REPORT on the Reverse Circulation Overburden Drilling Program for TARZAN GOLD INC GLEN AUDEN RESOURCES LIMITED Joint Venture Property Singer, Hurtubise and St. Laurent Townships

by
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M-181/M-265

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SUMMARY

A 38 hole reconnaissance reverse circulation drill program was conducted on the 191 contiguous claim Tarzan Gold Inc. - Glen Auden Resources Limited joint venture property in Singer and Hurtubise Townships and in selected areas in Hurtubise and St. Laurent Townships, which form part of a larger 722 contiguous claims property that straddles the Quebec-Ontario border and is controlled by Tarzan Gold Inc., Glen Auden Resources Limited and Goldrock Resources Limited. All holes were drilled in and around a northeast trending (oxide) iron formation so as to test for possible Au mineralization associated with structural lineaments which either parallel or cross-cut the high magnetic signature. Twelve of the overburden drill holes recorded significant gold grain counts (>5 grains) in basal or near basal till/gravel samples. Further exploration in the form of ground geophysical surveys (mag, I.P., possibly EM) along structural lineaments and follow-up overburden drilling around overburden holes recording anomalous gold values is recommended at a cost of $216,070.00. It is also recommended that an additional 60 claims be staked along the southern property boundary to cover an interpreted large regional structural lineament that parallels the southern flank of the iron formation in the southwestern sector of the area examined.

INTRODUCTION

A thirty-eight hole circulation drill program was carried out, from November 28 to December 9, 1988 and January 30 to February 15, 1989, on the 191 contiguous claim Tarzan Gold Inc./Glen Auden Resources Limited joint venture property in Singer and Hurtubise Townships, Larder Lake Mining Division, and in selected areas in Hurtubise and St. Laurent Townships on part of a 722 contiguous claims property that straddles the Quebec-Ontario border and is controlled by Tarzan Gold Inc., Glen Auden Resources Limited and Goldrock Resources Limited. The objectives of the program were to determine if anomalous concentrations of gold occur in glacial till derived from bedrock in the vicinity of interpreted structural lineaments which parallel and cross-cut iron formation similar to the Golden Pond geological setting in Casa Berardi Township and to obtain information on the bedrock geology of the property.

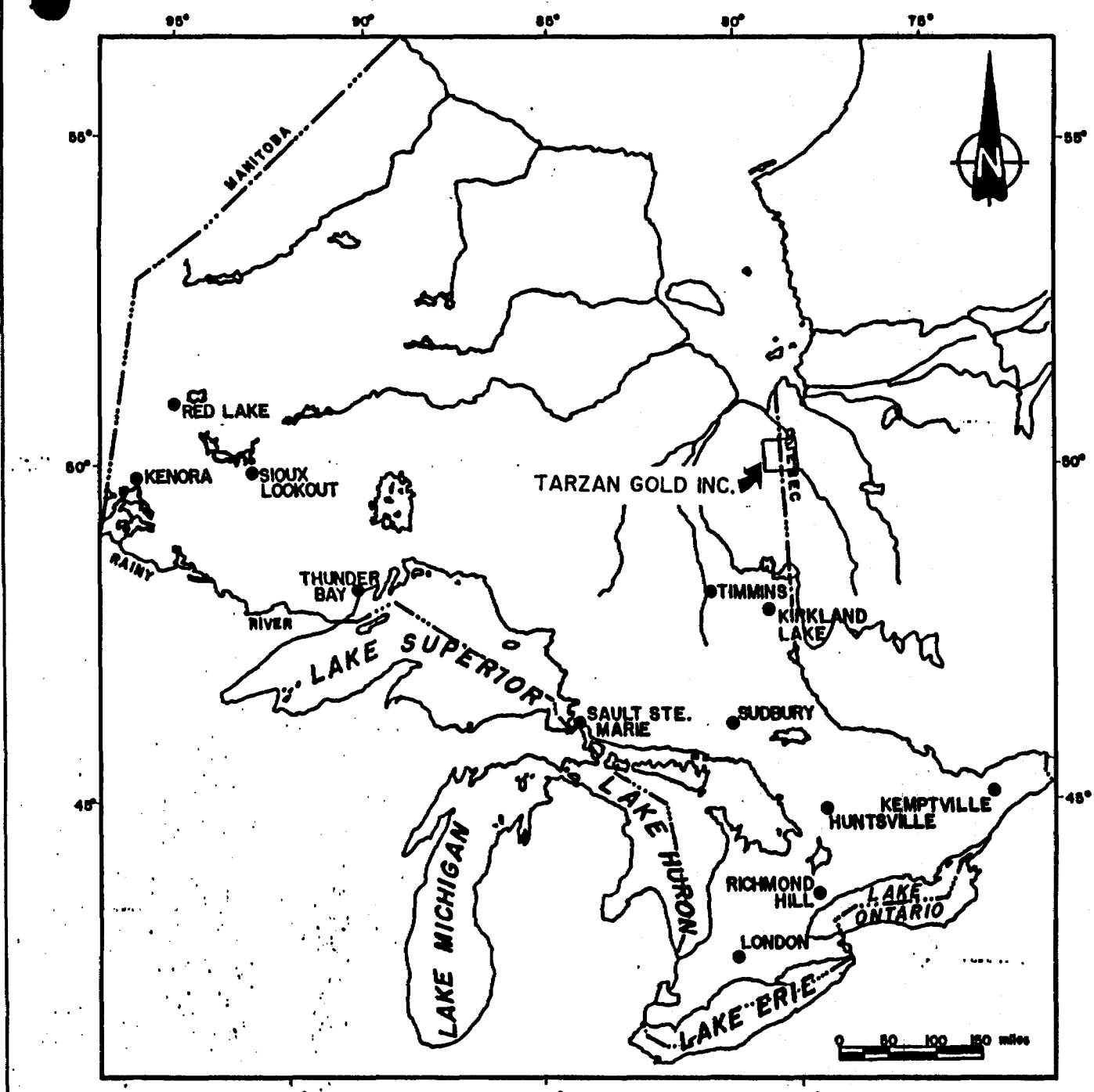
Twenty-nine holes (H88-1 to -4 and H89-5 to 29) were drilled on the 191 contiguous claim Tarzan/Glen Auden joint venture property and nine holes (H89-30-38) were drilled on part of the 722 Tarzan Gold-Glen Auden-Goldrock joint venture claim block. The average depth to bedrock is 31.6 metres, the minimum depth being 14.5 metres and the maximum being +61.5 metres (hole abandoned). The cumulate amount drilled was 1189.2 metres (3,964 feet).

Drill services were provided by Heath and Sherwood Drilling Inc. of Kirkland Lake, Ontario, using a mobile Nodwell mounted Acker reverse circulation drill rig assisted by a GT1000 tracked water carrier. Approximately 22 kilometres of bush access roads were cleared to the drill sites using a D-6 bulldozer provided by M.J. Labelle Company Ltd. of Cochrane, Ontario. Supervision and sample logging and collection services were provided by Robert S. Middleton Exploration Services Inc. of Timmins, Ontario.

Concurrently with the overburden drill program, a program of linecutting (2 grids + 1 partial grid establishment), magnetic, electromagnetic (MAX-MIN II) and induced polarization surveys was conducted (see Appendix F) in areas where weak airborne EM anomalies are associated with airborne magnetically interpreted structural lineaments or 'breaks' cross-cutting the high magnetic signature, ie. iron formation. The data and report from these surveys was not available at the time of writing this report.

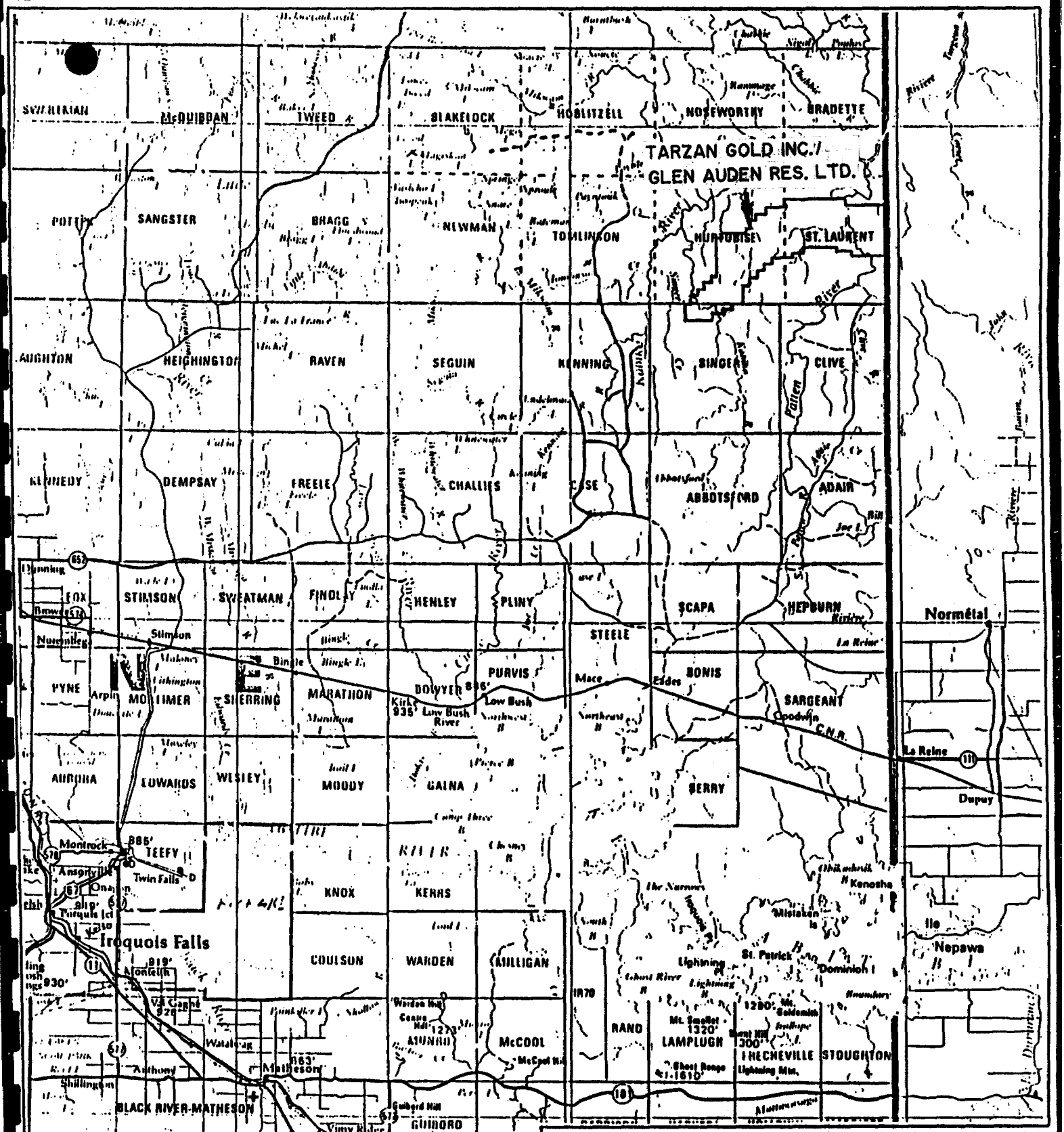
LOCATION, ACCESS AND VEGETATION

The portion of the property on which the overburden drilling was conducted is located in northcentral Singer Township, the south-central part of Hurtubise Township and west-central St. Laurent Township in northeastern Ontario (see Figures 1 and 2). The towns of Cochrane and Iroquois Falls lie approximately 95 air kilometres southwest of the property. The property is accessed by the all-weather Abitibi Translimit gravel road from Iroquois Falls



PROVINCE OF ONTARIO

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for TARZAN GOLD INC.		
	Title LOCATION-REGIONAL		
			Fig. 1
	Date: Dec.16,88	Scale: 1"=160mi.	N.T.S.:
	Drawn: JLB	Approved:	File: M-181



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for TARZAN GOLD INC./GLEN AUDEN RES. LTD.		
	Title PROPERTY MAP LOCAL		Fig. 2
	Date: Mar. 89	Scale: 1:600,000	N.T.S.:
	Drawn: JLB	Approved: TG	File: M-181/M-265

to kilometre 89 and the all-weather Tomlinson gravel road for approximately 25 kilometres to the Singer gravel road. The end of the Singer road is four kilometres east of the Tomlinson road and approximately six kilometres south-west of the southern boundary of the property. A winter bush access road was constructed from the end of the Singer road to drill hole locations on the property and to the campsite located on the west side of the East Kabika River near the Hurtubise-Singer Township line. The Translimit Road is maintained during the winter months by Abitibi Paper Co. but the Tomlinson Road is usually not.

The property is flat and swampy due to its location within the basin of a large late-stage proglacial lake (Lake Barlow-Ojibway) that deposited varved clays, silts and fine sands 8K to 10K years ago. Moderate relief of 5 to 10 metres is found incised in this plain generally only along major stream courses such as the Kabika and Patten Rivers. Stands of birch, poplar and spruce are found along the banks of rivers and elsewhere the property is overlain by bogs and stunted stands of black spruce. Southeast of the property a large outcrop of mafic metavolcanic rocks and felsic intrusive rocks produce a relief of 120 metres.

On the property drainage is poor as characterized by the abundance of muskeg swamps. A large part of the property is drained by the Kabika and East Kabika Rivers and tributaries from the Patten River.

CLAIMS

Twenty-nine holes (H88-1 to -4 and H89-5 to 29) were drilled on the 191 contiguous claim Tarzan Gold Inc./Glen Auden Resources Limited joint venture property and nine holes (H89-30 to H89-38) were drilled on the eastern extension of the 722 Tarzan Gold Inc./Glen Auden Resources Limited/Goldrock Resources Limited property that straddles the Ontario/Quebec border. Claim maps showing the property outline and overburden drill hole locations (Maps 1 and 2) are found in Appendix E.

The overburden drill holes were collared on the following claims in Singer, Hurtubise and St. Laurent Townships:

Hole No.	Claim Number
H88-1	878042
H88-2	878034
H88-3	878029
H88-4	878030
H89-5	878028
H89-6	878027
H89-7	877795
H89-8	877789
H89-9	877792
H89-10	877788
H89-11	877782
H89-12	877776
H89-13	878079
H89-14	878081
H89-15	878083
H89-16	877739
H89-17	877740
H89-18	877754
H89-19	877760
H89-20	877761
H89-21	877762
H89-22	878010
H89-23	878019
H89-24	877649
H89-25	877698
H89-26	877637

Hole No.	Claim Number
H89-27	877648
H89-28	877648
H89-29	877626
H89-30	877622
H89-31	864730
H89-32	864730
H89-33	864729
H89-34	864733
H89-35	877658
H89-36	877660
H89-37	877665
H89-38	877664

PREVIOUS WORK

As per the Engineer's report by R.P. Bowen (1988), several companies have been active on the Glen Auden/Tarzan joint venture property and the surrounding area.

Rio Tinto Canadian Exploration Ltd., Canadian Superior Exploration Ltd., Dome Exploration Ltd., Noranda Exploration Company Ltd., Newmont Exploration of Canada Ltd. and Glen Auden Resources Limited have all conducted surveys in the vicinity of, or over part of, the claims held by Glen Auden/Tarzan (see Appendix F).

Rio Tinto Canadian Exploration Ltd.

In 1965 Rio Tinto carried out electromagnetic magnetometer (EA-EM5 Askania magnetometer) and gravity (Worldwide) surveys on a six claim block in the northeast corner of Hurtubise Township. The conductors located were concluded to be of little potential for base metal deposits.

Canadian Superior Exploration Ltd.

In 1969 Canadian Superior conducted a Turam electromagnetic survey over their property located in the northeast quadrant of Hurtubise Township. An anomalous conductive zone was delineated and in 1971 two diamond drill holes were subsequently drilled totalling 1,458 feet. It was concluded that the Turam anomaly was not valid (Bowen, 1988) as only minor sulphides were found.

Dome Exploration Canada Ltd.

In 1973 Dome Exploration Canada Ltd. carried out a Turam electromagnetic and magnetic survey on their property located in the northeast corner of Hurtubise Township. The objective of the survey was to delineate conductive zones from base metal ore bodies.

Numerous conductors were located and in 1974 four diamond drill holes were completed to test them. Conductive sulphides were intersected with the rock containing up to 50% pyrite. Trace gold assays were reported in two holes.

Noranda Exploration Canada Ltd.

In 1973 Noranda completed electromagnetic and magnetic surveys on three claim groups in Hurtubise Township. On claim group 2-73, located just north of the Glen Auden/Tarzan property, several weak to moderate conductive zones with no magnetic correlations were located.

Hudson Bay Exploration and Development Co. Ltd.

In 1977 a horizontal loop Max Min II electromagnetic survey was completed on a 15 claim property located in northcentral Hurtubise Township. Two strong northeast striking conductive zones were outlined but a follow-up diamond drill program to test the zones was not completed.

Newmont Exploration of Canada Ltd.

In January of 1982 an airborne electromagnetic and magnetic survey was flown over their 'Mikwam' property straddling Hurtubise and St. Laurent Townships. One significant conductor with a corresponding high magnetic signature was outlined. A follow-up overburden drill program was attempted to test the anomalies and determine if anomalous concentrations of gold occur in the glacial till. The program was not successful due to the lack of drill mobility during the summer months.

Glen Auden Resources Limited

In 1986 Questor Surveys Limited was commissioned by Glen Auden Resources Limited to conduct an airborne electromagnetic and magnetic survey over the present property.

A high magnetic signature with several weak bedrock conductors was outlined striking roughly southwest across the southern portion of the property. A follow-up overburden drill program was recommended to test this high magnetic signature.

REGIONAL GEOLOGY

The Glen Auden/Tarzan joint venture property is located in the northern portion of the Abitibi Greenstone Belt of the Superior Province of the Canadian Shield. The rocks in this area consists mainly of Archean metavolcanic and metasedimentary rocks that have undergone regional and contact metamorphism ranging from lower greenschist to lower amphibolite facies.

The base of the supracrustal sequence, north of the Mistawak Batholith (Appendix F) consists of a thick section of mafic to intermediate flows with minor interbedded felsic to intermediate metavolcanic rocks and clastic and chemical metasediments. These rocks pinch out to the west and are intercalated with clastic metasedimentary rocks (Johns 1982). The clastic metasedimentary rocks are composed of arkose, graphite, wackes, calc-silicate and iron-rich chemical rocks and change from being intercalated with the felsic metavolcanic rocks to conformably overlying them in Noseworthy and Bradette Townships. These rocks are traceable around the western extent of a nose fold which wraps around the Mistawak Batholith and to the Casa Berardi area of Quebec where they are closely related to gold mineralization as evidenced by the

Inco-Golden Knight discovery in Casa Berardi Township, Quebec (see Northern Miner 1984 a,b).

The supracrustal belt is an antiform produced by the intrusion of the quartz monzonitic to granodioritic Mistawak and Bateman Lake Plutons (Johns 1982) which create a doming effect. The domal sequence of rocks north of the Mistawak Pluton are folded into an east-plunging synform and antiform. This interpretation is based upon the preservation of a lithologic sequence of mafic to intermediate metavolcanics overlain by felsic to intermediate metavolcanics which in turn are overlain by a thick sequence of clastic metasediments on the north and south side of the Mistawak Pluton.

The supracrustal rocks and felsic plutons and batholiths are cut by later north-trending Proterozoic diabase dykes.

Generally thick and extensive Pleistocene glacial and glaciofluvial sediments overlie the bedrock throughout the region.

DRILL PROGRAM

Drill hole targets were selected based on airborne INPUT electromagnetic and magnetic surveys done by Questor Surveys Limited in 1986 for Glen Auden Resources Limited. The survey delineated a long linear high magnetic signature trending in a southwest direction along the southern portion of the property and deviating to a north-south direction in the eastern part of the property (see Appendix F) which is interpreted to represent an oxide facies iron formation. The contoured data from the

aeromagnetic survey outlines several displacements within the southwest trending high magnetic signature which appear to reflect structural lineaments or 'breaks'. Structural breaks cross-cutting oxide facies iron formation are important structural traps for auriferous fluids, as evidenced in the Beardmore-Geraldton gold camps in Ontario.

Several weak electromagnetic anomalies were delineated by the airborne electromagnetic survey. Some of the better EM responses associated with structural lineaments have been examined by ground geophysics. These include anomalies 31D, 75C and 73B as shown on the airborne survey maps, Appendix F.

Overburden holes were drilled generally on or down ice of all the above geophysical anomalies as well as along the trend of a major structural lineament that parallels the southern flank of the iron formation in the southwestern sector and then cross-cuts the iron formation and trends along its northern flank toward the northeast. The program was designed on a reconnaissance level and the majority of holes were spaced at 500 metre intervals. The drill traverse generally follows the strike of the southwest trending iron formation and the drill holes. Locations were spotted using topographical features and compassing and chaining.

OVERBURDEN STRATIGRAPHY

The subject area is covered by a thick sequence of glacial sediments. At least three distinct till units were intersected.

The uppermost till (and/or gravel) unit was intersected in all holes and has a medium sandy-silty matrix containing up to 60% mafic and intermediate clasts. The clasts are commonly pebble to cobble size, but in hole H89-9, are commonly boulder size. This till unit may represent a late Wisconsian ice sheet advance from the north-northwest (Boissoneau, 1966; John, 1982) but is not generally considered to represent a good sampling medium for determining possible localized mineralization because, in most holes, this till unit is replaced by sand or gravel units representative of a washed till. In all holes a grey coloured lacustrine clay (Lake Barlow-Ojibway Sediments, Boissoneau, 1966), sometimes containing silt or fine sand, such as in holes H89-15 to -17, overlies the uppermost till unit. The Cochrane till (Johns, 1982) was not recognized in any of the holes.

The second till unit is also very extensive on the property and is found in holes H88-1, H88-3, H89-5 to -12, -14, -15, -17, -21, -24, -28, -29 to -31, -36 and -38. It has a clay rich, fine sandy-silty matrix with the clast content high in mafics (up to 80%) and low in palaeozoic carbonates (less than 5%). Clasts are pebble to cobble size and compose 5-10% of the till. This till unit represents a good sampling medium because of its high percentage of local clasts and fine matrix content. The second

till unit generally underlies the upper till unit but in holes H88-4, H89-9 to -12, brown clayey-silty lacustrine sediments separates the two till sheets.

In holes H88-1 and -3 and H89-5, -7 and -38 a gravel unit underlies the second clay till unit. The gravel unit contains up to 70% subrounded mafic volcanic clasts in a fine to medium grained sand-silt matrix. This unit is interpreted to represent proglacial outwash deposits or in some cases possibly washed tills, ie. gravel units in basal or near basal positions which contain a high percentage of locally derived clasts.

It should be noted that in holes H89-9 and -36 there is a rhythmic layering of lacustrine sediments, till and gravel units in the lower portion of the hole. Both holes were uncompleted and drilled in bedrock depressions. It is believed that these sediments were deposited as a result of slumping as the glaciers retreated and sometimes are referred to as leeside deposits.

In holes H89-9 and H89-11, a third till-gravel sequence was penetrated. This unit contains a high percentage of felsic and granitoid clasts (up to 50%) in a sandy-silty matrix and is recognized as a separate unit as it is separated from similar overlying units by a compact grey coloured lacustrine clay-silt unit. This lower lacustrine unit was also found resting on bedrock in holes H89-15, -21 and -25 and in holes H89-36 and H89-38 which did not penetrate solid bedrock. The lack of local clasts makes the third till-gravel unit a less attractive sampling medium.

Although hole H89-38 did not penetrate solid bedrock, a very compact, hard, orange-brown clay unit and a rotted banded iron formation horizon (from 49.4 to 51 metres) was penetrated in the lower eight metres. The colour of the clay suggests it was deposited in an oxidizing environment and may be regolith or fault gouge.

BEDROCK GEOLOGY

Bedrock was penetrated and sampled in all but three (H89-9, -36, -38) of the thirty-four holes. Rock types vary from intermediate to mafic volcanic and intrusive rocks. Holes H89-1 to 6, 8, 11 to 14, 16, 20, 21, 22, 25, 27 to 32 and 34 intersected dark green mafic volcanic rocks and holes H89-10, 15, 17 to 19, 23, 24, 26, 33, 35 and 37 intersected medium green-grey intermediate to mafic volcanic rocks. Pink granitic and banded chert-magnetite-hematite regolithic bedrock was intersected in holes H89-7 and 38 respectively.

The only significant alteration was moderate sericitization of bedrock in holes H89-24 and 33. All rocks are moderately to strongly chloritized by regional metamorphism. Some holes contained barren quartz carbonate stringers with trace amounts of pyrite. All bedrock samples assayed <5 ppb Au except hole H89-22 which assayed 10 ppb.

Detailed geochemical analysis was not carried out on the bedrock chip samples, but representative samples are currently stored at the Robert S. Middleton Exploration Services warehouse for future analysis.

DISCUSSION OF RESULTS

The following is a synopsis of the results and a brief discussion on a hole by hole basis for the 38 holes drilled. The reader is referred to Appendices B and C for overburden drill logs and analytical data.

HOLE	COMMENTS
H89-01	Of the two samples collected, the best sample was collected 20 metres above bedrock. It contained four gold grains and the HMC assay was 300 ppb.
H89-02	Nothing of significance in the overburden or the bedrock.
H89-03	Nineteen gold grains were found in this hole. Two gold grains with an HMC assay of 350 ppb was recorded in a basal till sample overlying bedrock. The grains were abraded suggesting either a distal source or the grains were transported in a zone of high traction indicating a proximal source. All other samples collected contained from one to seven gold grains.

HOLE	COMMENTS
H89-04	One sample, overlying bedrock, was collected from a gravel unit. It contained two gold grains with an HMC assay value of 709 ppb. The gold in the gravel is not considered significant as the gravel lies at the interface between bedrock and overlying lacustrine sediments and may therefore have acted as a gravity filter induced by wave action. Holes 1 to 4 were designed to test the high magnetic signature west of a NNW striking 'break'.
H89-05	This hole contained 13 grains of gold collected from five samples. The basal gravel unit over bedrock had an HMC assay of 400 ppb Au. All other samples collected were under 100 ppb Au. However, sample No.3 had an estimated Au ppb of 404 but the HMC only assayed 69 ppb Au. This discrepancy can be explained by some gold grains being lost to the 1/4 split that is not sent to the analytical laboratory.
H89-06	The basal till sample over bedrock contained 12 gold grains with an HMC assay of 1560 ppb Au and 336 ppm As. However, the estimated gold assay was only 464 ppb suggesting that not all the gold grains were found on the shaker table. Also note there was an estimate of 20% pyrite, which is double the estimates from the other samples, suggesting some gold may have been tied in the sulphides. The other three samples had HMC assays ranging from 76 to 330 ppb Au. Hole 6 is located just southwest of a NNW striking 'break' crosscutting the high magnetic signature.

HOLE	COMMENTS
H89-07	Thirty-six gold grains from eight samples were found in this hole. A sample three metres above bedrock contained two gold grains with an HMC assay of 2570 ppb Au, while another sample 4.5 metres above bedrock contained 10 gold grains with an HMC assay of 150 ppb. Of the eight samples, six assayed over 100 ppb. However, it should be noted that several discrepancies arise between the estimated gold assay and the HMC assay. For example, in sample 11, the estimated gold assay was 2745 ppb but the HMC assay was less than five ppb. The explanation could be most of the gold grains were left in the 1/4 split sample that was not sent to the laboratory for analysis. This discrepancy is also found in samples 06 and 09. Since significant amounts of gold grains were found in the overburden in the vicinity of the NNW striking 'break', further work is warranted in the area just northwest of holes H89-06 and -07. In general, there appears to be no apparent correlation between percent sulphides and gold assays. In hole 7, for example, sample 09 contained an estimated 5% pyrite but assayed 2570 ppb Au. Sample 4 in hole 8 contained 15% pyrite but only assayed 280 ppb Au.
H89-08	A basal till sample and a sample collected two metres above bedrock recorded a subanomalous gold assay in the HMC of 280 and 260 ppb respectively. Hole 8 is within the high magnetic signature and just east of the NNW striking 'break'.

HOLE	COMMENTS
H89-09	A total of 37 gold grains were noted from eight samples and seven of the samples assayed over 100 pbb Au in the HMC. This hole was abandoned at 153m due to severe overburden conditions. A sample collected 3.5 metres above where the hole was abandoned assayed 5800 ppb Au in the HMC but was only estimated to contain 55 ppb Au. Again the discrepancy can be explained by not all the gold grains being observed on the shaker table. Holes H89-9 and 10 were drilled to test an east-west 'break' cross-cutting the high magnetic signature.
H89-10	A total of 45 gold grains were noted from four samples and all samples assayed over 200 ppb Au in the HMC. 4.5 metres above bedrock, a till sample contained 18 gold grains with an HMC assay of 200 ppb Au but was estimated to contain 17,183 ppb Au. The discrepancy is an analytical error as explained previously in hole H89-5. Similar discrepancies are noted in results from samples 5 and 6. All the gold grains were observed to be either abraded or irregular shaped,possibly suggesting distal gold source. However, the gold grains in the till zone could have been transported in an area of high traction. This suggests a proximal source for the gold in the order of 10's to 100's of metres. Both holes 9 and 10 were drilled in a bedrock depression and hence, along the trend of a possible interpreted structural 'break'. These very encouraging results proximal and down-ice of weak electromagnetic input anomalies strongly argue for continued exploration in the immediate area.
H89-11	The basal till sample overlying the bedrock contained six gold grains with an HMC assay of 110 ppb Au. The bedrock is a strongly foliated dark-grey-green mafic rock containing some quartz stringers.

HOLE	COMMENTS
H89-12	A basal gravel sample overlying the bedrock contained three gold grains with an HMC assay of 220 ppb Au. The overlying sample contained three gold grains with an HMC assay value of 120 ppb Au but an estimated assay of 2971 ppb Au. A similar discrepancy was noted and explained in hole H89-5. The gold in the gravel is not considered significant as the gravel lies at the interface between bedrock and lacustrine sediments and may therefore have acted as a gravity filter.
H89-13	Two samples were taken from a basal gravel unit above bedrock. They contained two and four gold grains with an HMC assay of 230 and 350 ppb Au respectively.
H89-14	A gravel sample taken six metres above bedrock contained seven gold grains with an HMC assay of 490 ppb Au. Holes H89-11 to -14 were designed to test the contact between the iron formation and an interpreted small intrusive body to the N-NW. All holes intersected medium to dark green coloured intermediate to mafic bedrock containing <5 ppb Au.
H89-15	A basal gravel sand sample taken 1.5 metres above bedrock contained three gold grains with an HMC assay of 110 ppb Au. Interestingly, five of the six samples contained As assays of greater that 100 ppm. Hole H89-15 was designed to test a north-south 'break' cross-cutting the high magnetic signature.
H89-16	A basal gravel sand sample overlying bedrock contained 18 grains of gold with an HMC assay of 1360 ppb Au and 307 ppm As. The gold grains in the gravel may or may not be considered significant as all the gold grains are abraded and it is at the interface between bedrock and sand suggesting possible paleoplacer deposition.

HOLE	COMMENTS
H89-17	This hole contained a total of 26 grains of gold. Two samples 6 and 7.5 metres above bedrock each contained 9 abraded gold grains in a gravel unit suggesting a distal source for the gold grains. It is interesting to note that both holes 16 and 17 were drilled down-ice from a wedged-shaped embayment of the intrusive into the iron formation which is broken at the apex of the intrusive wedge by a structural lineament. Thus the high gold content in gravel units within these holes may be of some significance.
H89-18	One gold grain with an HMC assay of 490 ppb Au was recorded in gravel or sandy till above bedrock. The bedrock is a medium green-grey coloured mafic to intermediate volcanic containing barren milky-white stringers.
H89-19	Three gold grains with an HMC assay of 2290 ppb Au was recorded in gravel above bedrock. This sample was estimated to contain 140 ppb Au. Probably not all the gold grains were visible on the shaker table which explains this discrepancy. The overlying two samples contained a total of 11 abraded gold grains. Hole 19 lies near to the axis of the interpreted structural lineament mentioned above that emanates from the apex of the intrusive wedge.
H89-20	The best HMC assay was 1020 ppb Au with 9 gold grains recorded in a sandy till or gravel sample overlying bedrock. Another sample 8.6 metres above bedrock contained 9 gold grains with an HMC assay of 240 ppb Au recorded in a sandy till/gravel. Hole 20 falls along the trend of the structural lineament mentioned to be associated with hole 19.

HOLE	COMMENTS
H89-21	A sample 6.5m above bedrock recorded 18 gold grains with an HMC assay of 3970 ppb Au in an upper till overlying lacustrine clays. Nine gold grains are irregularly shaped and eight are delicately shaped. The high stratigraphic emplacement of the grains due to the presence of a bedrock ridge immediately up-ice and the shape of the grains argues for local derivation of the grains. Hole H89-21 was targeted over a N-W structural 'break' that follows the axial plane of a fold closure within the iron formation.
H89-22	Two gold grains with an HMC assay of 200 ppb Au was recorded in a basal till sample overlying bedrock.
H89-23	Nothing of significance was recorded in the overburden or the bedrock.
H89-24	A total of 36 gold grains was recorded from 12 samples which ranged in values from one to six gold grain counts and 56 to 420 ppb Au from the HMC. All samples were from a sandy till.
H89-25	The best overburden HMC assay was 5,360 ppb Au with 4 gold grains (1 delicate) recorded in a sandy till sample collected 2.5 metres above bedrock. However, the estimated gold assay was only 429 ppb suggesting not all the gold grains were found on the shaker table. The bedrock is a dark green chloritic mafic rock containing 2 to 3% pyrite which assayed less than 5 ppb.
H89-26	Nothing of significance was recorded in the overburden or the bedrock. However, the basal gravel sample overlying bedrock contained 414 ppm Cu.
H89-27	The best overburden HMC assay was 1760 ppb Au with 4 gold grains recorded in a till 3 metres above bedrock. Of the 10 samples taken, seven of them were over 200 ppm As and over 500 ppm Cu and the two samples overlying bedrock are over 600

HOLE	COMMENTS
H89-27 (cont'd)	The bedrock is dark green mafic volcanic rock containing finely disseminated pyrite. Holes H89-27 and -28 were targeted over a low magnetic signature interpreted to be a N-W structural 'break'.
H89-28	Nothing of significance was recorded in the overburden or the bedrock. Holes H89-22 to -26 and -28 were targeted over a low magnetic signature, coincident with various weak INPUT anomalies, interpreted to be a structural break along the axial plane of a fold.
H89-29	Two basal till samples over bedrock record 6 and 7 (2 delicate) gold grains respectively and HMC assays of 584 and 160 ppb Au respectively. Holes H89-29 and 30 were targeted over a low magnetic signature interpreted to be a low angle east-west structural 'break'.
H89-30	The best HMC assay recorded is 310 ppb Au with 2 gold grains (1 delicate) from a till 7 metres above bedrock. The stratigraphic position of gold grains and the presence of a basement ridge up-ice suggests a local derivation for the gold grains. The encouraging gold anomalies and gold grain counts warrants further work to the north.
H89-31	A till sample collected approximately one metre above bedrock recorded an HMC assay of 3150 ppb Au with 3 gold grains. The hole was targeted approximately at the intersection of a low angle east-west and north-east striking low magnetic signatures, both interpreted to be structural 'breaks'.
H89-32A	Nothing of significance recorded in the overburden or the bedrock.
H89-33	A basal till sample overlying bedrock contained 2 gold grains with an HMC assay of 150 ppb.

HOLE	COMMENTS
H89-34	A basal till sample overlying bedrock contained 7 gold grains with an HMC assay of 130 ppb Au.
H89-35	The best recorded HMC assay is 26,800 ppb Au with 2 gold grains. The estimated gold assay was only 200 ppb suggesting that not all the gold grains were found on the shaker table. The overlying two samples recorded HMC assays at 150 and 470 ppb Au respectively. All samples were taken from a sandy till. The bedrock is a pale green weakly sericitic intermediate volcanic rock containing trace disseminated pyrite.
H89-36	This hole was abandoned at 61.5 metres due to mechanical problems and time constraints. Fourteen samples were taken containing a total of 37 gold grains and ranging in HMC assays from <5 to 553 ppb Au. All samples were taken from a stratified till. The depth of overburden indicates this hole was collared into a deep bedrock trough that probably follows the trend of a major structural 'break'.
H89-37	The best recorded HMC assay was 250 ppb Au with 2 gold grains from a till one metre above bedrock.
H89-38	This hole was abandoned at 51.5m due to mechanical difficulties and time constraints. A till sample 17.5 metres above from where the hole was abandoned contained 7 gold grains (1 delicate) with an HMC assay of 130 ppb Au. Overlying this sample, another till sample contained 4 gold grains with an HMC assay of 633 ppb Au. From 43.5 to 49.4 metres a light orange, very compact, clay was intersected believed to be regolithic bedrock or fault gouge. From 49.4 to 51 metres a banded chert-hematite-magnetite iron formation horizon was intersected thus suggesting the interpretation of regolithic bedrock. Holes H89-33 to -38 were targeted on a low magnetic signature interpreted to be

HOLE	COMMENTS
H89-38 (cont'd)	a N-E structural 'break' paralleling the southern flank of the iron formation. The depth of overburden indicates this hole collared into a deep bedrock trough, thus supporting the interpretation of a major structural 'break'. Further work in this area is justified.

Overall, the best results were obtained from holes H89-6, 7, 10, 11, 16, 19 to 21, 29, 34 and 35 which contained significant amounts of gold grains, some of which are delicate in shape, in the basal till overlying bedrock. The anomalous gold values and the shape of the gold grains suggest a short transport distance (10 to 100's metres) and further work is warranted in the vicinity of these holes.

A plot of As vs Au (see Figure 3), displays a large scattering of the data thus suggesting that there is no apparent relationship between gold and arsenic mineralization. Also, visual analysis of the estimated percent of pyrite and the associated HMC gold assay suggests that generally there is no apparent relationship between percent pyrite and the amount of gold. Therefore, the gold contained in the various overburden samples is presumed to represent 'free' gold.

PLOT OF As vs. Au

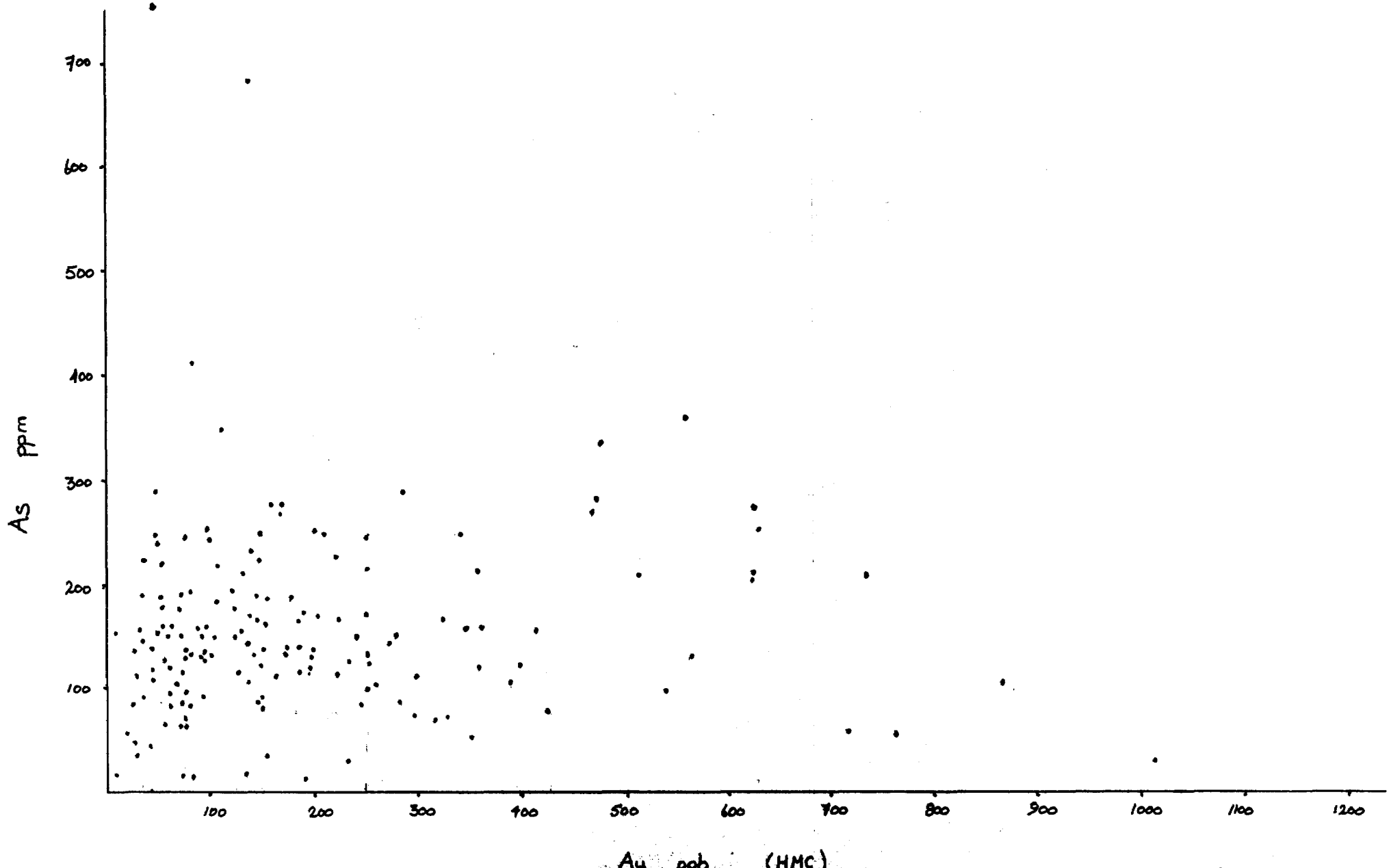


Figure 3.

CONCLUSIONS AND RECOMMENDATIONS

Reconnaissance overburden drilling at 500 metre spacings on the property has been an affective exploration tool in suggesting the presence of gold mineralization being associated with major structural lineaments throughout the property.

Holes H89-5 to -7 recorded delicate gold grains (H89-5) and anomalous gold values in the basal till suggesting that the source of the gold mineralization is proximal to these holes and associated with structural lineaments that cross-cut or parallel the iron formation. Such structural breaks may provide structural traps for auriferous bearing hydrothermal fluids because of the brittle fracturing nature of the iron formation. Furthermore, holes H89-6 and 7 contained a high percentage of pyrite in the basal till/gravel samples which might suggest a local association of gold mineralization with sulphides, even though it was pointed out earlier that such a relationship is generally not evident.

Holes H89-9 and 10 were targeted just south of another northwest trending break cross-cutting the iron formation. Hole H89-10 contained three delicate gold grains in the basal sample suggesting a proximal source for the gold mineralization. Further work based on these results is warranted in the vicinity of holes H89-5 to 10. A program of linecutting, geophysics (magnetometer and/or induced polarization surveys) and follow-up overburden drilling on a grid at 100 metre spacing is recommended to help locate possible sources of the gold mineralization.

Holes H89-15 to 28 were targeted just down-ice from a low magnetic signature interpreted to be a structural break along the axial plane of a northeast closing fold within the iron formation. Hole H89-21 recorded 18 gold grains, of which 8 were delicate, in an upper till sample 6.5 metres above bedrock and hole H89-20 recorded 9 gold grains in the basal till overlying bedrock. Both holes are down-ice from a bedrock ridge which suggests a local derivation for the gold grains. Holes H89-18 to H89-22 are not on surveyed lines. Therefore it is recommended that a 100m line spaced grid be established in this area on which magnetic and induced polarization surveys should be conducted to determine the exact location of the 'break' and to determine if more overburden drilling is warranted. Holes H89-26 and 27 contained a high percentage of pyrite (20-60%) in the basal till samples which suggests the presence of sulphide mineralization a short distance up-ice. As 6 of the 13 holes drilled along this trench recorded significant gold grain counts and high HMC assay values in the basal samples, a continuous grid at 200 metre spacing along this structural trend, is recommended over which magnetic and I.P. surveys should be conducted, along with possible follow-up overburden drilling, to define diamond drill targets. A reconnaissance overburden drilling program at 500m spacing is also recommended to completely test for gold grains down-ice from the structural 'break' along the entire length of the fold axial plane.

Holes H89-33 to 38 were designed to test a low magnetic signature interpreted to be a structural break along the southern flank of the northeast trending iron formation that flexures to the north. Only one hole out of six recorded significant gold values. Hole H89-35 recorded 26,800 ppb Au in the HMC with two observed gold grains in the basal till overlying bedrock and interpreted to be from a proximal source. As this sample estimated assay was only 200 ppb, it is obvious that all the gold contained within the sample was not recognized during HMC preparation. In addition to this, the single basal till sample over bedrock in hole H89-34 contained 7 gold grains. Holes H89-36 and 38 were drilled into a bedrock trough postulated to represent the traces of the structural break and hole H89-38 intersected regolithic bedrock. Seven gold grains (1 delicate) were recorded in an upper till in this hole and are interpreted to be from a relatively proximal source. Thus, the encouraging gold values combined with the location of the holes, ie. along a structural break, argues for further work along this structure similar to that as outline above along the fold axial plane.

Respectfully submitted

Thomas Guoth, B.A.Sc.

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CERTIFICATION

I, Thomas Guoth, B.A.Sc. of Timmins, Ontario, certify that:

1. I am a graduate of the University of Toronto, with a Bachelor of Applied Science degree in Geo-Engineering obtained in 1985.

2. I have been practising my profession in Ontario, Quebec Newfoundland and Manitoba since 1985.

3. I have no direct interest in the properties, leases or securities of Tarzan Gold Inc. or Glen Auden Resources Limited nor do I expect to receive any.

4. The attached report is a product of:

   a) Examination of data included in the report which was collected on the property concerned.

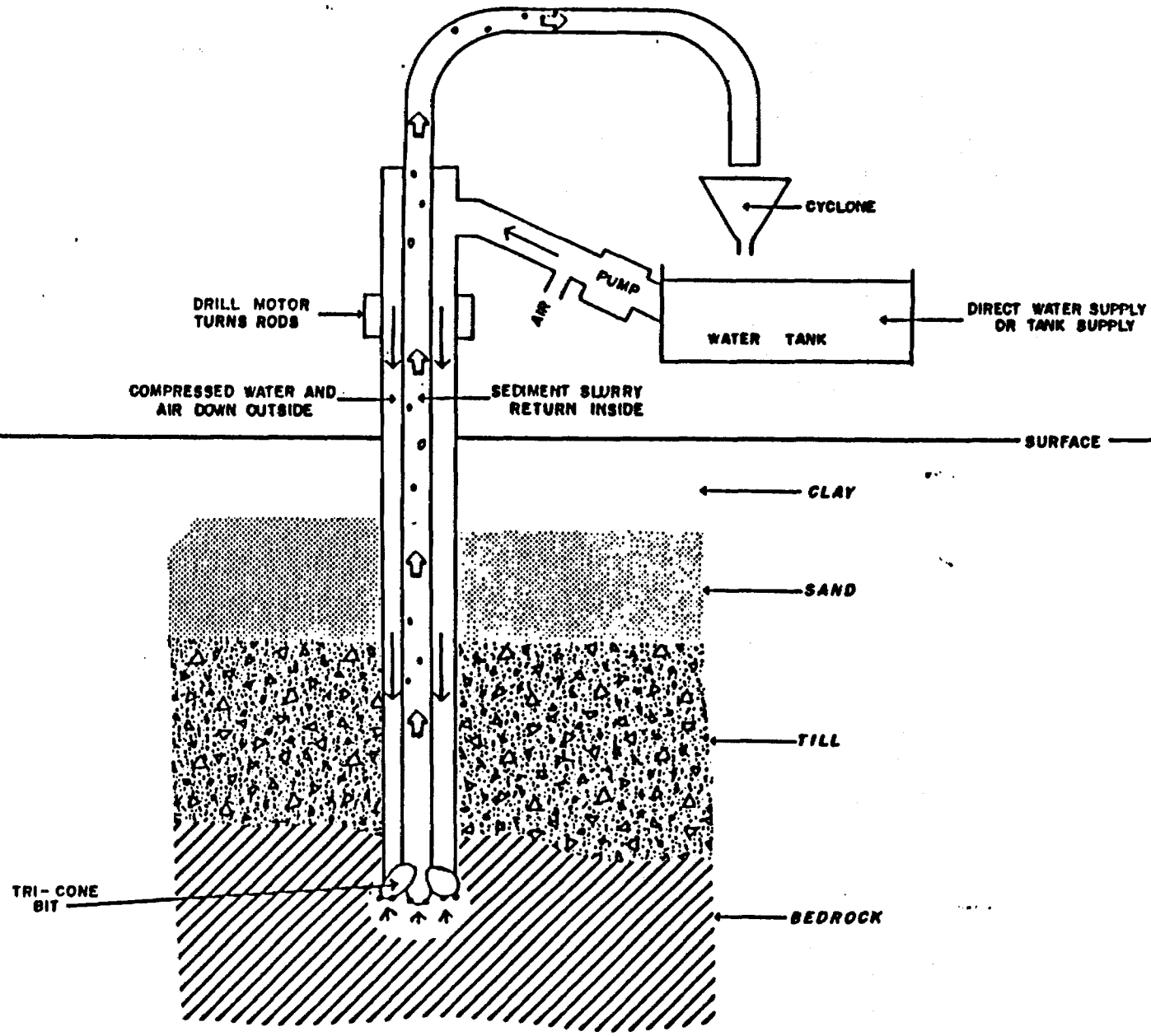
Dated this May 5, 1989
TIMMINS, Ontario

Thomas Guoth, B.A.Sc.

APPENDIX A

DRILLING METHOD

The reverse circulation drill rig and accessory equipment such as the water pump and air compressor are mounted on a Nodwell to provide mobility. Dual tubed rods are used, approximately 7.6 cm in diameter with a carbide buttoned tricone bit. A drill fluid consisting of water and air is pumped down between the outer and inner tube of the drill rods and the cuttings produced by the rotating tricone bit is mixed in and return as a slurry up the inner tube. The slurry is then passed through a cyclone to reduce the pressure and is collected into a sample bucket. The water overflowing the sample bucket goes into a holding tank and is reused as drilling fluid. A diagram of the reverse circulation drill system is shown on the next page.

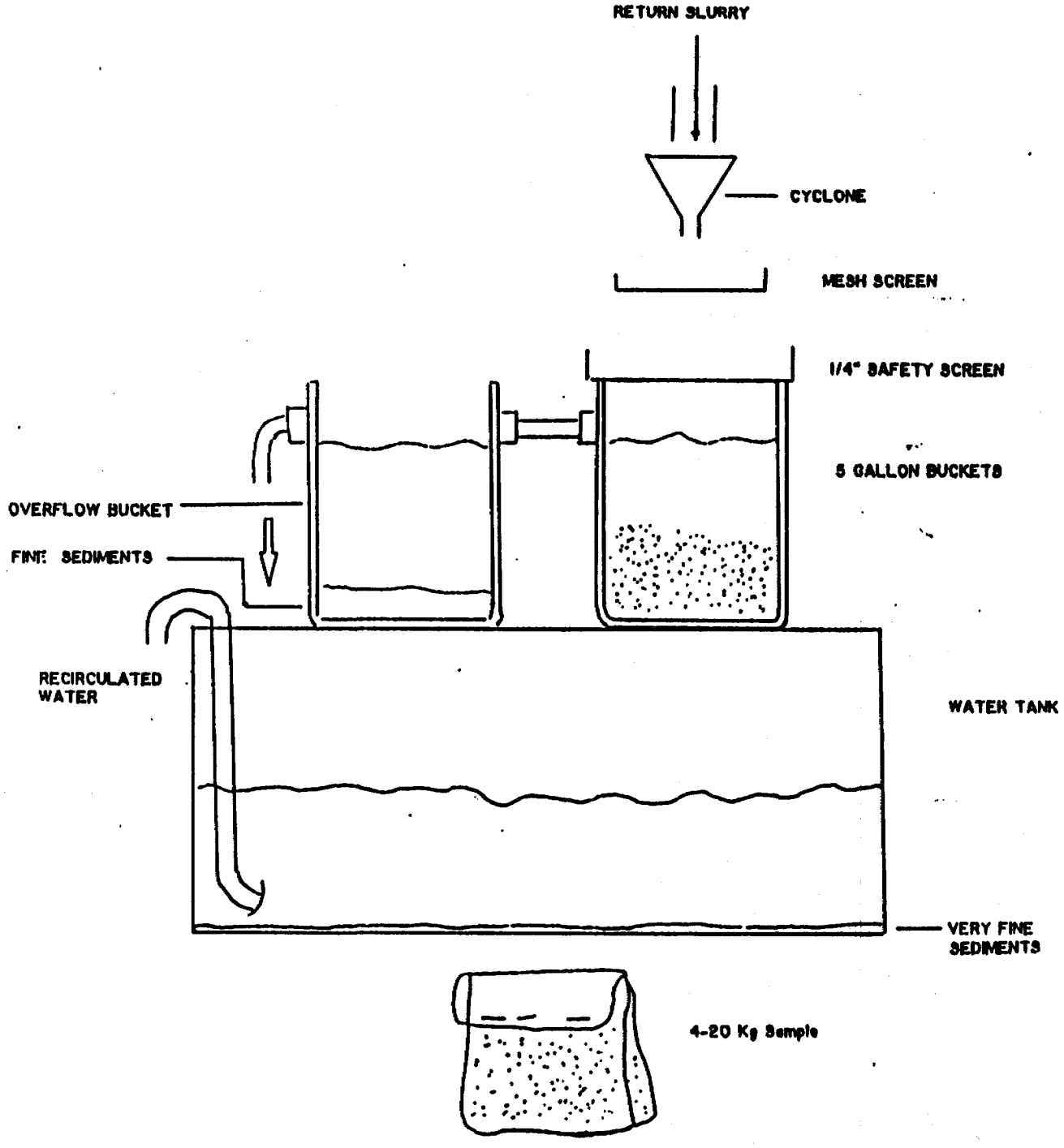


REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for		
	Title: The Reverse Circulation Overburden Drill System		Fig.
	Date:	Scale:	N.T.S.:

SAMPLE COLLECTION

The slurry produced by the drilling passes through a sieve (+10 mesh) which is placed over a sample bucket. The slurry is 'felt' and the material collected in the sieve is continuously logged by the geologist. The slurry passing through the sieve settles into two overflow buckets and it is this settled material that is saved as a sample. A helper bags the samples and assists the geologists.

The logging is done in meters and samples are collected at 1 1/2 meter intervals in favourable sedimentary horizons. When the tricone bit hits bedrock one to two meters more is drilled to insure that the bit is not in a boulder. The bedrock chips are collected in the sieve and saved as a sample. A sample collection diagram is shown on the next page.



ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
for:		
SAMPLE COLLECTION		
Date: DEC/87	Scale	N.T.S.
Drawn: D.G./S.S.	Approved:	File: M-137

SAMPLE PROCESSING

All overburden samples were sent to Overburden Drilling Management of Rouyn, Quebec. The samples are first weighed wet and 250 grams are stored. The remaining sample is screened through a +10 mesh fraction which is kept and the finer material is released on a Deister shaker table where the sample separates into mineral bands according to specific gravity. Visible gold grains also separate out and are counted and classified into delicate, irregular and abrades grains.

The table preconcentrates are put through a heavy liquid separation (methylene iodide, S.G. 3.3) to separate out the light silicates. The light silicates are retained and the heavy concentrate goes through a magnetic separation to remove drill steel and magnetite. A quarter of the concentrate is stored and the rest is shipped off to an analytical laboratory (Bondar-Clegg) for neutron activation to analyze for 32 elements.

A sample processing flow sheet is shown on the next page.

OVERBURDEN DRILLING MANAGEMENT LIMITED
107-15 CAPELLA COURT, NEPEAN, ONTARIO K2E 7X1 (613) 226-1771

SAMPLE PROCESSING FLOW SHEET

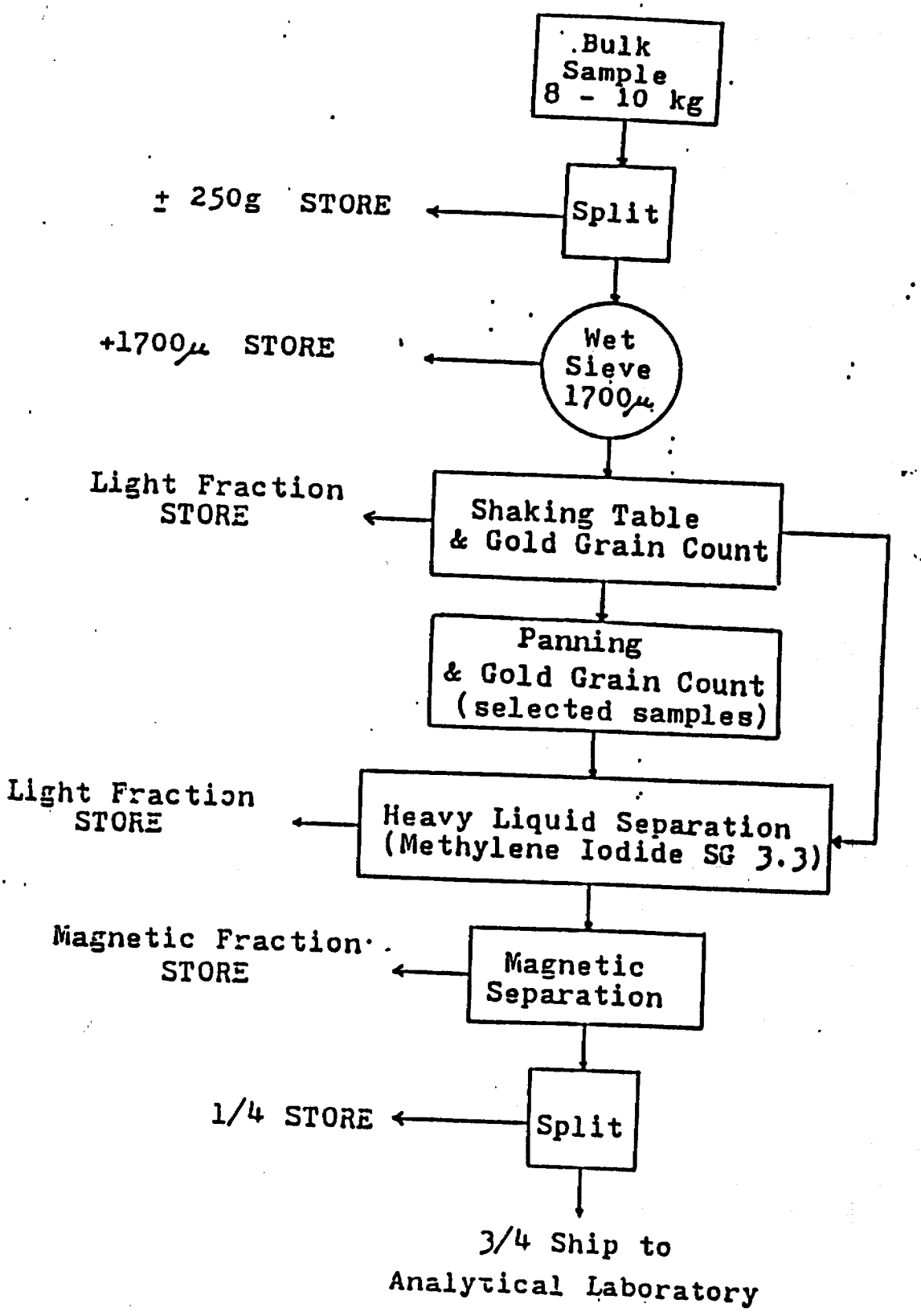


Figure - Sample Processing Flow Sheet

A P P E N D I X B

DATE December 8/88 HOLE No. H-88-01 GEOLOGIST Burton DRILLER Howg

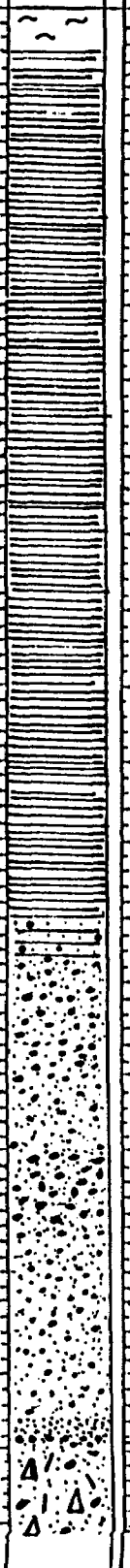
HOLE LOCATION

BIT No. CB70144 FOOTAGE ON BIT 0'

HOURS MOVE HOURS DRILL OTHER

start drill @ 11:20 am stop drill @ 3:30 pm

12:30 pm to 2:00 pm Downtime.



SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grains	Au ppb	As ppm	Total Au ppb	% sulphide
	0'-3' Organic Material 3'-60' Lacustrine Clay - light cream colored, greasy clay. 60'-94.4' Gravel @ 60' - dominently clay with approx. 20% of pan being gravel; f-m-g gravel, and well rounded. 63.5'-64' - peb-cobs with approx. 10% fg sand matrix. 80% granitic, 15% mafic volcanic. 64' - m-c-g sand matrix with pebs to cobs - 60% granitic, 20-30% m.v. after 65' - 10% mtg sand matrix with 60% mafic vol., 20% granitic, 10% felsic vol pebs and cobs. after 70' - dominent matic volcanic gravel. @ 76' - coarse grained gravel with approx. 60% m.v. and 30% granitics. after 77' - increase in granitics to 60% after 78' - coarse grained gravel with 60% m.v. and 30-40% granitics. @ 81.5' - med. grained gravel with 10% f-m-g sand matrix. after 90' - f-m-g gravel with 15% m-g sand matrix. after 93' - m-c-g sand. after 94' - m-c gravel with matic volcanic dominating. @ 94.4'-100.5' Clay Till after 94.4' - vy light grey h.g.c.b. comprises 80% of return with 20% small random pebs (70% m.v.). after 95.7' - 80% grey h.g.c.b. with a granitic content of 10-15% 96'-97' - granite boulder. 97' - clay till with h.g.c.b. approx. 75% with 25% random pebs; 80% m.v. and 20% granitics.					
1		4	300	74	388	8

DATE _____ HOLE No. H-88-01 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES				
				Gold Grains	HMC Au ppb	HMC As ppm	Bed'd Au ppb	% Sulphides
		2	100.5' - 121' Gravel 100.5' - 115' - m-c gravel with approx. 10% sand matrix; pebs and cobs - 60% m.v. and 30% granitics.	3	31	31	96	7
110			after 115' - fine gravel with pebs: 70% mv and 20-30% granitics after 120' - fine gravel with well rounded pebs and 10% sand matrix. 80% m.v. pebs.					
120		3	120.5' - increase to 80-90% m.v. pebs and 5% f-m-g sand matrix.		<5	<2		
			121' BEDROCK - black, f-g, massive to weak foliation: mafic volcanic: BASALT.					
130								
			Stopped Drill @ 125'.					
140								
150								
160								
170								
180								
190								
200								

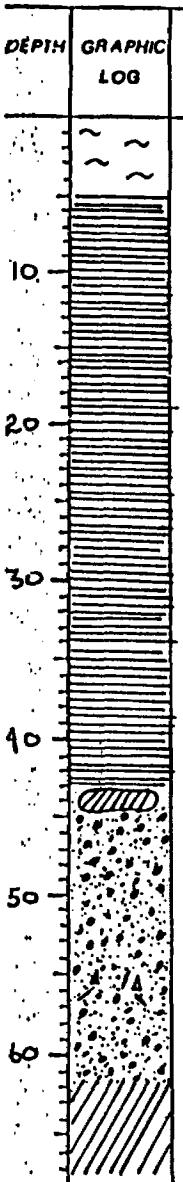
DATE Dec. 8, 1988. HOLE No. H-88-02 GEOLOGIST Bent DRILLER Howg

HOLE LOCATION

BIT No. CB70148 FOOTAGE ON BIT 0'

HOURS MOVE HOURS DRILL OTHER

Start @ 4:00 pm Stop @ approx. 5:30 pm.



DEPTH	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES				
				Gold Grain	Au ppb	As ppm	Est'd Ag ppb	% Sulphides
			0'-5' Organic Material					
			5'-43.5' Lacustrine Clay					
			5'-12' - light brown oxidized clay, greasy texture, ± silt.					
			12'-43.5' - grey, greasy clay, ± silt.					
			43.5'-45' Granite boulder					
			45'- Gravel					
			- granitic, mafic volcanic and carbonate cobs and pebs, +10% sand matrix.					
			53' significant carb. pebs					
			55.2' 6-7% hg.cb.					
			60' - granodiorite cobs and pink granite cobs.					
			62' BEDROCK					
			- dark, black mafic volcanic, massive; quartz stringers; minor carb. and silica alteration.					
		01		0	24	107	0	6
		02			<5	<2		

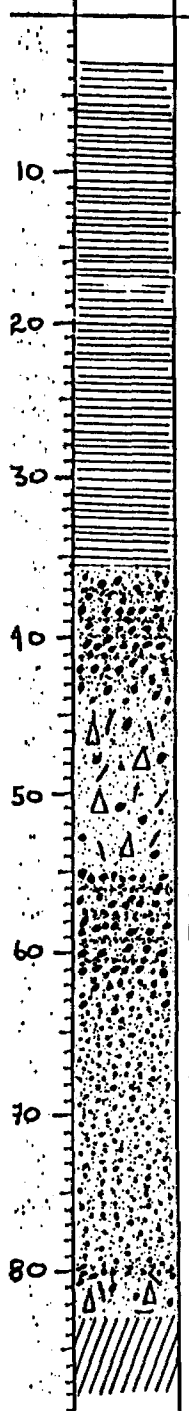
DATE December 9/88. HOLE No. H-88-03 GEOLOGIST Burton DRILLER Howy

HOLE LOCATION

BIT No. CB70148 FOOTAGE ON BIT 72'

HOURS MOVE HOURS DRILL OTHER

Start Drill @ 10:00 am. Stop @ approx. 11:30 am



SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grains	Au ppb	As ppm	Est. Au ppb	% Sulphides
	0'-3' ORGANICS					
	3'-35.5' LACUSTRINE CLAY - light brown, greasy hard clay.					
	35.5'-44.5' GRAVEL - c-gravel: subrounded pebs and cobs; 50-60% mafic vol, 30% granitics, approx. 10% m-g sand matrix.					
	44.5'-54.5' CLAY TILL after 44.5' - hg.c.b. comprise 50-60% of return with small random pebs; 50% m.v. and 40% granitics. after 45' - 70% hg.c.b. with pebs; dominant m.v. pebs and approx. 10% m-c-g sand matrix. after 45.5' - 95% + hg.cb.; good return from drill; pebs are 70% m.v. and 5% of return.					
1	@ 52.5' - 70% hg.c.b.; 30% small random pebs; 95% m.v.	1	190	195	10	10
2	54.5'-80.5' GRAVEL @ 55' - mafic vol. dominent gravel with 10% f-m-g sand matrix.	5	75	68	71	4
3	after 56' - c-gravel with 70% m.v., ~30% granitics; poor return. after 60' - good return of m-c-gravel with dominant m.v. pebs.	7	29	24	37	1
4	after 63' - f-gravel, subrounded to well rounded pebs consisting after 75' - 80% m.v. gravel	2	29	35	38	3
	80.5'-83' Till					
5	@ 80.5' - approx. 5% hg.c.b.	2	15	34	46	3
6	after 81' - 60-70% of return is hg.c.b. with small random pebs, 50% int-m. vol and 50% granitics.	2	350	37	488	7
7			<5	<2		
	83' BEDROCK - massive, crystalline rock; main components being plagioclase, qtz and mafics (biotite?). GRANODIORITE. - Trace euhedral crystals of py. Stopped drill @ 88'					

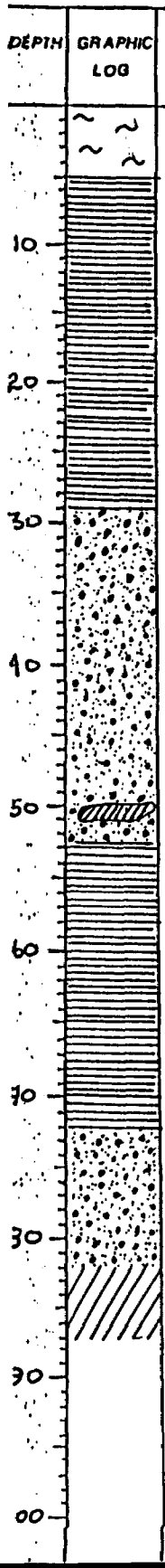
DATE Dec. 9, 1988 HOLE No. H-88-04 GEOLOGIST Bent DRILLER Howg

HOLE LOCATION

BIT No. CB70154 FOOTAGE ON BIT

HOURS MOVE HOURS DRILL OTHER

Start @ 12:30 pm Stop @ approx. 3:00 pm.



SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grains	NMC Au ppb	NMC As ppm	Fire'd Au ppb	% sulphides
	0'-5' Organic Material					
	5'-29' Lacustrine Clay - grey, greasy clay; ± silt and sand.					
	29'-52.5' Gravel - sand and gravel; and fine sand; granitic, mafic volcanic and carb. cobs and pebs. 51' - granodiorite boulder					
	52.5'-72' Lacustrine Clay 54.4' - grey, greasy, dense clay.					
	72'-82' Gravel - granitic, mafic volcanic and carb cobs and pebs. 74.1' pink granite boulder with weakly schistose mafic volcanic gravel + fine sand. 75' gabbro cobs present. 80' a few g.c.b and pebs - layers of lacustrine clay + silt and minor pebs.					
	82' BEDROCK - weakly schistose mafic volcanic with quartz and carb stringers; weakly sericitized. 84' quartz and carb stringers; brown carb alteration. increase in carb and qtz stringers with depth.					
01		2	709	66	654	10
02			<5	<2		

DATE Jan 30, 1989 HOLE No. H89-05 GEOLOGIST M.Z. DRILLER W.G.
HOLE LOCATION 500m from H89-04 at bearing N68°E.
BIT No. CB 70254 FOOTAGE ON BIT 0 to 20 m
HOURS MOVE ____ HOURS DRILL 3½ hours OTHER ____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Tot. Au Agg	% PY
			0-9m Lacustrine Clay - grey-brown - turns grey at 2.5m - few pebbles at 5m					
3			9-12.5m Gravel (Till?) 30-40% fine sand 30-40% pebbles 5-20% cobbles -clasts 40% mafic volcanic 30% granitoids 5-10% limestone					
6								
9		* 01	13.5-15.0m Sandy (Till?)					
		* 02	70% fine sand 15-10% pebbles 15-20% silt 5% cobbles					
12		03		7	69	123	404	5
		04	-clasts 15-25% granitoids 60-75% mafic volcanic 5% other	3	48	155	128	5
15		05		1	87	66	19	1
		06	11.5-11.6m more pebbles	1	30	211	2	1
18		07	12.5-12.8m sand + silt layer	1	400	128	482	5
		08						
		09	@ 12.8m quartz vein in mafic volcanic cobble		<5	<2		
21			@ 13.4m quartz vein in mafic volcanic cobble					
24			@ 13.6m few h.g.c.b.					
			14-14.5 sand layer					
			15.0-16.0m Till 15-35% hgcb (grey-green) 20-15% pebbles 15% sand 15% silt					
27								

DATE_____ HOLE No. H89-05 GEOLOGIST_____ DRILLER ____

HOLE LOCATION _____

BIT No._____ FOOTAGE ON BIT _____

HOURS MOVE_____ HOURS DRILL_____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)		
			-clasts 80% mafics 10% granitoids 10% meta-sediments					
			15.6-16m mafic volcanic boulder					
			16-18.2m Fluvial-lacustrine sediments -layering of clay(grey) silt, sand and pebbles					
			@ 18m granitoid cobbles					
			18.2-19.0m Gravel 40% pebbles + cobbles 40% sand -clasts 60-70% mafic mainly volcanics 15-20% granitoids 5-10% limestone					
			19.0-20.0m Bedrock Mafic Volcanic possibly Ultramafic					
			19-19.5m quartz veining in volcanic (sample 07)					
			-dark green, fine grained, weakly foliated, moderately soft, non-magnetic 10% contamination					
			EOH 20m.					
			* samples not sent.					

DATE Jan. 31, 1989 HOLE No. H89-06 GEOLOGIST M.Z. DRILLER W.G.
HOLE LOCATION 500m east of hole H89-05 at bearing N68°E
BIT No. CB70254 FOOTAGE ON BIT 20m + 16m = 36m
HOURS MOVE _____ HOURS DRILL 2½ hours OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Extra Au ppb	% Py
			0-1m Organics					
			1-5.7m Clay -beige @ 2.5m turns grey and gritty					
3			5.7-10m Graded Sand + Gravel 15% silt 40% sand (fine) 40% pebbles					
6		* 01	base silty and fine sand layers					
		* 02	-clasts 60-50% int.-mafic volc.					
9		* 03	30% granitoids					
		04	5% paleozoics 10% other (exotics)	7	330	66	164	10
12		05	10-10.6m Till 10-15% pebbles	5	76	83	141	10
		06	70% sand (fine) + silt 10% hgcb	2	230	100	261	10
15		07		12	1560	336	464	20
		08	-clasts 70-80% int.-mafic volc		<5	<2		
			20% granitoids 5% paleozoics					
18			-few arm'd clasts					
			10.6-11.8m Gravel 50% pebbles 50% sand (fine)					
21			11.8-13.0m Till? 60% silt 20% pebbles 20% sand.					
			-clasts 70% mafic volc. 20-25% granitoids 5% paleozoics					
			@ 12.5m mafic (black) fine grained clasts with sulfides					

DATE _____ HOLE No. H89-06 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)		
			13 - 14.6m Till					
			5-40% hgcb (green-grey-brown)					
			15-30% pebbles					
			20-40% sand (fine)					
			15-30% silt					
			clasts 70% mafic volc					
			15% granitoids					
			10% mafics					
			5% exotics					
			13.3 - 13.4m maf. volc boulder					
			@ 13.8m maf. volc cobble.					
			14.6 - 15m Gravel					
			10-70% pebbles (less + cobbles downhole)					
			20-80% sand (more downhole)					
			10% silt					
			- clasts 70-80% maf. volc with qtz. veining					
			15-20% gran.					
			5-10% other					
			15-16m Bedrock (Mafic Volcanic)					
			- mod. hard					
			- dark grey (black)					
			- fine grained					
			- weakly foliated					
			- non-magnetic					
			- trace pyrite (platy)					
			- homogenous appearance relatively unaltered					
			EOH 16m					
			* samples not sent					

DATE Jan. 31/89 HOLE No. H89-07 GEOLOGIST DF/MZ/HN DRILLER WG

HOLE LOCATION 500m from H89-06 at bearing N68°E.

BIT No. C870254/70257 FOOTAGE ON BIT 1st: (36m-116.9m) 52.5 m; 2nd: 10.5m

HOURS MOVE HOURS DRILL OTHER

10:15 AM - 10:30 AM move drill. Hole finished at 3:45 pm. Bit replaced at 16.5 m

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grade Count	Au (ppb)	As (ppm)	Est. at Au ppb	% PY
			0-1.5 Organic Material					
			1.5-3.5 greasy grey (gy) lacustrine (lac.) clay					
			3.5-7.5 silty gy lac. clay containing minor fine-grained (fg) to medium-grained (mg) gy sand & occasional (occ.) pebbles (pebs) of both mafic & felsic composition					
3			7.5-9.5 greasy gy lac. clay containing v. thin heterolithic (hl) peb horizons at 8m & 9m					
			9.5-18.5 Sandy Gravel					
6			Abundant tio return of weakly stratified (strat.) normally graded angular (ang.) to subangular (subang.) hl pebs in 50% matrix of f.g. to m.g. gy-green (grn) sand. Peb composition varies from 50-70% mafic (intrusive & volcanic (volc.)), 25-40% felsic to intermediate, 5-10% sedimentary (sed). Volc. pebs generally more rounded (rdd.) Limestone & volc cobbles (cobs) encountered at 11m; Thin seam of greasy gy lac. clay occurs at 12.5m; v. low tio return from 13-13.5m (occ. clay fragments and pebs in gy sandy to silty matrix); granodiorite boulder (bldr) from 14.5-15m; dark grn schistose bldr containing minor quartz (qtz) veining and some sulphides from 15.15-15.6m; Qtz & intermediate cobs at 16.5m					
9		01 *						
12		02 *						
		03 *		6	190	103	232	15
15		04 *						
		05	17.5-19 Clay Till	4	380	103	577	10
		06	Abundant tio return of 60% hard gritty clay balls (hgcb's) with (w) 40% hl pebs - 50% felsic to intermediate, 40% mafics (intrusive & volc), 10% seds. Large mafic dk grn cob at 18.25m; granite bldr from 18.5-18.75m; v. thin clay seam at 19m	2	769	50	1891	3
18		07		8	210	107	124	20
		08		10	150	27	207	10
21			19-25.5 Sandy Gravel					
		09	Moderate tio return ang. to subrdd hl pebs in 50% matrix of f.g. to m.g. gysand. Peb composition varies from 50-70% mafic (intrusive & volc) & 30-50% felsic. Reduced tio return of larger hl pebs in 80% f.g. gy-brown (brn) sand matrix from 24.5-24.6m	2	2570	6	5451	5
		10		1	77	7	54	25
24		11		3	<5	16	2745	15
		12	25.5 Bedrock Pink Granite EOH at 27m.		<5	<2		
27								
30								

* Sample discarded

ns - no sample taken

DATE Jan 31/89 HOLE No. H89-08 GEOLOGIST DF/MZ/HN DRILLER WG

HOLE LOCATION 500m from H89-07 at bearing N8°E.

BIT No. 70257 FOOTAGE ON BIT (12m+21m) 33m

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

3:45 PM - 4:00PM move drill. Hole finished at 6:15 PM

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Sb (ppm)	Zn (ppm)
			0-2 Organic Material					
			2-10.5 Lac. clay grading from red-brn to gy at ~2.75m. Thin peb layer (0.1m) at 7m containing ang. to subang. hl clasts 50% mafic, 50% felsic and intermediate.					
			10.5-19.5 Sandy Gravel Abundant tio return of ang. to subang. hl pebs, 50% mafic (intrusive & volc.) 50% felsic & intermediate w occ. chert & lst pebs. Gy-grn f.g. to c.g. sandy matrix of 40-60%. Dk grn mafic bldr at 10.7m. Peb mix becomes 50% lt to med grn mafic & 50% intermediate from 13-13.5m. Peb mix becomes 90% mafic (half intrusive half volc) & 10% felsic to intermediate at 13.5m. Lg weathered yellow intermediate cob at 15m. Med. grn mafic cob at 16.5m.					
12		01*						
			19.5-20 Clayey Sand Till (?) Reduced tio return of 90% mafic 10% felsic pebs in 70% f.g. gy-grn sandy matrix. Darker volc. pebs subrdd (many bullet-shaped) and occ. armoured w lt to med gy clay.					
		02*						
15		03		2	94	133	47	15
			20 Bedrock Med. to dk grn mafic rock containing no sulphides or qtz veins. EOH at 21m.					
		04		6	260	106	390	10
18		05		3	120	154	61	20
		06		4	280	149	381	15
		07			<5	<2		
21								
24								

* sample discarded

ns - no sample taken

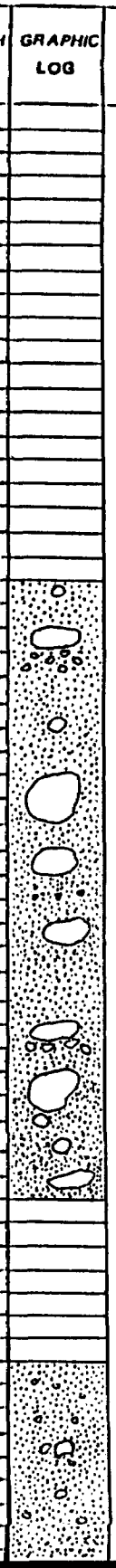
DATE Feb 1/89 HOLE No. H89-09 GEOLOGIST DF/MZ DRILLER WG

HOLE LOCATION 500m at N8°E and 300m at N270°E from H89-08

BIT No. 70257/70253 FOOTAGE ON BIT (33m+17m) 50m / 36m

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

Leave camp 6:45AM - start drilling 7:30AM - drill stopped 1PM (broken hydraulic pump)



DEPTH (m.)	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Fe 2nd Au ppb	% Py
		0-10 Brn lac. clay					
		10-22.5 Sandy Gravel 40% mafic (intrusive & volc.), 40% intermediate, 10% felsic & 10% sed. pebs in f.g. to m.g. gy/grn sand matrix of 40% Smaller, darker volc pebs often subrdd. Other pebs ang. to subang. Intermediate cob at 10.2m. Lt to med grn mafic bldr from 11-11.25 m. Below bldr, mafic pebs increase to 70%, balance of 30% mostly granite. Pebs also become larger, many almost cob sized, then return to smaller at 12m. Granite cob at 13 m. Med. grn mafic bldr at 14-15 m. Dk grn mafic bldr at 15.5-16m. Layer of predom. dk mafic pebs from 16-16.5m. V. thin horizon containing v. few small, gritty clay balls (max diam 50mm) at 16.5 m. Granite bldr from 17-17.5 m. Granite bldr from 19-19.25m, followed by several granite cobs to 19.5m. Lt grn mafic bldr from 20-20.15 m. Granodiorite cobs at 21m & 21.5 m. Sand matrix becomes f.g. to c.g. from 21.5-22.3, then f.g. grn from 22.3-22.5. Granite bldr from 22-22.3 m.					
	01 *						
	02 *						
	03 *						
		22.5-26 Oxidized Lacustrine Clay Plentiful t10 return of 50% red-brn gritty, dry, friable clay balls and 50% greasy gy silty clay fragments, and v. few pebs (60% mafic, 20% felsic). From 22.75 to 23 m, t10 return is comprised of 30%-90% red-brn clay balls (max diam 1.5 cm) & 20% med. grn mafic ang. pebs. After 23m, pebs absent. Greasy gy clay balls (to 3cm diam) & no pebs from 23.25-23.5m. From 23.5-23.75, 50% red-brn clay balls, 50% greasy gy clay balls (to 3cm diam) & no pebs. Greasy gy clay balls (1-3cm diam), no pebs from 23.75-26m.					
	04 *						
	05 *						
	06 *						
	07 *						
	08 *						
	ns	26-33 Sandy Gravel Abundant t10 return of 70% volc. & intrusive mafic pebs, 30% felsic (predom. granite) pebs in a f.g. to c.g. brn sandy matrix of 40-50%. Clasts range in size from small pebs to cobs. (Cobs dominantly granite). Occ rdd lst peb, occ sulphides in mafic pebs. From 26.75-27.75m, dk rdd volc peb content ↑ to ~20%, lst pebs ↑ to ~10% & matrix becomes f.g. grn sand (50%).					
	09 *						
	ns						
	10		7	570	364	247	50

DATE Feb 2/89 HOLE No. H89-09 GEOLOGIST DF/TG DRILLER WG

HOLE LOCATION

BIT No. 70253 FOOTAGE ON BIT 36m

HOURS MOVE HOURS DRILL OTHER

Hydraulics repaired & drilling under way at 2:45 PM. Hole stopped at 8:00 PM

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Ex'd Au Au	% Py
		11	26-33 (cont'd) Lg gy felsic/intermediate cob at 27.75m. Lt gy felsic cob at 28.5m. Lt gy felsic bldr at 28.75-29.25m. Lg peb horizon of 90% mafic clasts (50% intrusive, 50% volc) & 10% felsics at 29m. Peb horizon composed primarily of 50% white subang. qtz & 50% subang yellow lst clasts at 29.5m. Alternating layers of small & lg hl pebs in occ. lg lst pebs & cobs in f.g. to c.g. gy-grn sand matrix from 29.5-30.5m. Med to dk gy mafic cob at 31m. Darker pebs continue to be subrdd in contrast to ang. to subang. nature of lt mafics & felsic pebs. Smaller peb sizes in thin horizon at 31.5m. Layer of large white qtz & lst pebs at 32m. Dk gy mafic cob at 32.5m.	6	614	279	511	40
33		12		6	715	233	578	40
		13		3	13	78	50	15
36		ns						
		14		3	120	103	67	7
39		15		5	320	160	181	5
		ns						
42			33-36 Sandy Clay Till High tio return of 98% gy, hard gritty clay balls (hgcb) & 20% f.g. gy sand containing occ. small ang dk gy mafic pebs showing no armouring. From 33.5-34m, tio return consists of 100% hgcb's (1-2 cm diam). Mafic cob at 34.25m. Thin horizon of lt. gy felsic pebs at 34.35m. Very dk mafic cob at 34.5m. Thin layer of lst pebs at 34.75m. Lg altered (fuchsite?) highly bl-iated mafic cob at 35m. Lg dk mafic cob at 35.25m, followed by increase in clay frag diam to 8cm (max). Occ. armoured clast at 35.5m (dk subrdd mafic).					
		16		2	350	151	65	2
45		ns						
48		17		5	5800	181	55	1
			36-37.5 Sandy Gravel Reduced tio return of small, ang. pebs (60% dk gy mafics, 40% felsic to intermediate) in f.g. gy sand matrix containing v. occ small hgcb's. Dk mafic cob at 37m. V. thin layer of felsic & lst pebs followed by v. thin horizon of small hgcb's making up 50% of tio return (Balance of return composed of dk ang. mafic pebs) at 37.75m. V. thin clay seam at base of this unit.					
51								
54								
			37.5-40.5 Sandy Clay Till Good tio return of 60% hgcb's & 40% pebs (70% mafic intrusive & volc, 30% felsic) in f.g. gy-grn sand (sample) matrix. Darker volc pebs usually rdd-no armour. Dk mafic cob at 37.5m.					
57								

DATE Feb 2/89 HOLE No. H89-09 GEOLOGIST DF/TG DRILLER WG

HOLE LOCATION

BIT No. 70253 FOOTAGE ON BIT 36 m

HOURS MOVE HOURS DRILL OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)
			37.5 - 46.5 (cont'd) Granite cob at 38 m, followed by a thin horizon (~5cm) of 60% hgeb's & 40% dk subrdd mafic clasts, many armoured w grey clay. Greasy gy clay seam from 38.35 - 38.5 m. Till of 50% hgeb's, 50% hl pebs from 38.5 - 38.75. Lac greasy gy clay seam for 10cm at 38.75. Till resumes below clay, but contains up to 10% lst clasts. Hgeb content ↓ to ~30% at 40m. Peb mix at this level is 50% mafic, 50% felsic, with most of the clasts ang. to subang & no armouring evident.			
			40.5 - 42 Grey Lacustrine Clay Greasy gy silty lac. clay seam			
			42 - 44 Sandy Clay Till Abundant tio return shows some stratification from 42-42.5m. Lg peb layer grades into smaller pebs, then to 100% hgeb's in f.g. sand. Sandy clay till containing 50% hgeb's & 50% hl pebs (80% mafic, 20% intermediate) poorly sorted & containing armoured clasts of dk mafic composition generally larger than the other clasts from 42.5-43m. Hgeb content ↑ to 80% & peb size↑ from 43-44m. Peb composition in this interval is 90% dk mafic (non-armoured and angular) Lg gy-grn mafic bldr from 43.25-44 m.			
			44 - 45 Sandy Gravel V. high tio return of small pebs - 50% mafic (intrusive & vole) 50% felsic - in a f.g. to c.g. grey sand matrix.			
			45 - 47 Lacustrine Clay Grey, smooth clay becoming silty(then then sandy by 47m.			
			47 - 48.5 Sandy Clay Till (?) Hgeb's containing muck sand & v. occ pebs of various lithologies - non armoured, subang. to subrdd.			
			48.5 - 53 Sandy Gravel Low tio return of reverse-graded hl pebs in 90% matrix of f.g. gy sand. Larger upsection pebs (80% pink granite, 20% mafic) grade into smaller pebs of 90% felsic 50% mafic composition. EOH at 53 m - bedrock undetermined.			

* sample discarded NS - no sample taken

DATE Feb 3 1989 HOLE No. HB9-10 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N8°E from HB9-08

BIT No. CB 70856 FOOTAGE ON BIT 0+

HOURS MOVE HOURS DRILL 4hrs 15mins OTHER

Repairs to drill from 7:00am to 2:45pm Start drilling 2:45pm Finish 7:00pm

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG
1–30	~ ~ ~ ~ ~ ~ ~ ~ ~		0 metres: Organics 1.5m Lacustrine Sediments Brown greasy soft clay. <1% +10 clasts. 12m Gravel Loosely packed, 15-20% +10 clasts in a medium to coarse sand-silt matrix. Clasts are pebble to gravel size, subangular, unsorted and composed of 35-40% mafic 20-25% granitic, 15-20% limestone, 5% felsic and 5-10% exotics - qtz etc. Unit appears to be crudely bedded. @ 14m - slow penetration, majority of clasts are ground by bit. Cobble to boulder clasts. @ 15 decrease in +10 clasts to 10-15% @ 17.5 - dark green mafic cobble, no visible sulphides. 18m - Lacustrine Sediments Medium brown greasy feel, slow penetration and moderately packed. Clay is varved. @ 20 - dark brown color, <1% granitic clasts. @ 21 - light grey color @ 21.5 - dark brown color @ 21.75 - light grey color @ 22m - dark brown @ 22.5 - light grey color. 26m Reworked Till ? Moderately packed, 15-20% +10 clasts in a fine to medium grained sand-silt matrix. Top of unit 5-7% h.g.c.b and armoured clasts. Clasts are angular unsorted, pebble to cobble size and composed of 20-25% light green intermediate to mafic, 40-45% dark green mafic volcanic, 10-15% granitic, 10% felsic and 5% exotic clasts - quartz, lmst and trace sulphide clasts. Downhole slow penetration and very compact and increase in mafic clasts to 50% and <1% well rounded limestone clasts and decrease in +10 clasts to 15-20%. Unit appears to be crudely stratified. @ 2 m - 5-10% +10 clasts Increase in granitic clasts to 15% fr. 27.75 to 28.25m - Mafic boulder containing medium green-grey quartz veins
26			
27		3	
28		4	
29		5	

ANALYSES				
Gold Grain Count	Au (ppb)	As (ppm)	Extra Ag ppm	% Py
18	200	247	17183	15
13	360	151	150	15
6	280	293	555	15

DATE Feb 3 1989 HOLE No. HB9-10 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Extra Anal	% Py
31		6	@ 28.25m · 15-20% granitic and 40-45% mafic clasts.	8	250	239	1244	30
32		7	@ 28.4m · 5-10% milky-white barren quartz clasts. Increase in local lithology downhole to 60%. <1% +10 sulphide clasts.		<5	<2		
33			Increase in +10 clasts to 20-25% @ 28.6 Increase in pebble to cobble clasts downhole Slow penetration. <1% hgcb					
			29.5 to 29.9m · medium green-grey mafic to intermediate boulder. No visible sulphides. fr. 29.9 to 29.95 pink granitic cobble.					
			@ 31.5 · <1% pale green sericite-carbonate schist. +10 clasts. @ 31.6 <1% milky white barren quartz					
			31.6 Bedrock					
			Medium green-grey, fine grained, moderately foliated and sericitized. @ 32.5 5-10% of cuttings are milky-white barren quartz veins No visible sulphides.					
			33 metres · End of Hole.					

DATE Feb 6/89 HOLE No. H89-11 GEOLOGIST DF/TG DRILLER WG

HOLE LOCATION 500m at N44°E from H89-10

BIT No. 70856 FOOTAGE ON BIT (33+39) 72m

HOURS MOVE HOURS DRILL OTHER

Travel to drill 6:30AM-7AM. Move drill to hole 11, begin drilling at 7:30AM - finish hole 11 at 12:20 PM

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Fe %	% Pb
			0-1.5 Organic material					
			1.5-13.5 Lacustrine clay 1.5-9m, brn earthy clay becoming grey & silty from 4-6m. Occ. pebs of 80% mafic, 20% felsic to intermediate composition from 6-9m, account for ~5% of tio return. Peb size ranges from small to medium, shapes from subang. to subrdd. Greasy gy lac. clay from 9-13.5m, becoming sandy down section.					
3								
6								
			13.5-18 Sandy Gravel Low tio return of 30% pebs, 70% f.g. gy sand. Slow penetration. Peb composition 60% mafic 40% felsic to intermediate. Mafic pebs 50% med. grn lg intrusive (ang. to subang.) & 50% dk grn/blk smaller subang to subrdd volcs. Intermediate cobs at 17m.					
9								
12								
			18-26 Lacustrine Clay Brn, oxidized horizon w occ. peb from 18-19m. Hl peb layer ~6cm thick at 19m. Clay becomes grey around 19.5m, grading from sandy to silty to smooth & greasy down section. Pebs absent from 19.5-26m.					
15		01*						
		02*	26-28.5 Sandy Gravel Moderate tio return. Ang. pebs, 90% mafic & 10% felsic in a f.g. gy-grn Hl sand matrix. Felsic clasts predom. granite, mafics are 70% lt grey-grn & 30% dk gy to blk. Occ. lg granite peb, occ. qtz peb.					
18								
			28.5-37.5 Lacustrine Clay Grey, slightly silty. V. lt grey in colour from 34-35m. V. thin horizon of lst pebs at 36m.					
21		ns						
			37.5-38 Sand/Clay Till 70% f.g. grey-grn sand matrix containing 30% small hl pebs and occ. hgcb. 50% felsic to intermediate, 50% mafic (predom intrusive) pebs ranging from subang to subrdd.					
24								
27		03	38 Bedrock Highly foliated dk grey-grn mafic rock w some small qtz veining. ~3% of tio sample composed of qtz & felsic feldspar. EOH at 39m	7	94	151	117	5
		ns	* sample discarded ns - no sample taken					
30								

DATE Feb 6/89 HOLE No. H89-11 GEOLOGIST DF/TG DRILLER WG

HOLE LOCATION

BIT No. 70856 FOOTAGE ON BIT 72m

HOURS MOVE HOURS DRILL OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Grid Au ppb	% Sb
33		ns						
36								
		04		8	110	67	318	.1
39		05			<5	<2		

DATE Feb 6/89 HOLE No. H89-12 GEOLOGIST DF/TG DRILLER WG

HOLE LOCATION 500m at N44°E from H89-11

BIT No. 70252 FOOTAGE ON BIT 31.5 m

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

Move from hole 11 to hole 12 from 12:30 - 1:00PM. Hole 12 finished at 4:15PM

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au g/t	% Py
0			0-9 Lacustrine clay Oxidized red-brn, gritty, friable, from 0-2 m. Grey, silty clay w occ. lst peb from 2-9m. Several dk gy mafic cobs & one granite cob from 7-7.5m. Dk gy mafic cob at 8.25m. Lt grn & dk gy mafic cobs at 8.5 m.					
3		ns						
6			9-22 Sandy Gravel Ang. hl pebs in 50-60% grey-grn f.g. to m.g. sand matrix. Abundant t10 return composed of 30% felsic (predom. granite) pebs & 70% mafic pebs (50% lt grn intrusive, 50% dk grn/blk volcs). Granite bldr from 10-10.5 m. Granite & mafic cobs at 10.75 m. Sand matrix ↑ to ~80% from 15-18m. Sand matrix ↓ to ~60% & peb mix changes to 90% mafic (intrusive & extrusive) & 10% felsic. Many of the dk mafic pebs are rdd. These ratios persist from 18-22m. Mafic & altered intermediate cobs at 19m. Lt grn intrusive mafic bldr from 19.75-20m. A thin horizon containing lge b's of gy, gritty clay occurs at 21m.					
9		01*						
12		02*						
15		03*	22-28 Lacustrine clay Oxidized red-brn unit containing some pebs from 22-23m. Clay becomes grey in colour from 23-24m, then back to red-brn from 24-24.5m. 50% grey, 50% red-brn lac. clay from 24.5-25m. Slightly silty gy clay from 25-28m.					
18		04		3	18	135	4497	5
21		05	28-30.75 Sandy Gravel 80% mafic (intrusive & volc.) & 20% felsic to intermediate pebs in f.g. gy-grn sand matrix of ~60%. Dk mafic pebs frequently rdd. Occ. qtz & chert pebs. Altered lt grn mafic cob at 29.5m. Clast size ↓ to small from 30m to bedrock. Sand matrix ↓ to ~40% (t10 rtn high) from 30-30.5m, then ↑ to ~70% to bedrock.	4	170	101	231	2
24		ns	30.75 Bedrock Altered lt. grn mafic rock for ~10cm changing to dk grn. No qtz, no sulphides. EOH at 31.5m.					
27			* sample discarded ns - no sample taken					
30		06		3	120	7	2971	.1

DATE Feb 6/89 HOLE No. H89-12 GEOLOGIST DF/TG DRILLER WG

HOLE LOCATION

BIT No. 70252 FOOTAGE ON BIT 31.5 m

HOURS MOVE HOURS DRILL OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES				
				Gold Grain Count	Au (ppb)	As (ppm)	Eq % Au Apx	% Py
		07		3	220	18	615	.1
		08			<5	<2		
33								

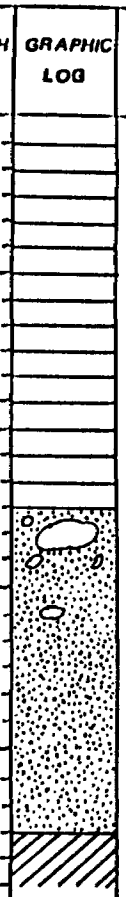
DATE Feb 6/89 HOLE No. H89-13 GEOLOGIST DF/TG DRILLER WG

HOLE LOCATION 500m at N44°E from H89-12

BIT No. 70252 FOOTAGE ON BIT (31.5 + 14.5) 46m

HOURS MOVE HOURS DRILL OTHER

Move drill 4:15-4:30 PM. Drill hole 13 from 4:30-5:40 PM



SAMPLE No.	DESCRIPTIVE LOG	Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% Ag
	0-7.5 Lacustrine clay Brn clay from 0-2m, grading from brn to grey from 2-7.5m.					
ns	7.5-13.5 Sandy Gravel 80% intrusive & volc mafic pebs & 20% felsic pebs in f.g. to m.g. gy-grn 60% sand matrix. Mafic pebs 40% intrusive lt. to med. grn, 60% dk grn volc (frequent rdd). Occ. small dk. mafic cob. Dk grn foliated mafic bldr containing sulphides & some qtz. veining from 7.75-8.25m. Below bldr, clast size ↑ (1-1.5cm) Lt. grn mafic cob at 9.5m. Matrix ↑ to ~80%, pebs become ~50% rdd from 13-13.5m.					
01*						
02*	13.5 Bedrock Highly foliated dk grn mafic rock w minor qtz veining & no sulphides present. EOH at 14.5m.					
03		4	350	248	202	5
04	* sample discarded ns - no sample taken	2	230	166	298	5
05			<5	<2		

DATE Feb. 7, 1989 HOLE No. H89-14 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N41°E from H89-13

BIT No. CB70252 FOOTAGE ON BIT

HOURS MOVE HOURS DRILL 2½ hours OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% Py
			0-1m Organics					
			1-12.1m Clay -beige turns grey at 2m -minor layers of fine sand and pebbles.					
3								
			12.1-17.5m Gravel 70% fine-med. sand 25% pebbles -clasts 40% int.-maf. volc. 20% matics (other) 20% granitoids 5-10% exotics -in places 2% qtz (creamy-white)					
6								
9								
12			-clasts subrounded					
		01	17.5-18.9m Coarse Sand					
		02	18.9-19.9m Gravel - same as above					
15		03	@19.5 m sandy layer					
		04	19.9-23.8m Till 70% semi-hard gritty clayballs (green-grey)	7	490	295	918	5
18		n/s						
		05	10% pebbles 15% fine sand + silt	6	190	9	235	1
		06		1	875	103	153	1
21		07	-clasts 70% int-matic volc. 25% intrusives mainly gran. 5% exotics -clasts subangular	0	60	97	0	20
24		08	@21m more matic clasts + armd clasts		45	42		
			22-23.8 mainly silty clayballs and matic volc. clasts @22.5 95% clay					
27								

DATE _____ HOLE No. H89-14 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)		
			23.8-25.5m Bedrock Intermediate-Mafic Volcanic - med-dark green-grey, fine grained, weakly foliated, tr cubic py(≤3mm) mod soft. @24.6m 2% qtz veining n.v.s. EOH 25.5m. * samples not sent					

DATE Feb. 7, 1989 HOLE No. H89-15 GEOLOGIST M. Z. DRILLER W.G.

HOLE LOCATION 500m at N90°E from H89-14

BIT No. CB70255 FOOTAGE ON BIT 0+46m = 46m

HOURS MOVE ¼ hour HOURS DRILL 4 hours OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Fe(t) Au Ant	% Py
			0-1m Organics					
			1-13.5m Clay					
			-beige, turns grey at 3m					
3			-few pebble layers					
			13.5-18m Sand					
			-fine → coarse layering with pebbles					
6			18-30.5m Sand and Gravel					
			-layering of sand, coarse sand, gravel					
9			-pebbles 75% int.-mafic volc					
			20% granitoids					
			5% paleozoics					
12			-in places 2% qtz					
			30.5-30.8m boulder					
			-felsic-int. volc.					
			-med. pale green					
15			5% qtz veining					
			-no visible sulfides					
			30.8-40m Gravel					
			30-60% pebbles					
			70-40% fine-med. gr. sand					
18			-clasts 40% volc.					
			20% other mafics					
			15% gran.					
		* 01	10-15% meta-sed.					
21			5-10% paleozoics					
			-decrease in pebbles down hole					
		* 02	-in places 2% qtz veins					
24			40-40.8m Till?					
		* 03	40% silty grey clayballs					
			10% pebbles					
		* 04	40.8-41.2m Coarse Sand					
27			41.2-42m Clay					
			-grey, smooth.					
		n/a						
		* 05	42-42.5m Sand					
30								

DATE Feb 7,1 HOLE No. H89-15 GEOLOGIST M.Z DRILLER

HOLE LOCATION

BIT No. FOOTAGE ON BIT

HOURS MOVE HOURS DRILL OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Ag (ppm)	% py
		05 *	42.5-43.5 Gravel · same as above with sand layers.					
33		06 *	43.5-46 m Bedrock (Int. Volcanic) 10-15% contamination - med. grey-green · fine grained, moderately soft, no visible sulfides					
		07		1	85	198	48	9
36		08		2	100	222	95	5
		09	EOH 46m	2	92	150	94	1
39		10		2	130	74	102	1.5
		11		3	110	179	101	12
42		12		0	1340	242	0	7
		13			<5	<2		
45								
48								

DATE Feb. 7, 1989 HOLE No. H89-16 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N30°E from H89-15.

BIT No. CB702S5 FOOTAGE ON BIT 46 + 22.5m = 68.5m

HOURS MOVE ½ hour HOURS DRILL 1½ hours OTHER

DEPTH Metres	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grains	WAC Au ppb	WAC As ppm	Extd Au ppb	Zn ppm
			0-1.5m Organic					
			1.5-10.5m Clay - grey, smooth - few pebbles					
3			10.5-19.5m Sand - fine sand + silt					
6								
			19.5-20.5m Gravelly Sand 85% sand 15% pebbles - pebbles 75% int.-matic volc 20% granitoids 5% other					
9								
12			20.5-22.5m Bedrock (matic volcanic) - med. green-grey, very soft, mod. foliated 20.5-20m 15% calcite stringers					
15								
18			EOH 22.5m					
		01		18	1360	307	2086	10
21		02			<5	<2		
24								
27								
30								
33								

DATE Feb 7, 1989 HOLE No. H89-17 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N30°E from H89-16

BIT No. GB 70255 FOOTAGE ON BIT 68.5 + 47m =

HOURS MOVE 1/4 hour HOURS DRILL 2 1/2 hours OTHER

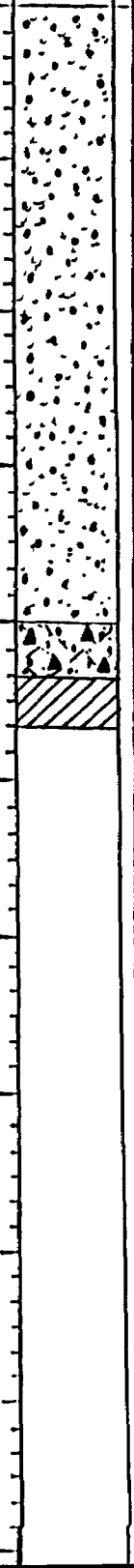
DEPTH METRES	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES
3			0-16.5m Clay - beige turns grey at 3.5m - has few pebble layers @12m gravel layer	
6			16.5-22m Fluvial - lacustrine sediments - clay, silt and fine sand grading and repeating	
9				
12			22.0-45m Gravel 50-60% pebbles 50-40% sand - clasts 40% int. volc. 30% mafics 15% granitoids 10% paleozoic & exotics @26.1m granitic cobble 43.2-45m sand layers	
15				
18				
21			45-46m Till 50-60% hg.cb 15% fine sand + silt 30-40% pebbles - clasts 70-80% mafic volc. 15-20% granitoids 5-10% other @45.2m mafic volc cobble.	
24		* 01		
27		* 02		
30		* 03		
33		* 04		
		* 05	46-47.0m Bedrock - med. green, fine grained, soft, mod. foliated, 5% qtz veining	
		* 06		
		* 07		
			EOH 47.0m	

DATE Feb. 17, 1989 HOLE No. H89-17 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION

BIT No. FOOTAGE ON BIT

HOURS MOVE HOURS DRILL OTHER



DEPTH (m.)	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Eq. Ag ppb	% Py
	* 08	* samples not sent.					
	* 09						
36	10		9	506	210	372	4
	11		9	260	147	627	2
39	12		0	37	132	0	3
	13		1	110	198	8	4
42	14		6	300	105	407	2
	n/s						
45	15		1	100	118	60	10
	16			<5	<2		
48							

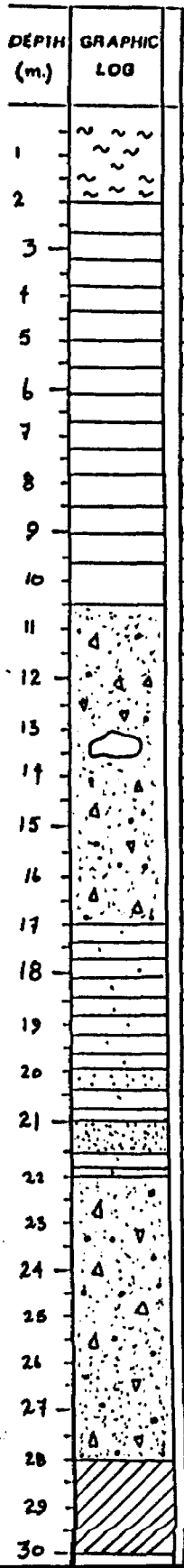
DATE Feb 8 1989 HOLE No. HB9-18 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N30°E from HB9-17.

BIT No. CB70265 FOOTAGE ON BIT 68.5+47+30m

HOURS MOVE ____ HOURS DRILL 2 hours OTHER ____

Start drilling 7:15am and finish drilling 9:45am.



DEPTH (m.)	SAMPLE No.	DESCRIPTIVE LOG
		0-2 Organics
		2-10.5 Lacustrine Sediments Grey, smooth, greasy feel. Clay contains less than 1% +10 mafic pebbles
		10.5-17 · Sandy Till ?/Gravel ? Unit contains 15-20% +10 clasts in a fine to medium sand-silt matrix. Clasts are subangular, pebble size, unsorted and composed of 20-25% mafic, 20-25% granitic, 10% limestone, 10% felsic, 10% bio-schist (sediment) and 10% exotics eg mon. qtz and hem. Unit is loosely packed & quick penetration, no hqcb. fr. 13 to 17m · slow penetration, cobble to boulder size clasts, majority of clasts (+10) are cuttings. fr. 13-18.6m · pale green intermediate boulder containing quartz carbonate stringers. No visible sulphides.
		17-22m · Lacustrine Sediments Grey, smooth, moderately packed, 'greasy' feel clay, <1% mafic pebbles. @ 20.5m · less than 30cm wide pebble seam fr. 21 to 21.5m · sand containing 20-25% +10 clasts · mostly granitic, coarse sand. fr. 21.5 to 22m · smooth clay.
		22-28m Sandy Till ? / Gravel ? Unit contains 20% +10 clasts in a medium sand-silt matrix. Slow penetration suggesting moderate compaction. Clasts are subangular, unsorted and are composed of 35% granitic 20% mafic, 20% pale green intermediate, 10% limestone, 10% bio-schist and 1% exotics · qtz, hematite. Uncut clasts are rounded. Unit appears to be crudely stratified. Downhole, increase in cobble-boulder size clasts, very slow penetration. @ 21m · mafic and gneissic cobbles. @ 24.6m · <1% hematite BIF clasts. <1% milky white quartz clasts.
		28m · Bedrock Medium green-grey color, moderate sericite and chlorite alteration. 30-55% of cuttings contain milky white barren quartz carb stringers. No visible sulphides. Intermediate Volcanic Rock.
01		
		30m · End of Hole.
02		

ANALYSES				
Gold Grain Count	Au (ppb)	As (ppm)	Est. % Au ppb	% Py
1	490	334	242	25
	<5	<2	-	

DATE Feb 8 1989 HOLE No. HB9-19 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N30°E from HB9-18

BIT No. CB70010 FOOTAGE ON BIT 0-31m

HOURS MOVE 20 minutes HOURS DRILL 1hr 25mins OTHER

Start Drilling 10:15am Trip out of hole 10 mins

Finish Drilling 11:39am

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG
1–19	~ ~ ~		0-1m Organics 1-19.5m Lacustrine Sediments Grey, soft, smooth, greasy clay. <1% mafic pebbles. @ 8½ m. pebble seam.
20–30		01	19.5-29.3m Sandy Till? / Gravel? Unit contains 10-15% +10 clasts in a medium-coarse sand-silt matrix. Clasts are pebble to cobble size, subangular, unsorted and are composed of 30-35% mafics, 25% granitic, 10% limestone, 10% biotite schist, 10% felsic and 10% exotics - quartz, hematite etc. Unit is loosely packed - quick penetration. No hgcb or armoured clasts. Downhole appears to be more compact - slower penetration. Unit maybe crudely stratified sand (coarse) + pebbles. Uncut #10 clasts by bit are well rounded (eg limestone clasts) indicating clasts to be from a distal source. @ 28.5m - very slow penetration. Majority of clasts are cuttings. Cuttings are dark green to medium green mafic to intermediate rocks.
		02	29.3m Bedrock Medium green-grey color, fine grained moderate chlorite and/sericite alteration. 10-15% of cuttings contain barren quartz-carbonate stringers. No visible sulphides.
		03	31m - End of Hole.
		04	
		05	

ANALYSES				
Gold Grade Count	Au (ppb)	As (ppm)	Sb (ppm)	% Py
9	250	165	629	5
2	360	211	248	1.5
3	2290	162	140	20
	<5	<2		

DATE Feb 8 1989 HOLE No. HB9-20 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N30° E from HB9-19

BIT No. CB70010 FOOTAGE ON BIT 0+31+31.1m

HOURS MOVE 20mins HOURS DRILL 1hr 45mins OTHER

Start Drilling 12:16pm. finish 2:00pm. trip out of hole 15mins.

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% Py
1	~ ~		0-2.5m Organics					
2	~ ~		2.5-12m- Lacustrine Sediments					
3			Brown to grey color, smooth, greasy, soft clay. < 1% mafic clasts.					
4			12-29.6m Sandy Till? / Gravel?					
5			Unit contains 15% +10 clasts in a medium sand-silt matrix. Clasts are pebble to cobble size, subangular, unsorted and composed of 40% mafics, 20-25% granitic, 10% felsic-sericitic (of these <1% contain pyrite) 10% biotite schist, 10% limestone - uncut clasts are well rounded. Unit is moderately packed - moderate penetration.					
6			fr. 15 to 15.5m. dark grey graphitic. argillaceous boulder. Less than 1% cuttings contain pyrite. Downhole slower penetration. more packed. 60% of +10 return are cuttings Clasts are cobble size. Downhole decrease in +10 clasts to 5-10%. Increase in mafic clasts to 50-55% at 19m. @ 20m pale green moderately chloritized intermediate cobble. From 21 to 21.5m Dioritic boulder - 30-35% plagioclase rest is chlorite. Increase in mafic clasts downhole to 55-60%. No visible sulphides. Very slow penetration. @ 22.5m 2-3% hgcb and clay adhesion. 1% of medium green intermediate volcanic rocks contain pyrite. From 25.7 to 26m pale green moderately sericitized and chloritized intermediate boulder. From 26 to 26.4m dark green strongly chloritized mafic boulder containing 10% quartz-carbonate stringers - no visible sulphides. @ 28.5m increase in granitic and limestone clasts to 10% @ 28.6m increase in lighter felsic clasts to 60-65%. Very slow penetration increase in cobbles and boulders					
7			29.6 Bedrock					
8			Dark green, fine grained, moderately chloritized. No visible sulphides. Mafic Volcanic Flow Rock.					
9			31.1m- End of Hole.					
10								
11								
12		01 *						
13		02 *						
14		03 *						
15		04 *						
16		05		2	92	157	105	5
17		06		9	246	137	447	7
18		07		7	180	110	412	6
19								
20		08		1	<24	108	170	2
21		09		0	77	<13	0	.1
22		10		9	1020	24	1550	.1
23		11			<5	<2		
24								
25								
26								
27								
28								
29								
30								

DATE Feb 8 1989 HOLE No. HB9-21 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N30°E from HB9-20 (at river).

BIT No. CB70010 FOOTAGE ON BIT 0+31+31.1+36

HOURS MOVE 15mins HOURS DRILL 1hr 50mins OTHER

Start Drilling 2:30 pm. Finish 4:20 pm Pull rods 10 mins.

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Fol-2 Au Anal	% Py
1	~ ~ ~ ~ ~		0-1.5m · Organics.					
2	·		1.5 Lacustrine Sediments Grey, soft, greasy clay. Less than 1% +10 matic pebbles.					
3	·							
4	·							
5	·							
6	·		15.5 Sandy Till? / Gravel? 15-20% +10 clasts a coarse to medium sand-silt matrix. Clasts are subangular, unsorted and composed of 35-40% matics, 25% granitic, 10% limestone, 10% biotite-schist sediments 5% felsic and 10% exotics - g/z, hem etc. Unit is moderately packed; moderate penetration No hqcb or clay adhesion. @ 19.5m - increase in matic clasts downhole to 45-50%. Slower penetration. Increase in +10 return to 20-25%. @ 21.5m · pale to medium green-grey intermediate cobble and grey argillitic cobble. No visible sulphides. @ 22.5 pale to medium green-grey intermediate cobble. @ 23 - granitic cobbles. @ 24.5 - dark green strongly chloritic matic boulder. @ 24.7 · pale green intermediate volcanic cobble. Becoming more packed downhole - slower penetration.					
7	·							
8	·							
9	·							
10	·							
11	·							
12	·							
13	·							
14	·							
15	·							
16	Δ Δ		24.8 Till 15% +10 clasts in a fine sand-silt-clay matrix. Clasts are angular, unsorted and composed of 40% matic, 20% granitic, 10% felsic, 10% limestone, 10% bio-schist and 10% exotics. @ 25.5m - 10% hqcb and clay adhesion. From 25.5 to 26m - 50% hqcb and fr. 26 to 28m - 10-30% hqcb.					
17	Δ							
18	Δ							
19	Δ							
20	Δ	01 *						
21	Δ		28 - 28.5m · grey, smooth, greasy, moderately packed clay. Lacustrine Sediments?					
22	Δ	02 *	28.5 - 29m · clay and coarse sand containing less than 10% +10 clasts.					
23	Δ	03 *	29 - 30.2m · grey, smooth, greasy, moderately packed clay.					
24	Δ							
25	Δ	04	30.2 to 31.5m · of the +10 return, 50% is clasts composed of 40% matic, 20% granitic, 10% felsic, 10% limestone, 10% bio-schist, 10% exotic. Rest of +10 return is hqcb. Unit appears to crudely stratified; clay + pebbles.	1	140	169	123	1.5
26	Δ							
27	Δ	05	@ 31.5m · grey, smooth, greasy, moderately packed clay. Slow penetration. Appears to be crudely stratified; clay + pebbles + sand.	18	3970	117	5249	2
28	Δ							
29		N.S.	31.8 downhole · soft greasy lacustrine? clay.					
30								

DATE _____ HOLE No. H89-21 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES				
				Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% py
31		07	34.5m. Bedrock Medium to dark green, fine grained, moderately chloritized, no visible sulphides or quartz veins. - Mafic Volcanic-	3	130	120	34	5
32								
33		NS						
34			36m. End of Hole.					
35		08			<5	<2		
36								

DATE Feb 9 1989 HOLE No. HB9-22 GEOLOGIST TG DRILLER WG

HOLE LOCATION 150m at N64°E from HB9-21

BIT No. CB70010 FOOTAGE ON BIT 0+31+31.1+36+16.5m

HOURS MOVE ____ HOURS DRILL 1hr 15mins. OTHER ____

Start Drilling 7:45am Finish 9:00am

Trip out · 10mins and change bit.

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Epi'd Au grs	% Py
1–10	~ ~ ~		0 Organics 1 Lacustrine Sediments Brown-grey, soft, greasy, smooth clay. Quick penetration. fr. 6 to 10m · No +10 return.					
10–11			10.25 · Sandy Till? / Gravel? 10-15% +10 return in a fine to medium sand-silt matrix. Clasts are pebble to cobble size, subangular, unsorted and composed of 40% mafic, 10% granitic, 20% intermediate volcanic rocks, 20% felsic, 10% limestone and 5% exotics - qtz etc. 35% of +10 return are cuttings and uncut clasts are well rounded. Quick penetration · loosely packed. No hycb.					
11–14	Δ Δ Δ	01	14 Bedrock Medium green color, moderate chloritization, fine grained. @ 14.3m downhole, 20% of cuttings contain milky-white quartz-carbonate. No visible sulphides. Intermediate to Mafic Volcanic Flow.	2	200	247	188	5
14–16		02			10	<2		
16			16.5m · End of Hole					
17								

DATE Feb 9 1989 HOLE No. H89-23 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N64°E from H89-22

BIT No. CB70102 FOOTAGE ON BIT 0 to 21.8m

HOURS MOVE 15 mins HOURS DRILL 1hr 25 mins OTHER

Start Drilling 9:35 am, Finish Drilling 11:00 am, trip out 10 mins.

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG
1	~ ~		0. Organics
2	~ ~		2. Lacustrine Sediments
3			Grey, soft, smooth, greasy clay. fr. 10.5 to 13.5m. no +10 return.
4			15. Sandy Till? / Gravel?
5			10-12% +10 clasts in a fine-medium sand silt matrix. Clasts are subangular, unsorted, and composed of 50% mafic, 20% granitic, 10% limestone, 5% felsic, 5% bio-schist, 10% exotic-qtz. Appears to be more downhole - slower penetration. 80% of +10 return is cuttings. clasts are pebble to cobble size. Cobbles are pale green to dk green color - mafic to intermediate volcanic flow. Increase in local lithology downhole? @18m - granitic cobble. No hgcb or clay adhesion. Increase in mafic clasts downhole to 65%. @19m - majority of cuttings (80%) is dark green mafic and pale green intermediate-felsic volcanic rock. @20m - dark grey argillitic and dark green mafic cobbles. Slow penetration. @20.25m - pale green, moderately sericitized intermediate volcanic cobbles
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17		01 *	2a3 Bedrock
18		02 *	Medium green-grey, fine grained and weakly sericitized. 30% of cuttings contain milky-white quartz-carbonate. No visible sulphides. Intermediate Volcanic Flow Rock.
19			
20		03	
21		04	21.8m - End of Hole
22			

* - Accidently Discarded.

ANALYSES				
Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% Cy
1	78	100	20	2
	<5	<2		

DATE Feb 9 1989 HOLE No. H89-24 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N61°E from H89-23

BIT No. CB70102 FOOTAGE ON BIT 0 + 21.8 + 36.7m

HOURS MOVE 10mins HOURS DRILL 2 3/4 hrs OTHER

Start Drilling 11:25am. Finish 2:10pm, trip out 20mins

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% Py
1	~ ~		0- Organics					
2	~ ~		3- Lacustrine Sediments					
3	~ ~		Grey, soft, greasy, smooth clay.					
4			13 Sandy Till					
5			10-15% +10 clasts in a fine to medium sand-silt matrix. Clasts are subrounded, unsorted and composed of 35-40% dark green mafic, 20% pale green mafic-intermediate 20% granitic, 10% limestone, 5% argillite, and 5% exotic - milky quartz, tr. BIF (hem) and tr. pyrite. Downhole, increase in cobble size clasts; slow penetration. @ 16m dark green mafic and granitic cobbles. 80% of +10 clasts are cuttings. Rest of clasts are well rounded pebbles. @ 18m - pale green color, moderately sericitized cobble. @ 19m <1% of clasts is grey argillitic clasts containing tr. pyrite. @ 19.25m - tr. massive pyrite clasts. No hgcb or armoured clasts. @ 19.5m - increase in local lithology to 50%. @ 19.75m - very slow penetration, more than 80% of clasts are cuttings. - cobble to boulder size clasts. @ 20.75m - pale green - yellow felsic? cobble and pink granitic cobble. @ 22.5m - pink granitic cobble and trace hem BIF. @ 24.5m pale green moderately sericitized felsic? cobble. @ 24.7m - argillitic cobble containing minor graphite. @ 25 - <10% of clasts are steel grey color, moderately magnetic iron formation. @ 25.6m - milky white granitic cobble @ 25.8m - dark green moderately chloritized mafic cobble. fr. 24-27m - increase in coarse sand - sample bucket fills up quickly. @ 27m - <10% clasts are bio-schist @ 30.5m - pale green intermediate-mafic cobble. @ 30.75m - pink granitic cobble @ 31m - grey argillitic cobble. @ 31.6 - dark green and pale green mafic to intermediate cobble and grey argillitic clasts. <1% hgcb and armoured clasts. @ 32m - 50% hgcb and armoured clasts, 50% of clasts are grey argillitic rocks and rest are dark green mafic rocks. @ 32.25m - pink granitic boulder. @ 32.6m - dark green mafic cobble. @ 32.6m - 50% hgcb, rest is dark green mafic clasts. fr. 32.6 to 32.8m - 50% hgcb, fr. 32.7m downhole <5% hgcb and increase in mafic clasts to 65-70% (50% = dk green mafic, 20% = pale green intermediate rock					
6								
7								
8								
9								
10								
11								
12								
13								
14								
15		01						
16								
17		02						
18								
19		03						
20		04		5	200	122	245	5
21								
22		05		5	420	72	441	2
23		06		1	87	63	55	2
24								
25		07		6	190	108	138	1
26		08		3	240	77	221	2
27								
28		09		6	280	93	468	1
29		10		3	56	107	86	1.5
30								

DATE _____ HOLE No. H89-24 GEOLOGIST _____ DRILLER ____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Excel Au ppb	% Py
31		10	@ 34.5m - 50% hgcb, rest = dk green mafic clasts.	3	56	107	86	1.5
32		11	35.2m Bedrock	1	130	106	2	1
33		N.S 12	Pale green color, fine grained, moderately sericitized, <10% +10 clasts contain milky white quartz-carbonate stringers. No visible sulphides. Intermediate Volcanic Flow Rock.	0	75	84	0	3
34		13		2	150	287	167	1
35		14		1	87	118	122	1.5
36		15	36.7m - End of Hole		<5	<2		
37								
38								

DATE Feb 9 1989 HOLE No. HB9-25 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N 64° E from HB9-24

BIT No. CB70009 FOOTAGE ON BIT 0+ 27.7m

HOURS MOVE ____ HOURS DRILL 1hr 20mins. OTHER ____

Start Drilling 3:00pm, Finish 4:20pm. Pull rods 10mins.

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG
1–9	~ ~ ~		0· Organics 1· Lacustrine Sediments, grey, soft greasy smooth clay 9· Sandy Till ? 10% clasts in a fine to medium sand-silt matrix. Loosely packed; quick penetration. Clasts are subangular, unsorted and are composed of 30-35% dark green mafic, 20% pale green intermediate, 20% granitic, 10% limestone, and 10% exotic· quartz, hematite etc. Uncut pebbles are rounded. No hgcb. @16.5m· yellow granitic cobble. @15m· dark grey argillitic cobble. @17m· pale green intermediate and bio-schist cobbles. @17m· slow penetration· 80-85% of +10 clasts are cutting ∴ boulder to cobble size clasts. @18m· 1% of pale green intermediate clasts contain pyrite. @19.5m· 1-2% hgcb and armoured clasts. @19.76m· 22% of +10 clasts is pyrite, 5% is milky white barren quartz. @20m· increase in mafic lithology downhole to 50%. @22.5m· pale green moderately Sericitized intermediate cobble. @24m· argillite and pale green intermediate volc. cobble. @25.5m· dark green mafic cobble.
9–16		01, 02	
16–18		03	25.6· Lacustrine Sediments Grey, smooth, greasy, soft clay. +10 return is large irregular masses of clay.
18–19			26.2 Bedrock
20		04	Dark green, chloritic, fine grained, contains 2-3% euhedral pyrite. @21.2m· 20% hgcb - fracture ?. 21.3m downhole· 5% milky white quartz· carbonate stringers. Mafic Volcanic Flow.
21–22		05	
23		06	27.7 End of Hole
24–25		07	
26		08	
27		09	
28			

ANALYSES				
Gold Grain Count	Au (ppb)	As (ppm)	Extd Au ppb	% Py
1	63	159	398	1
4	5360	109	429	1
1	39	141	20	2
2	42	105	36	1
3	210	140	233	10
	45	<2		

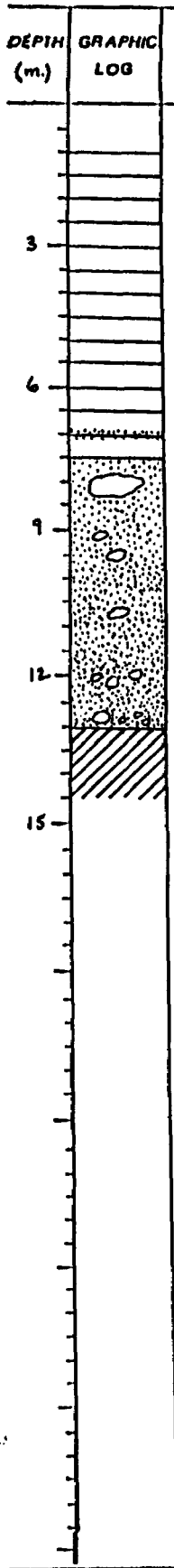
DATE Feb 9/89 HOLE No. H89-26 GEOLOGIST TG/DF DRILLER WG

HOLE LOCATION 500m at N64°E from H89-25

BIT No. 70009 FOOTAGE ON BIT 28m

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

start hole at 5:00pm - stop drilling, pull rods at 6:30pm. Continue Feb 10 from 7:30-9:45AM.



SAMPLE No.	DESCRIPTIVE LOG	Gold Grain Count	Au (ppb)	As (ppm)	Eg Au grains	% py
	0-1 Organic material					
	1-7.5 Lacustrine clay Brn, greasy smooth soft clay. Peb seam at 7m.					
	7.5-13 Sandy Gravel From 7.5-7.8m, 40% pale grn mafic intrusives, 20% mafic volcs, 20% felsic ↑ intermediate, 20% lst in coarse grn-gy sand matrix of ~50%. Lt grn f.g. mafic bldr from 7.8-8.1m. Below bldr, ↑10 return ↓ to ~20%, matrix ↑ to ~80% ↑ becomes f.g. to m.g. Granite cob at 9.1m. Lt grn intrusive cob at 9.5m. At 10.5m, ↑10 ↑ to ~50%, peb composition becomes 70% mafic, 25% felsic, 5% lst. 90% ↑ pebs are ang. - remaining 10% are subrdd dk mafic volcs. Magnetite xtals ↑ occ. dk magnetic peb present to bedrock. Dk mafic cob at 10.7m. From 11-12m, mafic pebs ↑ to ~80%, peb size ↑ slightly. Felsic cobs from 12-12.2m. 1g py xtal at 12.5m. Several good-sized mt xtls at this depth (just above bedrock). Granite cob, 1g rdd chert-y peb at 12.75m. ↑10 return ↓ 20%, grn-gy f.g. sand matrix ↑ to 80%.					
01		1	100	179	17	3
02		1	190	130	5	1
03		1	100	91	2	2
04		0	110	348	9	50
05			<5	<2		
	13 Bedrock Lt. to med. grn mafic intrusive with moderate foliation, 5% qtz ± trace py present. Bedrock moderately magnetic. EOH at 14.5m.					

* sample discarded
ns - no sample taken

DATE Feb 10/89 HOLE No. H89-27 GEOLOGIST DF/MZ DRILLER WG

HOLE LOCATION 200m at N64°E and 300m at N154°E from H89-24

BIT No. 70259 FOOTAGE ON BIT 47.5m

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

Repairs to drill 9:45-10:45AM. Drill hole 27 from 11AM-2:15PM

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Eg't Au ppb	% py
			0-4 Organic material					
			4-20 Lacustrine clay Greasy gy, smooth w minor silt. Peb seam, ang. to subrdd, hl at 9m. Occ. pebs from 14-15m.					
3								
			20-38 Sandy Gravel 50% +10 return of ang, hl pebs 40% felsic to intermediate, 60% intrusive & volc. mafic. 50% f.g to m.g. gy sand matrix. Lt. gy felsic cob at 24m. Sand ↑ to 70%, ↓ to 30% from 24.5-27m. 10cm horizon of compact qtz & chert pebs at 27m. Lt grn intrusive mafic cob at 28m. Pink granite cob at 28.5m. Yellow qtz cob at 29m. Dk mafic cob at 31.5m. Granite cob at 33m. A few py-bearing pebs around 34m. Dk gy mafic bldr cut w qtz veins at 35-36m. Dk grn mafic cob & granite cobs at 37m. From 36-38m, mafics ↑ to 90%.					
6								
9								
12								
			38-43 Clay till Abundant (80%) +10 return of hgeb's & pebs of hl composition: 70% volc. & intrusive mafics, 30% felsic to intermediate. Intrusive mafics usually lt. to med. grn, ang to subang. Volc pebs smaller, darker, subrdd to rdd. Many volc pebs armoured w gy clay. Hgeb's comprise 50% of +10 return at the top of till section, but ↑ to 75% downhole. Avg. size of hgeb's ↑ from ~.5cm to 2cm by 41m. Lt gy-grn (sed?) bldr w trace cubic py at 39m. Lt grn intrusive mafic cob at 41m. % hgeb's ↓ to 10% from 42-43m.					
15								
18								
21		01 *	43-46 Sandy Gravel 50% +10 return of ang. to subang. hl pebs, 60-70% mafic, 30-40% felsic. Mafic pebs 50% lt. to med. grn intrusive (ang to subang) & 50% smaller, dark subrdd to rdd volc. Several dk mafic cobs at 44m.					
		02 *						
24		03 *						
		04 *	46 Bedrock Highly foliated dk grn mafic rock containing pink to purple qtz veins (some hematite concentrations). Finely disseminated sulphide in both host & qtz veins. EOH at 47.5m					
27		05 *						
		06 *						
30								

DATE Feb 10/89 HOLE No. H89-27 GEOLOGIST DF/MZ DRILLER WG

HOLE LOCATION

BIT No. 70259 FOOTAGE ON BIT 47.5m

HOURS MOVE HOURS DRILL OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES				
				Gold Grain Count	Au (ppb)	As (ppm)	Au oz/T	% Py
		07 *	* sample discarded					
		08	ns - no sample taken	1	42	152	9	5
33		09		3	81	234	39	5
		10		4	210	224	68	2
36		11		2	79	174	33	2
		12		0	75	137	0	2
39		13		1	100	226	18	6
		14		1	627	206	851	3
		15		4	1760	362	152	5
42		16		0	47	752	0	20
		17		0	130	683	0	60
45		18			<5	<2		
48								

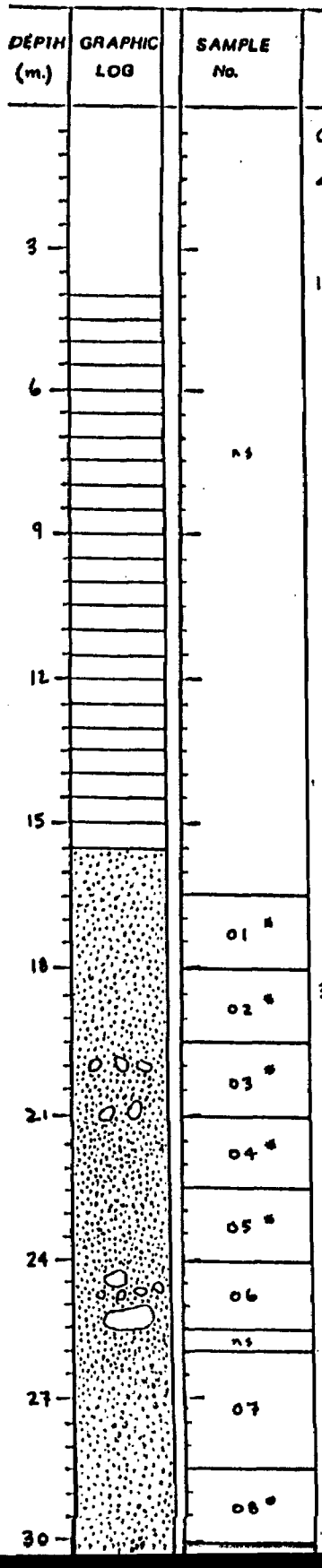
DATE Feb 10/89 HOLE No. H89-28 GEOLOGIST DF/MZ DRILLER WG

HOLE LOCATION 200m at N 69° E from H89-24

BIT No. 70259 FOOTAGE ON BIT (47.5 + 43.5) 91 m

HOURS MOVE HOURS DRILL OTHER

Move drill from hole 27 (2:15-2:45 PM) Drill hole 28 from 2:45-6:45 PM



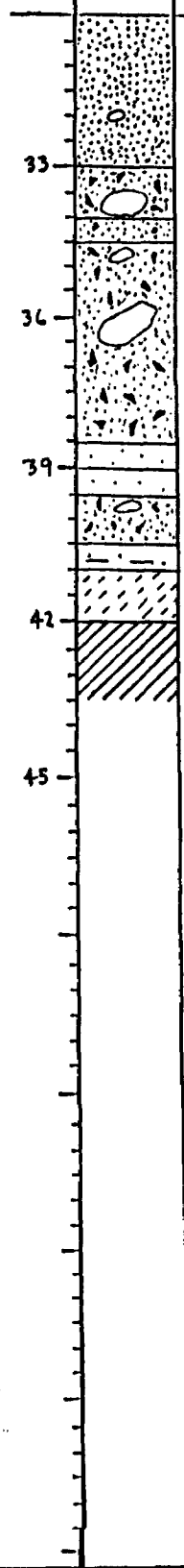
DEPTH (m.)	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Eq. Au ppb	% Py
	0-4 Organic material					
	4-15.5 Lacustrine clay Greasy gy clay ± minor silt. Seam of sandy hl gravel at 11m.					
	15.5-33 Sandy Gravel 50% t10 return of poorly-sorted hl pebs in f.g. to m.g. gy-brn sand matrix. Mafic pebs comprise 75% of t10 return, and are divided into 60% lt to med grn intrusive clasts & 40% dk gy to blk volc clasts, which are generally smaller and more rdd. 20% of t10 return is made up by felsic (largely granite) and intermediate clasts, with the final 5% represented by sed pebs. lt lrt ± some chert. Granite, intermediate and med. grn mafic cobs at 20m. Lg hematized chert cob, granite cob. occ. rdd sed peb at 21m. Lg granite cob at 24.5m. Several dk mafic cobs at 24.7m. From 25-25.5m, t10 ↓ to 30-40%, peb size ↓, gravel becomes more compact, penetration slows. Percentage of rdd to subrdd pebs ↑ to 40%. Med dk grn bldr ± qtz veining at 25.3m. Lt gy felsic bldr at 25.5m. From 28-33m, sand matrix becomes vfg to fg gy-grn, ↑ to 70%. Clasts poorly-sorted & mostly subang to subrdd. White qtz cob at 32m. Dodecahedral mt xtls common.					
	33-41.2 Clay Till Abundant t10 return of 85% hgeb's & predom. dk mafic volc, subrdd, many armoured ± gy clay. Lt grn intrusive mafic bldr from 33.5-34m. Gravel seam from 34-34.5 containing few hgeb's-dom dk mafic subang to subrdd clasts in 30% fg to mg gy sand matrix. From 34.5-35.5 v. low t10 return of predom. dk mafic clasts & ~10% hgeb's, increasing to 75% by 35.5m. Lg dk mafic cob at 34.75m. Lt to med grn mafic bldr ± minor qtz veining & finely dissem. sulphides, grading to dk gy-grn ± py cubes from 36-36.5m. Silty gy lac clay seam from 39.5-39.5m. Intermediate cob at 39.75m. Gy lac. clay seam from 40.5-41m. Hgeb's ± lg dk mafic pebs just above bedrock-no armouring.	0	23	88	0	1.5
		1	70	131	261	3

DATE Feb 10 /89 HOLE No. H 89-28 GEOLOGIST DF/mz DRILLER WG

HOLE LOCATION

BIT No. 70259 FOOTAGE ON BIT 91 m

HOURS MOVE HOURS DRILL OTHER



SAMPLE No.	DESCRIPTIVE LOG	Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% PY
	ANALYSES					
09	41.2 - 42 Regolith Brilliant dk grn soft regolithic rock, grading to lighter grn, soft greasy clay balls and gy clay balls containing small dk mafic rock fragments.	2	100	126	18	4
10		2	95	124	51	5
11		0	47	296	0	.5
12	42 Bedrock Med. grn-gy mafic rock moderately foliated, w small qtz veins and finely disseminated sulphides. Rock chips show moderate response to magnet. EOH at 43.5 m.	0	72	410	0	4
ns						
13		1	140	96	4	5
14	* sample discarded ns - no sample taken	0	200	162	0	6
ns						
15			<5	42		

DATE Feb. 10, 1989 HOLE No. H89-29 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N100°E from H89-26.

BIT No. CB70259 FOOTAGE ON BIT 91+17.5 = 108.5m

HOURS MOVE ½ hour HOURS DRILL 2 hours OTHER

1 hour repairing water pump

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Eff-Z Au ppb	% Py
			0 - 0.2m No Return					
			0.2 - 0.8m Organics					
3			0.8 - 7.0m Clay - beige turns grey at 1.8m					
			6.0 - 7.0m Silty Sand - fine sand, silt, few pebbles					
6			7.0 - 15m Sandy Till?					
		01	50% fine-med. sand	3	140	168	85	2
9			20-30% silt 15-25% pebbles					
		02	- clasts 30% int. volc 30% mafics 20% granitoids 10% other	2	160	272	3	4
12		03	@10.3m int. volc cobble	6	160	247	40	5
15		04	- few milky white qtz-carb. clasts	7	584	159	644	15
		05	@13.6m meta-sed cobble		<5	<2		
18			@13.7m granite cobble					
			N.B. very little return pump losing pressure					
			15 - 15.6m Till 40% sand 30% silt 15% pebbles 5% soft gritty clayballs (grey)					
			- clasts 40% int. volc. 40% mafics 10% meta-sed. 10% other.					

DATE _____ HOLE No. H89-29 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)		
			15.6 - 17.5m Bedrock Intermediate Volcanic - medium green, fine grained, weakly foliated to massive, trace disseminated pyrite, moderately soft.					
			EOH 17.5m					

DATE Feb. 10, 1989 HOLE No. H89-30 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N 100°E from H89-29

BIT No. CB 70260 FOOTAGE ON BIT 0 + 39.4m = 39.4m

HOURS MOVE ¼ hour HOURS DRILL 3½ hours OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)		
			0-2 m Organics					
			2-6 m Clay - grey					
3			6-19.3 m Fluvial-lacustrine Sediments - coarse layering of clay, silt, fine sand and pebbles					
6			19.3-28m Sandy Till? 40% silt 25% sand 25% pebbles - clasts 30% intermediate volcanic 40% mafics intrusives + possibly volcanic 15% granitoids 10% carbonates 10% other exotics					
9								
12								
15		* 01	@ 22.4m mafic intrusive cobble (non-magnetic)					
18			@ 22.7m mafic intrusive cobble (same) @ 24m " " " "					
21		* 02	@ 25m int-fel. volc. cobble					
		* 03	@ 25.6m int. volc. cobble					
		* 04	@ 25.7m granitoid cobble					
24		* 05	@ 27.9m mafic intrusive cobble with qtz-veining					
		* 06	@ 28m int. volc cobble - locally milky-white qtz veining.					
27		* 07	28-29.5m Fine Sand + Silt - few pebbles and cobble					
		* 08	- drilling slow					
30		09		2	310	72	41	1

DATE _____ HOLE No. H89-30 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% Py
		10	29.5 - 34.3m Sandy-silty Till?	3	50	70	11	1
			50% silt					
		11	40% fine sand	0	67	86	0	1
33			10% pebbles					
		12	-clasts 35% int. volc	1	120	155	531	25
			40% mafic intrusive					
		13	10% granitoids	2	180	132	189	3.5
36			5% meta-sed.					
		14	5% exotics	1	24	140	294	3
			@32m int. volc. cobble					
39		15	34.3 - 36.4m Till		<5	<2		
			20-40% hgcb (grey)					
			30-40% sand					
			15-20% silt					
41			10-15% pebble					
			-clasts 40% int. volc.					
			40% mafics					
			10% gran.					
			5% other.					
			36.4 - 37.0m ~~Fine Sand + Silt~~					
			- slow drilling					
			- few pebbles & cobbles					
			-clasts 70% - 80% int-maf. volc.					
			10% gran.					
			10% others.					
			37.0 - 37.5m Sandy-silty Till?					
			-same as before					
			37.5 - 37.6m Till					
			-same as before					
			37.6 - 39.4m Bedrock (Mafic-Int. Volcanic but looks intrusive downhole)					
			- med. - dark green					
			- fine - med. grained					
			- massive					
			- mod. soft (downhole harder)					
			- mod. pervasive chlorite alt. (downhole less)					
			EOH 39.4m *samples not sent					

DATE Feb. 10, 1989 HOLE No. H89-31 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N100°E from H89-30.

BIT No. CR 702660 FOOTAGE ON BIT 39.4 + 46.5m = 85.9 m

HOURS MOVE ½ hour HOURS DRILL 2 hours OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)
	~~		0-1m Organics			
			1-24.5m. Clay - grey - few pebble + silt layers			
3			24.5-25.4m Silty-sandy Till? 30% silt 40% sand 20% pebbles - clasts 40% mafic 30% gran 10% carb @25.4m mafic cobble			
6						
9			25.4-38m Clay - grey, greasy-feel			
12			38-38.3m Fine Sand + Silt 60% silt 35% sand 5% pebbles + cobbles			
15			38.3-38.5 Boulder (Int. Intrusive?) - light green, fine grained, massive, mod. hard, granular texture @38.5 small gravel seam			
18						
21			38.5-39.0m Boulder - same as above			
			39.0-44.7m Silty-Sandy Till? 40% silt 30% sand 20% pebbles - clasts 40% mafics 25% int. volc. 15% gran. 10% carb. 10% other exotics			
24						
27						
30						

DATE _____ HOLE No. H89-31 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Au Fire Assay ppb	% Py
			44.7-45.7m Till					
			25% silt					
			25% sand					
33			25% hgcb (green-grey)					
			25% pebbles					
			- clasts 40% mafic intrusive					
			40% int. volcanic					
36			10% granitoids					
			10% other.					
			45.7-46.5m Bedrock:					
		* 01	- dark grey, very soft,					
39		* 02	strong biotite alt.					
		* 03	@ 46.1m (Intermediate volc)					
		04	- med. green, mod soft,	1	88	191	138	15
42			no biotite, calcite					
		05	veining.	0	42	246	0	15
			EOH 46.5m					
		06		3	3150	176	2256	5
45		07	* samples not sent.	0	120	101	0	2
		08						
		09			<5	<2		

DATE Feb 12, 1989 HOLE No. H89-32 GEOLOGIST M. Z. DRILLER W.G.

HOLE LOCATION 200m at N240°E from H89-31.

BIT No. CB 70260 FOOTAGE ON BIT 85.9 m+

HOURS MOVE ¼ hour HOURS DRILL 1¼ hours OTHER

1 rod, 1 sub + 1 bit lost in hole another rod broken but recovered

hole abandoned in what could be bedrock

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au ppb	% Py
			0-1.5m Organics					
			1.5-27 m clay - grey - fine sand, silt and pebble layers @24m goopy clay					
			27m-30.5m Silty-Sandy Till? 25-40% silt 30% fine sand 25-40% pebbles -clasts 35% mafics 35% int. volc 15% granitoids 10% carb. 5% other exotics - silt + fine sand layers					
			30.5-31m Bedrock? (Intermediate volcanic) - dark green, fine grained weakly foliated-massive, mod. hard.					
			Hole abandoned at 31m					
			* Samples discarded. See drill log for hole H89-32A					
27		01 *						
30		02 *						

DATE_____ HOLE No. H89-32 GEOLOGIST_____ DRILLER ___

HOLE LOCATION _____

BIT No._____ FOOTAGE ON BIT _____

HOURS MOVE_____ HOURS DRILL_____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES				
				Gold Grain Count	Au (ppb)	As (ppm)	Extra Au ppb	% Py
		?						
		03			<5	<2		
33								

DATE Feb. 12, 1989 HOLE No. H89-32A GEOLOGIST M. Z. DRILLER W.G

HOLE LOCATION Three feet from H89-32

BIT No. CB70258 FOOTAGE ON BIT 0 + 30.6m = 30.6m

HOURS MOVE _____ HOURS DRILL 2 3/4 hours OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Cold Au ppb	% Py
			0 - 1.5 m Organics					
			1.5 - 27m Clay - same as in previous hole					
3			27 - 29.5m Silty-Sandy Till? - same as in previous hole					
6			29.5 - 30.6m Bedrock (Intermediate Volcanic) - dark green, fine grained, weakly foliated to massive, mod. hard					
9			@ 29.9m 5-10% qtz-carb veining.					
12			EOH 30.6m					
15								
18								
21								
24								
27		01		0	190	178	0	7
		02		0	26	246	0	3
30		03			45	42		

DATE Feb. 12, 1989 HOLE No. H89-33 GEOLOGIST M. Z. DRILLER W.G.

HOLE LOCATION 500m at N 100° E from H89-32.

BIT No. CR 70258 FOOTAGE ON BIT 30.6 + 26.7 m = 57.3

HOURS MOVE ¼ hour HOURS DRILL 1 ¼ hours OTHER

½ hour cleaning tanks

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Sb Au ppb	% Py
			0-1.5m Organics					
			1.5-23m Clay - grey - silt + pebble layers @22m goopy clay					
			23-25.2m Silty-Sandy Till? 30% silt 40% sand 25% pebbles - clasts 40% int. volc. 25% mafics 15-20% granitoids 10% meta-sed. 5% other					
			25.2-26.7m Bedrock (Intermediate-Felsic Volcanic) - light grey, fine grained, weakly fol., moderately soft.					
			EOH 26.7m					
24		01		2	150	262	90	10
		02			<5	<2		
27								

DATE Feb. 12, 1989 HOLE No. H89-34 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N34°E from H89-33

BIT No. CB70258 FOOTAGE ON BIT 57.3+17.6m=74.9m

HOURS MOVE ½ hour HOURS DRILL 1½ hours OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Est'd Au g/t	% Ag
			0-0.5m No Return					
			0.5-14.8m Clay					
3			-beige, turns grey at 3m					
			-silt, fine sand and pebble layers					
			14.8-16.3m Silty-Sandy Till?					
6			30% silt					
			40% sand					
			30% pebbles					
9			-silty-sandy sections					
			-clasts 60% int-mafic volc					
			15% felsic-int. volc or meta-sed.					
12			15% granitoid					
			5% carb.					
			5% other exotics					
15			16.3-17.6m Bedrock (Mafic Intrusive)					
		01	-dark grey, fine grained, massive, intrusive appearance, <1% disseminated py	7	130	218	413	8
		02			<5	<2		
			EOH 17.6m					

DATE Feb 13 1989 HOLE No. H89-35 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N34°E from H89-34.

BIT No. CB70009 FOOTAGE ON BIT 0 to 27.7 to 24m

HOURS MOVE ____ HOURS DRILL 1 hr 45 mins OTHER ____

Fix alternator and replace belt from 8:30 am to 11:45 am Start drilling 12:00 pm and finish 1:45 pm Pull rods - 10 mins

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Sb % Au ppb	% Py
1	~ ~ ~		0. Organics					
2	~ ~ ~		2. Lacustrine Sediments					
3			Grey, soft, smooth, greasy feel clay and silt. <1% mafic pebbles. fr. 7.5 to 11 m - no +10 return.					
4								
5								
6			11 Sandy Till					
7			15-20% +10 clasts in a fine to medium sand-silt matrix. Clasts are subangular unsorted and composed of 20-25% pale green intermediate volcanic rock, 20% dark green mafic volcanic rock, 20% dark grey argillaceous rock, 20% granitic, 10% limestone and 10% exotic. Very slow penetration, 80% return are cuttings: pebble to boulder size clasts. @ 12m. pale green intermediate cobble. No visible sulphides.					
8								
9								
10								
11								
12		01	@ 15m. pink granitic cobble. @ 16.5m. dark green mafic cobble. @ 18.5m. medium green-grey intermediate cobble containing trace disseminated pyrite. Downhole increase in local lithology - pale green-grey clasts to 40%. No hgcb. From 19 to 19.5m - pale green-grey, fine grained, no acid reaction, minor quartz carb stringers, no visible sulphides - Intermediate Volcanic Boulder. From 19.75 to 20.5m - pale green-grey color, fine grained, moderately sericitized - Intermediate Volcanic Boulder - no visible sulphides, trace quartz-carbonate stringers. @ 21.5 - Diabase / Dioritic cobble fr. 21.5 to 22.5 - pale green intermediate volcanic and dark green mafic cobble and pink granitic cobble. @ 22.5m - granitic cobbles.	5	98	250	82	4
13								
14		02		2	28	191	18	4
15								
16		03		1	47	196	1	25
17		04		1	150	198	31	20
18		05		0	470	283	0	20
19								
20		N.S.						
21								
22		07		2	26,800	120	200	5
23		08			<5	<2		
24			22.5 Bedrock					
25			Pale green-grey weakly sericitic intermediate volcanic rock. containing trace disseminated pyrite.					
			24m. End of Hole					

DATE Feb 13 1989 HOLE No. H89-36 GEOLOGIST TG DRILLER WG

HOLE LOCATION 500m at N50°E from H89-35

BIT No. CB70009 FOOTAGE ON BIT 0 + 27.1 + 24 + 61.5m

HOURS MOVE 15mins HOURS DRILL 4 hours OTHER

Start Drilling 2:15pm and finish 6:15pm Pull rods 20 minutes.

Hole abandoned at 61.5m due wheels falling off bit.

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Fire Assay Au ppb	% Py
1	~ ~ ~		0 · Organics					
2			1 Lacustrine Sediments					
3			Brown · grey, smooth, soft, greasy clay. <1% clasts. From 3m downhole, clay changes to a grey color.					
4								
5			13.5 Sandy Till?					
6			15-20% of +10 clasts are in a fine to medium sand · silt matrix. Clasts are subangular, unsorted and composed of 30-35% dark green mafic volcanic, 20% intermediate volcanic, 20% granitic, 10% bro · schist grey meta-sedimentary clasts, 10% limestone, 10% exotics - qtz, hem etc. Uncut pebbles are well rounded. Unit is moderately packed - slow penetration. @15m · pale green intermediate cobble. @19m - <1% of +10 return is pyrite clasts. Downhole, increase in mafics to 40% and decrease in +10 return to 10%. Unit appears to be crudely stratified. @22m · trace pyrite clasts. From 22m downhole - very slow penetration, 95% of return is cuttings. fr. 22 to 22.5m - pale green, moderately sericitized intermediate to felsic boulder · very hard and contains trace disseminated pyrite. @24m - mafic cobble containing tr. pyrite. fr. 24.2 - 24.3m · grey, moderately hard, greasy feel clay. Return is in irregular masses. @24.3m · granitic cobble. @24.5m · pale green, moderately sericitic intermediate cobble and pink granitic cobble. @25.5m · Dioritic Cobble containing trace pyrite.					
7								
8								
9								
10								
11								
12								
13								
14		*						
15		01						
16								
17		* 02						
18								
19		* 03						
20		* 04						
21								
22		* 05						
23		N.S.						
24		* 06						
25								
26		* 07						
27		08						
28		09						
29		10						
30								

26.5 Till (Stratified)

90% hgcb and rest of +10 return is dark green mafic volcanic rock with minor granitic clasts. Matrix is a fine sand · silt containing grey clay. fr. 27 to 27.25 - medium green colour, moderately chloritized mafic volcanic boulder. Unit is moderately compact · slow penetration. fr. 27 to 30m - 80 to 85% hgcb, rest is dark green moderately chloritized mafic volcanic 2-3% limestone, 2% granitic and 5% pale green intermediate volcanic. @30.5m · med green-grey moderately chloritized cobble and pink granitic cobble. No visible sulphides. 50% hgcb

Gold Grain Count	Au (ppb)	As (ppm)	Fire Assay Au ppb	% Py
2	370	113	864	5
2	190	167	73	.5
3	160	204	56	3

DATE _____ HOLE No. H89-36 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Ed'l Au ppb	% Py
31		11	@31m - medium to dark green moderately chloritized mafic cobble. @31.5m - pale green moderately sericitized cobble. Decrease in hgcb to 3-5%. Very slow penetration. @32 decrease in pale green intermediate volcanic and granitic clasts to 5-10%. From 32.75 to 33m - granitic boulder. From 33 to 33.25 dark green moderately chloritized mafic volcanic boulder. No visible sulphides. @ 34m - 70-80% hgcb. From 34.25 to 34.5m - grey smooth greasy clay. Return is in large irregular masses. From 34.5 to 34.75 - dark green moderately chloritized mafic boulder. From 34.75 to 35m - 90% hgcb, rest is dark green mafic, minor granitic and grey bio-schist. Unit appears to be crudely stratified - clay + pebbles + silt. @35m - decrease in hgcb downhole to 60-70% rest = fine cuttings of dark green mafic, pale green intermediate volcanic and pink granitic cobble. 35.25-35.5 - dk green mafic volc boulder. fr. 37.25 to 37.5m - grey, smooth, large irregular masses of clay. @37.5m - dark green moderately chloritized mafic cobble. @38m - dk green, moderately chloritized mafic cobble. fr. 42 - 42.25m - grey smooth greasy clay. @42.25m - 15-20% clasts in a fine sand-silt-clay matrix - 15% hgcb. Clasts are angular and composed of 50% mafic volc, 20% pale green intermediate volc, 10% limestone, 10% granitic	1	79	124	278	2
32		12		0	430	131	0	15
33								
34		13		0	74	150	0	.5
35		14		5	180	122	752	4
36								
37		15		4	130	155	56	2
38		16		3	220	102	61	1
39								
40		17		2	90	119	53	3
41		18		6	130	85	141	2
42								
43		19		6	553	97	123	2
44		20		3	87	70	37	1
45								
46		21		0	<5	<2	0	1
47			46.5m - Lacustrine Sediments Grey, smooth, 'greasy' feel clay. Clay is moderately packed and contains <1% mafic pebbles. 49.5m - Sand Medium grained and contains 10% +10 clasts that are rounded, sorted and composed mostly of mafic and granitic clasts. 52.5m - Gravel 20-25% clasts in a medium sand matrix. Clasts are angular (cut by bit) and unsorted. Clasts are 0% mafic and 40% granitic. 54m - Sand Medium grained, <5% +10 clasts, quick penetration, loosely packed.					
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

DATE_____ HOLE No. H89-36 GEOLOGIST_____ DRILLER ___

HOLE LOCATION _____

BIT No._____ FOOTAGE ON BIT _____

HOURS MOVE_____ HOURS DRILL_____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)		
61			60m- Gravel					
62			15-20% +10 clasts in a medium to coarse Sand-silt matrix. Clasts are composed of 30-35% mafic, 20% granitic, 20% bio-schist 10% limestone and 10% exotics - qtz.					
63			@ 61m - granitic cobble.					
			@ 61.5m - Hole Abandoned - wheels and buttons falling off bit.					
			# Samples not sent in for analysis					

DATE Feb 14, 1989 HOLE No. HB9-37 GEOLOGIST M.Z DRILLER WG

HOLE LOCATION 500m at N50°E from HB9-36

BIT No. CB 70262 FOOTAGE ON BIT 0 + 27.5m = 27.5m

HOURS MOVE ¼ hour HOURS DRILL 1¼ hours OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Est Au ppb	% Py
			0-1m Organics					
			1-18.5m Clay - grey - silt, fine sand and pebble layers @ 12m goopy clay					
			18.5-25m Silty-Sandy Till? 25% silt 40% sand 30-40% pebbles - clasts 40% mafics 30% int. volcanic 15% granitoid 10% carb + others @ 22m int. volc cobble @ 23m " " " @ 24.5m diorite cobble					
			25-26m Pebbly Sand 90% sand 10% pebbles - pebbles 35% int. volc 35% mafics 25% granitoids 10% carb.					
21		01		1	63	233	20	1.5
		02		2	<5	154	105	2
			26-26.2 Silty-Sandy Till? - same as before					
		03		1	29	152	3	2
24		04	26.2-27.5m Bedrock (Intermediate Volcanic!) - medium green, fine grained, massive, moderately soft, 5% calcite veining		250	120	200	1
		* 05						
27		06			<5	<2		
			EOH 27.5m * sample not sent					
30								

DATE Feb. 14, 1989 HOLE No. H89-38 GEOLOGIST M.Z. DRILLER W.G.

HOLE LOCATION 500m at N50°E from H89-37.

BIT No. CB 70262 FOOTAGE ON BIT 27.5+ 51.5m = 79.0 m

HOURS MOVE ¼ hour HOURS DRILL 5¾ hours OTHER

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES: Gold Grain Count	Au (ppb)	As (ppm)	Extd Au ppb	% FY
			0-1.5 m Organics					
			1.5-13.4m Clay - grey - silt, fine sand and pebble layers @12m clay turns goopy					
3								
6								
			13.4-16.7m Silty-Sandy Till? 30% silt 50% sand 15% pebbles -clasts 30% int. volc 35% mafics 25% granitoids 10% carb + exotics					
9								
12								
			16.7-17m Boulder - light green with 10% med. green chips, fine grained, mod. hard, massive - felsic-int. volc.					
15		* 01						
		* 02 n/s						
18		* 03	17m-19.3 Silty-Sandy Till? - same as before.					
		04	19.3-30.5m Till 25% silt 30% hgcb (grey) 20% sand 15% pebbles -clasts 70% int. volc 15% mafics 10% gran., carb + others	1	100	149	143	1
21		05		1	150	194	16	1
		06		3	130	168	103	2
24		07		4	36	172	30	3
		08	@23m diorite cobble	6	240	205	156	2
27		09	-fewer hgcb downhole and increase in diorite + int. volcanic cobbles	2	130	202	22	2
		10	@23.5m hgcb appear again + increase.	4	633	262	842	2
30								

DATE _____ HOLE No. H89-38 GEOLOGIST _____ DRILLER _____

HOLE LOCATION _____

BIT No. _____ FOOTAGE ON BIT _____

HOURS MOVE _____ HOURS DRILL _____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES Gold Grain Count	Au (ppb)	As (ppm)	Soil Au ppb	%
		* 11	downhole					
			30.5 - 31.5m Clay					
33		12	- hard (compact), smooth, grey, few pebble layers	7	130	189	110	3
		*	31.5 - 35m Silty-sandy Till?					
36		13	30% silt 35% pebbles 35% sand					
			- clasts 70% int. volc 15% mafics 10% granitoids 5% other exotics					
39			@31.5m int. volc cobble					
42			35 - 43.5m Pebbly Sand					
		n/s	90% sand 10% pebbles - silt. layers					
45		REGOLITHIC BEDROCK						
			43.5 - 49.4m Clay - light orange, very compact + drilling very slow <5% pebbles wh are soft and break easily					
48								
		14			<5	<2		
51			49.4 - 51m Iron formation - brick red fragments (hematitic jasper) with med-dark grey clasts - fine grained, very soft, weakly foliated.					
54								
57			51 - 51.5m Clay - similar to above orange clay but starts off as light green colour and turns orange.					

DATE_____ HOLE No. H89-38 GEOLOGIST_____ DRILLER ____

HOLE LOCATION _____

BIT No._____ FOOTAGE ON BIT _____

HOURS MOVE_____ HOURS DRILL_____ OTHER _____

DEPTH (m.)	GRAPHIC LOG	SAMPLE No.	DESCRIPTIVE LOG	ANALYSES				
				Gold Grain Count	Au (ppb)	As (ppm)		
			- hole abandoned at 51.5m due to lack of time					

A P P E N D I X C

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Geochemical Lab Report

M-181

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Geochemical Lab Report

REP : 089-50054.0 (COMPLETE)

REFERENCE INFO:

CLIE : ROBERT S. MIDDLETON EXPL. SERV.
PRO. T: NONE

SUBMITTED BY: JOHALE NEWSOME
DATE PRINTED: 18-JAN-89

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Na	Sodium	10	0.05 PCT		Neutron Activation
2	Sc	Scandium	10	0.5 PPM		Neutron Activation
3	Cr	Chromium	10	50 PPM		Neutron Activation
4	Fe	Iron	10	0.5 PCT		Neutron Activation
5	Co	Cobalt	10	10 PPM		Neutron Activation
6	Ni	Nickel	10	50 PPM		Neutron Activation
7	Zn	Zinc	10	200 PPM		Neutron Activation
8	As	Arsenic	10	1 PPM		Neutron Activation
9	Se	Selenium	10	10 PPM		Neutron Activation
10	Br	Bronine	10	1 PPM		Neutron Activation
11	Rb	Rubidium	10	10 PPM		Neutron Activation
12	Zr	Zirconium	10	500 PPM		Neutron Activation
13	Mo	Molybdenum	10	2 PPM		Neutron Activation
14	Ag	Silver	10	5 PPM		Neutron Activation
15	Cd	Cadmium	10	10 PPM		Neutron Activation
16	Sn	Tin	10	200 PPM		Neutron Activation
17	Sb	Antimony	10	0.2 PPM		Neutron Activation
18	Te	Tellurium	10	20 PPM		Neutron Activation
19	Cs	Cesium	10	1 PPM		Neutron Activation
20	Ba	Barium	10	100 PPM		Neutron Activation
21	La	Lanthanum	10	5 PPM		Neutron Activation
22	Ce	Cerium	10	10 PPM		Neutron Activation
23	Sm	Samarium	10	0.1 PPM		Neutron Activation
24	Eu	Europium	10	2 PPM		Neutron Activation
25	Tb	Terbium	10	1 PPM		Neutron Activation
26	Yb	Ytterbium	10	5 PPM		Neutron Activation
27	Lu	Lutetium	10	0.5 PPM		Neutron Activation
28	Hf	Hafnium	10	2 PPM		Neutron Activation
29	Ta	Tantalum	10	1 PPM		Neutron Activation
30	W	Tungsten	10	2 PPM		Neutron Activation
31	Ir	Iridium	10	100 PPB		Neutron Activation
32	Au	Gold	10	5 PPB		Neutron Activation
33	Th	Thorium	10	0.5 PPM		Neutron Activation
34	U	Uranium	10	0.5 PPM		Neutron Activation
35	WT	Test Weight	10	0.01 g		

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REPORT: 089-50054.0 (COMPLETE)

REFERENCE INFO:

CLIENT: ROBERT S. MIDDLETON EXPL. SERV.
PROJECT: NONE

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DATE PRINTED: 18-JAN-89

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	10	-200	10	Pulverize -200	10

REMARKS: SAMPLES WERE ACCIDENTLY PULVERIZED. THERE WILL
BE NO CHARGE.
< MEANS LESS THAN.

~~REPORT COPIES TO: R. MIDDLETON~~

~~INVOICE TO: R. MIDDLETON~~

8

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REPORT: 089-50054.0 | PROJECT: NONE | PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Na PCT	Sc PPM	Cr PPM	Fe PCT	Co PPM	Ni PPM	Zn PPM	As PPM	Se PPM	Br PPM	Rb PPM	Zr PPM
HD-88-01-01-3/4		0.73	143.0	1400	35.0	150	<50	510	74	<10	<5	<23	5200
HD-88-01-02-3/4		0.45	80.0	830	20.0	100	67	200	31	<10	<5	<21	3500
HD-88-02-01-3/4		0.18	76.6	740	20.0	83	80	280	107	<10	<5	<21	4400
HD-88-03-01-3/4		0.23	56.4	610	16.0	98	53	200	195	<10	<5	<10	6600
HD-88-03-02-3/4		0.23	60.0	520	14.0	48	<50	<200	68	<10	<5	<10	5200
HD-88-03-03-3/4		0.30	59.2	470	13.0	29	<50	220	24	<10	<5	14	5800
HD-88-03-04-3/4		0.34	59.8	550	15.0	43	<50	220	35	<10	<5	<10	5500
HD-88-03-05-3/4		0.35	58.0	590	15.0	52	73	<200	34	<10	<5	<10	4500
HD-88-03-06-3/4		0.20	58.1	620	14.0	54	<50	<200	37	<10	<5	<22	5200
HD-88-04-01-3/4		0.32	54.0	570	14.0	58	<50	<200	66	<10	<5	<10	4000

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REPORT: 089-50054.0 PROJECT: NONE PAGE 18

SAMPLE NUMBER	ELEMENT UNITS	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	Cs PPM	Ba PPM	La PPM	Ce PPM	Sm PPM	Eu PPM
HD-88-01-01-3/4		8	<11	<10	<200	0.9	<41	<1	<100	380	1040	39.0	13
HD-88-01-02-3/4		<5	<5	<10	<200	0.7	<20	<1	<100	370	930	57.6	11
HD-88-02-01-3/4		9	<5	18	<200	1.4	<20	<1	<100	330	760	56.2	6
HD-88-03-01-3/4		5	<5	<10	<200	1.8	<20	<1	<100	220	530	47.0	6
HD-88-03-02-3/4		<2	<5	<10	<200	0.8	<20	<1	<100	190	460	49.0	7
HD-88-03-03-3/4		<2	<5	<10	<200	0.6	<20	<1	130	200	510	56.3	7
HD-88-03-04-3/4		9	<5	<10	<200	0.6	<20	<1	<100	220	520	50.8	8
HD-88-03-05-3/4		5	<5	<10	<200	0.5	<20	<1	<100	220	500	47.0	5
HD-88-03-06-3/4		<5	<5	<10	<200	0.6	<42	<1	<100	230	550	48.0	5
HD-88-04-01-3/4		<5	<5	<10	<200	1.0	<20	<1	<100	180	450	43.0	6

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REPORT: 089-50054.0 | PROJECT: NONE | PAGE 10

SAMPLE NUMBER	ELEMENT UNITS	Tb PPM	Yb PPM	Lu PPM	Hf PPM	Ta PPM	W PPM	Ir PPB	Au PPB	Th PPM	U PPM	WT g
HD-88-01-01-3/4		3	57	9.1	208	8	<10	<100	300	69.4	8.0	17.26
HD-88-01-02-3/4		4	43	6.7	120	9	<9	<100	31	116.0	12.0	15.99
HD-88-02-01-3/4		4	32	5.3	130	12	<9	<100	24	130.0	12.0	16.40
HD-88-03-01-3/4		4	24	4.6	170	11	<8	<100	150	92.0	13.0	14.54
HD-88-03-02-3/4		4	23	4.1	140	11	<7	<100	75	73.2	11.0	22.64
HD-88-03-03-3/4		4	22	4.0	150	10	<6	<100	29	65.9	13.0	41.23
HD-88-03-04-3/4		4	27	4.4	170	11	<9	<100	29	88.9	12.0	13.72
HD-88-03-05-3/4		4	25	3.9	140	8	<7	<100	15	108.0	12.0	19.78
HD-88-03-06-3/4		5	21	4.1	160	9	<10	<100	350	105.0	12.0	9.19
HD-88-04-01-3/4		4	21	3.8	110	8	<27	<100	709	90.4	11.0	14.65

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Bondar-Clegg & Company Ltd.
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Ottawa, Ontario
K1J 8X5
(613) 749-2220 Telex 053-3233

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 089-50888.0 (COMPLETE)

REFERENCE INFO:

CLIENT: ROBERT S. MIDDLETON EXPL. SERV.
PROJECT: NONE

SUBMITTED BY: ODM
DATE PRINTED: 11-APR-89

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Na	Sodium	80	0.05 PCT		Neutron Activation
2	Sc	Scandium	80	0.5 PPM		Neutron Activation
3	Cr	Chromium	80	50 PPM		Neutron Activation
4	Fe	Iron	80	0.5 PCT		Neutron Activation
5	Co	Cobalt	80	10 PPM		Neutron Activation
6	Ni	Nickel	80	20 PPM		Neutron Activation
7	Zn	Zinc	80	200 PPM		Neutron Activation
8	As	Arsenic	80	1 PPM		Neutron Activation
9	Se	Selenium	80	10 PPM		Neutron Activation
10	Br	Bromine	80	1 PPM		Neutron Activation
11	Rb	Rubidium	80	10 PPM		Neutron Activation
12	Zr	Zirconium	80	500 PPM		Neutron Activation
13	Mo	Molybdenum	80	2 PPM		Neutron Activation
14	Ag	Silver	80	5 PPM		Neutron Activation
15	Cd	Cadmium	80	10 PPM		Neutron Activation
16	Sn	Tin	80	200 PPM		Neutron Activation
17	Sb	Antimony	80	0.2 PPM		Neutron Activation
18	Te	Tellurium	80	20 PPM		Neutron Activation
19	Cs	Cesium	80	1 PPM		Neutron Activation
20	Ba	Barium	80	100 PPM		Neutron Activation
21	La	Lanthanum	80	5 PPM		Neutron Activation
22	Ce	Cerium	80	10 PPM		Neutron Activation
23	Sm	Samarium	80	0.2 PPM		Neutron Activation
24	Eu	Europium	80	2 PPM		Neutron Activation
25	Tb	Terbium	80	1 PPM		Neutron Activation
26	Yb	Ytterbium	80	5 PPM		Neutron Activation
27	Lu	Lutetium	80	0.5 PPM		Neutron Activation
28	Hf	Hafnium	80	2 PPM		Neutron Activation
29	Ta	Tantalum	80	1 PPM		Neutron Activation
30	W	Tungsten	80	2 PPM		Neutron Activation
31	Ir	Iridium	80	100 PPB		Neutron Activation
32	Au	Gold	80	5 PPB		Neutron Activation
33	Th	Thorium	80	0.5 PPM		Neutron Activation
34	U	Uranium	80	0.5 PPM		Neutron Activation
35	Wt	Test Weight	80	0.01 g		Neutron Activation

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SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	80	AS RECEIVED	80	As Received, No SP	80

REPORT COPIES TO: J. NEWSOME

INVOICE TO: J. NEWSOME

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SAMPLE NUMBER	ELEMENT UNITS	Na PCT	Sc PPM	Cr PPM	Fe PCT	Co PPM	Ni PPM	Zn PPM	As PPM	Se PPM	Br PPM	Rb PPM	Zr PPM
M-181-05-03-3/4H		0.25	82.8	590	21.0	110	66	<200	123	<10	<5	<24	9900
M-181-05-04-3/4H		0.22	80.8	480	21.0	98	50	<200	155	<10	<5	<23	6000
M-181-05-05-3/4H		0.20	64.1	470	14.0	59	88	<200	66	<10	<5	<26	4500
M-181-05-06-3/4H		0.23	86.1	570	22.0	76	<65	<200	211	<10	<5	<28	6000
M-181-05-07-3/4H		0.44	74.2	450	21.0	95	90	270	128	<10	<5	<22	4900
M-181-06-04-3/4H		0.30	85.8	580	20.0	72	55	240	66	<10	<5	<22	7800
M-181-06-05-3/4H		0.32	82.9	520	22.0	91	68	<200	83	<10	<5	<23	8200
M-181-06-06-3/4H		0.20	72.7	530	21.0	350	170	290	100	<10	<5	<25	6100
M-181-06-07-3/4H		0.28	71.6	550	26.0	170	110	250	336	<10	<5	<22	6600
M-181-07-03-3/4H		0.25	70.8	490	18.0	82	91	290	103	<10	<5	<10	9200
M-181-07-05-3/4H		0.31	77.3	470	20.0	96	95	240	103	<10	<5	<28	9300
M-181-07-06-3/4H		0.42	92.3	530	19.0	84	<59	430	50	<10	<5	<27	8900
M-181-07-07-3/4H		0.28	88.9	610	25.0	120	120	<200	107	<10	<5	<25	8200
M-181-07-08-3/4H		0.37	92.9	660	21.0	71	<46	270	27	<10	<5	<21	7100
M-181-07-09-3/4H		0.24	89.0	560	21.0	62	<49	210	6	<10	<5	<24	8400
M-181-07-10-3/4H		0.24	103.0	640	22.0	54	<56	<200	7	<10	<5	<26	11000
M-181-07-11-3/4H		0.41	76.2	490	22.0	100	110	270	16	<10	<5	<25	6300
M-181-08-03-3/4H		0.26	81.9	570	23.0	120	61	<200	133	<10	<5	<24	9300
M-181-08-04-3/4H		0.29	78.8	460	19.0	94	60	220	106	<10	<5	<10	7900
M-181-08-05-3/4H		0.29	75.1	530	21.0	170	150	<200	154	<10	<5	<27	8200
M-181-08-06-3/4H		0.57	85.6	570	23.0	120	120	<200	149	<10	<5	<26	9400
M-181-09-10-3/4H		0.32	73.6	480	24.0	200	130	310	364	<10	<5	<22	4200
M-181-09-11-3/4H		0.32	78.3	490	26.0	180	110	230	279	<10	<5	<23	5100
M-181-09-12-3/4H		0.32	78.5	490	25.0	180	140	340	233	<10	<5	<10	4900
M-181-09-13-3/4H		0.30	76.7	490	18.0	110	79	<200	78	<10	<5	<10	5800
M-181-09-14-3/4H		0.24	82.9	600	22.0	180	70	<200	103	<10	<5	<28	8200
M-181-09-15-3/4H		0.30	80.5	560	22.0	180	120	300	160	<10	<5	<10	8600
M-181-09-16-3/4H		0.14	59.2	460	16.0	300	<55	<200	151	<10	<5	<25	4600
M-181-09-17-3/4H		0.27	73.5	590	20.0	120	130	<200	181	<10	<5	<23	7600
M-181-10-03-3/4H		0.16	64.3	520	21.0	140	140	<200	247	<10	<5	<24	6600
M-181-10-04-3/4H		0.30	79.7	520	20.0	130	100	270	151	<10	<5	<10	8200
M-181-10-05-3/4H		0.25	78.2	490	27.0	270	640	<200	293	<10	<5	<23	4500
M-181-10-06-3/4H		0.26	76.6	500	24.0	160	150	200	239	<10	<5	<22	4600
M-181-10-07-3/4H		0.30	72.1	490	20.0	150	100	260	229	<10	<5	<26	4400
M-181-11-03-3/4H		0.23	87.4	530	22.0	110	64	280	151	<10	<5	<24	8700
M-181-11-04-3/4H		0.29	79.0	470	19.0	38	<46	<200	67	<10	<5	<22	9800
M-181-12-04-3/4H		0.28	72.3	580	20.0	110	110	280	135	<10	<5	<23	10000
M-181-12-05-3/4H		0.22	71.1	540	18.0	210	80	320	101	<10	<5	<25	4400
M-181-12-06-3/4H		0.21	73.7	590	17.0	35	<62	<200	7	<10	<5	<29	9100
M-181-12-07-3/4H		0.25	98.7	490	15.0	91	170	300	18	<10	<5	<25	6500

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	Cs PPM	Ba PPM	La PPM	Ce PPM	Sm PPM	Eu PPM
M-181-05-03-3/4H		<5	<11	<10	<200	1.7	<46	<1	<100	330	650	60.9	7
M-181-05-04-3/4H		6	<11	<10	<200	1.7	<45	<1	<100	280	620	51.6	7
M-181-05-05-3/4H		5	<13	<10	<200	0.7	<49	<1	<100	190	350	31.0	4
M-181-05-06-3/4H		23	<14	<10	<200	1.5	<59	2	<100	270	600	49.0	7
M-181-05-07-3/4H		6	<5	<10	<200	1.1	<41	<1	<100	220	430	37.0	8
M-181-06-04-3/4H		<2	<5	<10	<200	0.9	<42	<1	<100	350	720	55.3	7
M-181-06-05-3/4H		9	<11	<10	<200	1.2	<45	<1	<100	320	670	52.4	6
M-181-06-06-3/4H		4	<11	<10	<200	1.1	<44	<1	<100	210	480	38.0	5
M-181-06-07-3/4H		<5	<5	<10	<200	2.9	<47	<1	<100	300	590	48.0	4
M-181-07-03-3/4H		<4	<5	<10	<200	1.3	<42	<1	<100	350	720	62.4	7
M-181-07-05-3/4H		<5	<13	<10	<200	1.3	<54	<1	<100	340	660	59.3	<5
M-181-07-06-3/4H		10	13	<10	<200	0.6	<52	<1	<100	460	910	70.9	6
M-181-07-07-3/4H		<5	<11	<10	<200	1.4	<48	<1	<100	460	860	67.5	5
M-181-07-08-3/4H		<2	<5	<10	<200	0.8	<41	<1	<100	400	800	63.4	7
M-181-07-09-3/4H		<5	<11	<10	<200	0.4	<47	<1	<100	470	910	72.6	7
M-181-07-10-3/4H		<5	<12	<10	<200	0.5	<50	<1	<100	610	1190	94.5	10
M-181-07-11-3/4H		7	<11	<10	<200	0.6	<48	<1	<100	430	930	73.6	6
M-181-08-03-3/4H		<5	<11	<10	<200	1.6	<47	<1	<100	380	780	60.5	6
M-181-08-04-3/4H		<2	<5	<10	<200	1.0	<41	<1	<100	310	640	52.6	7
M-181-08-05-3/4H		<5	<12	<10	<200	1.9	<52	<1	<100	300	640	56.6	9
M-181-08-06-3/4H		<5	<12	<10	<200	1.4	<53	<1	<100	340	660	56.4	5
M-181-09-10-3/4H		4	<5	<10	<200	4.0	<48	<1	<100	230	470	41.0	7
M-181-09-11-3/4H		5	<11	<10	<200	3.3	<48	<1	<100	260	560	46.0	4
M-181-09-12-3/4H		7	<5	<10	<200	3.2	<42	<1	<100	260	550	45.0	6
M-181-09-13-3/4H		<2	<5	<10	<200	1.1	<20	<1	<100	210	480	41.0	4
M-181-09-14-3/4H		10	<13	<10	<200	1.3	<53	<1	<100	280	590	48.0	5
M-181-09-15-3/4H		<2	<5	<10	<200	1.5	<42	<1	<100	300	630	52.3	5
M-181-09-16-3/4H		<4	<11	<10	<200	1.1	<48	<1	<100	200	410	30.0	4
M-181-09-17-3/4H		<5	<11	<10	<200	2.3	<54	<1	<100	270	530	47.0	5
M-181-10-03-3/4H		<5	<11	<10	<200	3.2	<50	<1	<100	260	490	44.0	5
M-181-10-04-3/4H		4	<5	<10	<200	1.3	<20	<1	<100	270	610	51.6	7
M-181-10-05-3/4H		<4	<5	<10	<200	3.8	<46	<1	<100	270	510	42.0	4
M-181-10-06-3/4H		7	<5	<10	<200	4.6	<44	1	<100	240	510	42.0	4
M-181-10-07-3/4H		7	<12	<10	<200	3.0	<51	<1	<100	220	470	37.0	4
M-181-11-03-3/4H		<5	<11	<10	<200	1.2	<49	<1	<100	330	710	54.6	8
M-181-11-04-3/4H		18	<5	<10	<200	0.5	<44	<1	<100	523	1000	70.7	6
M-181-12-04-3/4H		5	<11	<10	<200	1.3	<46	<1	<100	290	580	48.0	8
M-181-12-05-3/4H		<4	<12	<10	<200	0.8	<48	<1	<100	190	400	36.0	6
M-181-12-06-3/4H		5	<13	<10	<200	0.4	<54	<1	<100	310	620	50.0	8
M-181-12-07-3/4H		<2	<12	<10	<200	0.4	<46	<1	<100	230	480	41.0	7

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SAMPLE NUMBER / ELEMENT UNITS	Tb PPM	Yb PPM	Lu PPM	Hf PPM	Ta PPM	W PPM	Ir PPB	Au PPB	Th PPM	U PPM	Wt g
M-181-05-03-3/4H	8	29	7.0	229	20	9	<100	69	135.0	23.0	37.01
M-181-05-04-3/4H	7	27	6.9	150	16	10	<100	48	106.0	17.0	25.30
M-181-05-05-3/4H	5	22	5.3	130	10	7	<100	87	60.3	12.0	8.20
M-181-05-06-3/4H	8	33	7.2	160	14	8	<100	30	95.8	17.0	11.82
M-181-05-07-3/4H	6	21	5.5	120	13	12	<100	400	82.1	13.0	21.04
M-181-06-04-3/4H	7	27	7.2	190	14	6	<100	330	136.0	19.0	30.47
M-181-06-05-3/4H	7	28	6.9	202	15	<2	<100	76	126.0	19.0	22.98
M-181-06-06-3/4H	5	19	4.9	140	15	<2	<100	230	74.9	13.0	18.70
M-181-06-07-3/4H	6	25	6.2	160	26	5	<100	1560•	133.0	18.0	40.00
M-181-07-03-3/4H	7	24	6.4	218	16	6	<100	190	164.0	25.0	37.37
M-181-07-05-3/4H	8	28	5.9	190	15	6	<100	360	151.0	22.0	17.65
M-181-07-06-3/4H	10	30	6.4	215	16	<5	<100	769•	198.0	26.0	19.38
M-181-07-07-3/4H	8	30	7.3	190	20	8	<100	210	205.0	24.0	36.96
M-181-07-08-3/4H	8	27	7.2	170	16	<2	<100	150	170.0	20.0	43.94
M-181-07-09-3/4H	9	31	8.1	203	20	5	<100	2570•	223.0	23.0	31.52
M-181-07-10-3/4H	11	39	10.0	265	23	<5	<100	77	270.0	32.0	37.25
M-181-07-11-3/4H	7	28	6.0	140	15	8	<100	<5	304.0	47.0	26.88
M-181-08-03-3/4H	8	27	6.8	231	23	5	<100	94	164.0	23.0	29.00
M-181-08-04-3/4H	7	26	6.2	190	15	4	<100	260	129.0	19.0	30.91
M-181-08-05-3/4H	8	26	5.2	211	18	11	<100	120	140.0	22.0	21.98
M-181-08-06-3/4H	8	30	6.5	234	16	6	<100	260	135.0	22.0	21.51
M-181-09-10-3/4H	5	21	6.0	100	11	<2	<100	570•	93.3	12.0	25.82
M-181-09-11-3/4H	6	24	5.7	120	21	<4	<100	614•	108.0	14.0	29.27
M-181-09-12-3/4H	6	22	6.0	120	14	17•	<100	715•	96.3	15.0	43.16
M-181-09-13-3/4H	5	22	5.3	140	11	<2	<100	13	83.9	13.0	19.36
M-181-09-14-3/4H	7	30	5.9	170	15	<5	<100	120	108.0	16.0	12.99
M-181-09-15-3/4H	6	25	6.0	190	16	6	<100	320	117.0	18.0	37.67
M-181-09-16-3/4H	5	18	4.5	130	11	<5	<100	350	78.3	12.0	11.88
M-181-09-17-3/4H	6	21	4.8	180	14	6	<100	5800•	115.0	18.0	25.91
M-181-10-03-3/4H	5	19	5.3	150	14	8	<100	200	119.0	17.0	23.18
M-181-10-04-3/4H	7	25	5.6	190	14	6	<100	360	109.0	17.0	45.44
M-181-10-05-3/4H	7	20	6.0	100	19	8	<100	280	103.0	14.0	37.83
M-181-10-06-3/4H	5	26	6.3	110	12	<2	<100	250	94.8	16.0	24.46
M-181-10-07-3/4H	5	24	4.3	99	12	9	<100	83	88.7	13.0	12.57
M-181-11-03-3/4H	7	28	6.7	211	16	5	<100	94	131.0	21.0	21.36
M-181-11-04-3/4H	8	26	6.7	231	14	5	<100	110	225.0	27.0	34.05
M-181-12-04-3/4H	7	26	6.5	234	14	7	<100	18	115.0	21.0	18.47
M-181-12-05-3/4H	5	23	4.9	120	14	6	<100	170	71.1	11.0	11.07
M-181-12-06-3/4H	6	22	6.0	203	16	<6	<100	120	139.0	19.0	11.24
M-181-12-07-3/4H	6	22	4.7	140	11	19	<100	220	83.6	12.0	12.97

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SAMPLE NUMBER	ELEMENT UNITS	Na PCT	Sc PPM	Cr PPM	Fe PCT	Co PPM	Ni PPM	Zn PPM	As PPM	Se PPM	Br PPM	Rb PPM	Zr PPM
[redacted]81-13-03-3/4H		0.30	86.9	590	26.0	190	150	350	248	<10	<5	<25	6500
[redacted]81-13-04-3/4H		0.29	78.5	550	22.0	230	150	230	166	<10	<5	<23	6800
M-181-13-05-3/4H		0.30	101.0	230	20.0	500	330	<200	50	<10	<5	<28	2100
M-181-14-04-3/4H		0.37	86.2	590	24.0	140	120	330	295	<10	<5	<24	7300
[redacted]81-14-05-3/4H		0.35	84.9	630	20.0	37	<45	200	9	<10	<5	<21	9700
M-181-14-06-3/4H		0.25	65.2	430	20.0	110	140	<200	103	<10	<5	<31	4100
[redacted]81-14-07-3/4H		0.27	54.9	370	22.0	370	170	320	97	<10	<5	<30	4300
[redacted]81-15-07-3/4H		0.18	66.1	530	19.0	130	140	<200	198	<10	<5	<26	9000
M-181-15-08-3/4H		0.25	73.3	540	21.0	180	140	430	222	<10	<5	<25	5400
[redacted]81-15-09-3/4H		0.24	79.7	570	21.0	130	100	<200	150	<10	<5	<31	10000
M-181-15-10-3/4H		<0.12	89.6	550	22.0	110	<78	370	74	<10	<5	<38	8400
[redacted]81-15-11-3/4H		0.20	76.7	470	22.0	180	150	280	179	<10	<5	<21	3900
[redacted]81-15-12-3/4H		0.26	81.4	550	26.0	190	94	<200	242	<10	<5	<29	7500
M-181-16-01-3/4H		0.25	80.0	640	25.0	180	130	<200	307	<10	<5	<23	8300
M-181-17-10-3/4H		0.28	106.0	850	30.0	150	<74	500	210	<21	<5	<34	12000
[redacted]81-17-11-3/4H		0.22	79.6	550	21.0	100	<53	<200	147	<10	<5	<24	8400
M-181-17-12-3/4H		0.26	81.6	600	21.0	110	<60	260	132	<10	<5	<27	8700
[redacted]81-17-13-3/4H		<1.00	91.5	620	25.0	140	150	<200	198	<10	<5	<28	8900
[redacted]81-17-14-3/4H		<0.73	93.2	610	22.0	95	98	290	105	<10	<5	<21	5500
M-181-17-15-3/4H		<0.57	104.0	640	19.0	100	83	230	118	<10	<5	<10	2600
[redacted]81-18-01-3/4H		<0.95	68.9	590	30.0	350	210	220	334	20	<5	<27	5900
M-181-19-02-3/4H		<0.77	81.0	590	24.0	130	100	320	165	<10	<5	<10	9300
M-181-19-03-3/4H		<0.96	88.9	670	24.0	140	120	<200	211	<10	<5	<24	9400
[redacted]81-19-04-3/4H		<0.88	84.7	640	23.0	150	120	320	162	<10	<5	<22	8000
[redacted]81-20-05-3/4H		<0.87	84.6	530	21.0	110	140	360	157	<10	<5	<25	9500
[redacted]81-20-06-3/4H		<0.66	78.8	450	21.0	100	70	420	137	<10	<5	<10	7300
[redacted]81-20-07-3/4H		<0.64	70.8	490	18.0	96	84	350	110	<10	<5	<10	7700
M-181-20-08-3/4H		<1.20	75.8	510	19.0	89	<64	290	108	<10	<5	<31	8000
M-181-20-09-3/4H		<1.00	82.2	590	19.0	37	<47	630	<13	<10	<5	<23	9200
[redacted]81-20-10-3/4H		<1.00	93.8	670	23.0	45	58	210	24	<10	<5	<23	8800
M-181-21-04-3/4H		<0.97	88.7	600	21.0	87	90	390	169	<10	<5	<26	11000
[redacted]81-21-05-3/4H		<0.90	74.8	620	22.0	130	78	680	117	<10	<5	<25	6200
[redacted]81-21-07-3/4H		<0.75	85.7	590	23.0	60	67	460	120	<10	<5	<10	4400
M-181-22-01-3/4H		<0.71	72.0	550	23.0	150	97	250	247	<10	<5	<22	6500
[redacted]81-23-03-3/4H		<0.79	78.8	560	18.0	78	99	250	100	14	<5	<21	7900
M-181-24-04-3/4H		<0.77	71.4	530	19.0	77	100	260	122	<10	<5	<21	9400
M-181-24-05-3/4H		<0.64	60.5	430	14.0	44	61	260	72	<10	6	<10	9300
[redacted]81-24-06-3/4H		<0.69	71.6	470	17.0	53	86	220	63	<10	<5	<10	9100
[redacted]81-24-07-3/4H		<0.67	76.1	570	22.0	67	52	<200	108	<10	8	<10	10000
M-181-24-08-3/4H		<0.65	74.3	580	19.0	57	97	240	77	<10	<5	<10	8200

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Geochemical Lab Report

REPORT: 089-50888.0 PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	Cs PPM	Ba PPM	La PPM	Ce PPM	Sm PPM	Eu PPM
M-181-13-03-3/4H		<5	<11	<10	<200	2.8	<51	<1	<100	290	610	50.0	9
M-181-13-04-3/4H		<4	<11	<10	<200	2.1	<46	<1	<100	270	560	45.0	6
M-181-13-05-3/4H		<5	<13	<10	<200	1.0	<50	<1	<100	140	310	34.0	8
M-181-14-04-3/4H		<5	<11	<10	<200	2.5	<49	<1	<100	290	620	48.0	5
M-181-14-05-3/4H		<2	<5	<10	<200	0.5	<20	<1	<100	280	580	51.6	6
M-181-14-06-3/4H		<5	<13	<10	<200	1.4	<57	<1	<100	200	360	29.0	<4
M-181-14-07-3/4H		7	<13	<10	<200	0.9	<56	<1	<100	160	310	26.0	5
M-181-15-07-3/4H		<5	<12	<10	<200	2.6	<53	<1	<100	310	610	50.0	<2
M-181-15-08-3/4H		<5	<11	<10	<200	2.4	<49	<1	<100	250	540	49.0	5
M-181-15-09-3/4H		<6	<13	<10	<200	1.5	<60	<1	<100	340	720	55.1	7
M-181-15-10-3/4H		<6	<17	<21	<200	0.8	<69	<2	<220	490	990	67.4	7
M-181-15-11-3/4H		5	<5	<10	<200	2.1	<42	<1	<100	300	590	47.0	6
M-181-15-12-3/4H		<6	<12	<10	<200	2.3	69	<1	<100	460	870	62.7	<5
M-181-16-01-3/4H		<5	<5	<10	<200	2.3	<49	<1	<100	380	730	58.2	4
M-181-17-10-3/4H		<6	<15	<10	<450	2.0	<68	<1	<210	500	990	76.5	9
M-181-17-11-3/4H		5	<11	18	<200	1.5	76	<1	<100	330	690	53.4	7
M-181-17-12-3/4H		11	<12	<10	<200	1.5	<53	<1	<100	330	740	55.2	8
M-181-17-13-3/4H		<9	<13	<37	<200	2.2	<64	<1	<100	390	710	66.7	7
M-181-17-14-3/4H		<7	<5	<27	<200	1.1	48	<1	<100	280	570	49.0	4
M-181-17-15-3/4H		<6	<5	<22	<200	1.3	<20	<1	<100	240	490	42.0	6
M-181-18-01-3/4H		<9	<11	<32	<200	5.9	58	<1	<100	370	760	53.4	3
M-181-19-02-3/4H		<7	<5	<25	<200	2.2	<45	<1	<100	380	770	60.6	6
M-181-19-03-3/4H		8	<11	<30	<200	1.9	<51	<1	<100	410	830	61.7	8
M-181-19-04-3/4H		<8	<5	<29	<200	1.3	<49	<1	<100	380	780	58.4	7
M-181-20-05-3/4H		<8	<11	<33	<200	1.8	<56	<1	<100	310	670	54.8	7
M-181-20-06-3/4H		<6	<5	<23	<200	1.7	<20	<1	<100	250	530	47.0	7
M-181-20-07-3/4H		<6	<5	<23	<200	1.4	<20	<1	<100	260	550	55.1	7
M-181-20-08-3/4H		<9	13	<39	<200	4.9	<66	2	<100	260	540	50.1	8
M-181-20-09-3/4H		<7	<5	<29	<200	0.6	<50	<1	<100	420	790	60.6	5
M-181-20-10-3/4H		<8	<11	<31	<200	0.9	<49	<1	220	400	800	61.5	6
M-181-21-04-3/4H		<8	<12	<34	<200	1.2	<58	<1	<100	310	690	57.1	8
M-181-21-05-3/4H		<8	<5	<32	<200	2.4	<57	<1	<100	330	630	47.0	10
M-181-21-07-3/4H		<6	<5	<25	<200	1.1	<43	<1	<100	330	650	49.0	7
M-181-22-01-3/4H		<7	<5	<26	<200	3.3	<46	<1	<100	300	570	49.0	8
M-181-23-03-3/4H		<6	<5	<28	<200	1.8	<44	<1	<100	270	570	51.1	9
M-181-24-04-3/4H		<6	<5	<26	<200	1.3	<43	2	<100	300	620	55.3	7
M-181-24-05-3/4H		9	<5	<22	<200	0.7	<20	<1	<100	250	530	53.1	9
M-181-24-06-3/4H		<5	<5	<23	<200	0.6	<20	<1	<100	270	550	55.7	11
M-181-24-07-3/4H		<6	<5	<22	<200	1.0	<20	2	<100	340	670	58.3	8
M-181-24-08-3/4H		<6	<5	<24	<200	0.8	<41	<1	<100	320	650	57.8	10

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Geochemical Lab Report

REPORT: 089-50888.0 PROJECT: NONE PAGE 2C

SAMPLE NUMBER	ELEMENT UNITS	Tb PPM	Yb PPM	Lu PPM	Hf PPM	Ta PPM	W PPM	Ir PPB	Au PPB	Th PPM	U PPM	Wt g
M-181-13-03-3/4H		7	28	7.5	160	17	5	<100	350	123.0	18.0	26.90
M-181-13-04-3/4H		6	26	6.8	150	14	<5	<100	230	101.0	15.0	22.37
M-181-13-05-3/4H	BR	7	15	3.6	51	5	<5	<100	16	34.0	6.4	12.04
M-181-14-04-3/4H		7	30	7.5	170	15	7	<100	490	115.0	16.0	24.73
M-181-14-05-3/4H		8	27	7.2	208	17	<4	<100	190	93.1	18.0	27.02
M-181-14-06-3/4H		5	22	4.5	98	11	<6	<100	875•	77.5	10.0	7.52
M-181-14-07-3/4H		5	15	4.2	88	8	<6	<100	60	58.5	8.8	8.94
M-181-15-07-3/4H		6	23	5.9	205	15	9	<100	85	143.0	20.0	16.20
M-181-15-08-3/4H		7	25	5.7	140	17	<5	<100	100	100.0	16.0	25.70
M-181-15-09-3/4H		7	26	7.0	243	14	17	<100	92	147.0	30.0	12.78
M-181-15-10-3/4H		9	38	7.8	190	24	<7	<100	130	235.0	23.0	9.19
M-181-15-11-3/4H		6	22	5.2	100	16	<4	<100	110	136.0	14.0	30.07
M-181-15-12-3/4H	BR.	7	34	7.0	170	22	17	<100	1340•	223.0	23.0	20.00
M-181-16-01-3/4H		7	28	7.5	200	22	17	<100	1360•	164.0	21.0	38.12
M-181-17-10-3/4H		10	40	10.0	310	24	16	<100	506•	216.0	30.0	17.32
M-181-17-11-3/4H		7	29	6.8	200	17	9	<100	260	136.0	19.0	19.11
M-181-17-12-3/4H		8	31	7.1	213	17	9	<100	37	142.0	21.0	14.54
M-181-17-13-3/4H		8	32	6.9	209	22	<35	<100	110	177.0	22.0	17.64
M-181-17-14-3/4H		7	28	8.4	110	14	<27	<100	300	114.0	15.0	23.93
M-181-17-15-3/4H		6	21	5.7	74	11	<22	<100	100	107.0	12.0	34.55
M-181-18-01-3/4H		7	27	7.0	140	17	<30	<100	490	188.0	19.0	18.77
M-181-19-02-3/4H		8	27	8.3	204	19	<24	<100	250	170.0	21.0	29.74
M-181-19-03-3/4H		8	34	7.4	216	20	<29	<100	360	173.0	24.0	20.25
M-181-19-04-3/4H		8	33	7.5	200	16	<28	<100	2290•	169.0	23.0	20.17
M-181-20-05-3/4H		8	29	7.0	204	15	<32	<100	92	127.0	18.0	13.34
M-181-20-06-3/4H		6	25	6.4	180	15	<22	<100	240	102.0	17.0	31.99
M-181-20-07-3/4H		6	23	5.5	170	17	<23	<100	180	98.3	18.0	32.17
M-181-20-08-3/4H		8	26	5.9	180	15	<38	<100	<24	117.0	18.0	9.33
M-181-20-09-3/4H		8	30	6.9	215	17	<29	<100	77	185.0	20.0	18.51
M-181-20-10-3/4H		8	30	7.4	200	20	<31	<100	1020•	181.0	20.0	19.77
M-181-21-04-3/4H		8	34	7.0	232	18	<33	<100	140	120.0	21.0	13.29
M-181-21-05-3/4H		6	29	5.9	150	15	<31	<100	3970•	149.0	15.0	9.99
M-181-21-07-3/4H		5	26	5.6	100	16	<25	<100	130	136.0	12.0	16.75
M-181-22-01-3/4H		5	27	4.9	150	18	<25	<100	200	122.0	14.0	17.31
M-181-23-03-3/4H		5	27	5.4	190	17	<27	<100	78	93.6	18.0	14.11
M-181-24-04-3/4H		6	27	4.6	232	18	<25	<100	200	115.0	20.0	16.00
M-181-24-05-3/4H		6	18	3.8	224	17	<22	<100	420	97.6	22.0	20.04
M-181-24-06-3/4H		6	22	4.9	215	17	<23	<100	87	89.9	21.0	20.86
M-181-24-07-3/4H		7	29	6.8	228	23	<22	<100	190	139.0	23.0	30.00
M-181-24-08-3/4H		6	25	4.7	190	18	<24	<100	240	132.0	21.0	19.24

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Geochemical Lab Report

ROBERT S. MIDDLETON EXPL. SERV.
J. NEWSOME
136 CEDAR ST. S. BOX 1637
TIMMINS. ONTARIO
P4N 7W8

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Geochemical Lab Report

REPORT: 089-50907.0 (COMPLETE)

REFERENCE INFO:

CLIENT: ROBERT S. MIDDLETON EXPL. SERV.
PROJECT: NONE

SUBMITTED BY: ODM
DATE PRINTED: 17-APR-89

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Na	Sodium	34	0.05 PCT		Neutron Activation
2	Sc	Scandium	34	0.5 PPM		Neutron Activation
3	Cr	Chromium	34	50 PPM		Neutron Activation
4	Fe	Iron	34	0.5 PCT		Neutron Activation
5	Co	Cobalt	34	10 PPM		Neutron Activation
6	Ni	Nickel	34	20 PPM		Neutron Activation
7	Zn	Zinc	34	200 PPM		Neutron Activation
8	As	Arsenic	34	1 PPM		Neutron Activation
9	Se	Selenium	34	10 PPM		Neutron Activation
10	Br	Bromine	34	1 PPM		Neutron Activation
11	Rb	Rubidium	34	10 PPM		Neutron Activation
12	Zr	Zirconium	34	500 PPM		Neutron Activation
13	Mo	Molybdenum	34	2 PPM		Neutron Activation
14	Ag	Silver	34	5 PPM		Neutron Activation
15	Cd	Cadmium	34	10 PPM		Neutron Activation
16	Sn	Tin	34	200 PPM		Neutron Activation
17	Sb	Antimony	34	0.2 PPM		Neutron Activation
18	Te	Tellurium	34	20 PPM		Neutron Activation
19	Cs	Cesium	34	1 PPM		Neutron Activation
20	Ba	Barium	34	100 PPM		Neutron Activation
21	La	Lanthanum	34	5 PPM		Neutron Activation
22	Ce	Cerium	34	10 PPM		Neutron Activation
23	Sm	Samarium	34	0.2 PPM		Neutron Activation
24	Eu	Europium	34	2 PPM		Neutron Activation
25	Tb	Terbium	34	1 PPM		Neutron Activation
26	Yb	Ytterbium	34	5 PPM		Neutron Activation
27	Lu	Lutetium	34	0.5 PPM		Neutron Activation
28	Hf	Hafnium	34	2 PPM		Neutron Activation
29	Ta	Tantalum	34	1 PPM		Neutron Activation
30	W	Tungsten	34	2 PPM		Neutron Activation
31	Ir	Iridium	34	100 PPB		Neutron Activation
32	Au	Gold	34	5 PPB		Neutron Activation
33	Th	Thorium	34	0.5 PPM		Neutron Activation
34	U	Uranium	34	0.5 PPM		Neutron Activation
35	WT	Test Weight	34	0.01 g		

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DATE PRINTED: 17-APR-89

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	34	AS RECEIVED	34	As Received, No SP	33

REPORT COPIES TO: J. NEWSOME
FAX TO TIMMINS

INVOICE TO: J. NEWSOME

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Geochemical Lab Report

REPORT: 089-50907.0 | PROJECT: NONE | PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Na PCT	Sc PPM	Cr PPM	Fe PCT	Co PPM	Ni PPM	Zn PPM	As PPM	Se PPM	Br PPM	Rb PPM	Zr PPM
M181-24-09-3/4H		0.39	88.6	550	20.0	100	85	<200	93	<10	<5	<10	11000
M181-24-10-3/4H		0.53	91.2	620	20.0	110	74	<200	107	<10	<5	<10	14000
M181-24-11-3/4H		0.41	86.5	530	21.0	330	110	<200	106	<10	<5	<10	8500
M181-24-12-3/4H		0.70	72.1	480	15.0	400	140	<200	84	<10	<5	<10	6300
M181-24-13-3/4H		0.32	87.0	650	24.0	370	100	<200	287	<10	<5	<10	11000
M181-24-14-3/4H		<0.21	90.0	660	25.0	360	140	480	118	<10	<5	<21	8300
M181-25-04-3/4H		0.23	93.5	640	24.0	140	82	<200	159	<10	<5	<10	9300
M181-25-05-3/4H		<0.17	93.6	630	22.0	120	82	<200	109	<10	<5	<10	11000
M181-25-06-3/4H		0.26	91.2	650	22.0	120	85	<200	141	<10	<5	<10	12000
M181-25-07-3/4H		0.36	92.1	660	22.0	120	100	<200	105	<10	<5	<10	13000
M181-25-08-3/4H		0.37	69.4	560	24.0	1120	310	<200	140	<10	<5	<10	9100
M181-26-01-3/4H		0.27	85.2	610	21.0	150	110	270	179	<10	<5	<10	13000
M181-26-02-3/4H		0.30	95.3	620	23.0	120	70	<200	130	<10	<5	<10	12000
M181-26-03-3/4H		0.34	88.0	530	19.0	130	120	200	91	<10	<5	<10	10000
M181-26-04-3/4H		0.35	55.6	430	28.0	1230	290	<200	348	<10	<5	<10	4300
M181-27-08-3/4H		<0.13	83.2	560	22.0	160	90	260	152	<10	<5	<10	12000
M181-27-09-3/4H		0.33	82.2	650	25.0	170	99	<200	234	<10	<5	<10	13000
M181-27-10-3/4H		0.33	86.9	680	25.0	160	100	410	224	<10	<5	<10	14000
M181-27-11-3/4H		<0.15	82.9	570	21.0	150	53	<200	174	<10	<5	<10	11000
M181-27-12-3/4H		0.26	83.6	630	20.0	110	47	<200	137	<10	<5	<10	14000
M181-27-13-3/4H		0.25	80.7	550	22.0	230	120	<200	226	<10	<5	<10	6900
M181-27-14-3/4H		0.42	74.4	550	23.0	330	110	<200	206	<10	<5	<10	8300
M181-27-15-3/4H		0.28	72.3	560	24.0	400	180	230	362	<10	<5	<10	6800
M181-27-16-3/4H		0.26	63.8	450	27.0	260	190	540	752	<10	<5	<10	4600
M181-27-17-3/4H		<0.13	57.4	420	31.0	960	240	450	683	<10	<5	<10	5000
M181-28-06-3/4H		0.37	74.2	450	19.0	110	56	<200	88	<10	<5	<10	9700
M181-28-07-3/4H		0.25	84.5	560	21.0	160	74	200	131	<10	<5	<10	10000
M181-28-09-3/4H	A	0.25	84.5	570	21.0	96	55	210	126	<10	<5	<10	11000
M181-28-09-3/4H	B	<0.30	84.6	620	20.0	87	<44	310	69	<10	<5	<21	9800
M181-28-10-3/4H		0.27	84.4	580	20.0	130	66	<200	124	<10	<5	<10	9900
M181-28-11-3/4H		0.42	83.7	590	22.0	210	120	<200	296	<10	<5	<10	7600
M181-28-12-3/4H		0.23	65.4	680	30.0	590	330	370	410	<10	<5	<10	5600
M181-28-13-3/4H		<0.16	66.8	720	24.0	630	220	<200	96	<10	<5	<10	5000
M181-28-14-3/4H		0.36	104.0	590	19.0	310	130	<200	162	<10	<5	<10	8800

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	Cs PPM	Ba PPM	La PPM	Ce PPM	Sm PPM	Eu PPM
M181-24-09-3/4H		<2	<5	<10	240	1.0	<20	<1	170	300	620	61.4	9
M181-24-10-3/4H		<2	<5	<10	<200	1.1	<20	<1	<100	320	670	59.8	11
M181-24-11-3/4H		6	<5	<10	<200	1.7	<20	<1	<100	270	570	50.3	8
M181-24-12-3/4H		10	<5	<10	<200	0.9	<20	<1	150	260	580	54.6	13
M181-24-13-3/4H		<2	<5	<10	<200	1.8	<20	<1	<100	310	630	55.1	9
M181-24-14-3/4H		5	<5	<10	<200	1.2	<20	<1	<100	280	630	54.7	10
M181-25-04-3/4H		<2	<5	<10	<200	2.3	<20	<1	<100	280	620	53.3	7
M181-25-05-3/4H		<4	<5	<10	<200	1.1	<20	<1	<100	320	670	58.0	10
M181-25-06-3/4H		<2	<5	<10	<200	1.2	<20	<1	<100	320	660	59.6	10
M181-25-07-3/4H		<2	<5	<10	<200	1.1	<20	<1	<100	320	690	60.2	10
M181-25-08-3/4H		<2	<5	<10	<200	0.9	<20	<1	<100	230	470	43.0	7
M181-26-01-3/4H		<2	<5	<10	<200	1.3	<20	<1	<100	320	640	57.3	9
M181-26-02-3/4H		<2	<5	<10	<200	1.5	<20	1	<100	330	670	59.3	9
M181-26-03-3/4H		<2	<5	<10	<200	1.4	<20	<1	<100	250	540	50.0	10
M181-26-04-3/4H		9	<5	<10	<200	3.2	<20	<1	110	150	320	29.0	5
M181-27-08-3/4H		<2	<5	<10	<200	1.8	26	<1	<100	380	750	62.3	8
M181-27-09-3/4H		<2	<5	<10	<200	2.8	<20	<1	<100	380	750	59.3	8
M181-27-10-3/4H		<2	<5	<10	<200	2.6	<20	<1	<100	380	750	63.0	9
M181-27-11-3/4H		<2	<5	<10	<200	1.7	<20	<1	<100	300	620	54.3	7
M181-27-12-3/4H		<2	<5	<10	<200	1.8	<20	2	<100	300	630	58.2	10
M181-27-13-3/4H		<2	<5	<10	<200	2.4	<20	<1	<100	230	500	44.0	8
M181-27-14-3/4H		6	<5	<10	<200	1.9	<20	<1	<100	250	510	42.0	7
M181-27-15-3/4H		<2	<5	<10	<200	3.0	<20	<1	<100	240	460	40.0	7
M181-27-16-3/4H		10	<5	<10	<200	9.0	<20	<1	<100	180	350	29.0	4
M181-27-17-3/4H		8	<5	<10	<200	8.9	<20	<1	<100	200	380	30.0	4
M181-28-06-3/4H		<2	<5	<10	<200	1.1	<20	<1	<100	260	530	48.0	8
M181-28-07-3/4H		4	<5	<10	<200	2.0	<20	<1	<100	260	550	50.2	8
M181-28-09-3/4H	A	4	<5	<10	<200	1.1	<20	<1	<100	280	590	53.4	9
M181-28-09-3/4H	B	<5	<5	<21	<200	1.0	<43	<1	<100	260	540	48.0	9
M181-28-10-3/4H		4	<5	<10	200	1.3	<20	<1	<100	280	590	51.7	9
M181-28-11-3/4H		<5	<5	<10	<200	2.3	<41	1	<100	250	540	49.0	10
M181-28-12-3/4H		8	<5	<10	<200	4.0	<20	<1	<100	200	410	33.0	6
M181-28-13-3/4H		5	<5	<10	<200	0.9	<20	<1	<100	200	390	36.0	6
M181-28-14-3/4H		4	<5	<10	<200	1.4	<20	<1	130	220	440	41.0	6

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Tb PPM	Yb PPM	Lu PPM	Hf PPM	Ta PPM	W PPM	Ir PPB	Au PPB	Th PPM	U PPM	WT g
M181-24-09-3/4H		8	33	5.8	206	19	<9	<100	280	105.0	22.0	17.24
M181-24-10-3/4H		8	34	6.8	267	21	<10	<100	56	112.0	26.0	12.52
M181-24-11-3/4H		7	31	5.5	170	26	<11	<100	130	84.3	16.0	7.91
M181-24-12-3/4H		6	24	3.8	120	12	<10	<100	75	64.2	14.0	9.19
M181-24-13-3/4H		8	36	6.6	206	17	<11	<100	150	109.0	19.0	9.71
M181-24-14-3/4H		7	31	5.9	160	17	<12	<100	87	94.5	17.0	6.03
M181-25-04-3/4H		7	34	6.3	180	20	<11	<100	63	100.0	20.0	9.22
M181-25-05-3/4H		8	38	6.7	223	20	<11	<100	5360	119.0	22.0	8.04
M181-25-06-3/4H		8	33	6.4	220	19	10	<100	39	114.0	22.0	14.34
M181-25-07-3/4H		8	36	6.9	240	19	<10	<100	42	115.0	23.0	11.44
M181-25-08-3/4H		6	24	4.5	160	13	<10	<100	210	75.8	15.0	12.15
M181-26-01-3/4H		8	31	6.3	241	17	<9	<100	100	122.0	22.0	15.79
M181-26-02-3/4H		8	36	6.8	221	19	<10	<100	190	114.0	22.0	12.67
M181-26-03-3/4H		6	27	5.5	180	14	<10	<100	100	79.7	19.0	10.73
M181-26-04-3/4H		4	17	3.6	83	10	<8	<100	110	48.0	9.2	21.16
M181-27-08-3/4H		7	32	6.3	226	19	11	<100	42	148.0	24.0	29.73
M181-27-09-3/4H		7	33	6.5	232	23	<9	<100	81	155.0	22.0	20.63
M181-27-10-3/4H		7	35	7.0	272	18	<11	<100	210	166.0	25.0	12.28
M181-27-11-3/4H		7	30	6.0	204	19	<9	<100	79	114.0	20.0	15.70
M181-27-12-3/4H		8	32	5.7	250	18	<10	<100	75	121.0	24.0	14.16
M181-27-13-3/4H		6	28	5.0	140	12	<12	<100	100	75.8	13.0	7.89
M181-27-14-3/4H		5	27	5.2	160	15	<11	<100	627	91.7	14.0	9.32
M181-27-15-3/4H		5	23	4.5	120	13	<9	<100	1760	85.1	12.0	19.17
M181-27-16-3/4H		4	18	4.0	86	10	<8	<100	47	67.4	8.4	18.99
M181-27-17-3/4H		4	22	3.7	91	9	<9	<100	130	78.2	8.0	17.86
M181-28-06-3/4H		6	28	5.7	170	14	12	<100	23	88.7	17.0	26.09
M181-28-07-3/4H		7	31	5.9	180	16	<8	<100	70	90.8	18.0	23.27
M181-28-09-3/4H	A	7	30	6.6	200	17	<8	<100	100	97.0	20.0	26.49
M181-28-09-3/4H	B	6	33	5.7	180	15	<17	<100	<15	92.2	21.0	3.47
M181-28-10-3/4H		7	31	5.9	190	19	<9	<100	95	97.8	19.0	16.02
M181-28-11-3/4H		6	31	5.8	150	16	<14	<100	47	86.4	17.0	5.04
M181-28-12-3/4H		4	20	4.1	100	12	<10	<100	72	67.6	8.9	14.53
M181-28-13-3/4H		4	19	3.7	98	12	<10	<100	140	58.8	11.0	13.56
M181-28-14-3/4H		6	23	4.7	160	14	<10	<100	200	88.4	13.0	15.28

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Geochemical Lab Report

ROBERT S. MIDDLETON EXPL. SERV.
J. NEWSOME
136 CEDAR ST. S. BOX 1637
TIMMINS. ONTARIO
P4N 7W8

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Geochemical Lab Report

REPORT: 089-50922.0 (COMPLETE)

REFERENCE INFO:

CLIENT: ROBERT S. MIDDLETON EXPL. SERV.
PROJECT: NONE

SUBMITTED BY: J. NEWSOME
DATE PRINTED: 21-APR-89

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Na	Sodium	50	0.05 PCT		Neutron Activation
2	Sc	Scandium	50	0.5 PPM		Neutron Activation
3	Cr	Chromium	50	50 PPM		Neutron Activation
4	Fe	Iron	50	0.5 PCT		Neutron Activation
5	Co	Cobalt	50	10 PPM		Neutron Activation
6	Ni	Nickel	50	20 PPM		Neutron Activation
7	Zn	Zinc	50	200 PPM		Neutron Activation
8	As	Arsenic	50	1 PPM		Neutron Activation
9	Se	Selenium	50	10 PPM		Neutron Activation
10	Br	Bromine	50	1 PPM		Neutron Activation
11	Rb	Rubidium	50	10 PPM		Neutron Activation
12	Zr	Zirconium	50	500 PPM		Neutron Activation
13	Mo	Molybdenum	50	2 PPM		Neutron Activation
14	Ag	Silver	50	5 PPM		Neutron Activation
15	Cd	Cadmium	50	10 PPM		Neutron Activation
16	Sn	Tin	50	200 PPM		Neutron Activation
17	Sb	Antimony	50	0.2 PPM		Neutron Activation
18	Te	Tellurium	50	20 PPM		Neutron Activation
19	Cs	Cesium	50	1 PPM		Neutron Activation
20	Ba	Barium	50	100 PPM		Neutron Activation
21	La	Lanthanum	50	5 PPM		Neutron Activation
22	Ce	Cerium	50	10 PPM		Neutron Activation
23	Sm	Samarium	50	0.2 PPM		Neutron Activation
24	Eu	Europium	50	2 PPM		Neutron Activation
25	Tb	Terbium	50	1 PPM		Neutron Activation
26	Yb	Ytterbium	50	5 PPM		Neutron Activation
27	Lu	Lutetium	50	0.5 PPM		Neutron Activation
28	Hf	Hafnium	50	2 PPM		Neutron Activation
29	Ta	Tantalum	50	1 PPM		Neutron Activation
30	W	Tungsten	50	2 PPM		Neutron Activation
31	Ir	Iridium	50	100 PPB		Neutron Activation
32	Au	Gold	50	5 PPB		Neutron Activation
33	Th	Thorium	50	0.5 PPM		Neutron Activation
34	U	Uranium	50	0.5 PPM		Neutron Activation
35	WT	Test Weight	50	0.01 g		

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SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	50	AS RECEIVED	50	As Received, No SP	50

REPORT COPIES TO: J. NEWSOME

INVOICE TO: J. NEWSOME

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Geochemical Lab Report

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SAMPLE NUMBER / ELEMENT UNITS	Na PCT	Sc PPM	Cr PPM	Fe PCT	Co PPM	Ni PPM	Zn PPM	As PPM	Se PPM	Br PPM	Rb PPM	Zr PPM
M-265-29-01-3/4H	0.32	77.7	500	20.0	160	95	<200	168	<10	<5	<23	9700
M-265-29-02-3/4H	0.39	80.8	560	22.0	170	110	360	272	<10	<5	<24	12000
M-265-29-03-3/4H	0.34	82.6	580	22.0	190	110	<200	247	<10	<5	<10	11000
M-265-29-04-3/4H	0.27	63.2	790	29.0	860	140	<200	159	27	<5	<26	7700
M-265-30-09-3/4H	0.43	85.3	610	20.0	82	64	<200	72	<10	<5	<26	14000
M-265-30-10-3/4H	0.47	85.0	640	21.0	81	53	<200	70	<10	<5	<10	15000
M-265-30-11-3/4H	0.39	85.6	630	19.0	110	94	<200	86	<10	<5	<24	13000
M-265-30-12-3/4H	0.37	91.8	650	23.0	120	55	<200	155	<10	<5	<27	12000
M-265-30-13-3/4H	0.34	84.9	590	21.0	100	76	450	132	<10	<5	<10	9700
M-265-30-14-3/4H BR	0.37	71.0	440	21.0	260	110	<200	140	<10	<5	<10	5800
M-265-31-04-3/4H	0.29	79.4	510	22.0	230	140	330	191	<10	<5	<10	6600
M-265-31-05-3/4H	0.30	82.4	550	25.0	240	120	340	246	<10	<5	<10	7400
M-265-31-06-3/4H	0.33	90.7	570	24.0	230	120	400	176	<10	<5	<22	7600
M-265-31-07-3/4H	0.37	87.9	750	23.0	250	160	360	101	<10	<5	<33	8300
M-265-32-01-3/4H	0.21	84.9	490	24.0	230	130	410	178	<10	<5	<10	7300
M-265-32-02-3/4H	0.26	86.1	560	25.0	250	110	340	246	<10	<5	<22	7900
M-265-33-01-3/4H	0.32	87.6	440	26.0	300	220	490	262	<10	<5	<10	6100
M-265-34-01-3/4H	0.32	66.2	450	22.0	260	200	290	218	<10	<5	<10	8100
M-265-35-01-3/4H	0.33	80.3	590	25.0	450	160	<200	250	<10	<5	<24	10000
M-265-35-02-3/4H	0.30	77.1	590	23.0	350	230	<200	191	<10	<5	<29	11000
M-265-35-03-3/4H	0.24	81.7	620	26.0	410	160	240	196	<10	<5	<26	11000
M-265-35-04-3/4H	0.30	84.7	570	27.0	350	110	260	198	<10	<5	<23	9200
M-265-35-05-3/4H	0.22	85.5	680	31.0	470	190	570	283	<10	<5	<30	10000
M-265-35-07-3/4H	0.28	86.7	610	22.0	120	53	<200	120	<10	<5	<10	11000
M-265-36-08-3/4H	0.35	87.8	570	24.0	160	55	<200	113	<10	<5	<24	12000
M-265-36-09-3/4H	0.37	101.0	700	26.0	160	86	<200	167	<10	<5	<30	15000
M-265-36-10-3/4H	0.43	96.4	820	25.0	120	95	<200	204	<10	<5	<28	13000
M-265-36-11-3/4H	0.37	96.7	830	24.0	120	66	300	124	<10	<5	<27	14000
M-265-36-12-3/4H	0.27	81.5	690	26.0	200	68	240	131	<10	<5	<23	11000
M-265-36-13-3/4H	0.31	102.0	750	27.0	180	160	280	150	<10	<5	<27	12000
M-265-36-14-3/4H	0.36	83.3	750	24.0	160	93	<200	122	<10	<5	<21	11000
M-265-36-15-3/4H	0.36	78.1	670	27.0	160	62	280	155	<10	<5	<10	9700
M-265-36-16-3/4H	0.36	85.1	630	23.0	120	110	<200	102	<10	<5	<21	12000
M-265-36-17-3/4H	0.39	85.0	740	21.0	130	78	250	119	<10	<5	<10	11000
M-265-36-18-3/4H	0.40	88.0	730	22.0	150	88	<200	65	<10	<5	<21	9800
M-265-36-19-3/4H	<0.22	84.1	650	200.0	92	<20	<200	97	<10	<5	<10	11000
M-265-36-20-3/4H	0.34	79.4	590	19.0	62	34	<200	70	<10	<5	<10	12000
M-265-36-21-3/4H BR	0.33	80.2	510	17.0	60	41	<200	54	<10	<5	<10	13000
M-265-37-01-3/4H	0.30	80.2	610	23.0	140	75	<200	233	<10	<5	<24	9600
M-265-37-02-3/4H	0.34	86.0	660	23.0	100	76	320	154	<10	<5	<23	12000

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Geochemical Lab Report

REPORT: 089-50922.0 PROJECT: NONE PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	Cs PPM	Ba PPM	La PPM	Ce PPM	Sm PPM	Eu PPM
M-265-29-01-3/4H		6	<5	<10	<200	1.9	<45	<1	<100	250	560	54.2	6
M-265-29-02-3/4H		8	<5	<10	<200	2.4	<48	<1	<100	300	630	52.5	8
M-265-29-03-3/4H		4	<5	<10	<200	2.5	<20	<1	<100	290	590	50.4	8
M-265-29-04-3/4H		<5	<5	<10	<200	1.2	<47	<1	<100	210	410	35.0	4
M-265-30-09-3/4H		<4	<12	<10	<200	0.7	<51	<1	190	330	670	55.9	8
M-265-30-10-3/4H		<2	<5	<10	<200	0.5	<20	<1	<100	340	690	56.5	9
M-265-30-11-3/4H		7	<5	<10	<200	0.8	<46	<1	<100	310	640	54.8	9
M-265-30-12-3/4H		<5	<12	<10	<200	1.8	<52	<1	260	330	710	54.5	10
M-265-30-13-3/4H		6	<5	<10	<200	1.6	<20	<1	<100	270	590	50.0	7
M-265-30-14-3/4H DR		7	<5	<10	<200	1.7	<20	<1	<100	200	450	38.0	6
M-265-31-04-3/4H		6	<5	<10	<200	2.7	<20	<1	<100	220	460	38.0	7
M-265-31-05-3/4H		7	<5	<10	<200	3.2	<20	<1	<100	230	470	39.0	8
M-265-31-06-3/4H		5	<5	<10	<200	2.5	<47	<1	<100	250	530	44.0	6
M-265-31-07-3/4H		6	<14	<10	<200	1.4	<59	<1	<100	300	620	51.2	11
M-265-32-01-3/4H		7	<5	<10	<200	3.0	<20	<1	<100	220	450	40.0	5
M-265-32-02-3/4H		4	<5	<10	<200	3.0	<44	1	<100	230	470	40.0	8
M-265-33-01-3/4H		5	<5	<10	<200	4.3	<20	<1	<100	220	450	40.0	5
M-265-34-01-3/4H		4	<5	<10	<200	3.3	<20	<1	<100	230	450	41.0	5
M-265-35-01-3/4H		6	<5	<10	<200	2.3	<45	<1	<100	310	600	51.7	9
M-265-35-02-3/4H		<5	<11	<10	<200	2.6	<55	<1	<100	410	770	66.8	7
M-265-35-03-3/4H		<5	<11	<10	<200	2.3	<48	<1	<100	290	610	50.4	9
M-265-35-04-3/4H		<4	<5	<10	<200	3.2	<43	<1	<100	300	580	50.1	6
M-265-35-05-3/4H		6	<12	<10	<200	3.3	<60	<1	<100	300	630	51.7	8
M-265-35-07-3/4H		<6	<5	<10	<200	1.2	<50	<1	<100	310	580	53.6	8
M-265-36-08-3/4H		8	<5	<10	<200	1.3	<47	<1	<100	340	700	55.6	6
M-265-36-09-3/4H		<5	<13	<10	<200	0.9	<57	2	<100	410	800	64.6	6
M-265-36-10-3/4H		<5	<12	<10	<200	2.1	<54	<1	<100	370	780	61.1	6
M-265-36-11-3/4H		7	<11	<10	<200	1.3	<50	<1	<100	400	820	65.9	11
M-265-36-12-3/4H		5	<5	<10	<200	0.9	<44	<1	<100	330	660	54.5	7
M-265-36-13-3/4H		5	<12	<10	<200	1.6	<52	<1	<100	360	730	55.5	7
M-265-36-14-3/4H		<2	<5	<10	<200	1.1	<20	<1	<100	280	570	47.0	10
M-265-36-15-3/4H		5	<5	<10	<200	1.2	<20	<1	<100	280	570	46.0	4
M-265-36-16-3/4H		<2	<5	<10	<200	1.1	<41	<1	<100	300	610	51.4	8
M-265-36-17-3/4H		<2	<5	<10	<200	1.5	<20	<1	<100	270	550	48.0	7
M-265-36-18-3/4H		<2	<5	<10	<200	1.1	<20	<1	<100	270	560	50.0	6
M-265-36-19-3/4H		<2	<5	<10	<200	0.9	<20	<1	<100	290	600	50.4	8
M-265-36-20-3/4H		<2	<5	<10	<200	0.7	<20	<1	<100	290	580	50.2	8
M-265-36-21-3/4H DR		6	<5	<10	<200	0.9	<20	<1	<100	260	590	53.7	9
M-265-37-01-3/4H		<4	<5	<10	<200	2.1	<48	<1	<100	290	590	51.9	<2
M-265-37-02-3/4H		6	<5	<10	<200	1.3	54	<1	<100	320	650	53.6	7

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Geochemical Lab Report

REPORT: 089-50922.0 PROJECT: NONE PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Tb PPM	Yb PPM	Lu PPM	Hf PPM	Ta PPM	W PPM	Ir PPB	Au PPB	Th PPM	U PPM	WT g
M-265-29-01-3/4H		7	24	4.7	180	17	11	<100	140	92.0	19.0	13.02
M-265-29-02-3/4H		6	29	5.8	232	18	11	<100	160	118.0	21.0	12.10
M-265-29-03-3/4H		6	28	5.7	200	16	9	<100	160	106.0	18.0	21.49
M-265-29-04-3/4H		4	24	4.2	140	10	6	<100	584	75.6	11.0	8.96
M-265-30-09-3/4H		6	37	7.2	280	19	<6	<100	310	117.0	24.0	7.38
M-265-30-10-3/4H		7	34	7.4	279	20	<4	<100	50	134.0	25.0	16.82
M-265-30-11-3/4H		7	38	6.3	244	16	<5	<100	67	107.0	22.0	8.35
M-265-30-12-3/4H		8	35	6.8	221	16	10	<100	120	131.0	20.0	7.03
M-265-30-13-3/4H		7	32	6.2	190	16	12	<100	180	92.6	18.0	17.54
M-265-30-14-3/4H	BR	5	24	4.4	120	11	6	<100	24	68.7	13.0	14.81
M-265-31-04-3/4H		5	23	4.5	130	11	12	<100	68	81.3	13.0	15.55
M-265-31-05-3/4H		5	23	4.4	130	13	5	<100	42	84.7	14.0	15.02
M-265-31-06-3/4H		6	29	4.9	150	17	<6	<100	3150	87.3	15.0	8.84
M-265-31-07-3/4H		7	30	5.6	150	20	<7	<100	120	80.6	17.0	4.79
M-265-32-01-3/4H		6	23	4.6	130	11	<4	<100	190	75.0	13.0	17.27
M-265-32-02-3/4H		5	25	4.5	150	16	14	<100	26	82.9	14.0	11.08
M-265-33-01-3/4H		5	25	4.7	130	12	11	<100	150	84.4	13.0	18.77
M-265-34-01-3/4H		5	21	4.8	150	14	4	<100	130	79.7	15.0	28.03
M-265-35-01-3/4H		6	27	5.0	202	16	6	<100	98	134.0	20.0	13.23
M-265-35-02-3/4H		8	24	4.4	211	18	10	<100	28	202.0	26.0	11.55
M-265-35-03-3/4H		6	28	5.1	200	16	7	<100	47	126.0	21.0	11.06
M-265-35-04-3/4H		6	26	5.4	170	15	<5	<100	150	120.0	18.0	15.47
M-265-35-05-3/4H		6	31	5.6	190	14	24	<100	470	121.0	21.0	7.70
M-265-35-07-3/4H		6	30	6.0	190	19	12	<100	26800	117.0	20.0	23.56
M-265-36-08-3/4H		8	36	6.2	220	17	12	<100	370	142.0	23.0	9.18
M-265-36-09-3/4H		7	41	7.7	271	21	8	<100	190	176.0	26.0	6.99
M-265-36-10-3/4H		8	40	7.2	246	19	<7	<100	160	161.0	24.0	7.56
M-265-36-11-3/4H		9	42	7.2	272	20	<7	<100	79	179.0	25.0	7.79
M-265-36-12-3/4H		6	30	5.9	200	16	10	<100	430	133.0	19.0	10.61
M-265-36-13-3/4H		6	37	6.6	223	17	<7	<100	74	159.0	22.0	7.51
M-265-36-14-3/4H		6	32	5.7	203	15	9	<100	180	109.0	18.0	12.24
M-265-36-15-3/4H		6	31	6.2	190	16	7	<100	130	110.0	17.0	13.40
M-265-36-16-3/4H		6	31	6.2	205	18	<5	<100	220	115.0	19.0	10.90
M-265-36-17-3/4H		7	29	6.2	200	15	<5	<100	90	101.0	17.0	13.47
M-265-36-18-3/4H		6	33	6.2	200	16	13	<100	130	103.0	18.0	11.83
M-265-36-19-3/4H		6	31	6.5	211	18	<13	<100	553	110.0	19.0	15.97
M-265-36-20-3/4H		6	30	5.9	202	18	<12	<100	87	110.0	19.0	21.51
M-265-36-21-3/4H	BR	7	30	5.7	234	17	7	<100	21	94.9	20.0	11.78
M-265-37-01-3/4H		7	29	5.5	170	19	13	<100	63	131.0	20.0	13.56
M-265-37-02-3/4H		7	34	6.8	229	19	15	<100	<5	132.0	22.0	11.62

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Geochemical Lab Report

REPORT: 089-50922.0 PROJECT: NONE PAGE 2A

SAMPLE NUMBER	ELEMENT UNITS	Na PCT	Sc PPM	Cr PPM	Fe PCT	Co PPM	Ni PPM	Zn PPM	As PPM	Se PPM	Br PPM	Rb PPM	Zr PPM
M-265-37-03-3/4H		0.36	82.8	570	22.0	110	46	<200	152	<10	<5	<10	10000
M-265-37-04-3/4H		0.38	85.7	610	22.0	130	73	<200	120	<10	<5	<21	12000
M-265-38-04-3/4H		0.41	84.7	640	22.0	120	140	<200	149	<10	<5	<21	9100
M-265-38-05-3/4H		0.44	79.3	560	21.0	150	68	<200	194	<10	<5	<10	8400
M-265-38-06-3/4H		0.41	87.4	620	22.0	110	71	<200	168	<10	<5	<21	8000
M-265-38-07-3/4H		0.37	83.1	550	19.0	100	85	<200	172	<10	<5	<10	10000
M-265-38-08-3/4H		0.36	85.3	630	22.0	120	72	<200	205	<10	<5	<21	11000
M-265-38-09-3/4H		0.35	85.0	540	22.0	130	<43	230	202	<10	<5	<23	9900
M-265-38-10-3/4H		0.35	90.6	590	25.0	160	56	440	262	<10	<5	<22	9100
M-265-38-12-3/4H		0.36	74.9	540	21.0	130	40	<200	139	<10	<5	<10	8700

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Geochemical Lab Report

REPORT: 089-50922.0 PROJECT: NONE PAGE 28

SAMPLE NUMBER	ELEMENT UNITS	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	Cs PPM	Ba PPM	La PPM	Ce PPM	Sm PPM	Eu PPM
M-265-37-03-3/4H		<2	<5	<10	<200	1.4	<20	<1	<100	300	620	50.0	6
M-265-37-04-3/4H		5	<5	<10	<200	1.2	<42	<1	<100	330	660	50.3	7
M-265-38-04-3/4H		<2	<5	<10	<200	1.6	<42	<1	<100	270	530	47.0	5
M-265-38-05-3/4H		5	<5	<10	<200	4.9	<20	<1	<100	250	530	46.0	6
M-265-38-06-3/4H		8	<5	<10	<200	1.7	<41	<1	<100	280	610	50.0	7
M-265-38-07-3/4H		5	<5	<10	<200	1.4	<20	<1	<100	290	590	50.2	8
M-265-38-08-3/4H		<2	<5	<10	<200	1.8	<42	<1	<100	310	650	54.9	8
M-265-38-09-3/4H		8	<5	<10	<200	2.0	<44	<1	<100	280	610	51.7	8
M-265-38-10-3/4H		6	<5	<10	<200	2.5	<45	<1	<100	300	630	54.8	11
M-265-38-12-3/4H		4	<5	<10	<200	1.6	31	<1	<100	240	490	41.0	4

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Geochemical Lab Report

REPORT: 089-50922.0 | PROJECT: NONE | PAGE 2C

SAMPLE NUMBER	ELEMENT UNITS	Tb PPM	Yb PPM	Lu PPM	Hf PPM	Ta PPM	W PPM	Ir PPB	Au PPB	Th PPM	U PPM	WT g
M-265-37-03-3/4H		6	30	6.1	190	15	15	<100	29	122.0	18.0	20.47
M-265-37-04-3/4H		6	34	6.2	217	18	9	<100	250	137.0	21.0	13.61
M-265-38-04-3/4H		6	34	6.6	170	15	7	<100	100	102.0	16.0	11.03
M-265-38-05-3/4H		6	29	5.5	160	14	13	<100	150	88.8	15.0	16.94
M-265-38-06-3/4H		6	32	6.2	170	16	8	<100	130	105.0	17.0	12.15
M-265-38-07-3/4H		7	28	6.0	180	15	8	<100	36	103.0	17.0	17.49
M-265-38-08-3/4H		7	34	6.9	212	17	<6	<100	240	114.0	20.0	12.52
M-265-38-09-3/4H		7	33	6.3	190	18	<6	<100	130	100.0	18.0	9.75
M-265-38-10-3/4H		7	37	6.5	180	18	15	<100	633	114.0	19.0	12.01
M-265-38-12-3/4H		5	25	5.5	160	16	7	<100	130	102.0	15.0	26.10

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Geochemical Lab Report

REPORT: 089-50888.1 (COMPLETE)

REFERENCE INFO:

CLIENT: ROBERT S. MIDDLETON EXPL. SERV.
PROJECT: NONE

SUBMITTED BY: ODM
DATE PRINTED: 7-APR-89

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu	Copper	8	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption
2	Zn	Zinc	8	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	8	-200	8	Other Sample Prep 1	8
				Pulverize -200	8

REMARKS: OTHER SAMPLE PREP REFERS TO SPLITTING OFF
APPROX 1 GRAM OF SAMPLE FOR PULVERIZING.

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INVOICE TO: J. NEWSOME

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Geochemical Lab Report

REPORT: 089-50888.1

PROJECT: NONE PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM
M-181-06-07-3/4H		204	61
M-181-07-07-3/4H		161	66
M-181-07-10-3/4H		75	47
M-181-08-05-3/4H		149	66
M-181-09-10-3/4H		177	106
M-181-09-11-3/4H		148	82
M-181-09-12-3/4H		173	88
M-181-10-06-3/4H		189	85

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Geochemical Lab Report

REPORT: 089-50907.1 (COMPLETE)

REFERENCE INFO:

CLIENT: ROBERT S. MIDDLETON EXPL. SERV.
PROJECT: NONE

SUBMITTED BY: ODM
DATE PRINTED: 7-APR-89

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu	Copper	3	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption
2	Zn	Zinc	3	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	3	-200	3	Other Sample Prep 1	3
				Pulverize -200	3

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Geochemical Lab Report

REPORT: 089-50907.1 | PROJECT: NONE | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM
M181-26-04-3/4H		414	107
M181-27-16-3/4H		548	205
M181-27-17-3/4H		885	180

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Geochemical Lab Report

REPORT: 089-50922.1 (COMPLETE)

REFERENCE INFO:

CLIENT: ROBERT S. MIDDLETON EXPL. SERV.
PROJECT: NONE

SUBMITTED BY: ODM
DATE PRINTED: 6-APR-89

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu	Copper	2	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption
2	Zn	Zinc	2	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
HEAVY MINERAL CONC.	2	-200	2	Pulverize -200	2

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Geochemical Lab Report

REPORT: 089-50922.1 | PROJECT: NONE | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM
M-265-35-03-3/4H		387	103
M-265-35-05-3/4H		464	138

OVERBURDEN DRILLING MANAGEMENT LIMITED
107-15 CAPELLA COURT, NEPEAN, ONTARIO, K2E 7X1
TELEPHONE: (613) 224-1771/1774
FAX NO: (613) 224-8753

DATA TRANSMITTAL REPORT

DATE: 04-Jan-89

CLIENT: _____

ATTENTION:

Mr, Johale Newsome
MIDDLETON EXPLORATION SERVICES INC.
136 Cedar Street S.
P.O. Box 1637
Timmins, Ontario
P4N 7W8

PROJECT: H-88 01-01 to 04-01

FILE NO: MDPD2DEC.WR1

NO. OF SAMPLES: 10

NO. OF PANNINGS: 10

HEAVY MINERAL CONCENTRATES:

3/4 NON MAG sent to Analytical Lab BONCHE CLEGG

_____ are included in this shipment _____ mag _____ non-mag.

REMARKS: _____

_____

_____

Duane Parnham
Laboratory Manager

OVERBURDEN DRILLING MANAGEMENT LIMITED - LABORATORY SAMPLE LOG

ABBREVIATIONS

DATA LOG

Clast:

Size of Clast:

- G: Granules
- P: Pebbles
- C: Cobbles
- BL: Boulder Chips
- BK: Bedrock Chips

% Clast Composition:

- V/S: Volcanics and Sediments
- GR: Granitics
- LS: Limestone
- OT: Other Lithologies (Refer to Footnotes Below)
- TR: Only Trace Present
- NA NOT APPLICABLE

Matrix:

S/U: Sorted or Unsorted

SD:	Sand	Y:	Yes Fraction Present	F:	Fine
ST:	Silt	N:	Fraction Not Present	M:	Medium
CY:	Clay			C:	Coarse

Colour:

- B: Beige
- GY: Grey
- GB: Grey Beige
- GN: Green
- GG: Grey Green
- BN: Brown
- BK: Black
- OC: Ochre
- PK: Pink
- OE: Orange

Class:

- BLD: Boulder Chips
- BDK: Bedrock Chips

GOLD LOG

Number of Grains:

- T: Number Found on Shaking Table
- P: Number Found After Panning

Thickness:

- C: Calculated Thickness of Grain
- M: Actual Measured Thickness of Grain

Footnotes:

A: Gritty Clay Lumps Present

: Smooth Clay Lumps Present

: Organics Present

D: Oxidized

MDPD2DEC.WR1 OVERBURDEN DRILLING MANAGEMENT LIMITED

TOTAL # OF SAMPLES IN THIS REPORT = 10

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
H-88																						
01-01	9.2	0.0	9.2	252.1	215.3	36.8	24.0	12.8	4	388	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
01-02	11.1	0.0	11.1	255.6	221.6	34.0	21.2	12.8	3	96	TR	NA	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
02-01	7.2	0.0	7.2	221.1	188.5	32.6	22.2	10.4	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
03-01	7.3	0.0	7.3	183.5	154.0	29.5	19.4	10.1	1	10	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
03-02	8.3	0.0	8.3	191.4	147.1	44.3	32.5	11.8	5	71	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
03-03	10.1	0.0	10.1	213.9	143.7	70.2	55.1	15.1	7	37	TR	NA	NA	NA	NA	S	F	Y	Y	GYB	GYB	SAND
03-04	7.1	0.0	7.1	183.5	157.1	26.4	19.0	7.4	2	38	TR	NA	NA	NA	NA	S	F	Y	Y	GYB	GYB	SAND
03-05	8.3	0.0	8.3	251.6	186.1	65.5	47.0	18.5	2	46	TR	NA	NA	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
03-06	3.6	0.0	3.6	150.2	132.9	17.3	12.2	5.1	2	488	TR	NA	NA	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
04-01	6.8	0.0	6.8	221.6	189.6	32.0	20.3	11.7	2	654	TR	NA	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MDPD2DEC.WR1

TOTAL # OF PANNINGS 10

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
H-88													
01-01	Y	75 X 75	15 C	1						1			EST. 8% PYRITE
		75 X 100	18 C		1					1			
		100 X 175	27 C	1						1			
		125 X 150	27 C	1						1			
										4	24.0	388	
01-02	Y	50 X 75	13 C		1					1			EST. 7% PYRITE
		50 X 100	15 C		1					1			
		75 X 100	18 C	1						1			
										3	21.2	96	
02-01	Y	NO VISIBLE GOLD											EST. 6% PYRITE
03-01	Y	50 X 50	10 C		1					1			EST. 10% PYRITE
										1	19.4	10	
03-02	Y	25 X 50	8 C				1			1			EST. 4% PYRITE
		50 X 50	10 C		1					1			10 GRAINS ARSENOPYRITE
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		75 X 100	18 C	1						1			
										5	32.5	71	
03-03	Y	25 X 50	8 C		2					2			EST. 1% PYRITE
		50 X 50	10 C		3					3			
		50 X 100	15 C	1						1			
		75 X 75	15 C		1					1			
										7	55.1	37	
03-04	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		75 X 75	15 C		1					1			
										2	19.0	38	
03-05	Y	50 X 100	15 C		1					1			EST. 3% PYRITE
		75 X 125	20 C	1						1			5 GRAINS ARSENOPYRITE
										2	47.0	46	
03-06	Y	100 X 125	22 C		1					1			EST. 7% PYRITE
		100 X 175	27 C	1						1			

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MDPD2DEC.WR1

TOTAL # OF PANNINGS 10

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
H-88										2	12.2	488	
04-01	Y	100 X 175	27 C		1					1			EST. 10% PYRITE
		125 X 250	36 C		1					1			
										2	20.3	654	

OVERBURDEN DRILLING MANAGEMENT LIMITED
107-15 CAPELLA COURT, NEPEAN, ONTARIO, K2E 7X1
TELEPHONE: (613) 226-1771/1774
FAX NO: (613) 226-8753

D A T A T R A N S M I T T A L R E P O R T

DATE: 22-Mar-89

CLIENT:

ATTENTION: **Mr. Johale Newsome**
MIDDLETON EXPLORATION SERVICES INC
136 Cedar St. S.
P.O. Box 1637
Timmins, Ontario
P4N 7W8

PROJECT: M-181 05-03 to 12-07

FILE NO: MIDM1MAR.WR1

NO. OF SAMPLES: 40

NO. OF PANNINGS: 40

HEAVY MINERAL CONCENTRATES:

3/4 NON MAG sent to Analytical Lab BONDAR CLEGG.

_____ are included in this shipment _____ mag _____ non-mag.

REMARKS: _____

Duane Parnham
Laboratory Manager

OVERBURDEN DRILLING MANAGEMENT LIMITED - LABORATORY SAMPLE LOG

ABBREVIATIONS

DATA LOG

Clast:

Size of Clast:

- G: Granules
- P: Pebbles
- C: Cobbles
- BL: Boulder Chips
- BK: Bedrock Chips

% Clast Composition:

- V/S: Volcanics and Sediments
- GR: Granitics
- LS: Limestone
- OT: Other Lithologies (Refer to Footnotes Below)
- TR: Only Trace Present
- NA NOT APPLICABLE

Class:

- BLD: Boulder Chips
- BDK: Bedrock Chips

Matrix:

S/U: Sorted or Unsorted

SD:	Sand	Y:	Yes Fraction Present	F:	Fine
ST:	Silt	N:	Fraction Not Present	M:	Medium
CY:	Clay			C:	Coarse

Colour:

- B: Beige
- GY: Grey
- GB: Grey Beige
- GN: Green
- GG: Grey Green
- BN: Brown
- BK: Black
- OC: Ochre
- PK: Pink
- OE: Orange

GOLD LOG

Number of Grains:

- T: Number Found on Shaking Table
- P: Number Found After Panning

Thickness:

- C: Calculated Thickness of Grain
- M: Actual Measured Thickness of Grain

Footnotes:

A: Gritty Clay Lumps Present

B: Smooth Clay Lumps Present

C: Organics Present

D: Oxidized

IDM1MAR.WR1 OVERBURDEN DRILLING MANAGEMENT LIMITED

TOTAL # OF SAMPLES IN THIS REPORT = 40

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)						AU	DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
M-181																						
05-03	24.7	0.0	24.7	398.7	318.8	79.9	50.6	29.3	7	404	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
05-04	17.2	0.0	17.2	361.2	307.5	53.7	34.4	19.3	3	128	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
05-05	5.0	0.0	5.0	112.0	97.3	14.7	10.3	4.4	1	19	TR	NA	NA	NA	NA	U	Y	Y	Y	GG	GG	TILL
05-06	9.6	0.0	9.6	143.7	120.7	23.0	15.8	7.2	1	2	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
05-07	13.3	0.3	13.0	185.7	142.0	43.7	28.2	15.5	1	482	P	90	10	NA	NA	U	Y	Y	Y	BKGNB	KGN	TILL
06-04	14.8	0.0	14.8	246.4	184.4	62.0	41.1	20.9	7	164	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
06-05	12.4	0.0	12.4	222.3	175.6	46.7	31.1	15.6	5	141	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
06-06	8.3	0.0	8.3	150.7	116.6	34.1	24.6	9.5	2	261	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
06-07	11.1	0.0	11.1	244.6	148.7	95.9	58.5	37.4	12	464	TR	NA	NA	NA	NA	U	Y	Y	Y	GN	GN	TILL
07-03	25.2	0.0	25.2	342.6	264.7	77.9	50.0	27.9	6	232	TR	NA	NA	NA	NA	S	M,F	Y	Y	B	B	SAND
07-05	7.3	0.0	7.3	169.2	135.4	33.8	23.4	10.4	4	577	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
07-06	10.0	0.0	10.0	207.1	166.6	40.5	25.7	14.8	2	1891	TR	NA	NA	NA	NA	S	M,F	Y	Y	GB	GB	SAND
07-07	26.6	0.3	26.3	442.9	349.0	93.9	53.4	40.5	8	124	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
07-08	27.2	0.2	27.0	270.3	164.3	106.0	62.0	44.0	10	207	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
07-09	21.9	0.0	21.9	418.2	345.6	72.6	42.9	29.7	2	5451	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
07-10	21.3	0.0	21.3	373.3	282.2	91.1	54.0	37.1	1	54	TR	NA	NA	NA	NA	S	M,F	Y	Y	B	B	SAND
07-11	18.3	0.0	18.3	309.1	240.4	68.7	37.3	31.4	3	2745	TR	NA	NA	NA	NA	S	M	Y	Y	PKB	PKB	SAND
08-03	14.9	0.0	14.9	261.4	196.5	64.9	39.5	25.4	2	47	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
08-04	18.3	0.0	18.3	242.3	182.0	60.3	40.3	20.0	6	390	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
08-05	16.0	0.0	16.0	269.7	216.4	53.3	33.2	20.1	3	61	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
08-06	13.4	0.0	13.4	243.6	198.7	44.9	28.6	16.3	4	381	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
09-10	12.5	0.6	11.9	253.3	198.7	54.6	38.0	16.6	7	247	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
09-11	11.8	0.0	11.8	345.2	283.6	61.6	43.2	18.4	6	511	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
09-12	19.0	0.2	18.8	372.5	281.0	91.5	61.5	30.0	6	578	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
09-13	3.9	0.0	3.9	202.9	168.4	34.5	25.7	8.8	3	50	TR	NA	NA	NA	NA	U	Y	Y	Y	GG	GG	TILL
09-14	5.9	0.0	5.9	116.0	91.9	24.1	16.7	7.4	3	67	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
09-15	6.9	0.0	6.9	305.3	233.3	72.0	50.3	21.7	5	181	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
09-16	3.4	0.0	3.4	162.6	140.2	22.4	15.6	6.8	2	65	TR	NA	NA	NA	NA	S	M	Y	Y	GN	GN	SAND
09-17	15.3	0.0	15.3	207.8	156.5	51.3	35.6	15.7	5	55	TR	NA	NA	NA	NA	S	F	Y	Y	GB	GB	SAND
10-03	12.3	0.0	12.3	167.0	114.1	52.9	31.5	21.4	18	17183	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
10-04	21.7	0.0	21.7	386.4	298.0	88.4	62.8	25.6	13	150	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
10-05	17.9	0.3	17.6	308.7	231.9	76.8	50.9	25.9	6	555	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
10-06	14.1	0.5	13.6	229.4	175.2	54.2	36.6	17.6	8	1244	P	85	15	NA	NA	U	Y	Y	Y	GB	GNB	TILL
10-07	7.3	0.0	7.3	294.5	270.3	24.2	16.5	7.7	1	227	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL & BDK
11-03	12.5	0.0	12.5	218.5	175.3	43.2	29.1	14.1	7	117	TR	NA	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
11-04	12.8	0.0	12.8	227.8	162.1	65.7	45.7	20.0	6	318	TR	NA	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL & BDK
12-04	13.0	0.0	13.0	223.1	185.5	37.6	24.3	13.3	3	4497	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
12-05	6.6	0.0	6.6	204.9	179.5	25.4	15.1	10.3	4	231	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
12-06	8.5	0.0	8.5	202.0	175.4	26.6	15.5	11.1	3	2971	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
12-07	12.0	0.0	12.0	225.5	202.6	22.9	16.6	6.3	3	615	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDMINAR.WR1

TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
05-03	Y	25 X 25	5 C		1				1	2			EST. 5% PYRITE
		25 X 50	8 C				1			1			
		50 X 50	10 C				1			1			
		50 X 75	13 C		1					1			
		75 X 100	18 C	1						1			
		150 X 325	44 C	1						1			
										7	50.6	404	
05-04	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		50 X 75	13 C		1					1			
		125 X 150	27 C	1						1			
										3	34.4	128	
05-05	Y	50 X 50	10 C		1					1			EST.1% PYRITE
										1	10.3	19	
05-06	Y	25 X 25	5 C		1					1			EST. 1% PYRITE 30 MARCASITE PELLETS
										1	15.8	2	
05-07	Y	150 X 275	40 C	1						1			EST. 5% PYRITE 100 MARCASITE PELLETS
										1	28.2	482	
06-04	Y	25 X 25	5 C		3					3			EST. 10% PYRITE
		50 X 25	8 C		1					1			
		75 X 75	15 C	1						1			
		75 X 150	22 C		1					1			
		125 X 150	27 C	1						1			
										7	41.1	164	
06-05	Y	25 X 25	5 C						1	1			EST. 10% PYRITE
		50 X 75	13 C		1		1			2			
		75 X 125	20 C			1				1			
		100 X 125	22 C			1				1			
										5	31.1	141	
06-06	Y	25 X 75	10 C				1			1			EST. 10% PYRITE
		125 X 200	31 C			1				1			
										2	24.6	261	

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM1MAR.WR1
TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
06-07	Y	25 X 50	8 C		2					2			EST. 20% PYRITE
		50 X 75	13 C	1	3					4			
		50 X 100	15 C	1						1			
		75 X 100	18 C	1						1			
		75 X 125	20 C	1						1			
		75 X 150	22 C			1				1			
		100 X 100	20 C	1						1			
		225 X 250	44 C			1				1			
										12	58.5	464	
07-03	Y	25 X 25	5 C		3					3			EST. 15% PYRITE
		50 X 75	13 C		1					1			
		150 X 150	29 C	1						1			
		150 X 175	31 C	1						1			
										6	50.0	232	
07-05	Y	50 X 50	10 C		1					1			EST. 10% PYRITE
		75 X 75	15 C		1					1			
		125 X 175	29 C	1						1			
		150 X 200	34 C			1				1			
										4	23.4	577	
07-06	Y	100 X 150	25 C	1						1			EST. 3% PYRITE
		250 X 400	40 C			1				1			30 MARCASITE PELLETS
										2	25.7	1891	
07-07	Y	25 X 25	5 C		1					1			EST. 20% PYRITE
		25 X 75	10 C		1					1			
		50 X 50	10 C		2					2			
		75 X 75	15 C				1			1			
		75 X 100	18 C	1						1			
		75 X 175	25 C	1						1			
		100 X 100	20 C	1						1			
										8	53.4	124	
07-08	Y	25 X 25	5 C		1					1			EST. 10% PYRITE
		25 X 50	8 C		1					1			
		50 X 50	10 C		1					1			
		50 X 75	13 C		2					2			
		50 X 125	18 C		1					1			
		75 X 175	25 C				1			1			
		100 X 125	22 C				1			1			

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDMAR.WR1

TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
		100 X 150	25 C	1	1					2			
										10	62.0	207	
07-09	Y	125 X 150	27 C		1					1			EST. 5% PYRITE
		525 X 650	89 C	1						1			
										2	42.9	5451	
07-10	Y	125 X 125	25 C		1					1			EST. 25% PYRITE
										1	54.0	54	
07-11	Y	75 X 100	18 C		1					1			EST. 15% PYRITE
		150 X 150	29 C		1					1			
		350 X 500	71 C	1						1			
										3	37.3	2745	
08-03	Y	50 X 75	13 C		1					1			EST. 15% PYRITE
		100 X 100	20 C	1						1			
										2	39.5	47	
08-04	Y	50 X 50	10 C		2					2			EST. 10% PYRITE
		50 X 75	13 C		1		1			2			
		50 X 125	18 C	1						1			
		175 X 250	40 C	1						1			
										6	40.3	390	
08-05	Y	50 X 75	13 C		1					1			EST. 20% PYRITE
		75 X 75	15 C		1					1			
		75 X 100	18 C				1			1			
										3	33.2	61	
08-06	Y	25 X 50	8 C		1					1			EST. 15% PYRITE
		50 X 50	10 C		1					1			50 GRAINS OF MARCASITE
		75 X 175	25 C	1						1			
		150 X 200	34 C	1						1			
										4	28.6	381	
09-10	Y	25 X 50	8 C		1					1			EST. 50% PYRITE
		25 X 75	10 C		1					1			500 GRAINS OF ARSENOPYRITE
		50 X 75	13 C		1					1			2000 GRAINS OF MARCASITE

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM1MAR.WR1

TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
		50 X 125	18 C		1					1			
		75 X 100	18 C	1						1			
		125 X 125	25 C	1						1			
		125 X 150	27 C	1						1			
										7	38.0	247	
09-11	Y	25 X 50	8 C		1					1			EST. 40% PYRITE
		50 X 75	13 C		3					3			
		150 X 225	36 C	1						1			
		150 X 250	38 C	1						1			
										6	43.2	511	
09-12	Y	50 X 75	13 C	1	1					2			EST. 40% PYRITE
		50 X 125	18 C		1					1			
		75 X 125	20 C	1						1			
		125 X 150	27 C	1						1			
		175 X 375	50 C	1						1			
										6	61.5	578	
09-13	Y	25 X 50	8 C		1					1			EST. 15% PYRITE
		50 X 50	10 C		1					1			
		75 X 100	18 C		1					1			
										3	25.7	50	
09-14	Y	25 X 25	5 C		1					1			EST. 7% PYRITE
		25 X 50	8 C		1					1			
		50 X 125	18 C		1					1			
										3	16.7	67	
09-15	Y	25 X 50	8 C		2					2			EST. 5% PYRITE
		50 X 75	13 C		1					1			
		75 X 150	50 M		1					1			
		125 X 150	27 C		1					1			
										5	50.3	181	
09-16	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
		75 X 75	15 C		1					1			
										2	15.6	65	
09-17	Y	25 X 75	10 C		1					1			EST. 1% PYRITE

OLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDMIMAR.WR1

TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
		50 X 50	10 C		2					2			
		50 X 75	13 C		1					1			
		75 X 100	18 C		1					1			
										5	35.6	55	
10-03	Y	25 X 25	5 C		1		3			4			EST. 15% PYRITE
		25 X 75	10 C		1					1			
		50 X 50	10 C		2					2			
		50 X 75	13 C		2					2			
		75 X 100	18 C		1		1			2			
		75 X 125	20 C		2					2			
		100 X 100	20 C		1					1			
		100 X 150	25 C				1			1			
		200 X 300	46 C	1						1			
		225 X 575	68 C	1						1			
		600 X 900	101 C	1						1			
										18	31.5	17183	
10-04	Y	25 X 25	5 C						1	1			EST. 15% PYRITE
		25 X 50	8 C		1					1			
		25 X 75	10 C		1					1			
		50 X 50	10 C	1	1					2			
		50 X 75	13 C				3			3			
		50 X 125	18 C				1			1			
		75 X 75	15 C	1	1					2			
		75 X 125	20 C	1						1			
		125 X 150	27 C	1						1			
										13	62.8	150	
10-05	Y	25 X 50	8 C				1			1			EST. 15% PYRITE
		50 X 125	18 C		1					1			
		75 X 75	15 C				1			1			
		75 X 100	18 C		1					1			
		100 X 175	27 C	1						1			
		225 X 275	46 C			1				1			
										6	50.9	555	
10-06	Y	25 X 50	8 C		2					2			EST. 30% PYRITE
		25 X 75	10 C		1					1			
		75 X 275	75 M	2						2			
		100 X 150	25 C	2						2			
		125 X 175	29 C	1						1			

									1	16.5	227	
11-03	Y	25 X 50	8 C	1	1				2			EST. 5% PYRITE
		50 X 50	10 C	1	1				2			
		50 X 75	13 C	1	1				2			
		100 X 125	22 C	1					1			
									7	29.1	117	
11-04	Y	25 X 25	5 C	1					1			EST. 0.1% PYRITE
		50 X 75	13 C	1					1			
		75 X 100	18 C		1	1			2			
		75 X 200	75 M	1					1			
		100 X 100	20 C		1				1			
									6	45.7	318	
12-04	Y	25 X 50	8 C				1		1			EST. 5% PYRITE
		125 X 150	75 M			1			1			5 GRAINS OF ARSENOPYRITE
		225 X 500	100 M	1					1			
									3	24.3	4497	
12-05	Y	25 X 50	8 C		1				1			EST. 2% PYRITE
		50 X 100	15 C		1				1			
		75 X 75	15 C		1				1			
		75 X 150	22 C		1				1			
									4	15.1	231	
12-06	Y	50 X 125	50 M	1					1			EST. 0.1% PYRITE
		75 X 75	15 C	1					1			
		225 X 325	75 C	1					1			
									3	15.5	2971	
12-07	Y	50 X 50	10 C		1				1			EST. 0.1% PYRITE
		75 X 175	25 C	1					1			
		100 X 125	75 M	1					1			
									3	16.6	615	

OVERBURDEN DRILLING MANAGEMENT LIMITED
107-15 CAPELLA COURT, NEPEAN, ONTARIO, K2E 7X1
TELEPHONE: (613) 224-1771/1774
FAX NO: (613) 224-8753

D A T A T R A N S M I T T A L R E P O R T

DATE: 23-Mar-89

CLIENT:

ATTENTION: **Mr. Johale Newsome**
MIDDLETON EXPLORATION SERVICES INC
136 Cedar St. S.
P.O. Box 1637
Timmins, Ontario
P4N 7W8

PROJECT: M-181 13-03 to 24-08

FILE NO: MIDM2MAR.WR1

NO. OF SAMPLES: 40

NO. OF PANNINGS: 40

HEAVY MINERAL CONCENTRATES:

34 NON MAG sent to Analytical Lab BONDAR CLEGG

_____ are included in this shipment _____ mag _____ non-mag.

REMARKS: _____

Duane Parnham
Laboratory Manager

OVERBURDEN DRILLING MANAGEMENT LIMITED - LABORATORY SAMPLE LOG

ABBREVIATIONS

DATA LOG

Clast:

Size of Clast:

- G: Granules
- P: Pebbles
- C: Cobbles
- BL: Boulder Chips
- BK: Bedrock Chips

% Clast Composition:

- V/S: Volcanics and Sediments
- GR: Granitics
- LS: Limestone
- OT: Other Lithologies (Refer to Footnotes Below)
- TR: Only Trace Present
- NA NOT APPLICABLE

Matrix:

S/U: Sorted or Unsorted

SD:	Sand	Y:	Yes Fraction Present	F:	Fine
ST:	Silt	N:	Fraction Not Present	M:	Medium
CY:	Clay			C:	Coarse

Colour:

- B: Beige
- GY: Grey
- GB: Grey Beige
- GN: Green
- GG: Grey Green
- BN: Brown
- BK: Black
- OC: Ochre
- PK: Pink
- OE: Orange

Class:

- BLD: Boulder Chips
- BDK: Bedrock Chips

GOLD LOG

Number of Grains:

- T: Number Found on Shaking Table
- P: Number Found After Panning

Thickness:

- C: Calculated Thickness of Grain
- M: Actual Measured Thickness of Grain

Footnotes:

A: Gritty Clay Lumps Present

B: Smooth Clay Lumps Present

C: Organics Present

D: Oxidized

M[illegible]M2MAR.WR1 OVERBURDEN DRILLING MANAGEMENT LIMITED

TOTAL # OF SAMPLES IN THIS REPORT = 40

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION										CLASS
						M. I. CONC					CLAST					MATRIX					
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE V/S	% GR	LS	OT		S/U	SD	ST	CY	COLOR SD	COLOR CY	
[illegible]-181																					
[illegible]3-03	12.6	0.0	12.6	307.8	252.5	55.3	37.0	18.3	4	202	TR	NA	NA	NA	NA	U	Y	Y	Y	GYB	GB	TILL
13-04	9.3	0.0	9.3	201.4	157.2	44.2	30.6	13.6	2	298	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]3-05	6.2	0.0	6.2	126.1	106.9	19.2	16.1	3.1	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GN	GNB	TILL&BDK
[illegible]4-04	16.4	0.0	16.4	266.5	212.6	53.9	34.2	19.7	7	918	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
14-05	13.8	0.0	13.8	231.3	172.9	58.4	37.2	21.2	6	235	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]4-06	3.0	0.0	3.0	139.0	124.9	14.1	9.8	4.3	1	153	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]4-07	4.0	0.0	4.0	242.1	225.1	17.0	11.5	5.5	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GN	GNB	TILL&BDK
15-07	9.4	0.0	9.4	237.3	203.7	33.6	21.2	12.4	1	48	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
15-08	14.3	0.0	14.3	268.6	219.2	49.4	34.5	14.9	2	95	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]5-09	5.9	0.0	5.9	170.3	145.3	25.0	16.9	8.1	2	94	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
15-10	2.9	0.0	2.9	128.7	110.6	18.1	11.8	6.3	2	102	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
15-11	12.3	0.0	12.3	315.6	253.7	61.9	41.1	20.8	3	101	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]5-12	13.2	0.0	13.2	228.7	184.6	44.1	26.8	17.3	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]6-01	15.8	0.0	15.8	355.3	269.3	86.0	51.5	34.5	18	2086	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
17-10	12.0	0.0	12.0	180.1	142.7	37.4	23.9	13.5	9	372	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]7-11	11.6	0.0	11.6	162.0	123.9	38.1	25.1	13.0	9	627	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]7-12	8.2	0.0	8.2	193.7	163.7	30.0	19.3	10.7	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
17-13	8.8	0.2	8.6	175.0	139.1	35.9	23.6	12.3	1	8	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]7-14	10.5	0.0	10.5	231.1	186.5	44.6	31.4	13.2	6	407	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]7-15	15.5	0.0	15.5	252.0	185.3	66.7	48.3	18.4	1	60	TR	NA	NA	NA	NA	U	Y	Y	Y	GN	GNB	TILL
18-01	12.4	0.5	11.9	175.5	136.2	39.3	25.8	13.5	1	242	P	70	30	NA	NA	U	Y	Y	Y	GY	GYB	TILL
[illegible]9-02	21.4	0.0	21.4	269.6	206.9	62.7	39.8	22.9	9	629	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
[illegible]9-03	13.4	0.0	13.4	207.1	165.2	41.9	27.1	14.8	2	248	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
19-04	15.4	0.0	15.4	207.2	165.6	41.6	26.9	14.7	3	140	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
20-05	10.2	0.0	10.2	196.3	169.9	26.4	17.9	8.5	2	105	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]0-06	16.4	0.0	16.4	237.3	164.6	72.7	44.0	28.7	9	447	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]0-07	18.1	0.0	18.1	322.1	255.6	66.5	44.0	22.5	7	412	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
20-08	8.1	0.0	8.1	237.9	218.9	19.0	12.5	6.5	1	170	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]0-09	14.6	0.5	14.1	224.8	189.4	35.4	24.0	11.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]0-10	15.5	0.4	15.1	198.6	160.2	38.4	26.2	12.2	9	1550	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
21-04	7.1	0.0	7.1	129.8	103.2	26.6	17.2	9.4	1	123	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
21-05	5.0	0.0	5.0	129.7	110.4	19.3	13.0	6.3	18	5249	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]1-07	14.1	0.0	14.1	146.1	113.3	32.8	22.2	10.6	3	34	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
22-01	7.5	0.0	7.5	137.9	103.2	34.7	23.4	11.3	2	188	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
23-03	10.6	0.0	10.6	182.8	153.8	29.0	18.9	10.1	1	20	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]4-04	8.5	0.0	8.5	152.3	119.4	32.9	21.3	11.6	5	245	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]4-05	9.6	0.0	9.6	193.4	154.5	38.9	26.3	12.6	5	441	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
24-06	7.3	0.0	7.3	178.2	139.5	38.7	27.3	11.4	1	55	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]4-07	13.0	0.0	13.0	222.1	147.8	74.3	41.1	33.2	6	138	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]4-08	8.9	0.3	8.6	295.4	256.8	38.6	25.4	13.2	3	221	C	40	60	NA	NA	U	Y	Y	Y	GB	GB	TILL

LD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM2MAR.WR1 NUMBER OF GRAINS

TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL =====	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
13-03	Y	50 X 100	15 C		1					1			EST. 5% PYRITE
		75 X 125	20 C	1						1			5 GRAINS ARSENOPYRITE
		100 X 100	20 C		1					1			5 GRAINS GALENA
		125 X 150	27 C	1						1			
										4	37.0	202	
13-04	Y	125 X 125	25 C	1						1			EST. 10% PYRITE
		125 X 200	31 C	1						1			5 GRAINS GALENA
										2	30.6	298	
13-05	Y	NO VISIBLE GOLD											EST. 5% PYRITE
14-04	Y	50 X 50	10 C	1						1			EST. 5% PYRITE
		75 X 125	50 M		1					1			10 GRAINS ARSENOPYRITE
		100 X 150	25 C	1						1			
		100 X 150	50 M		1					1			
		125 X 200	31 C	1						1			
		150 X 175	31 C	2						2			
										7	34.2	918	
14-05	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
		25 X 50	8 C	1	1					2			
		50 X 100	50 M	1						1			
		100 X 100	20 C	1						1			
		150 X 150	29 C		1					1			
										6	37.2	235	
14-06	Y	75 X 125	20 C		1					1			EST. 1% PYRITE
										1	9.8	153	
14-07	Y	NO VISIBLE GOLD											EST. 20% PYRITE
15-07	Y	75 X 100	18 C		1					1			EST. 9% PYRITE
										1	21.2	48	
15-08	Y	50 X 75	13 C		1					1			EST. 5% PYRITE
		75 X 175	25 C	1						1			20 GRAINS ARSENOPYRITE
													5 GRAINS GALENA
										2	34.5	95	
15-09	Y	25 X 50	8 C		1					1			EST. 1% PYRITE

LD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

M2MAR.WR1

TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
		75 X 125	20 C		1					1			5 GRAINS ARSENOPYRITE
										2	16.9	94	
15-10	Y	50 X 50	10 C		1					1			EST. 1.5% PYRITE
		75 X 100	18 C		1					1			10 GRAINS ARSENOPYRITE
													10 GRAINS GALENA
										2	11.8	102	
15-11	Y	75 X 100	18 C		2					2			EST. 12% PYRITE
		75 X 150	22 C		1					1			5 GRAINS ARSENOPYRITE
													5 GRAINS GALENA
										3	41.1	101	
15-12	Y	NO VISIBLE GOLD											EST. 7% PYRITE
													5 GRAINS ARSENOPYRITE
16-01	Y	50 X 50	50 M		1					1			EST. 10% PYRITE
		50 X 75	50 M		2					2			30 GRAINS ARSENOPYRITE
		50 X 75	13 C		2					2			50 GRAINS GALENA
		50 X 100	15 C		1					1			
		75 X 100	18 C		3					3			
		75 X 100	50 M		1					1			
		75 X 125	50 M		1					1			
		100 X 125	22 C		1					1			
		125 X 150	27 C		1					1			
		150 X 150	29 C		1					1			
		150 X 175	22 C		1					1			
		150 X 200	34 C		1					1			
		200 X 200	38 C		1					1			
		325 X 375	61 C		1					1			
										18	51.5	2086	
17-10	Y	25 X 25	5 C		1					1			EST. 4% PYRITE
		25 X 50	8 C		1					1			10 GRAINS ARSENOPYRITE
		25 X 100	13 C		1					1			
		50 X 75	13 C		1					1			
		50 X 100	15 C		2					2			
		75 X 125	20 C		1					1			
		100 X 100	20 C		1					1			
		100 X 100	50 M		1					1			
										9	23.9	372	
17-11	Y	25 X 25	5 C		2					2			EST. 2% PYRITE
		25 X 50	8 C		1		1			2			5 GRAINS ARSENOPYRITE
		50 X 50	10 C		1		1			2			

OLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

IDM2MAR.WRI
TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
		75 X 125	20 C		1					1			
		75 X 125	50 M		1					1			
		125 X 200	50 M		1					1			
										9	25.1	627	
17-12	Y	NO VISIBLE GOLD											EST. 3% PYRITE
													15 GRAINS ARSENOPYRITE
17-13	Y	25 X 75	10 C				1			1			EST. 4% PYRITE
										1	23.6	8	
17-14	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 50	10 C				1			1			5 GRAINS OF ARSENOPYRITE
		50 X 100	15 C		1					1			
		50 X 125	18 C		1					1			
		75 X 125	50 M		1					1			
		125 X 150	50 M		1					1			
										6	31.4	407	
17-15	Y	100 X 150	25 C		1					1			EST. 10% PYRITE
													10 GRAINS OF ARSENOPYRITE
										1	48.3	60	50 GRAINS OF NATIVE COPPER
18-01	Y	125 X 200	31 C		1					1			EST. 25% PYRITE
										1	25.8	242	
19-02	Y	25 X 25	5 C				1			1			EST. 5 GRAINS OF ARSENOPYRITE
		50 X 50	10 C		2					2			
		50 X 50	50 M		1					1			
		75 X 100	50 M		1					1			
		75 X 125	20 C		1					1			
		75 X 125	50 M		1					1			
		100 X 125	75 M		1					1			
		125 X 175	50 M		1					1			
										9	39.8	629	
19-03	Y	100 X 150	25 C		1					1			EST. 1.5% PYRITE
		125 X 150	27 C				1			1			
										2	27.1	248	
19-04	Y	25 X 75	10 C		1					1			EST. 20% PYRITE
		50 X 75	50 M		1					1			10 GRAINS OF ARSENOPYRITE

LD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

DM2MAR.WR1

TOTAL # OF PANNINGS 40

MPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
		75 X 75	50 M		1					1			
										3	26.9	140	
20-05	Y	25 X 100	13 C		1					1			EST. 5% PYRITE
		75 X 125	20 C	1						1			5 GRAINS ARSENOPYRITE
													5 GRAINS GALENA
										2	17.9	105	
20-06	Y	50 X 75	13 C	2						2			EST. 7% PYRITE
		50 X 100	15 C		1					1			10 GRAINS GALENA
		75 X 100	18 C	1						1			
		75 X 100	50 M		1					1			
		75 X 125	20 C	1						1			
		75 X 125	50 M	1						1			
		125 X 125	25 C		1					1			
		125 X 200	31 C	1						1			
										9	44.0	447	
20-07	Y	75 X 75	15 C	1						1			EST. 6% PYRITE
		75 X 100	18 C	1						1			10 GRAINS OF ARSENOPYRITE
		75 X 100	50 M	1						1			
		100 X 150	25 C	3						3			
		150 X 150	29 C	1						1			
										7	44.0	412	
20-08	Y	75 X 150	22 C	1						1			EST. 2% PYRITE
										1	12.5	170	
20-09	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
20-10	Y	25 X 50	8 C		1					1			EST. 0.1% PYRITE
		50 X 100	15 C		1					1			
		75 X 125	20 C		1					1			
		100 X 100	20 C		1					1			
		100 X 225	31 C		1					1			
		125 X 125	25 C				1			1			
		125 X 150	27 C		1					1			
		150 X 150	29 C		1					1			
		175 X 275	50 M		1					1			
										9	26.2	1550	
21-04	Y	100 X 125	22 C		1					1			EST. 1.5% PYRITE

OLD CLASSIFICATION

ISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM2MAR.WR1

TOTAL # OF PANNINGS 40

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													5 GRAINS ARSENOPYRITE
										1	17.2	123	
21-05	Y	25 X 50	8 C						1	1			EST. 2% PYRITE
		25 X 75	10 C						1	1			5 GRAINS CHALCOPYRITE
		50 X 50	10 C				2			2			5 GRAINS ARSENOPYRITE
		50 X 75	13 C			1				1			PHOTOMICROGRAPH AVAILABLE
		50 X 100	15 C				2	1		3			REFERENCE # 160
		75 X 75	15 C				2			2			
		75 X 100	18 C					1		1			
		75 X 125	20 C				1			1			
		75 X 225	29 C				1			1			
		100 X 100	20 C					1		1			
		100 X 125	22 C					1		1			
		100 X 150	25 C					1		1			
		100 X 500	54 C					1		1			
		200 X 225	40 C		1					1			
										18	13.0	5249	
21-07	Y	25 X 25	5 C		1					1			EST. 5% PYRITE
		25 X 50	8 C				1			1			5 GRAINS ARSENOPYRITE
		75 X 75	15 C		1					1			
										3	22.2	34	
22-01	Y	75 X 125	20 C		1					1			EST. 5% PYRITE
		75 X 175	25 C		1					1			5 GRAINS OF ARSENOPYRITE
										2	23.4	188	
23-03	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
										1	18.9	20	
24-04	Y	25 X 25	5 C				1			1			EST. 5% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
		50 X 75	50 M		1					1			
		75 X 75	75 M				1			1			
										5	21.3	245	
24-05	Y	50 X 75	13 C	1	2					3			EST. 2% PYRITE
		75 X 100	18 C		1					1			10 GRAINS OF ARSENOPYRITE
		150 X 225	36 C	1						1			

LD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

DM2MAR.WR1

TOTAL # OF PANNINGS 40

MPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181										5	26.3	441	
24-06	Y	75 X 125	20 C		1					1			EST. 2% PYRITE 5 GRAINS ARSENOPYRITE
										1	27.3	55	
24-07	Y	50 X 50	10 C	1			1			2			EST. 1% PYRITE
		50 X 100	15 C		1					1			
		50 X 150	20 C	1						1			
		75 X 100	18 C		1					1			
		100 X 125	22 C	1						1			
										6	41.1	138	
24-08	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		50 X 100	15 C			1				1			
		125 X 175	29 C	1						1			
										3	25.4	221	

OVERBURDEN DRILLING MANAGEMENT LIMITED
107-15 CAPELLA COURT, NEPEAN, ONTARIO, K2E 7X1
TELEPHONE: (613) 224-1771/1774
FAX NO: (613) 224-8753

D A T A T R A N S M I T T A L R E P O R T

DATE: 27-Mar-89

CLIENT:

ATTENTION: **Mr. Johale Newsome**
MIDDLETON EXPLORATION SERVICES INC
136 Cedar St. S.
P.O. Box 1637
Timmins, Ontario
P4N 7W8

PROJECT: M-181 24-09 to 28-14

FILE NO: MIDM3MAR.WR1

NO. OF SAMPLES: 33

NO. OF PANNINGS: 33

HEAVY MINERAL CONCENTRATES:

3/4 NON MAG sent to Analytical Lab BONNAR CLEEK

_____ are included in this shipment _____ mag _____non-mag.

REMARKS: _____

_____

_____

Duane Parnham
Laboratory Manager

OVERBURDEN DRILLING MANAGEMENT LIMITED - LABORATORY SAMPLE LOG

ABBREVIATIONS

DATA LOG

Clast:

Size of Clast:

- G: Granules
- P: Pebbles
- C: Cobbles
- BL: Boulder Chips
- BK: Bedrock Chips

% Clast Composition:

- V/S: Volcanics and Sediments
- GR: Granitics
- LS: Limestone
- OT: Other Lithologies (Refer to Footnotes Below)
- TR: Only Trace Present
- NA NOT APPLICABLE

Matrix:

S/U: Sorted or Unsorted

SD:	Sand	Y:	Yes Fraction Present	F:	Fine
ST:	Silt	N:	Fraction Not Present	M:	Medium
CY:	Clay			C:	Coarse

Colour:

- B: Beige
- GY: Grey
- GB: Grey Beige
- GN: Green
- GG: Grey Green
- BN: Brown
- BK: Black
- OC: Ochre
- PK: Pink
- OE: Orange

Class:

- BLD: Boulder Chips
- BDK: Bedrock Chips

GOLD LOG

Number of Grains:

- T: Number Found on Shaking Table
- P: Number Found After Panning

Thickness:

- C: Calculated Thickness of Grain
- M: Actual Measured Thickness of Grain

Footnotes:

A: Gritty Clay Lumps Present

B: Smooth Clay Lumps Present

C: Organics Present

D: Oxidized

DM3MAR.WK1

OVERBURDEN DRILLING MANAGEMENT LIMITED

TOTAL # OF SAMPLES IN THIS REPORT = 33

LABORATORY SAMPLE LOG

MPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION										CLASS
						M. I. CONC					CLAST					MATRIX					
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
M-181																					
24-09	12.1	0.0	12.1	257.7	222.4	35.3	23.4	11.9	6	468	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
24-10	7.8	0.0	7.8	159.4	133.6	25.8	17.0	8.8	3	86	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
24-11	3.3	0.0	3.3	196.7	180.7	16.0	10.6	5.4	1	2	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
24-12	3.6	0.0	3.6	196.8	175.4	21.4	12.2	9.2	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
24-13	5.7	0.0	5.7	271.5	250.6	20.9	13.2	7.7	2	167	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
24-14	3.4	0.0	3.4	204.4	191.9	12.5	8.3	4.2	1	122	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
25-04	4.2	0.0	4.2	202.3	182.8	19.5	12.4	7.1	1	398	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
25-05	5.0	0.0	5.0	193.4	176.4	17.0	10.8	6.2	4	429	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
25-06	7.2	0.0	7.2	290.7	261.1	29.6	18.9	10.7	1	20	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
25-07	6.4	0.0	6.4	218.7	193.8	24.9	15.5	9.4	2	36	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
25-08	4.3	0.0	4.3	158.1	135.0	23.1	16.6	6.5	3	233	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
26-01	11.3	0.0	11.3	214.3	178.8	35.5	21.5	14.0	1	17	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
26-02	5.4	0.0	5.4	140.1	115.1	25.0	17.0	8.0	1	5	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
26-03	4.0	0.0	4.0	100.3	80.0	20.3	14.6	5.7	1	2	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
26-04	13.2	0.0	13.2	240.3	192.5	47.8	32.6	15.2	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-08	17.6	0.0	17.6	327.5	261.7	65.8	41.0	24.8	1	9	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-09	13.8	0.0	13.8	274.6	225.9	48.7	28.3	20.4	3	39	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-10	9.7	0.0	9.7	164.0	135.7	28.3	16.8	11.5	4	68	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-11	11.3	0.0	11.3	202.9	169.1	33.8	21.8	12.0	2	33	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-12	7.2	0.0	7.2	140.2	111.5	28.7	19.1	9.6	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-13	5.2	0.0	5.2	89.0	73.8	15.2	10.8	4.4	1	18	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-14	5.9	0.0	5.9	246.9	227.8	19.1	12.5	6.6	1	851	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-15	10.2	0.0	10.2	298.4	255.6	42.8	26.2	16.6	4	152	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-16	7.6	0.0	7.6	256.0	219.1	36.9	28.4	8.5	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
27-17	13.9	0.0	13.9	308.2	274.6	33.6	26.4	7.2	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
28-06	16.6	0.0	16.6	286.7	234.2	52.5	35.1	17.4	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
28-07	15.1	0.0	15.1	302.3	251.3	51.0	32.3	18.7	1	261	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
28-09	15.7	0.0	15.7	382.4	320.6	61.8	40.5	21.3	2	18	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
28-10	9.1	0.0	9.1	270.6	237.5	33.1	21.6	11.5	2	51	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
28-11	2.9	0.0	2.9	143.2	133.3	9.9	6.6	3.3	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
28-12	7.3	0.0	7.3	263.1	233.8	29.3	19.6	9.7	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
28-13	5.3	0.0	5.3	119.8	95.3	24.5	18.2	6.3	1	4	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
28-14	7.8	0.0	7.8	130.5	111.4	19.1	10.7	8.4	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL

D CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM3MAR.WR1 NUMBER OF GRAINS

TOTAL # OF PANNINGS 33

MPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
24-09	Y	50 X 50	10 C	1						1			EST. 1% PYRITE
		50 X 75	50 M	1						1			
		75 X 75	15 C		1					1			
		75 X 100	18 C	1						1			
		75 X 150	50 C	1						1			
		100 X 150	25 C		1					1			
										6	23.4	468	
24-10	Y	25 X 50	8 C		1					1			EST. 1.5% PYRITE
		50 X 75	13 C	1						1			
		50 X 125	18 C		1					1			
										3	17.0	86	
24-11	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
										1	10.6	2	
24-12	Y	NO VISIBLE GOLD											EST. 3% PYRITE
24-13	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		100 X 125	22 C		1					1			
										2	13.2	167	
24-14	Y	75 X 100	18 C		1					1			EST. 1.5% PYRITE
										1	8.3	122	
25-04	Y	125 X 175	29 C	1						1			EST. 1% PYRITE
										1	12.4	398	
25-05	Y	50 X 75	13 C				1			1			EST. 1% PYRITE
		75 X 75	15 C			1				1			
		75 X 125	20 C	1						1			
		100 X 125	22 C	1						1			
										4	10.8	429	
25-06	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
										1	18.9	20	
25-07	Y	50 X 50	10 C	1						1			EST. 1% PYRITE
		50 X 75	13 C		1					1			

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM3MAR.WR1 NUMBER OF GRAINS

TOTAL # OF PANNINGS 33

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
										2	15.5	36	
25-08	Y	25 X 25	5 C		1				1	2			EST. 10% PYRITE
		75 X 200	27 C		1					1			
										3	16.6	233	
26-01	Y	50 X 75	13 C		1					1			EST. 3% PYRITE
										1	21.5	17	
26-02	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
										1	17.0	5	
26-03	Y	25 X 25	5 C		1					1			EST. 2% PYRITE 5 GRAINS ARSENOPYRITE
										1	14.6	2	
26-04	Y	NO VISIBLE GOLD											EST. 50% PYRITE 10 GRAINS ARSENOPYRITE
27-08	Y	50 X 75	13 C		1					1			EST. 5% PYRITE 5 GRAINS ARSENOPYRITE
										1	41.0	9	
27-09	Y	25 X 25	8 C						1	1			EST. 5% PYRITE
		25 X 50	8 C						1	1			5 GRAINS ARSENOPYRITE
		75 X 100	18 C		1					1			
										3	28.3	39	
27-10	Y	25 X 25	5 C		2					2			EST. 2% PYRITE
		25 X 50	8 C				1			1			5 GRAINS ARSENOPYRITE
		75 X 100	18 C		1					1			
										4	16.8	68	
27-11	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 100	15 C		1					1			
										2	21.8	33	
27-12	Y	NO VISIBLE GOLD											EST. 2% PYRITE
27-13	Y	50 X 50	10 C		1					1			EST. 6% PYRITE 5 GRAINS ARSENOPYRITE

LD CLASSIFICATION

ISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM3MAR.WR1 NUMBER OF GRAINS

TOTAL # OF PANNINGS 33

MPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-181													
										1	10.8	18	5 GRAINS GALENA
27-14	Y	75 X 200	75 M	1						1			EST. 3% PYRITE
													5 GRAINS ARSENOPYRITE
										1	12.5	851	5 GRAINS GALENA
27-15	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 75	13 C			1				1			5 GRAINS ARSENOPYRITE
		75 X 75	15 C	1						1			5 GRAINS GALENA
		100 X 150	25 C	1						1			
										4	26.2	152	
27-16	Y	NO VISIBLE GOLD											EST. 20% PYRITE
													30 GRAINS ARSENOPYRITE
27-17	Y	NO VISIBLE GOLD											EST. 60% PYRITE
													15 GRAINS ARSENOPYRITE
28-06	Y	NO VISIBLE GOLD											EST. 1.5% PYRITE
28-07	Y	125 X 175	50 M	1						1			EST. 3% PYRITE
													5 GRAINS ARSENOPYRITE
										1	32.3	261	
28-09	Y	25 X 50	8 C		1					1			EST. 4% PYRITE
		75 X 75	15 C	1						1			5 GRAINS ARSENOPYRITE
										2	40.5	18	
28-10	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		75 X 100	18 C	1						1			
										2	21.6	51	
28-11	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
28-12	Y	NO VISIBLE GOLD											EST. 4% PYRITE
28-13	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
										1	18.2	4	
28-14	Y	NO VISIBLE GOLD											EST. 6% PYRITE
													5 GRAINS ARSENOPYRITE

OVERBURDEN DRILLING MANAGEMENT LIMITED
107-15 CAPELLA COURT, NEPEAN, ONTARIO, K2E 7X1
TELEPHONE: (613) 226-1771/1774
FAX NO: (613) 226-8753

D A T A T R A N S M I T T A L R E P O R T

DATE: 30-Mar-89

CLIENT:

ATTENTION: **Mr. Johale Newsome**
MIDDLETON EXPLORATION SERVICES INC
136 Cedar St. S.
P.O. Box 1637
Timmins, Ontario
P4N 7W8

PROJECT: M-265 29-01 to 38-12

FILE NO: MIDM4MAR.WR1

NO. OF SAMPLES: 50

NO. OF PANNINGS: 50

HEAVY MINERAL CONCENTRATES:

3/4 NONMAG sent to Analytical Lab BONDAR CLEVE.

_____ are included in this shipment _____ mag _____ non-mag.

REMARKS: _____

_____

_____

Duane Parnham
Laboratory Manager

OVERBURDEN DRILLING MANAGEMENT LIMITED - LABORATORY SAMPLE LOG

ABBREVIATIONS

DATA LOG

Clast:

Size of Clast:

- G: Granules
- P: Pebbles
- C: Cobbles
- BL: Boulder Chips
- BK: Bedrock Chips

% Clast Composition:

- V/S: Volcanics and Sediments
- GR: Granitics
- LS: Limestone
- OT: Other Lithologies (Refer to Footnotes Below)
- TR: Only Trace Present
- NA NOT APPLICABLE

Matrix:

S/U: Sorted or Unsorted

SD:	Sand	Y:	Yes Fraction Present	F:	Fine
ST:	Silt	N:	Fraction Not Present	M:	Medium
CY:	Clay			C:	Coarse

Colour:

- B: Beige
- GY: Grey
- GB: Grey Beige
- GN: Green
- GG: Grey Green
- BN: Brown
- BK: Black
- OC: Ochre
- PK: Pink
- OE: Orange

Class:

- BLD: Boulder Chips
- BDK: Bedrock Chips

GOLD LOG

Number of Grains:

- T: Number Found on Shaking Table
- P: Number Found After Panning

Thickness:

- C: Calculated Thickness of Grain
- M: Actual Measured Thickness of Grain

Footnotes:

A: Gritty Clay Lumps Present

B: Smooth Clay Lumps Present

C: Organics Present

D: Oxidized

IDM4MAR.WR1 OVERBURDEN DRILLING MANAGEMENT LIMITED

TOTAL # OF SAMPLES IN THIS REPORT = 50

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)		M. I. CONC			AU		DESCRIPTION										CLASS
											CLAST					MATRIX					
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% DT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
M-265																					
29-01	3.9	0.0	3.9	109.3	86.2	23.1	17.2	5.9	3	85	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
29-02	5.8	0.0	5.8	163.0	139.5	23.5	15.8	7.7	2	3	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
29-03	11.3	0.0	11.3	200.1	158.7	41.4	28.9	12.5	6	40	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
29-04	6.6	0.0	6.6	251.9	235.0	16.9	12.2	4.7	7	644	TR	NA	NA	NA	NA	U	Y	Y	Y	GNB	B	TILL
30-09	3.9	0.0	3.9	155.1	139.6	15.5	9.6	5.9	2	41	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
30-10	8.2	0.0	8.2	257.2	221.1	36.1	21.8	14.3	3	11	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
30-11	3.8	0.0	3.8	162.2	146.1	16.1	10.4	5.7	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
30-12	6.2	0.0	6.2	163.1	148.5	14.6	9.3	5.3	1	531	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
30-13	10.3	0.0	10.3	300.2	263.9	36.3	23.6	12.7	2	189	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
30-14	9.2	0.0	9.2	261.1	226.6	34.5	19.9	14.6	1	294	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
31-04	7.2	0.0	7.2	196.0	165.9	30.1	20.9	9.2	1	138	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
31-05	7.0	0.0	7.0	199.1	170.6	28.5	20.5	8.0	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
31-06	4.2	0.0	4.2	166.8	149.8	17.0	12.0	5.0	3	2256	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
31-07	5.4	0.0	5.4	184.0	174.5	9.5	6.4	3.1	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GN	GB	TILL
32-01	6.6	0.0	6.6	256.2	225.7	30.5	22.6	7.9	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
32-02	5.0	0.0	5.0	214.8	194.1	20.7	15.0	5.7	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
33-01	10.1	0.0	10.1	168.9	134.2	34.7	25.7	9.0	2	90	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
34-01	16.6	0.0	16.6	238.1	183.9	54.2	36.4	17.8	7	413	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-01	11.2	0.0	11.2	217.6	190.8	26.8	18.1	8.7	5	82	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-02	7.5	0.0	7.5	174.7	151.7	23.0	15.6	7.4	2	18	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
35-03	6.3	0.0	6.3	140.1	114.3	25.8	18.6	7.2	1	1	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
35-04	7.8	0.0	7.8	305.5	275.8	29.7	20.9	8.8	1	31	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-05	7.4	0.0	7.4	190.6	172.4	18.2	12.8	5.4	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
35-07	17.0	0.0	17.0	218.6	169.3	49.3	32.2	17.1	2	200	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-08	6.3	0.0	6.3	233.5	214.5	19.0	12.3	6.7	2	864	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-09	7.2	0.0	7.2	231.4	214.9	16.5	10.2	6.3	2	73	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-10	6.6	0.0	6.6	217.7	200.8	16.9	10.5	6.4	3	56	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-11	7.4	0.0	7.4	174.9	158.2	16.7	10.4	6.3	1	278	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-12	10.3	0.0	10.3	264.5	243.6	20.9	14.2	6.7	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-13	7.6	0.0	7.6	251.8	235.8	16.0	10.3	5.7	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-14	6.8	0.0	6.8	222.1	195.2	26.9	16.4	10.5	5	752	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-15	7.2	0.0	7.2	225.9	195.5	30.4	17.8	12.6	4	56	TR	NA	NA	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
36-16	6.7	0.0	6.7	185.1	161.0	24.1	15.1	9.0	3	61	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-17	6.0	0.0	6.0	135.2	109.3	25.9	17.7	8.2	2	93	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-18	5.7	0.0	5.7	146.7	123.1	23.6	15.6	8.0	6	141	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-19	9.1	0.0	9.1	208.4	174.8	33.6	21.9	11.7	6	123	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-20	10.0	0.0	10.0	215.4	170.8	44.6	28.9	15.7	3	37	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
36-21	7.2	0.0	7.2	230.4	207.8	22.6	15.8	6.8	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
37-01	5.1	0.0	5.1	165.0	135.1	29.9	18.6	11.3	1	20	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
37-02	7.2	0.0	7.2	166.6	140.3	26.3	15.7	10.6	2	105	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
37-03	13.5	0.0	13.5	206.0	163.1	42.9	26.8	16.1	1	3	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
37-04	10.4	0.0	10.4	155.4	126.8	28.6	17.7	10.9	2	200	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-04	6.6	0.0	6.6	222.1	198.9	23.2	14.7	8.5	1	143	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-05	8.2	0.0	8.2	229.5	195.2	34.3	22.8	11.5	1	16	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL

DM4MAR.WR1 OVERBURDEN DRILLING MANAGEMENT LIMITED

TOTAL # OF SAMPLES IN THIS REPORT = 50

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE V/S	% GR		LS	OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
M-265																						
38-06	5.8	0.0	5.8	186.2	161.7	24.5	16.0	8.5	3	103	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-07	7.2	0.0	7.2	207.5	173.5	34.0	22.7	11.3	4	30	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-08	6.0	0.0	6.0	145.8	120.7	25.1	16.6	8.5	6	156	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-09	5.1	0.0	5.1	169.6	150.3	19.3	12.7	6.6	2	22	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-10	6.4	0.0	6.4	216.2	191.5	24.7	15.8	8.9	4	842	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-12	11.7	0.0	11.7	283.9	230.1	53.8	18.6	35.2	7	110	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL

LD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM4MAR.WR1

TOTAL # OF PANNINGS 50

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-265													
29-01	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 75	13 C	1						1			
		75 X 100	18 C	1						1			
										3	17.2	85	
29-02	Y	25 X 25	5 C		2					2			EST. 4% PYRITE
										2	15.8	3	
29-03	Y	25 X 25	5 C		1					1			EST. 5% PYRITE
		50 X 50	10 C		4					4			
		50 X 75	13 C		1					1			
										6	28.9	40	
29-04	Y	25 X 50	8 C						1	1			EST. 15% PYRITE
		50 X 75	13 C		1					1			
		75 X 75	15 C		1					1			
		75 X 100	18 C		1					1			
		75 X 125	20 C		1					1			
		75 X 150	22 C		1				1	2			
										7	12.2	644	
30-09	Y	25 X 25	5 C						1	1			EST. 1% PYRITE
		50 X 75	13 C		1					1			
										2	9.6	41	
30-10	Y	25 X 50	8 C		3					3			EST. 1% PYRITE
										3	21.8	11	
30-11	Y	NO VISIBLE GOLD											EST. 1% PYRITE
30-12	Y	125 X 175	29 C		1					1			EST. 2.5% PYRITE 10 GRAINS GALENA
										1	9.3	531	
30-13	Y	50 X 100	15 C	1						1			EST. 3.5% PYRITE
		125 X 150	27 C	1						1			25 GRAINS GALENA
										2	23.6	189	
30-14	Y	125 X 125	50 M	1						1			EST. 3% PYRITE 15 GRAINS GALENA

LD CLASSIFICATION

SIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM4MAR.WR1

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
TOTAL # OF PANNINGS 50													
M-265										1	19.9	294	
31-04	Y	125 X 125	25 C			1				1			EST. 15% PYRITE
													5 GRAINS ARSENOPYRITE
										1	20.9	138	5 GRAINS GALENA
31-05	Y	NO VISIBLE GOLD											EST. 15% PYRITE, 5 GRAINS GALENA
													5 GRAINS ARSENOPYRITE
31-06	Y	25 X 25	5 C	1						1			EST. 5% PYRITE
		100 X 125	22 C	1						1			5 GRAINS ARSENOPYRITE
		200 X 325	48 C	1						1			5 GRAINS GALENA
										3	12.0	2256	
31-07	Y	NO VISIBLE GOLD											EST. 2% PYRITE
32-01	Y	NO VISIBLE GOLD											EST. 7% PYRITE
32-02	Y	NO VISIBLE GOLD											EST. 3% PYRITE
33-01	Y	50 X 50	10 C			1				1			EST. 10% PYRITE
		100 X 125	22 C	1						1			10 GRAINS ARSENOPYRITE
										2	25.7	90	
34-01	Y	25 X 25	5 C					1		1			EST. 8% PYRITE
		25 X 50	8 C			1				1			5 GRAINS ARSENOPYRITE
		50 X 75	13 C			2				2			
		50 X 100	15 C					1		1			
		75 X 100	13 C	1						1			
		175 X 200	50 M	1						1			
										7	36.4	413	
35-01	Y	25 X 25	5 C			1				1			EST. 4% PYRITE
		25 X 50	8 C			1				1			5 GRAINS ARSENOPYRITE
		50 X 75	13 C			2				2			
		50 X 100	15 C			1				1			
										5	18.1	82	
35-02	Y	25 X 50	8 C			1				1			EST. 4% PYRITE
		50 X 50	10 C			1				1			5 GRAINS ARSENOPYRITE
										2	15.6	18	
35-03	Y	25 X 25	5 C			1				1			EST. 25% PYRITE

LD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

TIDM4MAR.WR1 NUMBER OF GRAINS

TOTAL # OF PANNINGS 50

MPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL =====	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-265													
													5 GRAINS ARSENOPYRITE
										1	18.6	1	
35-04	Y	50 X 100	15 C		1					1			EST. 20% PYRITE
										1	20.9	31	
35-05	Y	NO VISIBLE GOLD											EST. 20% PYRITE
35-07	Y	75 X 125	20 C		1					1			EST. 5% PYRITE
		100 X 200	29 C		1					1			5 GRAINS ARSENOPYRITE
										2	32.2	200	
36-08	Y	125 X 125	25 C		1					1			EST. 5% PYRITE
		150 X 200	34 C		1					1			
										2	12.3	864	
36-09	Y	50 X 75	13 C		2					2			EST. 0.5% PYRITE
										2	10.2	73	
36-10	Y	25 X 25	5 C		1					1			EST. 3% PYRITE
		50 X 50	10 C		1					1			5 GRAINS ARSENOPYRITE
		50 X 75	13 C		1					1			
										3	10.5	56	
36-11	Y	125 X 125	25 C	1						1			EST. 2% PYRITE
										1	10.4	278	
36-12	Y	NO VISIBLE GOLD											EST. 15% PYRITE, 0.5% MARCASITE
													5 GRAINS ARSENOPYRITE
36-13	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
36-14	Y	25 X 25	5 C		1					1			EST. 4% PYRITE
		25 X 50	8 C		1					1			5 GRAINS ARSENOPYRITE
		25 X 75	10 C		1					1			
		75 X 75	15 C		1					1			
		150 X 250	38 C	1						1			
										5	16.4	752	
36-15	Y	25 X 50	8 C		2					2			EST. 2% PYRITE
		50 X 50	10 C		1					1			

LD CLASSIFICATION

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ISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM4MAR.WR1

TOTAL # OF PANNINGS 50

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-265													
		75 X 75	15 C		1					1			
										4	17.8	56	
36-16	Y	25 X 50	8 C				1			1			EST. 1% PYRITE
		50 X 50	10 C		1					1			
		50 X 100	15 C		1					1			
										3	15.1	61	
36-17	Y	50 X 100	15 C				1			1			EST. 3% PYRITE
		75 X 100	18 C	1						1			
										2	17.7	93	
36-18	Y	25 X 50	8 C		4					4			EST. 2% PYRITE
		50 X 75	13 C	1						1			
		100 X 100	20 C		1					1			
										6	15.6	141	
36-19	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		25 X 50	8 C		2					2			
		50 X 75	13 C	1						1			
		75 X 75	15 C		1					1			
		75 X 125	20 C				1			1			
										6	21.9	123	
36-20	Y	25 X 25	5 C		2					2			EST. 1% PYRITE
		75 X 100	18 C		1					1			
										3	28.9	37	
36-21	Y	NO VISIBLE GOLD											EST. 1% PYRITE
37-01	Y	50 X 75	13 C		1					1			EST. 1.5% PYRITE
										1	18.6	20	
37-02	Y	75 X 75	15 C		1					1			EST. 2% PYRITE
		75 X 100	18 C		1					1			
										2	15.7	105	
37-03	Y	25 X 50	8 C		1					1			EST. 2% PYRITE

OLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

MIDM4MAR.WR1

TOTAL # OF PANNINGS 50

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-265										1	26.8	3	
37-04	Y	75 X 75	15 C		1					1			EST. 1% PYRITE
		125 X 125	25 C	1						1			
										2	17.7	200	
38-04	Y	75 X 75	50 M		1					1			EST. 1% PYRITE
										1	14.7	143	
38-05	Y	50 X 75	13 C		1					1			EST. 1% PYRITE
										1	22.8	16	
38-06	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
		50 X 100	15 C		2					2			
										3	16.0	103	
38-07	Y	25 X 25	5 C		1					1			EST. 3% PYRITE
		25 X 50	8 C		1					1			
		50 X 50	10 C				1			1			
		50 X 75	13 C		1					1			
										4	22.7	30	
38-08	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		25 X 50	8 C		3					3			
		50 X 50	10 C				1			1			
		100 X 125	22 C		1					1			
										6	16.6	156	
38-09	Y	25 X 50	8 C				1			1			EST. 2% PYRITE
		50 X 50	10 C		1					1			
										2	12.7	22	
38-10	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		50 X 75	13 C		1					1			
		100 X 100	20 C		1					1			
		175 X 225	38 C	1						1			
										4	15.8	842	
38-12	Y	25 X 50	8 C				1			1			EST. 3% PYRITE

LD CLASSIFICATION

ISIBLE GOLD FROM SHAKING TABLE AND PANNING

IDM4MAR.WR1

TOTAL # OF PANNINGS 50

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
M-265													
		50 X 50	10 C		3					3			
		50 X 75	13 C		1				1	2			
		75 X 75	15 C		1					1			
										7	18.6	110	

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS SUPERVISION SERVICES INC.
1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA
TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 7919

TO: ROBERT S. MIDDLETON EXPLORATION
ATTN: TOM GOUTH
BOX 1637
136 CEDAR STREET SOUTH
TIMMINS, ONTARIO P4N 7W8

CUSTOMER No. 1078

DATE SUBMITTED
20-Feb-89

REF. FILE 4157-D3

Total Pages 4

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	METHOD	DETECTION LIMIT
AU PPB	NA	5.
NA PPM	NA	500.
CA %	NA	1.
SC PPM	NA	0.1
TI PPM	XRF	5.
CR PPM	NA	10.
FE %	NA	0.02
CO PPM	NA	5.
NI PPM	NA	200.
ZN PPM	NA	50.
AS PPM	NA	2.
SE PPM	NA	5.
RB PPM	NA	30.
Y PPM	XRF	2.
ZR PPM	XRF	3.
MO PPM	NA	5.

	METHOD	DETECTION LIMIT
AG PPM	NA	5.
SB PPM	NA	0.2
BA PPM	NA	100.
LA PPM	NA	1.
CE PPM	NA	3.
SM PPM	NA	0.1
EU PPM	NA	0.2
YB PPM	NA	0.2
LU PPM	NA	0.05
HF PPM	NA	1.
TA PPM	NA	1.
W PPM	NA	4.
IR PPB	NA	20.
TH PPM	NA	0.5
U PPM	NA	0.5

DATE 10-MAR-89

CERTIFIED BY .....
Jean H.L. Opdebeeck, Vice President Operations

SAMPLE	AU PPB	NA PPM	CA %	SC PPM	TI PPM	CR PPM	FE %	CO PPM
H89-5	<5	24000	3	20.6	5510	70	5.81	24
H89-6	<5	20000	3	20.8	6460	60	5.96	25
H89-7	<5	33000	1	3.9	845	20	0.98	5
H89-8	<5	20000	4	25.0	5710	120	6.16	29
H89-10	<5	19000	3	20.3	4240	220	5.47	30
H89-11	<5	20000	3	24.6	5570	170	6.26	32
H89-12	<5	26000	3	25.3	5850	180	4.89	30
H89-13	<5	13000	2	27.5	8440	40	8.89	34
H89-14	<5	20000	4	27.5	6380	90	7.37	37
H89-15	<5	19000	3	22.8	5560	60	5.84	26
H89-16	<5	12000	4	30.1	4120	190	5.92	31
H89-17	<5	11000	5	34.2	2790	230	5.38	30
H89-18	<5	14000	5	22.9	2930	190	4.28	25
H89-19	<5	8500	4	27.4	4530	330	6.95	40
H89-20	<5	12000	4	31.4	3940	340	6.23	40
H89-21	<5	12000	4	37.6	6760	250	7.33	36
H89-22	10	1800	8	17.5	1720	100	9.10	34
H89-23	<5	10000	6	31.9	3200	230	5.85	34
H89-24	<5	30000	2	5.8	2050	10	2.16	7
H89-25	<5	5400	5	20.2	7770	700	9.33	59
H89-26	<5	33000	3	26.4	4980	130	5.52	27
H89-27	<5	2100	5	33.7	2540	220	6.18	32
H89-28	6	6400	6	39.9	4600	280	7.13	38
H89-29	<5	12000	5	36.2	3820	260	6.25	35

SAMPLE	NI PPM	ZN PPM	AS PPM	SE PPM	RB PPM	Y PPM	ZR PPM	MO PPM
H89-5	<200	80	<2	<5	<30	25	135	<5
H89-6	<200	90	<2	<5	<30	18	135	<5
H89-7	<200	<50	<2	<5	100	16	77	<5
H89-8	<200	100	<2	<5	<30	19	113	<5
H89-10	<200	70	<2	<5	<30	18	119	<5
H89-11	<200	70	<2	<5	<30	20	106	<5
H89-12	<200	50	<2	<5	<30	20	116	<5
H89-13	<200	150	<2	<5	<30	34	238	<5
H89-14	<200	100	<2	<5	<30	21	107	<5
H89-15	<200	60	<2	<5	<30	21	155	<5
H89-16	<200	90	<2	<5	<30	15	60	<5
H89-17	<200	50	<2	<5	<30	14	60	<5
H89-18	<200	50	<2	<5	<30	12	50	<5
H89-19	<200	110	<2	<5	<30	14	71	<5
H89-20	<200	50	<2	<5	<30	9	50	<5
H89-21	<200	<50	<2	<5	<30	22	93	<5
H89-22	<200	150	<2	<5	<30	9	43	<5
H89-23	<200	90	<2	<5	<30	14	48	<5
H89-24	<200	<50	<2	<5	40	14	189	<5
H89-25	400	110	<2	<5	40	14	125	<5
H89-26	<200	60	<2	<5	<30	18	114	<5
H89-27	<200	90	<2	<5	50	12	57	<5
H89-28	<200	70	<2	<5	<30	13	58	<5
H89-29	<200	100	<2	<5	<30	15	56	<5

SAMPLE	AG PPM	SB PPM	BA PPM	LA PPM	CE PPM	SM PPM	EU PPM	YB PPM
H89-5	<5	<0.2	100	10	25	2.5	0.8	1.8
H89-6	<5	<0.2	100	13	35	3.2	1.1	1.7
H89-7	<5	<0.2	700	11	20	1.5	0.4	0.4
H89-8	<5	<0.2	100	8	21	2.3	0.7	1.8
H89-10	<5	<0.2	200	7	20	2.2	0.9	1.5
H89-11	<5	<0.2	100	8	19	2.2	0.8	1.6
H89-12	<5	<0.2	100	9	20	2.4	1.0	1.5
H89-13	<5	<0.2	100	17	42	4.6	1.8	3.2
H89-14	<5	<0.2	<100	6	20	2.5	1.2	1.9
H89-15	<5	<0.2	200	13	34	3.0	1.1	2.0
H89-16	<5	<0.2	<100	2	8	1.1	0.4	1.2
H89-17	<5	<0.2	<100	4	9	1.2	0.5	1.3
H89-18	<5	<0.2	100	3	10	0.9	0.5	1.0
H89-19	<5	<0.2	<100	6	18	1.9	0.8	1.4
H89-20	<5	<0.2	<100	5	13	1.7	0.8	1.2
H89-21	<5	<0.2	<100	10	25	3.0	1.1	2.0
H89-22	<5	<0.2	100	6	11	1.2	0.5	1.1
H89-23	<5	<0.2	100	2	6	1.1	0.4	1.1
H89-24	<5	<0.2	400	12	27	1.8	0.9	0.6
H89-25	<5	<0.2	500	14	30	3.3	1.1	1.1
H89-26	<5	<0.2	100	7	19	1.9	0.5	1.5
H89-27	<5	<0.2	300	2	7	1.1	0.5	1.4
H89-28	<5	<0.2	<100	4	10	1.7	0.9	1.5
H89-29	<5	<0.2	<100	3	7	1.3	0.7	1.4

SAMPLE	LU PPM	HF PPM	TA PPM	W PPM	IR PPB	TH PPM	U PPM
H89-5	0.28	3	<1	<4	<20	0.8	0.6
H89-6	0.23	3	<1	<4	<20	0.8	<0.5
H89-7	0.09	2	<1	<4	<20	3.8	2.9
H89-8	0.25	2	<1	<4	<20	0.6	<0.5
H89-10	0.21	2	<1	<4	<20	<0.5	<0.5
H89-11	0.25	3	<1	<4	<20	<0.5	<0.5
H89-12	0.24	3	<1	<4	<20	0.8	<0.5
H89-13	0.49	5	<1	<4	<20	1.7	<0.5
H89-14	0.27	2	<1	<4	<20	<0.5	<0.5
H89-15	0.28	3	<1	<4	<20	1.0	0.6
H89-16	0.20	1	<1	<4	<20	<0.5	<0.5
H89-17	0.20	1	<1	<4	<20	<0.5	<0.5
H89-18	0.13	1	<1	<4	<20	<0.5	<0.5
H89-19	0.23	1	<1	<4	<20	<0.5	<0.5
H89-20	0.17	1	<1	<4	<20	<0.5	<0.5
H89-21	0.32	3	<1	<4	<20	<0.5	<0.5
H89-22	0.17	1	<1	<4	<20	<0.5	<0.5
H89-23	0.19	1	<1	<4	<20	<0.5	<0.5
H89-24	0.11	4	<1	<4	<20	0.9	0.5
H89-25	0.17	4	1	<4	<20	1.1	0.7
H89-26	0.22	3	<1	<4	<20	0.8	<0.5
H89-27	0.22	1	<1	<4	<20	<0.5	<0.5
H89-28	0.24	2	<1	<4	<20	<0.5	<0.5
H89-29	0.20	1	<1	<4	<20	<0.5	<0.5

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS SUPERVISION SERVICES INC.
1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA
TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 7920

TO: ROBERT S. MIDDLETON EXPLORATION
ATTN: TOM GOUTH
BOX 1637
136 CEDAR STREET SOUTH
TIMMINS, ONTARIO P4N 7W8

CUSTOMER No. 1078

DATE SUBMITTED
20-Feb-89

REF. FILE 4158-D3

Total Pages 4

7 CR.ROCKS Proj. M-265

	METHOD	DETECTION LIMIT
AU PPB	NA	5.
NA PPM	NA	500.
CA %	NA	1.
SC PPM	NA	0.1
TI PPM	XRF	5.
CR PPM	NA	10.
FE %	NA	0.02
CO PPM	NA	5.
NI PPM	NA	200.
ZN PPM	NA	50.
AS PPM	NA	2.
SE PPM	NA	5.
RB PPM	NA	30.
Y PPM	XRF	2.
ZR PPM	XRF	3.
MO PPM	NA	5.

	METHOD	DETECTION LIMIT
AG PPM	NA	5.
SB PPM	NA	0.2
BA PPM	NA	100.
LA PPM	NA	1.
CE PPM	NA	3.
SM PPM	NA	0.1
EU PPM	NA	0.2
YB PPM	NA	0.2
LU PPM	NA	0.05
HF PPM	NA	1.
TA PPM	NA	1.
W PPM	NA	4.
IR PPB	NA	20.
TH PPM	NA	0.5
U PPM	NA	0.5

DATE 10-MAR-89

CERTIFIED BY

Jean H.L. Opdebeck, Vice President Operations

SAMPLE	AU PPB	NA PPM	CA %	SC PPM	TI PPM	CR PPM	FE %	CO PPM
H89-30	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
H89-31	<5	9400	4	36.4	3950	220	6.96	38
H89-32	<5	16000	4	40.3	6170	200	8.02	42
H89-33	<5	7400	4	32.5	6810	140	7.57	44
H89-34	<5	37000	2	3.9	6140	<10	6.80	10
H89-35	<5	1900	4	31.5	3840	260	6.90	40
H89-37	<5	12000	2	21.4	4240	80	5.38	28
H89-38	<5	<500	<1	25.3	4770	170	11.4	35

SMP.MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

SAMPLE	NI PPM	ZN PPM	AS PPM	SE PPM	RB PPM	Y PPM	ZR PPM	MO PPM
H89-30	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
H89-31	<200	100	<2	<5	40	16	59	<5
H89-32	<200	70	<2	<5	<30	21	75	<5
H89-33	<200	110	<2	<5	<30	20	81	<5
H89-34	<200	120	<2	<5	<30	47	418	<5
H89-35	<200	120	<2	<5	<30	13	46	<5
H89-37	<200	80	<2	<5	50	16	91	<5
H89-38	<200	110	<2	<5	<30	11	49	<5

SMP.MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

SAMPLE	AG PPM	SB PPM	BA PPM	LA PPM	CE PPM	SM PPM	EU PPM	YB PPM
H89-30	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
H89-31	<5	<0.2	400	3	11	1.0	0.5	1.7
H89-32	<5	<0.2	<100	4	13	2.3	0.8	2.0
H89-33	<5	0.2	<100	5	13	2.1	0.9	1.7
H89-34	<5	<0.2	500	45	112	11.0	4.6	4.1
H89-35	<5	<0.2	<100	2	5	1.1	0.5	1.3
H89-37	<5	<0.2	200	7	17	1.6	0.9	1.1
H89-38	<5	<0.2	<100	1	<3	0.5	0.3	1.2

SMP.MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

SAMPLE	LU PPM	HF PPM	TA PPM	W PPM	IR PPB	TH PPM	U PPM
H89-30	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
H89-31	0.24	1	<1	<4	<20	<0.5	<0.5
H89-32	0.28	2	<1	<4	<20	<0.5	<0.5
H89-33	0.27	2	<1	<4	<20	<0.5	<0.5
H89-34	0.58	10	3	<4	<20	3.6	0.8
H89-35	0.19	1	<1	<4	<20	<0.5	<0.5
H89-37	0.17	2	<1	<4	<20	0.5	<0.5
H89-38	0.16	1	<1	<4	<20	<0.5	<0.5

SMP.MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

A P P E N D I X D

Ministry of Northern Development and Mines

Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditure) Mining Act

#168

DOCUMENT W8908

32E05NE0090 2.12474 SINGER

900

Your P.I.C. 2.12474

Mining Lands Sec.

Type of Survey(s)

Reverse Circulation Overburden Drilling

St. Laurent (Hurtubise)

Claim Holder(s)

Glen Auden Resources Limited

Prospector's Licence No.

T-1915

Address

c/o P.O. Box 1637, Timmins, Ontario P4N 7C2

Survey Company

R.S. Middleton Exploration Services Inc.

Date of Survey (from & to)

From: 28 11 88 (Day, Mo., Yr.) To: 15 02 89

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)

T. Guoth, P.O. Box 1637, Timmins, Ontario P4N 7W8.

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days (This includes line cutting)	Geophysical - Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey using the same grid: Enter 20 days (for each)	- Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical - Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	SEE ENCLOSED SCHEDULES "A" and "B"				

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
AUG 11 1989
RECEIVED

RECEIVED
JUN - 8 1989
MINING LANDS SECTION

LAND MANAGEMENT BRANCH
RECEIVED
MAY 15 1989
9:55 a.m.

Total number of mining claims covered by this report of work: 244

Expenditures (excludes power stripping)

Type of Work Performed: Overburden Drilling (Sec. 77(19))

Performed on Claim(s): See Enclosed Schedule "D"

Calculation of Expenditure Days Credits

Total Expenditures: $ 142,642.26 ÷ 15 = Total Days Credits: 9509.48

Instructions

Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only		
Total Days Cr. Recorded	Date Recorded	Mining Recorder
9500	May 15/89	
	Date Approved as Recorded: Aug 2/89	

Date	Recorded Holder or Agent (Signature)
May 14/89	Clifford K. David

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

Cliff David R.S. Middleton Exploration Services Inc.

P.O. Box 1637 Timmins, Ontario P4N 7W8

Date Certified: May 14/89

Certified by (Signature): Clifford K. David

1362 (85/12)

SCHEDULE A
HURTUBISE/ST. LAURENT TOWNSHIP
REVERSE CIRCULATION OVERBURDEN DRILLING
GLEN AUDEN RESOURCES LIMITED

M-161	L-864729-737	9
	L-877601-603	3
	L-877608-613	6
	L-877618-623	6
	L-877625-629	5
	L-877652	1
	L-877657-661	5
	L-877664-681	18
	L-877684-685	2
	L-878627-628	2
		57
M-165	L-876995-996	2
	L-879715-732	18
	L-879734-737	4
		24
M-166	L-879202-206	5
	L-879208-210	3
	L-879212-214	3
	L-879218-221	4
	L-879268	1
	L-879277	1
	L-879313-315	3
		20
M167	L-880111	1
		1
M-181	L-877726-729	4
	L-877769	1
	L-877771-772	2
	L-877776-781	6
	L-877784-786	3
	L-877789-802	14
	L-878026-029	4
	L-878034-037	4
M-181	L-878065-066	2
	L-878076-082	7
		47
M-192	L-877634-639	6
	L-877650	1
	L-877691-692	2
	L-877695-697	3
	L-877733-745	13
	L-877750-756	7
	L-877758-763	6
	L-877767	1
	L-878007-012	6
	L-878018	1
	L-878021-022	2
	L-878083-084	2
		50
M-257	L-955511	1
	L-955520-521	2
	L-955530-531	2
	L-955540-541	2
	L-955577	1
	L-955586 *	1
		9
M-262	L-877291-293	3
	L-877298-300	3
	L-877705-708	4
	L-879352-359	8
	L-879739	1
		19

*claim List continued →

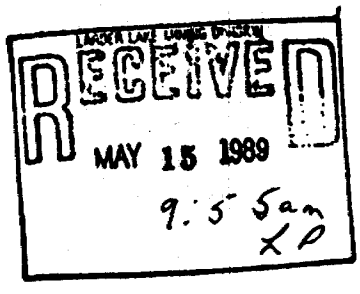
227 @ 40 days = 9080 days

* Enter 40 days per claim on each claim listed.

SCHEDULE B
HURTUBISE/ST. LAURENT TOWNSHIPS
REVERSE CIRCULATION OVERBURDEN DRILLING
GLEN AUDEN RESOURCES LIMITED

M-181	L-877783	1	
	L-877787-788	2	
		3 @ 20 DAYS =	60 DAYS
	L-877782	1	
		1 @ 30 DAYS =	30 DAYS
M-192	L-877643-646	4	
	L-877648-649	2	
		6 @ 20 DAYS =	120 DAYS
	L-877641-642	2	
	L-877647	1	
	L-877698-699	2	
	L-878019-020	2	
		7 @ 30 DAYS =	210 DAYS
TOTAL		17 CLAIMS =	420 DAYS

* Enter days as indicated beside each claim group on this page.



SCHEDULE D
HURTUBISE/ST. LAURENT TOWNSHIPS
GLEN AUDEN RESOURCES LIMITED
Reverse Circulation Drill Hole Locations

H88-01	L-878033
H88-02	L-878034
H88-03	L-878029
H88-04	L-878030
H88-05	L-878028
H88-06	L-878027
H88-07	L-878026
H88-08	L-877789
H88-09	L-877792
H88-10	L-877788
H88-11	L-877782
H88-12	L-877776
H88-13	L-878079
H88-14	L-878081
H88-15	L-878083
H88-16	L-877739
H88-17	L-877740
H88-18	L-877754
H88-19	L-877760
H88-20	L-877761
H88-21	L-878010
H88-22	"
H88-23	L-878019
H88-24	L-877649
H88-25	L-877698
H88-26	L-877637
H88-27	L-877648
H88-28	"
H88-29	L-877626
H88-30	L-877622
H88-31	L-864730
H88-32	L-864730
H88-33	L-864729
H88-34	L-864734
H88-35	L-877658
H88-36	L-877660
H88-37	L-877665
H88-38	L-877664

* Please see copy of letter attached re: H88-01 - 38 incl. Errors in Hole listing!

ROBERT S. MIDDLETON EXPLORATION SERVICES INC.

136 Cedar St. So.
P.O. Box 1637
Timmins, Ontario
P4N 7W8
Telephone (705) 264-4246
Fax: 705-267-6110

Suite 301
121 Richmond St. W.
Toronto, Ontario
M5H 2K1
Telephone: (416) 861-9316
Fax: 416-861-1367

May 29, 1989

Office of the Mining Recorder
Ministry of Natural Resources
4 Government Road East
KIRKLAND LAKE, Ontario
P2N 1A2

Attn: Jeanette
Re: your report # 16889
our job #181 et al.

Dear Jeanette:

Please be advised of the following typographical errors which occur in the above submission (Hurtubise, St. Laurent & Singer Twp. Overburden Drilling):

Schedule D should read: H88-01 to H88-04 incl.
H89-05 to H89-88 incl.
Corresponding Location Map: H88-11 should be H89-11

Should you have any questions or require any additional information, please call.

Thanks once again for your time.

Sincerely,

Cliff David

SINGER

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

M.590

LARDER LAKE MINING DIVISION

DISTRICT OF COCHRANE

Scale - 40 Chains - 1 Inch

MAY 15 1988

North Ast

NOTE

400' Surface Rights Reservation around all Lakes and Rivers.

HURTUBISE

KENNING

CLIVE

ABBOTSFORD

Kabika River

East Kabika River

45.M. 46.M. 47.M. 48.M. 49.M. 50.M. 51.M. 52.M. 53.M. 54.M. 55.M.

1.M. 2.M. 3.M. 4.M. 5.M. 6.M. 7.M. 8.M. 9.M.

NOSEWORTHY TOWNSHIP

TOMLINSON TOWNSHIP

ST. LAURENT TOWNSHIP

SINGER TOWNSHIP

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.S.R. – MINING AND SURFACE RIGHTS

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	○
LEASE SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	□
" MINING RIGHTS ONLY	□
LICENCE OF OCCUPATION	▼
ORDER IN COUNCIL	OC
RESERVATION	(R)
CANCELLED	⊗
SAND & GRAVEL	(S)

NOTE: MINING RIGHTS IN PARCELS SHOWN WITH LETTER "M" IN ORIGINAL PATENT, LEASE OR LICENCE OF OCCUPATION ARE SUBJECT TO THE PROVISIONS OF THE MINING ACT, R.S.O. 1970, CHAP. 274.

0 1000 Metres

SCALE 1:20 000

DATE OF ISSUE
MAY 30 1989
LARDER LAKE
MINING RECORDER'S OFFICE

TOWNSHIP

HURTUBISE

M.N.R. ADMINISTRATIVE DISTRICT
COCHRANE
MINING DIVISION
LARDER LAKE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ontario Ministry of Natural Resources | Ministry of Northern Development and Mines

Date OCTOBER 1986 | Number G-3518

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY

S.R.O. – SURFACE RIGHTS ONLY

M.S. – MINING AND SURFACE RIGHTS

Over Patent	Under No.	Date	Disposition	File

BRADETTE TOWNSHIP

PROJECTED

LINE

HURTUBISE TOWNSHIP

PROJECTED

LINE

CLIVE TOWNSHIP

QUEBEC

ONTARIO

130 M.

129 M.

128 M.

127 M.

126 M.

125 M.

124 M.

123 M.

122 M.

55 M.

56 M.

57 M.

58 M.

59 M.

60 M.

61 M.

Potten River

Clive River

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◓
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	▬
" , MINING RIGHTS ONLY	▬
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	R
CANCELLED	C
SAND & GRAVEL	G

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

DATE OF ISSUE

OCT 6 1988

LARDER LAKE MINING RECORDER'S OFFICE

CIRCULATED OCTOBER 3, 1988

TOWNSHIP

ST. LAURENT

M.N.R. ADMINISTRATIVE DISTRICT

COCHRANE

MINING DIVISION

LARDER LAKE

LAND TITLES / REGISTRY DIVISION

COCHRANE

Ontario Ministry of Natural Resources

Ministry of Northern Development and Mines

Date OCTOBER, 1986

Number G-3563

LEGEND

II DIABASE

9 FELSIC INTRUSIVE
9 syenite, monzonite, feldspar porphyry
10a quartz porphyry, quartz feldspar porphyry
b trondhjemite, granodiorite

7 METAMORPHOSED MAFIC and ULTRAMAFIC ROCKS
7 peridotite, dunite, pyroxenite, serpentinite
8 gabbro, diorite, lamprophyre

5 METASEDIMENTS
5 greywacke, siltstone, slate, argillite and minor pebble conglomerate
6 conglomerate, greywacke, siltstone, slate and argillite

4 ALKALIC METAVOLCANICS

3 ULTRAMAFIC METAVOLCANICS
3 serpentinized dunitic and peridotitic flows

2 FELSIC METAVOLCANICS
2 unsubdivided
2a pyroclastic rocks
2b flows

1 INTERMEDIATE and MAFIC VOLCANICS
1 unsubdivided
1a intermediate flows
1b intermediate pyroclastic rocks
1c matic flows and pyroclastic rocks

py	pyrite	gnss	gneiss
ser	sericite	amp	amphibolite
mar	marcasite	cht	chert
mag	magnetite	BIF	banded iron formation
po	pyrrhotite	brecc	breccia
cpy	chalcopyrite	tr	trace
chl	chlorite	str	strong
ank	ankerite	agg	agglomerate
sid	siderite	sil	silicified
aspy	arsenopyrite	prhy	porphyry
graph	graphite	f-i	felsic to intermediate rocks
Au	gold	sch	schist
Ag	silver	alt	alteration
Zn	zinc	ark	arkosic
fuch	fuchsite	cong	conglomerate
carb	carbonate	f	felsic
cr-musc	chrome muscovite		

× small outcrop
large outcrop
geologic boundary, assumed / determined
foliation, inclined / vertical
lineation, inclined
pillow top determination
electromagnetic, ground survey
induced polarization R_L low resistivity / C_H high - chargeability
M magnetometer, ground survey
M_L magnetic low, ground survey
M_H magnetic high, ground survey
M_{H_A} aeromagnetic high
G_L gravity low

airbourne input anomalies
6 channel
5 channel
4 channel
3 channel
2 channel

overburden drill hole
diamond drill hole

H89-05, 20m hole number, depth(meters)

O.B. Drill Hole Legend

Sample Medium
T-Till, G-Gravel
Sample Position (metres above bedrock)
Abraded
Irregular Gold Grains
Delicate
H.M.C. Au assay (ppb)
H.M.C. As assay (ppm)
No Sample

T- 5, (2, 1, 1) = 40,25 N/S

DIAMOND DRILL HOLES

CSE-1 to CSE-2	Canadian Superior Exploration Ltd.,1971
59-1,2,2A,3	Dome Exploration, 1974
RT-4	Rio Tinto Canadian Exploration Ltd., 1965
PM-1, PM-2	Asarco Exploration, 1966
SK 87-1,3,6,7 GA 87-1,2,3,4	Noranda Exploration Co. Ltd 1987

2.12474

REFERENCES

Lovell, H.L, de Grijs, Jon, and Ploegar, F. 1976
Hurtubise Township, Distrct of Cochrane, Ontario Div. Mines, Prelim Map P889, Kirkland Lake Data Series, 1:5,840 or 1" to 1/4 mile, Data Compiled 1972, 1973, 1975.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
April 89 A.M.	for GLEN AUDEN RESOURCES LTD. TARZAN GOLD INC.
	Title COMPILATION MAP HURTUBISE - ST.LAURENT TWPS.
	Date: April, 1989 Scale: 1:20,000 N.T.S.:
	Drawn: M.Z. Approved: File: M-181

TOMLINSON TOWNSHIP
KENNING TOWNSHIP
HURTUBISE TOWNSHIP
SINGER TOWNSHIP
ST. LAURENT TOWNSHIP
TARZAN GOLD INC.
GLEN AUDEN RESOURCES LTD
TARZAN GOLD INC. J.V.
MISTAWAK BATHOLITH
BURNTBUSH RIVER
KABKA RIVER
EAST KABKA RIVER

TABIKA RIVER

TARZAN GOLD INC.

GLEN AUDEN RESOURCES LTD.
TARZAN GOLD INC. J.V.

HURTUBISE TWP.

SINGER TWP.

ST. LAURENT TWP.

○ R.S. DRILL HOLES (ALL VERTICAL)

2.12474

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.	
A.M.	for GLEN AUDEN RESOURCES LTD TARZAN GOLD INC.	
	Title CLAIM MAP WITH R.C. DRILL HOLE LOCATIONS	MAP 1
	Date: April 1989	Scale: 1: 20,000 N.T.S.:
	Drawn: M.Z.	Approved: File: MIBI

DEPTH IN METERS

0
5
10
15
20
25
30
35
40
45
50

A — H89-05 — 500m — H89-06 — 500m — H 89-07 — A'

H89-05		H89-06		H 89-07	
69	7	330	7	190	6
48	3	76	5	380	4
87	1	230	2	769	2
30	1	1560	12	210	8
400	1	M	< 5	150	10
M	< 5			2570	2
				77	1
				< 5	3
				G	< 5

B — H89-08 — 200m — H89-09 — 200m — H89-10 — 500m — H89-

H89-08		H89-09		H89-10	
94	2	570	7	200	18
260	6	614	6	360	13
120	3	715	6	280	6
280	4	13	3	250	8
M	< 5	120	3	I	< 5
		320	5		
		350	2		
		5800	5		

DEPTH IN METERS

0
5
10
15
20
25
30
35
40
45
50

C — H89-15 — 500m — H89-16 — 500m — H89-17 — 500m — H89-18 — 500m — H89-19 — 500m — H89-20 — 500m — H89

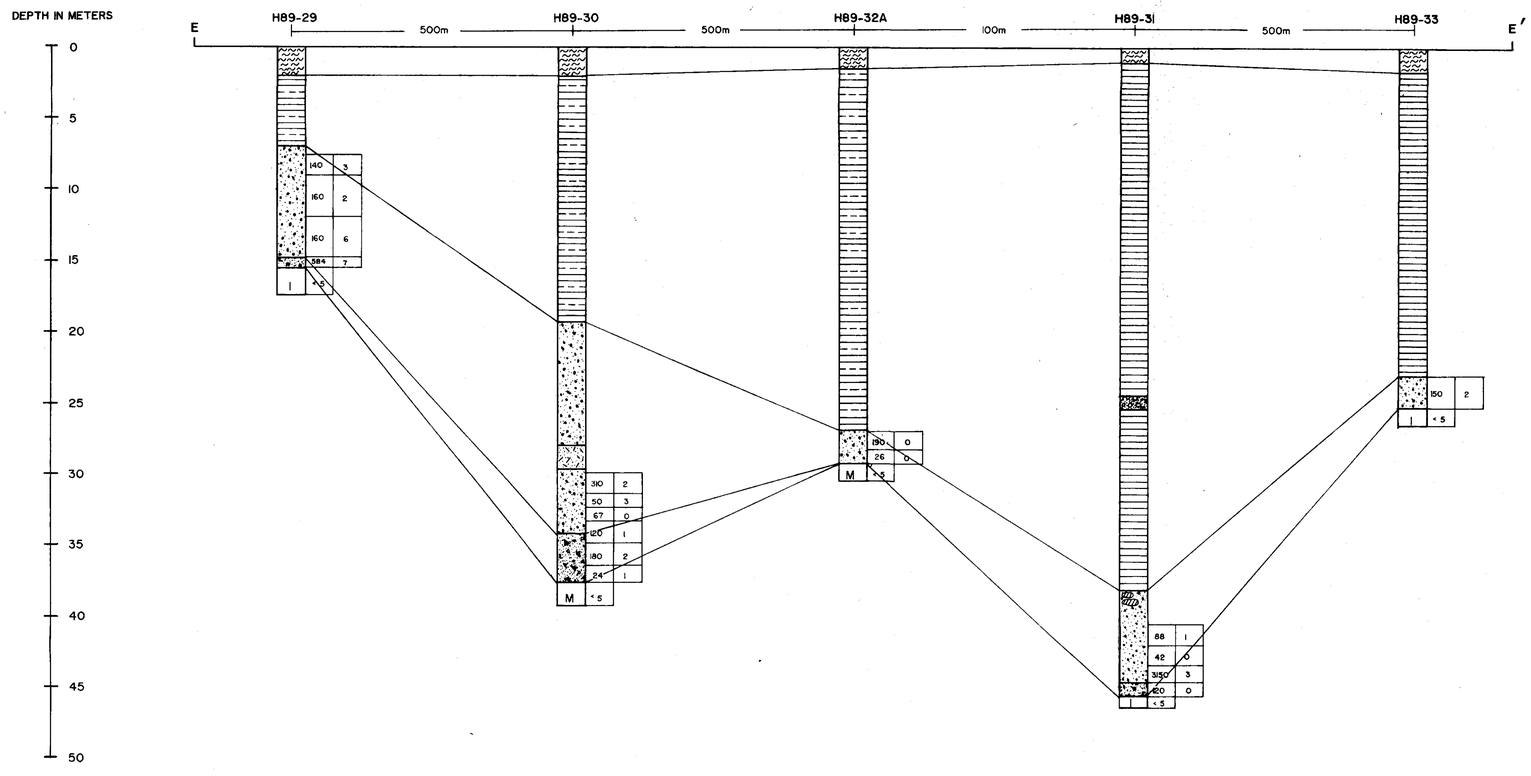
H89-15		H89-16		H89-17		H89-18		H89-19		H89-20	
85	1	1360	18	506	9	490	1	250	9	92	2
100	2	M	< 5	260	9	I	< 5	360	2	240	9
92	2			37	0			2290	3	180	7
130	2			110	1			I	< 5	< 24	1
110	3			300	6					77	0
1340	0			100	1					1020	9
I	< 5			I	< 5					M	< 5

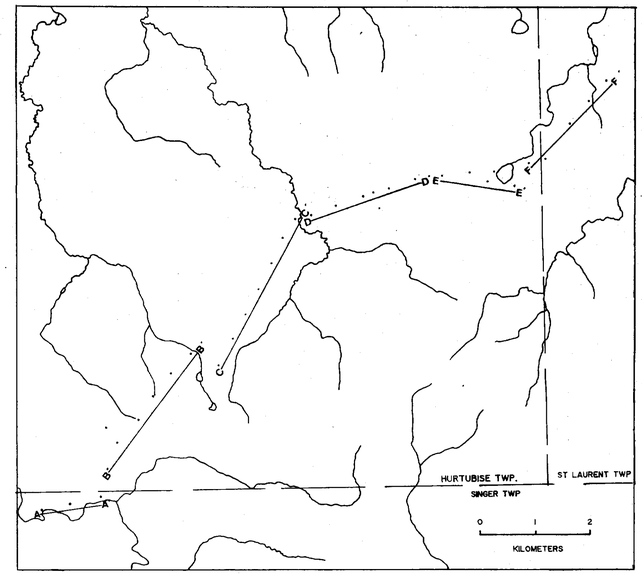
DEPTH IN METERS

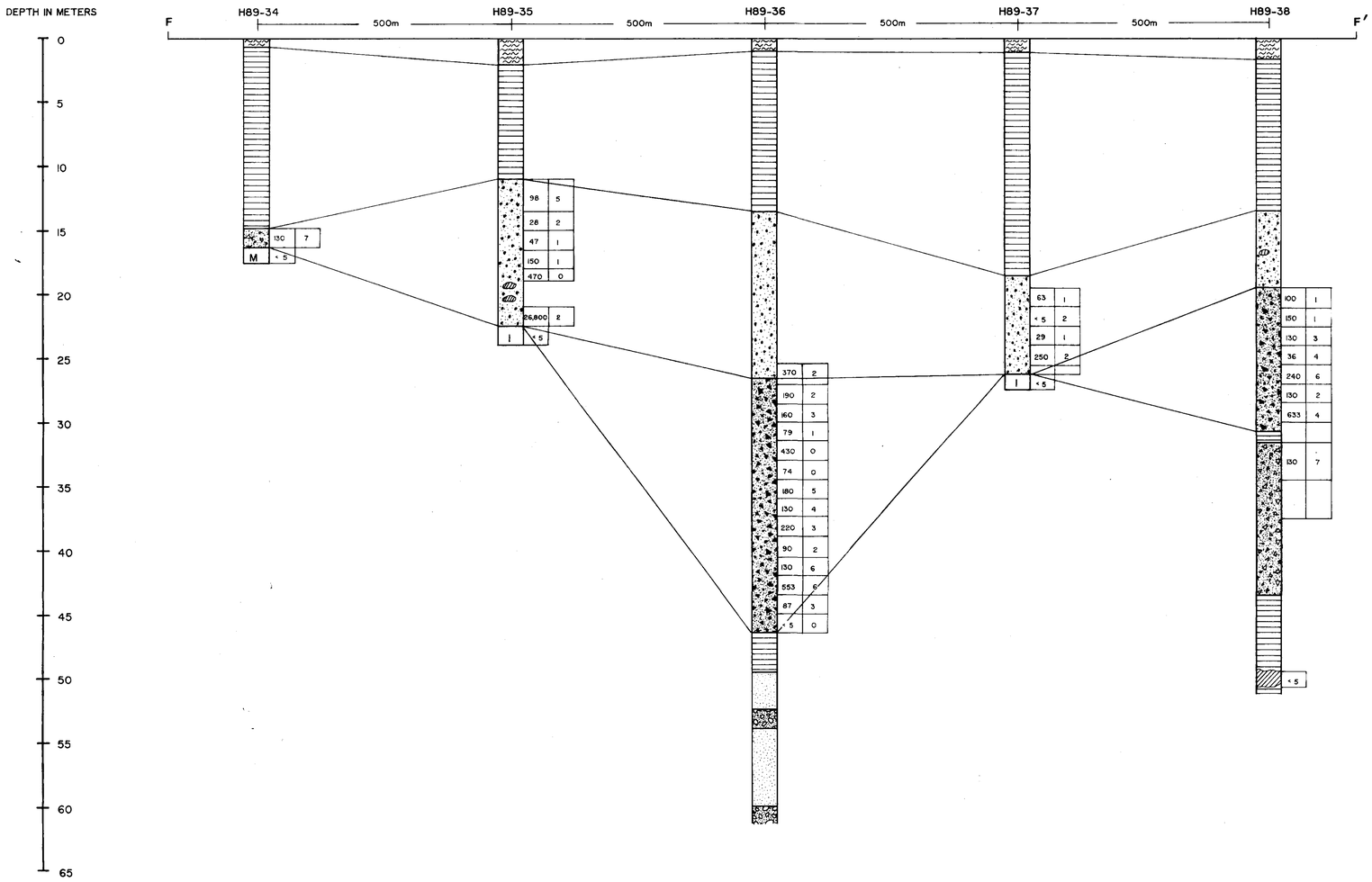
0
5
10
15
20
25
30
35
40
45

D — H89-22 — 500m — H89-23 — 500m — H89-24 — 200m — H89-28 — 300m — H89-25 — 500m — H89-26 — D'

H89-22		H89-23		H89-24		H89-28		H89-25		H89-26	
200	2	78	1	200	5	23	0	63	1	100	1
I	10	I	< 5	420	5	70	1	5360	4	190	1
				87	1			39	1	100	1
				190	6	100	2	45	2	110	0
				240	3	95	2	210	3	I	< 5
				280	6	47	0	M	< 5		
				56	3	72	0				
				130	1						
				75	0	140	1				
				150	2	200	0				
				87	1	M	< 5				
				I	< 5						







LEGEND

H89-05 Drill Hole Number

- ORGANIC MATERIAL
- CLAY
- CLAY & SILT
- SILT
- SAND
- SANDY GRAVEL
- GRAVEL
- SANDY TILL
- HMC / Au (ppb) / Au grains — TILL
- M / Au (ppb) — BEDROCK (LITHOLOGY)

ABBREVIATIONS

M - Mafic Metavolcanic Rocks

I - Intermediate Metavolcanic Rocks

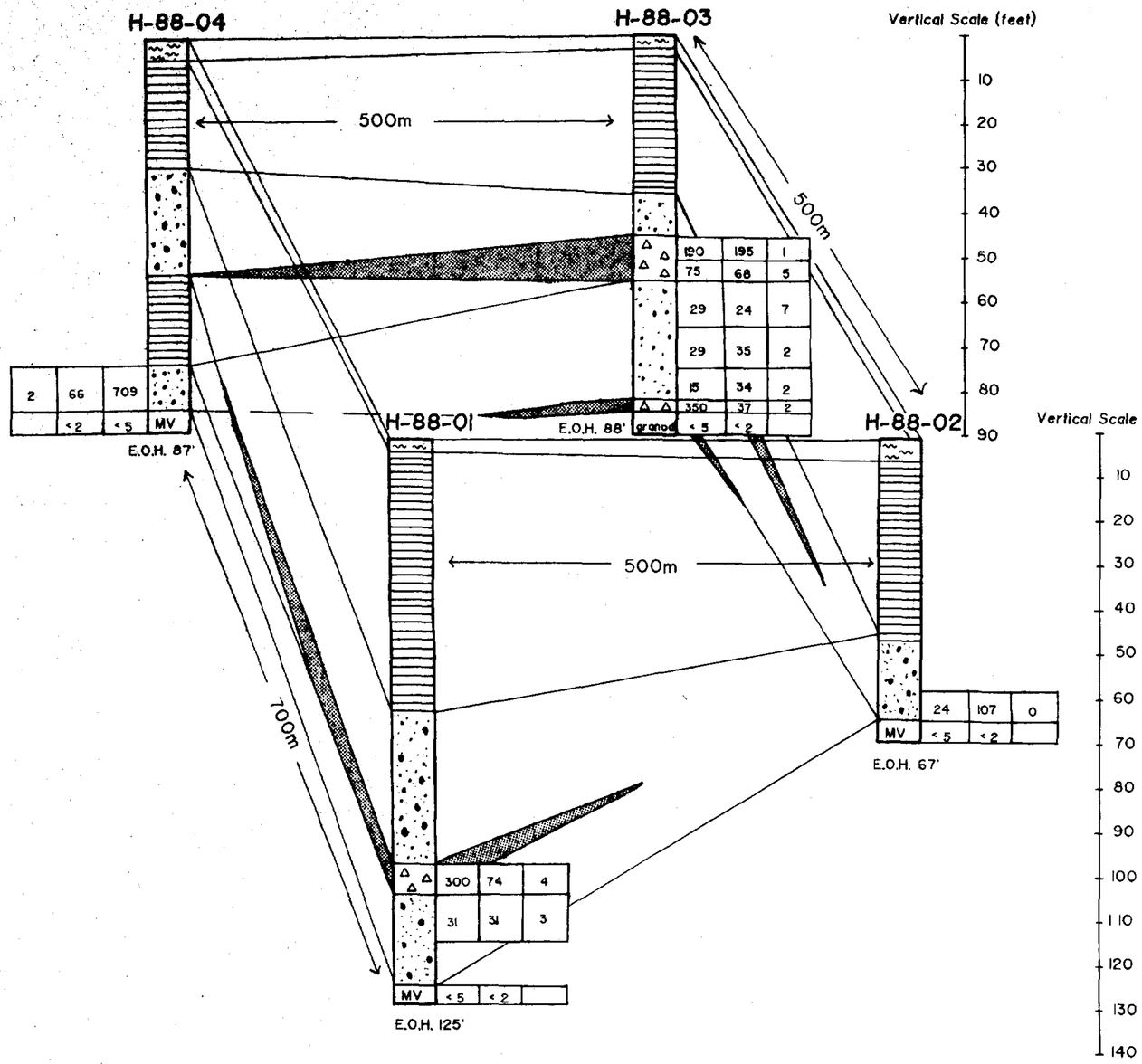
G - Granitic Rocks

py - pyrite

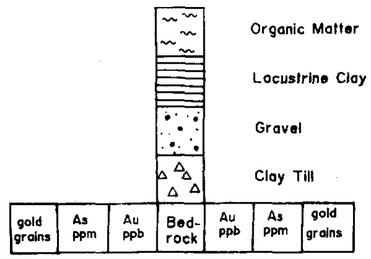
HMC - Heavy Mineral Concentrate

2.12474

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for TARZAN GOLD INCORPORATED		
	Title OVERBURDEN DRILL HOLE CROSS SECTIONS HURTUBISE AND ST LAURENT TWPS.		
	Date: March 1989	Scale: 1:200 Vert.	N.T.S.:
	Drawn: T.G / M.Z.	Approved:	File: M-265



LEGEND



H-88-03 Drill Hole Number
MV Mafic Volcanic
granod granodiorite

2.12474

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for TARZAN GOLD INC.		
	Title D.D.H. H-88-01,H-88-02, H-88-03,H-88-04 Singer Township		
	Date: Jan. 89	Scale:1cm.=10ft.	N.T.S.:
	Drawn: JB/JLB	Approved:	File: M-181

INPUT® PEAK RESPONSE SYMBOLS 2ms PULSE

SURFICIAL RESPONSE	UP-DIP PEAK RESPONSE	BEDROCK RESPONSE	DECAY INTERVAL CLASSIFICATION
			1 Channel (300 microseconds)
			2 Channel (500 microseconds)
			3 Channel (800 microseconds)
			4 Channel (1200 microseconds)
			5 Channel (1700 microseconds)
			6 Channel (2300 microseconds)

Culture Response

50 Associated Magnetic Response

B 5 1800

INTERPRETATION

20 Conductor Axis, with reference number (good definition)

20 Conductor Axis, with reference number (poor definition)

Vertical Conductor

60° Conductor Dip (magnitude and direction known)

Conductor Dip (direction known)

20 Selected Zone, with reference number

Conductive Zone

Fault Zone

10 Depth to top of conductor in metres

CONTOUR LEGEND

0.05 GAMMAS/METER
0.25 GAMMAS/METER
1.00 GAMMAS/METER
5.00 GAMMAS/METER

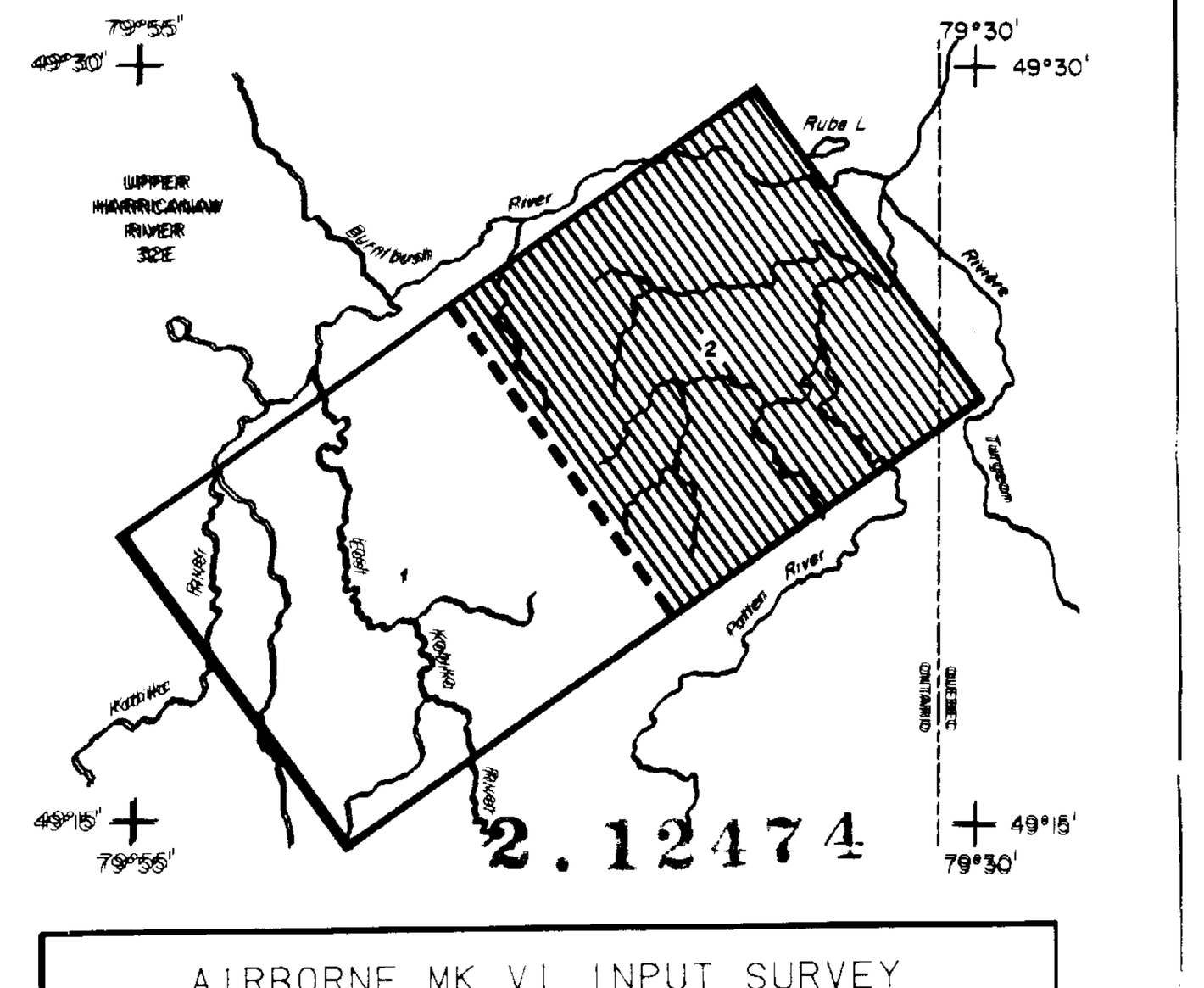
Representative INPUT® Magnetometer and Altimeter Recording

DESCRIPTIVE NOTES

The aircraft is equipped with the Barringer/Questor Mark VI INPUT® airborne E.M. System and the Geometrics G-803 Proton Precession Magnetometer and Sonotek SDS-1200 Series Data Acquisition System. The INPUT® system will respond to conductive overburden and near-surface horizontal conducting layers in addition to bedrock conductors. Discrimination of conductors is based on the rate of transient decay, magnetic correlation and the anomaly shape, together with the conductor pattern and topography.

® Registered Trade Mark of Barringer Research Limited

Reverse Circulation Drill Holes



2.12474

AIRBORNE MK VI INPUT SURVEY
CALCULATED VERTICAL MAGNETIC GRADIENT

TARZAN GOLD INC.

ST. LAURENT TOWNSHIP

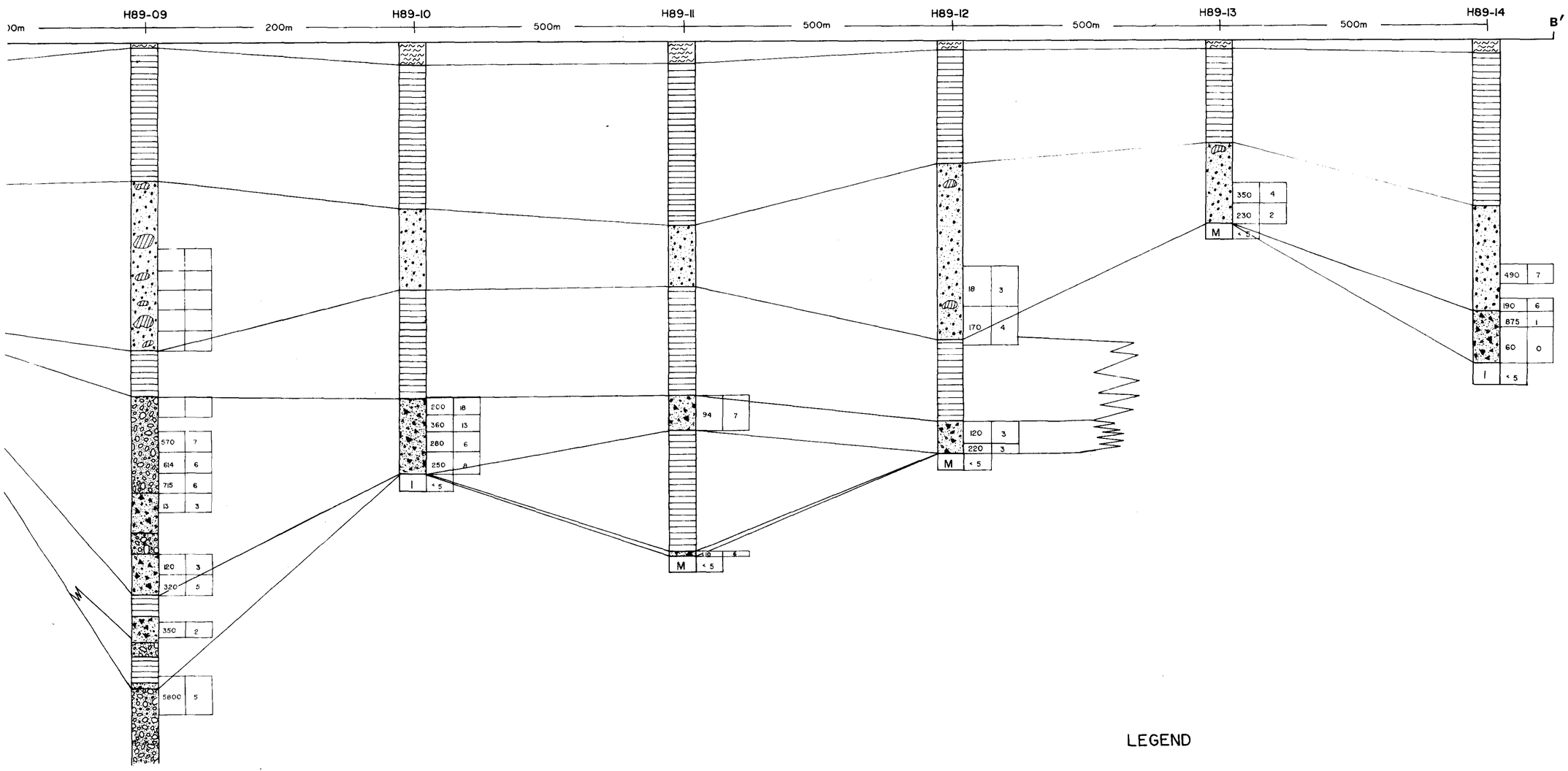
PROVINCES OF ONTARIO AND QUEBEC

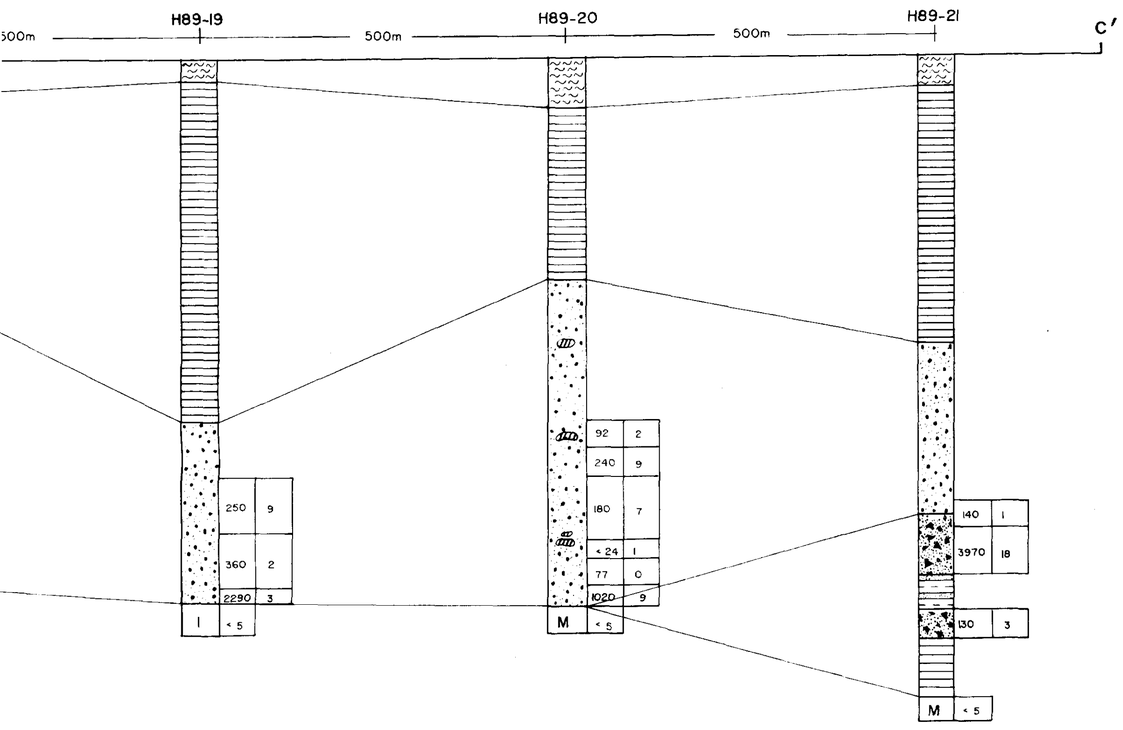
SCALE 1:20000

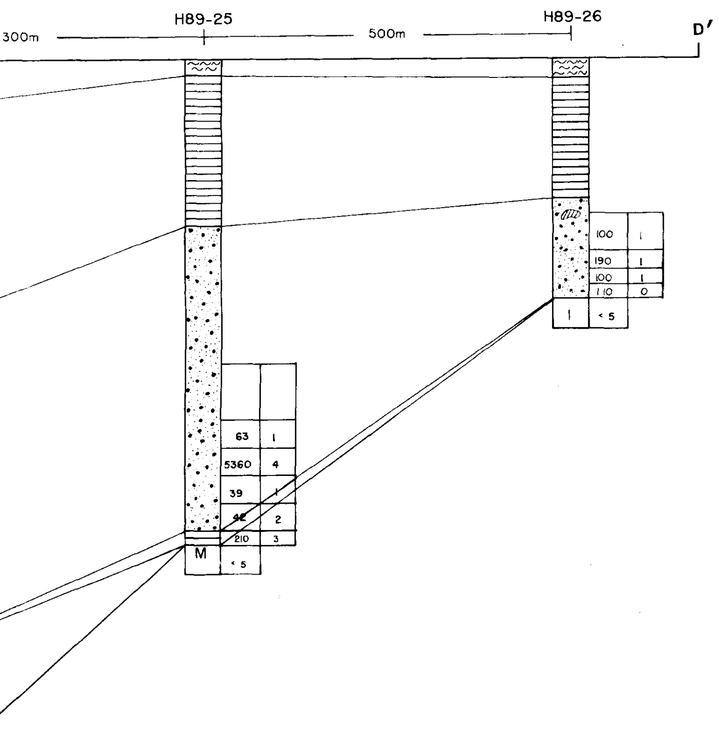
FILE NO.	SHEET NO.	DATE
28041	2 OF 2	NOVEMBER 1986

QUESTOR SURVEYS LIMITED
MISSISSAUGA ONTARIO CANADA

280







LEGEND

H89-05 Drill Hole Number

- ORGANIC MATERIAL
- CLAY
- CLAY & SILT
- SILT
- SAND
- SANDY GRAVEL
- GRAVEL
- SANDY TILL
- HMC Au (ppb) | Au grains — TILL
- M | Au (ppb) — BEDROCK (LITHOLOGY)

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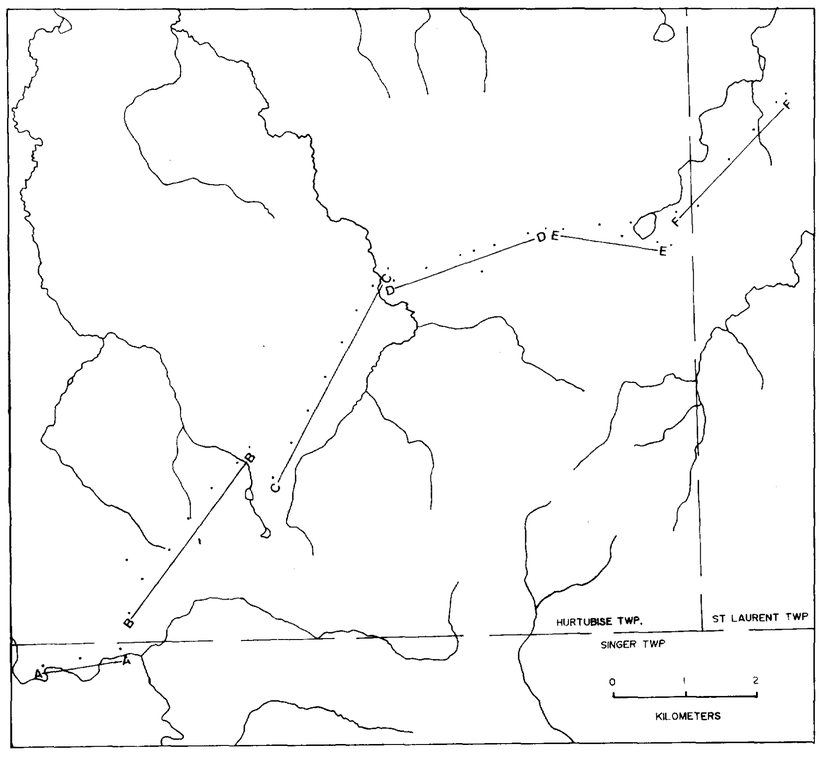

2.12474

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for TARZAN GOLD INCORPORATED		
	Title HURTUBISE TWP. OVERBURDEN DRILL HOLE SECTIONS		
	Date: March 1989	Scale: 1 : 200 Vert.	N.T.S.:
	Drawn: T.G. / M.Z.	Approved:	File: M-181