	220.20	0.00	651.41	1,409.59	109
	2,925.00	130.35	57.92	372.60	273.40	0.00	834.27	2,090.73	
FEB 1 - 15	2,043.00	93.91	40.45	289.85	216.00	0.00	640.21	1,402.79	105
FEB 16 - 28	1,867.50	85.22	36.98	251.60	101.70		475.50	1,392.00	98.5
	3,910.50	179.13	77.43	541.45	317.70	0.00	1,115.71	2,794.79	
MAR 1 - 15	2,286.00	105.94	45.26	347.05	138.65	0.00	636.90	1,649.10	114
MAR 16 - 31	1,727.82	78.31	34.21	219.90	88.50	0.00	420.92	1,306.90	79.5
	4,013.82	184.25	79.47	566.95	227.15	0.00	1,057.82	2,956.00	
ARP 1 - 15	1,773.00	80.54	35.11	231.80	91.80	0.00	439.25	1,333.75	93
APR 16 - 30	1,953.00	89.45	38.67	271.40	108.30	0.00	507.82	1,445.18	105
	3,726.00	169.99	73.78	503.20	200.10	0.00	947.07	2,778.93	
MAY 1 - 15	819.00	33.32	16.22	69.85	26.50	0.00	145.89	673.11	37.5
MAY 16 - 31	2,038.50	93.69	40.36	289.85	116.50	0.00	540.40	1,498.10	99.5
	2,857.50	127.01	56.58	359.70	143.00	0.00	686.29	2,171.21	
NE 1 - 15	2,043.00	93.91	40.45	289.85	116.50	0.00	540.71	1,502.29	97.5
IE 16 - 30	2,232.00	103.27	44.19	335.65	133.90	0.00	617.01	1,614.99	118.5
	4,275.00	197.18	84.64	625.50	250.40	0.00	1,157.72	3,117.28	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	21,707.82	987.91	429.82	2,969.40	1,411.75	0.00	5,798.88	15,908.94	

DOUGLAS NEWMAN
1132 FAIRBAIRN ST.
PETERBOROUGH, ONT.
K9J 6X3
(705) 748-4545

S.I.N.# 448 515 155

START DATE 29 SEPTEMBER, 2003
TERMINATION DATE
BIRTHDAY 7 APRIL 1953

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15	1,500.00	67.03	29.70	174.25	129.70	0.00	400.68	1,099.32	81.5
JAN 15 - 31	1,638.46	73.89	32.44	204.40	151.95	0.00	462.68	1,175.78	106
	3,138.46	140.92	62.14	378.65	281.65	0.00	863.36	2,275.10	
FEB 1 - 15	1,569.23	70.46	31.07	189.30	140.80	0.00	431.63	1,137.60	94
FEB 16 - 28	1,500.00	67.03	29.70	174.25	67.80	0.00	338.78	1,161.22	90
	3,069.23	137.49	60.77	363.55	208.60	0.00	770.41	2,298.82	
MAR 1 - 15	1,500.00	67.03	29.70	174.25	67.80	0.00	338.78	1,161.22	88
MAR 16 - 31	1,500.00	67.03	29.70	174.25	67.80	0.00	338.78	1,161.22	109
	3,000.00	134.06	59.40	348.50	135.60	0.00	677.56	2,322.44	
ARP 1 - 15	1,638.89	73.91	32.45	204.40	80.40	0.00	391.16	1,247.73	97
APR 16 - 30	1,638.89	73.91	32.45	204.40	80.40	0.00	391.16	1,247.73	105
	3,277.78	147.82	64.90	408.80	160.80	0.00	782.32	2,495.46	
MAY 1 - 15	1,638.89	73.91	32.45	204.40	80.40	0.00	391.16	1,247.73	99
MAY 16 - 31	1,500.00	67.03	29.70	174.25	67.80	0.00	338.78	1,161.22	90
	3,138.89	140.94	62.15	378.65	148.20	0.00	729.94	2,408.95	
JUNE 1 - 15	1,638.46	73.89	32.44	204.40	80.40	0.00	391.13	1,247.33	110.5
JUNE 16 - 30	1,915.38	87.59	37.92	263.45	105.00	0.00	493.96	1,421.42	119
	3,553.84	161.48	70.36	467.85	185.40	0.00	885.09	2,668.75	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	19,178.20	862.71	379.72	2,346.00	1,120.25	0.00	4,708.68	14,469.52	

Gord Jessup
37 Nelson St.
Lakefield, Ontario
K0L 2H0
(705) 652-3301

S.I.N.# 532 026 318

START DATE 19 JULY 2003
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15							0.00	0.00	
APR 16 - 30	245.00	4.91	4.85	0.00	0.00	0.00	9.76	235.24	24.5
	245.00	4.91	4.85	0.00	0.00	0.00	9.76	235.24	
MAY 1 - 15	140.00	0.00	2.77	0.00	0.00	0.00	2.77	137.23	14
MAY 16 - 31	60.00		1.19				1.19	58.81	6
	200.00	0.00	3.96	0.00	0.00	0.00	3.96	196.04	
JUNE 1 - 15	110.00	0.00	2.18	0.00	0.00	0.00	2.18	107.82	11
JUNE 16 - 30	310.00	8.13	6.14	0.00	0.00	0.00	14.27	295.73	31
	420.00	8.13	8.32	0.00	0.00	0.00	16.45	403.55	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	865.00	13.04	17.13	0.00	0.00	0.00	30.17	834.83	

Guy Peel
P.O. Box 484
Lakefield, Ontario
K0L 2H0
(705) 652-8726
(705) 872-7726 Cell

S.I.N.# 509 319 547

START DATE 14-Jan-04
TERMINATION DATE

$13 /hr

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15	253.50	5.33	5.02	0.00	0.00	0.00	10.35	243.15	19.5
JAN 15 - 31	1,494.00	66.73	29.58	174.25	129.70	0.00	400.26	1,093.74	108.5
	1,747.50	72.06	34.60	174.25	129.70	0.00	410.61	1,336.89	
FEB 1 - 15	1,305.50	57.40	25.85	142.05	101.95	0.00	327.25	978.25	91.5
FEB 16 - 28	1,099.00	47.18	21.76	112.60	42.25	0.00	223.79	875.21	76.5
	2,404.50	104.58	47.61	254.65	144.20	0.00	551.04	1,853.46	
MAR 1 - 15	1,249.50	54.63	24.74	134.05	50.30	0.00	263.72	985.78	87.5
MAR 16 - 31	1,669.50	75.42	33.06	208.20	83.60	0.00	400.28	1,269.22	117.5
	2,919.00	130.05	57.80	342.25	133.90	0.00	664.00	2,255.00	
ARP 1 - 15	1,207.50	52.55	23.91	128.65	48.30	0.00	253.41	954.09	75.5
APR 16 - 30							0.00	0.00	
	1,207.50	52.55	23.91	128.65	48.30	0.00	253.41	954.09	
MAY 1 - 15							0.00	0.00	
MAY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JUNE 1 - 15							0.00	0.00	
JUNE 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	8,278.50	359.24	163.92	899.80	456.10	0.00	1,879.06	6,399.44	

Steve McQuade
11 Colborne St.
P.O. Box 509
Omemee, Ontaro
K0L 2W0
(705) 799-6502

S.I.N.# 443 545 108

START DATE 15-Jan-04
TERMINATION DATE 12-Mar-04

$20 /hr

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31	2,350.00	109.11	46.53	358.50	266.40	0.00	780.54	1,569.46	114
	2,350.00	109.11	46.53	358.50	266.40	0.00	780.54	1,569.46	
FEB 1 - 15	1,745.00	79.16	34.55	223.85	169.15	0.00	506.71	1,238.29	85.5
FEB 16 - 28	1,970.00	90.30	39.01	275.35	109.90	0.00	514.56	1,455.44	95
	3,715.00	169.46	73.56	499.20	279.05	0.00	1,021.27	2,693.73	
MAR 1 - 15	985.00	41.54	19.50	94.85	35.50	0.00	191.39	793.61	47.5
MAR 16 - 31							0.00	0.00	
	985.00	41.54	19.50	94.85	35.50	0.00	191.39	793.61	
ARP 1 - 15							0.00	0.00	
APR 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAY 1 - 15							0.00	0.00	
MAY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JUNE 1 - 15							0.00	0.00	
JUNE 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	7,050.00	320.11	139.59	952.55	580.95	0.00	1,993.20	5,056.80	

Gary Mathewson
P.O. Box 262
Kinmount, Ont.
2A0

S.I.N.# 420-879-389

$16.00/hr

START DATE 01-Nov-02
TERMINATION DATE 07-May-04

DECUCTIONS + $50 EXTRA TAX PER PAY

2004 SALARY	**GROSS**	**C.P.P.**	**E.I.**	**FED.TAX**	**PROV. TAX**	**EXTRA TAX DED**	**TOTAL DEDUCT.**	**NET**	**HOURS**
JAN 1 - 15	1,456.00	64.85	28.83	163.50	124.15	50.00	431.33	1,024.67	74
JAN 15 - 31	1,684.00	76.14	33.34	212.00	160.40	50.00	531.88	1,152.12	102.5
	3,140.00	140.99	62.17	375.50	284.55	100.00	963.21	2,176.79	
FEB 1 - 15	1,444.00	64.26	28.59	163.50	121.35	50.00	427.70	1,016.30	87.5
FEB 16 - 28	1,672.00	75.55	33.11	208.20	83.60	50.00	450.46	1,221.54	99
	3,116.00	139.81	61.70	371.70	204.95	100.00	878.16	2,237.84	
MAR 1 - 15	1,648.00	74.36	32.63	204.40	80.40	50.00	441.79	1,206.21	100
MAR 16 - 31	1,808.00	82.28	35.80	239.70	95.10	50.00	502.88	1,305.12	110
	3,456.00	156.64	68.43	444.10	175.50	100.00	944.67	2,511.33	
ARP 1 - 15	1,632.00	73.57	32.31	200.55	78.80	50.00	435.23	1,196.77	100
APR 16 - 30	1,904.00	87.03	37.70	259.50	105.00	50.00	539.23	1,364.77	110
	3,536.00	160.60	70.01	460.05	183.80	100.00	974.46	2,561.54	
MAY 1 - 15	3,145.49	141.27	62.28	430.25	170.60	100.00	904.40	2,241.09	46
MAY 16 - 31							0.00	0.00	
	3,145.49	141.27	62.28	430.25	170.60	100.00	904.40	2,241.09	
JUNE 1 - 15							0.00	0.00	
JUNE 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	16,393.49	739.31	324.59	2,081.60	1,019.40	500.00	4,664.90	11,728.59	

Bill Lanouette
R.R. #3, LOT 30, CON. 15
LAKEFIELD, ONTARIO
K0L 2H0

S.I.N.# 426-019-824

$14.00 /hr

START DATE 1 FEB 2003
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15	1,776.00	80.69	35.16	231.80	174.95	0.00	522.60	1,253.40	82
JAN 15 - 31	1,760.00	79.90	34.85	227.85	172.05	0.00	514.65	1,245.35	56
	3,536.00	160.59	70.01	459.65	347.00	0.00	1,037.25	2,498.75	
FEB 1 - 15	1,636.00	73.76	32.39	200.55	151.95	0.00	458.65	1,177.35	96.5
FEB 16 - 28	1,576.00	70.79	31.20	189.30	74.10	0.00	365.39	1,210.61	95
	3,212.00	144.55	63.59	389.85	226.05	0.00	824.04	2,387.96	
MAR 1 - 15	1,764.00	80.10	34.93	231.80	91.80	0.00	438.63	1,325.37	106
MAR 16 - 31	2,168.00	100.10	42.93	318.45	129.15	0.00	590.63	1,577.37	129
	3,932.00	180.20	77.86	550.25	220.95	0.00	1,029.26	2,902.74	
ARP 1 - 15	1,760.00	79.90	34.85	227.85	91.80	0.00	434.40	1,325.60	105.5
APR 16 - 30	1,008.00	42.68	19.96	99.20	36.85	0.00	198.69	809.31	58.5
	2,768.00	122.58	54.81	327.05	128.65	0.00	633.09	2,134.91	
MAY 1 - 15	1,967.24	90.16	38.95	275.35	109.90	0.00	514.36	1,452.88	0
MAY 16 - 31							0.00	0.00	
	1,967.24	90.16	38.95	275.35	109.90	0.00	514.36	1,452.88	
JUNE 1 - 15							0.00	0.00	
JUNE 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	15,415.24	698.08	305.22	2,002.15	1,032.55	0.00	4,038.00	11,377.24	

Alaister Crouch
206 - 328 Aylmer St.
Peterboroug, Ontario
K9H 3V6
(705) 768 7224

S.I.N.# 512 707 472

START DATE 2 Aug. 03
TERMINATION DATE 07-Jun-04

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15	1,141.25	49.27	22.60	117.95	79.70	0.00	269.52	871.73	86
JAN 15 - 31	1,124.75	48.46	22.27	115.25	77.90	0.00	263.88	860.87	98
	2,266.00	97.73	44.87	233.20	157.60	0.00	533.40	1,732.60	
FEB 1 - 15	1,116.50	48.05	22.11	115.25	77.90	0.00	263.31	853.19	95
FEB 16 - 28	1,141.25	49.27	22.60	117.95	44.50	0.00	234.32	906.93	98.5
	2,257.75	97.32	44.71	233.20	122.40	0.00	497.63	1,760.12	
MAR 1 - 15	1,501.50	67.11	29.73	174.25	67.80	0.00	338.89	1,162.61	123.5
MAR 16 - 31	1,350.25	59.62	26.73	150.10	56.40	0.00	292.85	1,057.40	118
	2,851.75	126.73	56.46	324.35	124.20	0.00	631.74	2,220.01	
ARP 1 - 15	1,190.75	51.72	23.58	126.00	47.30	0.00	248.60	942.15	101.5
APR 16 - 30	1,182.50	51.32	23.41	123.30	46.25	0.00	244.28	938.22	102
	2,373.25	103.04	46.99	249.30	93.55	0.00	492.88	1,880.37	
MAY 1 - 15	1,352.15	52.50	26.77	97.10	29.55	0.00	205.92	1,146.23	45
MAY 16 - 31	1,177.00	51.04	23.30	123.30	46.25	0.00	243.89	933.11	88.5
	2,529.15	103.54	50.07	220.40	75.80	0.00	449.81	2,079.34	
JUNE 1 - 15	1,093.84	46.93	21.66	109.90	41.80	0.00	220.29	873.55	89
JUNE 16 - 30						0.00	0.00	0.00	
	1,093.84	46.93	21.66	109.90	41.80	0.00	220.29	873.55	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	13,371.74	575.29	264.76	1,370.35	615.35	0.00	2,825.75	10,545.99	

Luke O'brien
R.R. #1
Norwood, Ontario
K0L 2V0
(705) 639-1235

S.I.N.# 525-463-808

START DATE 30-Apr-04
TERMINATION DATE 07-Jun-04

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15							0.00	0.00	
APR 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAY 1 - 15	1,056.25	45.07	20.91	104.55	39.55		210.08	846.17	74
MAY 16 - 31	1,436.50	63.89	28.44	160.85	63.10		316.28	1,120.22	103
	2,492.75	108.96	49.35	265.40	102.65	0.00	526.36	1,966.39	
JUNE 1 - 15	1,461.85	65.14	28.94	166.70	64.70	0.00	325.48	1,136.37	96.5
JUNE 16 - 30							0.00	0.00	
	1,461.85	65.14	28.94	166.70	64.70	0.00	325.48	1,136.37	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	3,954.60	174.10	78.29	432.10	167.35	0.00	851.84	3,102.76	

Robert James
871 Barnardo Ave.
Peterborought, Ont.
K9H 5W2
(705) 745-6494

S.I.N.# 457-317-907

START DATE 04-Jun-04
TERMINATION DATE 05-Jun-04

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15							0.00	0.00	
APR 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAY 1 - 15							0.00	0.00	
MAY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JUNE 1 - 15	249.60	5.96	5.27	0.00	0.00	0.00	11.23	238.37	15
JUNE 16 - 30							0.00	0.00	
	249.60	5.96	5.27	0.00	0.00	0.00	11.23	238.37	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	249.60	5.96	5.27	0.00	0.00	0.00	11.23	238.37	

Robert King
28 Rutland St. East
P.O. Box 538
Omemee, Ont. K0L 2W0
(705) 799-7513

S.I.N.# 120-432-448

START DATE 16-Nov-03 $20.00 / hr.
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15	2,145.00	98.96	42.47	312.75	232.80	0.00	686.98	1,458.02	85
JAN 15 - 31	2,978.64	119.01	50.49	404.25	302.50	0.00	876.25	2,102.39	119.5
	5,123.64	217.97	92.96	717.00	535.30	0.00	1,563.23	3,560.41	
FEB 1 - 15	1,850.00	84.36	36.63	247.65	186.60	0.00	555.24	1,294.76	88
FEB 16 - 28	2,525.00	117.77	50.00	398.55	160.05	0.00	726.37	1,798.63	113.5
	4,375.00	202.13	86.63	646.20	346.65	0.00	1,281.61	3,093.39	
MAR 1 - 15	2,580.00	120.49	51.08	410.00	168.50	0.00	750.07	1,829.93	118.5
MAR 16 - 31	2,380.00	110.59	47.12	364.25	148.15	0.00	670.11	1,709.89	115
	4,960.00	231.08	98.20	774.25	316.65	0.00	1,420.18	3,539.82	
ARP 1 - 15	2,590.00	120.99	51.28	410.00	168.50	0.00	750.77	1,839.23	112.5
APR 16 - 30	2,370.00	110.10	46.93	364.25	145.80	0.00	667.08	1,702.92	107.5
	4,960.00	231.09	98.21	774.25	314.30	0.00	1,417.85	3,542.15	
MAY 1 - 15	950.00	39.81	18.81	88.90	33.70	0.00	181.22	768.78	39.5
MAY 16 - 31	2,822.55	125.28	55.89	361.15	144.80	0.00	687.12	2,135.43	67.5
	3,772.55	165.09	74.70	450.05	178.50	0.00	868.34	2,904.21	
JUNE 1 - 15	740.00	29.41	14.65	57.95	22.00	0.00	124.01	615.99	37
JUNE 16 - 30							0.00	0.00	
	740.00	29.41	14.65	57.95	22.00	0.00	124.01	615.99	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	23,931.19	1,076.77	465.35	3,419.70	1,713.40	0.00	6,675.22	17,255.97	

Matthew Ball
STREET
LAKEFIELD, ONTARIO
K0L 2H0

S.I.N.#

START DATE June 2004
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15							0.00	0.00	
APR 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAY 1 - 15							0.00	0.00	
MAY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JUNE 1 - 15	260.00	5.65	5.15	0.00	0.00	0.00	10.80	249.20	20
JUNE 16 - 30	253.50	5.33	5.02	0.00	0.00	0.00	10.35	243.15	19.5
	513.50	10.98	10.17	0.00	0.00	0.00	21.15	492.35	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	513.50	10.98	10.17	0.00	0.00	0.00	21.15	492.35	

Mike Campbell
R.R. 1
Lakefield, Ontario
K0L 2H0
(705) 731-9188

S.I.N.# 492 090 568

START DATE 23-Apr-04
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15							0.00	0.00	
APR 16 - 30	868.00	35.75	17.19	77.00	29.20	0.00	159.14	708.86	61
	868.00	35.75	17.19	77.00	29.20	0.00	159.14	708.86	
MAY 1 - 15	1,184.00	51.39	23.44	123.30	47.30	0.00	245.43	938.57	64
MAY 16 - 31	1,812.00	82.48	35.88	239.70	95.10	0.00	453.16	1,358.84	102.5
	2,996.00	133.87	59.32	363.00	142.40	0.00	698.59	2,297.41	
JUNE 1 - 15	1,768.00	75.84	33.22	212.00	83.60	0.00	404.66	1,363.34	110.5
JUNE 16 - 30	1,980.00	90.79	39.20	279.30	111.55	0.00	520.84	1,459.16	117
	3,748.00	166.63	72.42	491.30	195.15	0.00	925.50	2,822.50	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	7,612.00	336.25	148.93	931.30	366.75	0.00	1,783.23	5,828.77	

Adam Coppins
STREET
LAKEFIELD, ONTARIO
K0L 2H0

S.I.N.#

START DATE May 2004
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15							0.00	0.00	
APR 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAY 1 - 15							0.00	0.00	
MAY 16 - 31	889.00	36.79	17.60	80.55	30.10		165.04	723.96	57
	889.00	36.79	17.60	80.55	30.10	0.00	165.04	723.96	
JUNE 1 - 15	1,893.50	86.51	37.49	259.50	103.35	0.00	486.85	1,406.65	129.5
JUNE 16 - 30	1,907.50	87.20	37.77	259.50	105.00	0.00	489.47	1,418.03	124.5
	3,801.00	173.71	75.26	519.00	208.35	0.00	976.32	2,824.68	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	4,690.00	210.50	92.86	599.55	238.45	0.00	1,141.36	3,548.64	

Brent James
257 Middlefield
Peterborough, Ontario
K J 8H3

S.I.N.# 520-218-587

START DATE 11-Jun-04
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15							0.00	0.00	
APR 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAY 1 - 15							0.00	0.00	
MAY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
JUNE 1 - 15							0.00	0.00	
JUNE 16 - 30	1,508.00	67.43	29.86	174.25	69.40	0.00	340.94	1,167.06	110
	1,508.00	67.43	29.86	174.25	69.40	0.00	340.94	1,167.06	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	1,508.00	67.43	29.86	174.25	69.40	0.00	340.94	1,167.06	

Brennan Lanouette
STREET
town, ONTARIO
Postal Code
Phone #

S.I.N.#

START DATE 1st half of April
TERMINATION DATE

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15	155.00	0.45	3.07				3.52	151.48	15.5
APR 16 - 30	95.00		1.88				1.88	93.12	9.5
	250.00	0.45	4.95	0.00	0.00	0.00	5.40	244.60	
MAY 1 - 15	140.00	0.00	2.77	0.00	0.00	0.00	2.77	137.23	14
MAY 16 - 31	60.00		1.19				1.19	58.81	6
	200.00	0.00	3.96	0.00	0.00	0.00	3.96	196.04	
JUNE 1 - 15	60.00		1.19				1.19	58.81	6
JUNE 16 - 30	310.00	8.13	6.14	0.00	0.00	0.00	14.27	295.73	31
	370.00	8.13	7.33	0.00	0.00	0.00	15.46	354.54	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	820.00	8.58	16.24	0.00	0.00	0.00	24.82	795.18	

Conrad Lanouette S.I.N.#
STREET
town, ONTARIO START DATE 1st half of April
Postal Code TERMINATION DATE
Phone #

2004 SALARY	GROSS	C.P.P.	E.I.	FED.TAX	PROV. TAX	EXTRA TAX DED	TOTAL DEDUCT.	NET	HOURS
JAN 1 - 15							0.00	0.00	
JAN 15 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FEB 1 - 15							0.00	0.00	
FEB 16 - 28							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAR 1 - 15							0.00	0.00	
MAR 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARP 1 - 15	210.00	3.18	4.16				7.34	202.66	17.5
APR 16 - 30	252.00	5.26	4.99				10.25	241.75	21
	462.00	8.44	9.15	0.00	0.00	0.00	17.59	444.41	
MAY 1 - 15	168.00	1.10	3.33				4.43	163.57	14
MAY 16 - 31	72.00		1.43				1.43	70.57	6
	240.00	1.10	4.76	0.00	0.00	0.00	5.86	234.14	
JUNE 1 - 15	72.00	0.00	1.43	0.00	0.00	0.00	1.43	70.57	6
JUNE 16 - 30	276.00	6.44	5.46	0.00	0.00	0.00	11.90	264.10	23
	348.00	6.44	6.89	0.00	0.00	0.00	13.33	334.67	
JULY 1 - 15							0.00	0.00	
JULY 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AUG 1 - 15							0.00	0.00	
AUG 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SEPT 1 - 15							0.00	0.00	
SEPT 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OCT 1 - 15							0.00	0.00	
OCT 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NOV 1 - 15							0.00	0.00	
NOV 16 - 30							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
DEC 1 - 15							0.00	0.00	
DEC 16 - 31							0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T4 TOTAL	1,050.00	15.98	20.80	0.00	0.00	0.00	36.78	1,013.22	

Vermiculite Canada

Employee Record

Gary Mathewson

Employment Start Date: **November 1, 2002**

Termination Date: **May 7, 2004**
Last Day Worked: **May 7, 2004**

Quit for another job.

Starting Pay Rate:	**$15.00**	**per hour**	
Changed:	**$16.00**	**per hour**	Dec. 1, 2003

Address:

P.O. Box 262
Kinmount, Ontario
K0M 2A0

Social Insurance Number: 420 879 389

Dependents:

Deductions: **Employee Plus $50.00 Per Payday**

Phones: (705) 488-3200

Vermiculite Canada

Employee Record

Brunelle Rickard

Employment Start Date: **November 1, 2002**

Termination Date:
Last Day Worked:

Starting Pay Rate:	**$16.00 per hour**	
Changed:	**$18.00 per hour**	Dec. 1, 2003

Address: 16 - 700 Parkhill Road, West
Peterborough, Ontario
K9J 7W9

Social Insurance Number: 489 924 167

Dependents:

Deductions: **Employee Only**

Phones: (705) 741-1723
(705) 927-1838 Cell

Vermiculite Canada

Employee Record

Bill Lanouette

Employment Start Date: January 27, 2003

Termination Date: April 24, 2004
Last Day Worked: April 23, 2004

Starting Pay Rate:	**$14.00 per hour**	
Changed:	**$16.00 per hour**	**Dec. 1, 2003**

Address: RR #3
Lot 30, Con 15
Lakefield, Ontario
K0L 2H0

Social Insurance Number: 426-019-824

Birthday: January 17, 1948
Dependents: 4

Deductions: 1

Phones: (705) 657-1695
Business: (705) 745-6617
E-mail: wuzzy@pipcom.com

Vermiculite Canada

Employee Record

Alaister Crouch

Employment Start Date: August 2, 2003

Termination Date:	**June 7, 2004**
Last Day Worked:	**June 4, 2004**

Starting Pay Rate:	**$10.00 per hour**	
Changed:	**$11.00 per hour**	Oct. 1, 2003

Address: 206 - 328 Aylmer Street
Peterborough, Ontario
K9H 3V6

Social Insurance Number: 512-707-472

Dependents:

Deductions:

Phones: (705) 768-7224

Birthday: March 29, 1985

Vermiculite Canada

Employee Record

Douglas Newman

Employment Start Date: September 29, 2003

Termination Date:
Last Day Worked:

Starting Pay Rate: **$3,000 Per Month**
Changed:

Address: 1132 Fairbairn Streen
Peterborough, Ontario
K9J 6X3

Social Insurance Number: 448-515-155

Dependents:

Deductions: Wife: Beverly Newman
Children:

Phones: (705) 748-4545
E-mail: newman@sympatico.ca

Birthday: 07-Apr-53

Vermiculite Canada

Employee Record

Robert King

Employment Start Date: November 24, 2003

Temporary Employee

Off On Non-Industrial Illness	Starting May 31st, 2004
Termination Date:	
Last Day Worked:	May 28, 2004

Starting Pay Rate:	**$20.00**	**per hour**
Changed:		**per hour**

Address: 28 Rutland Street East
P.O. Box 583
Omemee, ON
K0L 2W0

Social Insurance Number: 120-432-448

Dependents:

Deductions: 1 Wife: Teresa Crossey
Children:

Phones: (705) 799-7513

Birthday:

Vermiculite Canada

Employee Record

Guy Peel

Employment Start Date: January 14, 2004

Temporary Employee

Termination Date:	**April 10, 2004**
Last Day Worked:	**April 10, 2004**

Starting Pay Rate:	**$13.00 per hour**	
Changed:	**$14.00 per hour**	January 29th, 2004

Address: P.O. Box 484
Lakefield, ON
K0L 2H0

Social Insurance Number: 509 319 547

Dependents:

Deductions: 1 Wife:
Children:

Phones: (705) 652-8726
Cell (705) 872-7726

Birthday:

Vermiculite Canada

Employee Record

Steve McQuade

Employment Start Date: January 15, 2004

Temporary Employee

Termination Date:	**March 12th, 2004**
Last Day Worked:	**March 12th, 2004**

Starting Pay Rate:	**$20.00 per hour**
Changed:	**per hour**

Address: 11 Colborne Street
P.O. Box 509
Omemee, ON
K0L 2W0

Social Insurance Number: 443-545-108

Dependents:

Deductions: 1 Wife: Yes
Children: 2

Phones: (705) 799-6502

Birthday:

Vermiculite Canada

Employee Record

Mike Campbell

Employment Start Date: April 23, 2004

Temporary Employee ???

Termination Date:
Last Day Worked:

Starting Pay Rate:	**$14.00**	**per hour**
Changed:		**per hour**

Address: R.R. #1
Lakefield, ON
K0L 2H0

Social Insurance Number: 492 090 568

Dependents:

Deductions: Wife:
Children:

Phones: (705) 731-9188

Birthday: 15-Mar-73

Vermiculite Canada

Employee Record

Luke O'brien

Employment Start Date: April 30, 2004

Termination Date:	**June 7, 2004**
Last Day Worked:	**June 4, 2004**

Starting Pay Rate:	**$13.00**	**per hour**
Changed:		**per hour**

Address: R.R. #1
Norwood, ON
K0L 2V0

Social Insurance Number: 525 463 808

Dependents:

Deductions: Wife:
Children:

Phones: (705) 639-1235
(705) 868-1947 - Cell

Birthday:

Vermiculite Canada

Employee Record

Brent James

Employment Start Date: June 11, 2004

Temporary Employee

Termination Date:
Last Day Worked:

Starting Pay Rate:	**$13.00**	**per hour**
Changed:		**per hour**

Address: 257 Middlefield
Peterborough, Ontario
K9J 8H3

Social Insurance Number: 520-218-587

Dependents:

Deductions: Wife:
Children:

Phones:

Birthday: March 5, 1984

Vermiculite Canada

Employee Record

Matthew Ball

Employment Start Date:June 8, 2004

Termination Date:	**June 14, 2004**
Last Day Worked:	**June 11, 2004**

Left Because of Family Emergency.
Good Employee, Re-hire For Sure.

Starting Pay Rate:	**$13.00**	**per hour**
Changed:		**per hour**

Address: 1978 Henderson Line
R.R # 7
Peterborough, Ontario
K9J 6X8

Social Insurance Number: 514 153 980

Dependents:

Deductions: Wife:
Children:

Phones: (705) 292-8648
Cell (705) 741-8648

Birthday: January 19, 1977

Vermiculite Canada

Employee Record

Robert James

Employment Start Date: June 4, 2004

Termination Date:	**June 7, 2004**
Last Day Worked:	**June 5, 2004**

Starting Pay Rate:	**$16.00**	**per hour**
Changed:		**per hour**

Address: 871 Barnardo Avenue
Peterborough, Ontario
K9H 5W2

Social Insurance Number: 457 317 907

Dependents:

Deductions: Wife:
Children:

Phones: (705) 745-6494

Birthday: 20-Oct-57

Vermiculite Canada

Employee Record

Conrad Lanouette

Employment Start Date: July 29, 2003

Termination Date:	**August 15, 2003**
Last Day Worked:	**August 15, 2003**

Starting Pay Rate:	**$12.00**	**per hour**
Changed:		**per hour**

Address: RR #3
Lot 30, Con 15
Lakefield, Ontario
K0L 2H0

Social Insurance Number: 529-924-839

Dependents: N/A

Deductions:

Phones: (705) 657-1695

E-mail: wuzzy@pipcom.com

Vermiculite Canada

Employee Record

Gord Jessup

Employment Start Date: July 19, 2003

Termination Date:	**August 15, 2003**
Last Day Worked:	**August 15, 2003**

Starting Pay Rate:	**$10.00**	**per hour**
Changed:		**per hour**

Address: 37 Nelson Street
Lakefield, Ontario
K0L 2H0

Social Insurance Number: 532-926-318

Dependents: N/A

Deductions: 1

Phones: (705) 652-3301

E-mail: gordjessup@hotmail.com

Vermiculite Canada

Employee Record

Brennan Lanouette

Employment Start Date: April 10, 2004

Temporary / Part Time Employee

Termination Date:
Last Day Worked:

Starting Pay Rate:	**$10.00**	**per hour**
Changed:		**per hour**

Address:

Social Insurance Number:

Dependents:

Deductions: Wife:
Children:

Phones:

Birthday:

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT AND MINES

Work Report Summary

Transaction No:	W0490.01174	**Status:**	APPROVED
Recording Date:	2004-JUL-26	**Work Done from:**	2003-SEP-01
Approval Date:	2004-OCT-14	**to:**	2004-JUL-01

Client(s):

303719 REGIS RESOURCES INC.

Survey Type(s):

ASSAY BENEF PROSP

Work Report Details:

Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
SO 1077035	$19,348	$19,348	$3,200	$3,200	$4,200	4,200	$11,948	$11,948	2006-JUL-27
SO 1077036	$15,675	$15,675	$4,800	$4,800	$2,600	2,600	$8,275	$8,275	2006-JUL-27
SO 1077038	$0	$0	$4,800	$4,800	$0	0	$0	$0	2005-JUL-27
SO 1077039	$0	$0	$4,800	$4,800	$0	0	$0	$0	2005-JUL-27
SO 1077043	$0	$0	$3,600	$3,600	$0	0	$0	$0	2005-JUL-27
SO 1077045	$0	$0	$2,400	$2,400	$0	0	$0	$0	2005-JUL-27
SO 1077414	$0	$0	$3,200	$3,200	$0	0	$0	$0	2005-AUG-02
SO 1077416	$0	$0	$4,800	$4,800	$0	0	$0	$0	2005-AUG-02
SO 1077459	$0	$0	$4,800	$4,800	$0	0	$0	$0	2005-AUG-30
SO 1077460	$0	$0	$2,400	$2,400	$0	0	$0	$0	2005-AUG-03
SO 1163443	$43,714	$43,714	$800	$800	$19,200	19,200	$23,714	$23,714	2005-NOV-03
SO 1191249	$35,888	$35,888	$0	$0	$6,000	6,000	$29,888	$29,888	2005-AUG-25
SO 1191295	$29,727	$29,727	$0	$0	$6,000	6,000	$23,727	$23,727	2005-NOV-18
SO 1230938	$0	$0	$4,800	$4,800	$0	0	$0	$0	2005-AUG-02
SO 1230939	$0	$0	$2,400	$2,400	$0	0	$0	$0	2005-AUG-28
	$144,352	$144,352	$46,800	$46,800	$38,000	$38,000	$97,552	$97,552	

External Credits: $0

Reserve:

$97,552 Reserve of Work Report#: W0490.01174

$97,552 Total Remaining

Status of claim is based on information currently on record.

31D09NW2035 2.28159 CAVENDISH 900

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

Date: 2004-OCT-14

GEOSCIENCE ASSESSMENT OFFICE
933 RAMSEY LAKE ROAD, 6th FLOOR
SUDBURY, ONTARIO
P3E 6B5

Tel: (888) 415-9845
Fax:(877) 670-1555

REGIS RESOURCES INC.
44 VICTORIA ST
SUITE 400
TORONTO, ONTARIO
M5C 1Y2 CANADA

Submission Number: 2.28159
Transaction Number(s): W0490.01174

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact STEVEN BENETEAU by email at steve.beneteau@ndm.gov.on.ca or by phone at (705) 670-5855.

Yours Sincerely,

Ron C Gashinski

Ron C. Gashinski
Senior Manager, Mining Lands Section

Cc: Resident Geologist

Regis Resources Inc.
(Claim Holder)

Keith Alwyn Vatcher
(Agent)

Assessment File Library

Regis Resources Inc.
(Assessment Office)

31D09NW2035 2.28159 CAVENDISH 200

ONTARIO CANADA

MINISTRY OF NORTHERN DEVELOPMENT AND MINES
PROVINCIAL MINING RECORDER'S OFFICE

Mining Land Tenure Map

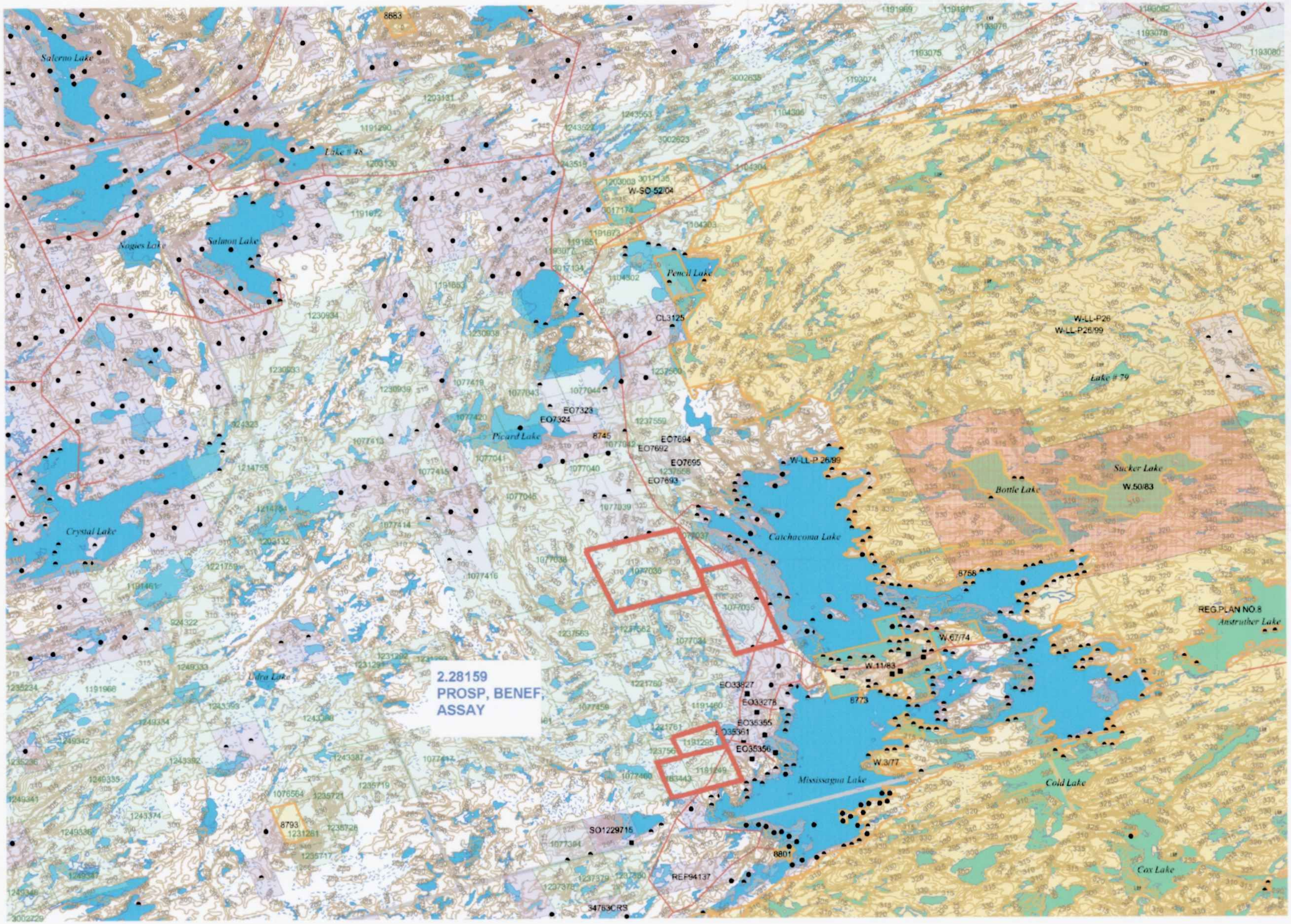
Date / Time of Issue: Mon Oct 25 09:06:08 EDT 2004

TOWNSHIP / AREA CAVENDISH

PLAN M-0072

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division	Southern Ontario
Land Titles/Registry Division	PETERBOROUGH
Ministry of Natural Resources District	BANCROFT



NAD 83
5 degree grid

TOPOGRAPHIC
- Administrative Boundaries
- Township
- Concession, Lot
- Provincial Park
- Indian Reserve
- Cliff, Pit & Pile
- Contour
- Mine Shafts
- Mine Headframe
- Railway
- Road
- Trail
- Natural Gas Pipeline
- Utilities
- Tower

Land Tenure

Freehold Patent
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only

Leasehold Patent
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only

Licence of Occupation
- Uses Not Specified
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only
- Land Use Permit
- Order In Council (Not open for staking)
- Water Power Lease Agreement
- 1234567 Mining Claim
- 1234567 Filed Only Mining Claims

LAND TENURE WITHDRAWALS
- 1234 Areas Withdrawn from Disposition

Mining Acts Withdrawal Types
- Wsm Surface And Mining Rights Withdrawn
- Ws Surface Rights Only Withdrawn
- Wm Mining Rights Only Withdrawn

Order In Council Withdrawal Types
- W'sm Surface And Mining Rights Withdrawn
- W's Surface Rights Only Withdrawn
- W'm Mining Rights Only Withdrawn

IMPORTANT NOTICES

Scale 1:74154

2.28159
ASSAY
BENEF
PROSP

Those wishing to stake mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Northern Development and Mines web site.

General Information and Limitations

Contact Information:
Provincial Mining Recorders' Office
Willet Green Miller Centre 933 Ramsey Lake Road
Sudbury ON P3E 6B5
Home Page: www.mndm.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Toll Free
Tel: 1 (888) 415-9845 ext 5791
Fax: 1 (877) 670-1444

Map Datum: NAD 83
Projection: Geographic Coordinates
Topographic Data Source: Land Information Ontario
Mining Land Tenure Source: Provincial Mining Recorders' Office

This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of ways, flooding rights, licences, or other forms of disposition of rights and interest from the Crown. Also certain land tenure and land uses that restrict or prohibit free entry to stake mining claims may not be illustrated.