SUMMARY REPORT OF THE MATARROW PROPERTY IN YARROW TOWNSHIP

FOR OPAWICA EXPLORATIONS INC

2.17169



by

B.J. MCKAY, M.SC.(A.), F.G.A.C.



010

KIRKLAND LAKE, ONTARIO

**10 DECEMBER 1996** 

## **Table of Contents**

Summaryl
Introduction
Location and Access I
Topography
Claim Status
Regional Geology
Property Geology
Previous Work
Present Work
Results
Conclusions
Recommendations
References
Certificate of Qualifications 10

## **List of Figures**

Figure 11 Property Location Map	after page 1
Figure 21 Claim Map	after page 2
Figure 31 Geology Map	after page 3



## List of Maps

Map 1: Geophysical Anomaly Map	back pocket
Map 2: Diamond Drill Plan	back pocket
Map 3: Longitudinal Section	back pocket

## List of Tables

Table 1: Summary of Geophysical Anomalies	after page 5
Table 2: Summary of Trenching	after page 6
Table 3: Summary of Assays	after page 7

## **List of Appendices**

Appendix A: Diamond Drill Logs, MAT 96-1 to 96-6	back pocket
Appendix B1 Assay Certificates	back pocket
Appendix C: Diamond Drill Sections, 1996 DDHs	back pocket

#### SUMMARY

This report presents the results of a program of field investigations and data compilation conducted on the Matarrow Property which was optioned by Opawica Explorations in the summer of 1996.

The property produced approximately 40,000 tons of ore averaging 6.13% lead-zinc during a brief period of production in 1952/53.

The recent exploration activity, conducted in 1996, consisted of linecutting, trenching, magnetics, IP and diamond drilling. Trenching was able to reach bedrock on only two of six trenches attempted. Results were discouraging. Geophysics was successful in outlining the known mineralization and identifying numerous other targets. Diamond drilling outlined a Pb-Zn geochemical anomaly approximately 600 meters in length in sulphide interflow sediments/iron formation. The anomaly appears to increase with depth. A single deep hole beneath the existing workings is believed to have intersected two zones that were mined. The "South Vein" returned a value of 9.57% Pb and 2.78% Zn over 1.0 meters and the "North Vein" returned 2.29% Pb and 0.87% Zn over 1.1 meters.

#### INTRODUCTION

This report prepared at the request of management of Opawica Explorations Inc. presents information from a recent program of data compilation and field exploration.

The data compilation was initiated concurrently with linecutting and geophysical surveys and was subsequently used to assist in locating diamond drill holes. A limited program of trenching did not reveal any significant mineralization. A program of six diamond drill holes totalling 1,077.6 meters was completed in September and October. The drilling intersected sulphide rich cherty-magnetite sediments with significant geochemical and economic values. The best results were obtained from a hole drilled beneath the underground workings.

Recommendations, including mapping and drilling, have been suggested to further evaluate the potential of the property.

#### LOCATION AND ACCESS

The northeast corner of Yarrow Township is located 1 km southwest of the town of Matachewan. The property is located in the north central portion of the Township. Matachewan is located approximately 60 km southwest of Kirkland Lake. See Figure 1.

Matachewan is accessible via provincial Highway 66. Access to the property is



via gravel road which branches southwest from Highway 566, 2 km west of Matachewan. The property, approximately 8 km southwest of Matachewan, is south of the Matachewan Consolidated Mines Limited property owned by Royal Oak Mines Inc.

#### **TOPOGRAPHY AND VEGETATION**

Topography in the area has little relief and rarely exceeds 200 m. The base elevation in the area is 356 m above sea level. The most prominent exposures in Yarrow Township are felsic plutonic rocks. The main iron formation (IF) on the property forms a topographic high. The West Montreal River flows northeastward through Yarrow Township and broadens to form Mistinikon Lake.

Vegetation on the property consists mostly of spruce and birch. Swampy areas occur in southern and northern portions of the property.

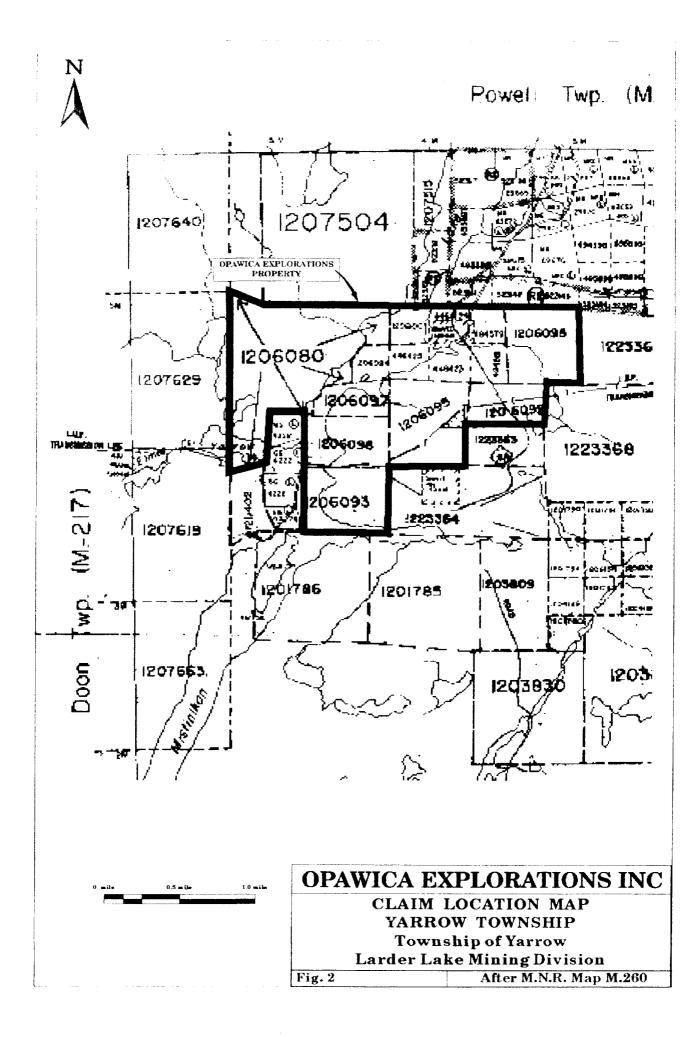
#### **CLAIM STATUS**

The property consists of 14 unpatented claims totalling approximately 384 hectares. The claim numbers are: 446423 to 446425, 494579, 494581, 1206080 and 1206093 to 1206100. The claims, optioned from Fred Kiernicki of Kirkland Lake, are in good standing. Refer to Figure 2.

#### **GENERAL GEOLOGY**

The Yarrow Township area lies along the northwestern margin of the Cobalt Embayment of the Southern Structural Province in the Canadian Shield. The oldest rocks in the area are Late Archean mafic to felsic flows and tuffs of the Larder Lake Group and of the Upper Deloro Group<sub>1</sub> the latter has been dated at 2275+/- Ma. The Larder Lake Group is associated with Late Archean metasedimentary rocks of the Porcupine Group which consist of diamictite, banded chert-magnetite iron formation and lithic wacke. The metavolcanic and metasedimentary rocks strike to the northeast and dip steeply to the southeast. They have been intruded by felsic plutonic rocks of the Round Lake batholith, which range in composition from granodiorite to granite. The felsic plutonic rocks range from massive to gneissic in texture and locally are highly deformed and mylonitized. All of these rocks have been intruded by diabase dikes of the Late Archean Matachewan swarm, which has been dated at 2633 +/- 93 Ma by Rb-Sr methods.

The Late Archean rocks are unconformably overlain by sedimentary rocks of the Early Proterozoic Gowganda Formation, which has been dated at 2240+/- 174 Ma by Rb-Sr methods. This is probably a minimum age of this unit. In the Cobalt



Embayment, the Gowganda Formation consists of the lower, glaciogenic, Coleman Member and the conformably overlying fluvial-deltaic Firstbrook Member. Only rocks equivalent to the Coleman Member occur in the area of Yarrow Township; these consist of a heterogenous assemblage of diamictite (polymictic paraconglomerate), sandstone, siltstone and laminated mudstone with dropstones. Strata of the Gowganda Formation dip gently to the southeast.

Nipissing intrusive rocks, which have been dated at 2219+/- 4 Ma, intrude both the Late Archean and Early Proterozoic rocks. In the map area, Nipissing intrusive rocks are represented by a few small outcrops of fine- to coarse-grained, locally pegmatitic diabase.

#### **PROPERTY GEOLOGY**

The property geology consists of a sequence of massive Late Archean intermediate to felsic metavolcanics intruded by Late Archean gneissic and foliated hornblende granodiorites. This major intrusive contact strikes northeasterly parallel to the bedding/foliation of the metavolcanics. A narrow, approximately 60 m wide, unit of banded, magnetite-chert iron formation occurs within (400 m) and subparallel to the major contact. This unit hosts the mineralization developed by Matarrow Mine Limited in 1952.

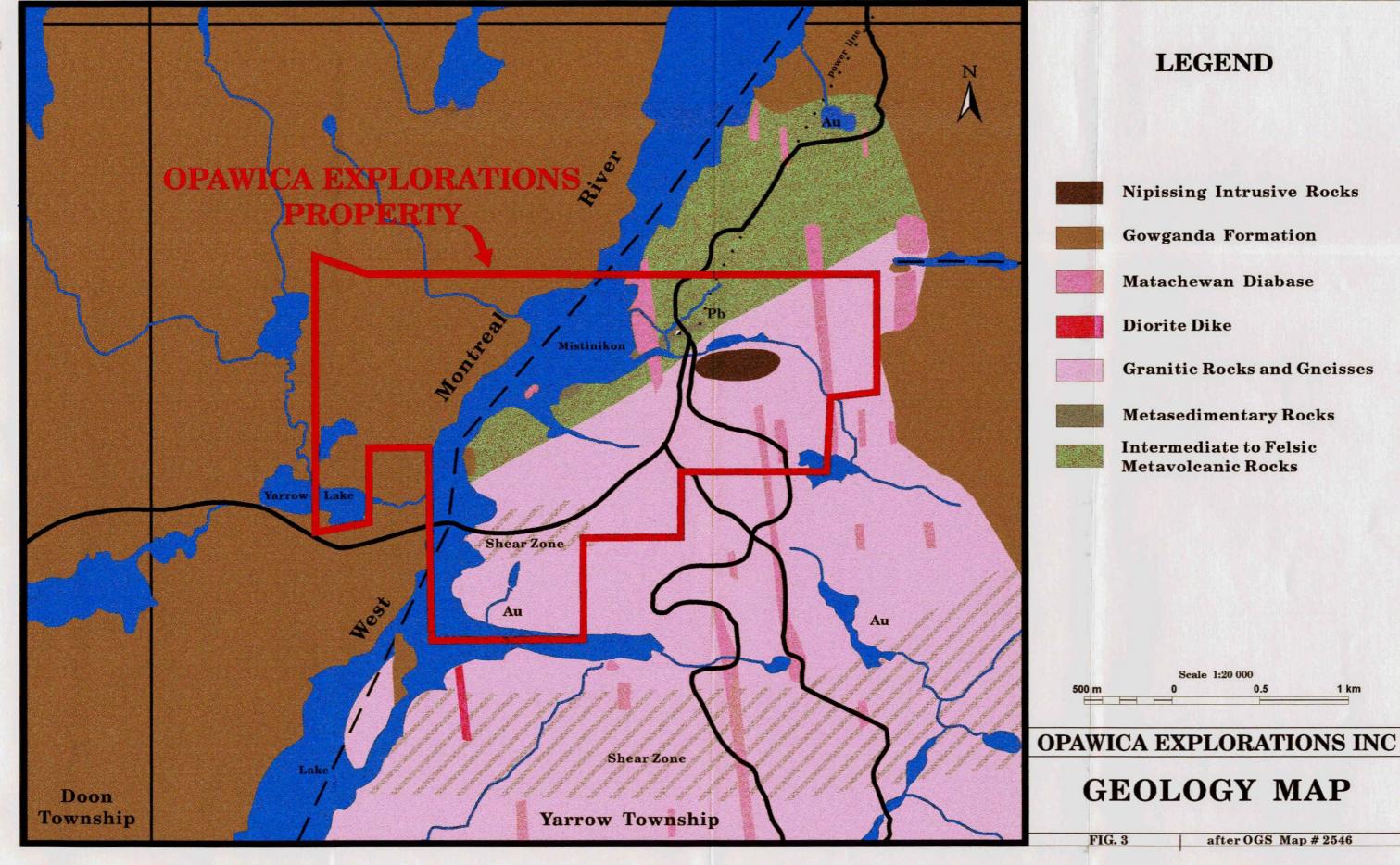
The metavolcanics are reddish brown on both weathered and fresh surfaces, are typically massive and aphanitic, and exhibit a northeast striking. southeast dipping foliation. Alteration consists of epidote, actinolite and chlorite. Carbonatized and silicified portions occur locally. The banded chert-magnetite iron formation, tightly folded, finely bedded, alternating layers of silica and magnetite, in the centre of the property is interbedded with metavolcanics. The unit is exposed for approximately 1 km, strikes northeasterly and dips steeply to the southeast.

The northwest corner of the property is overlain by Early Proterozoic diamictite and lithic arkosic to feldspathic wacke of the Cobalt Group.

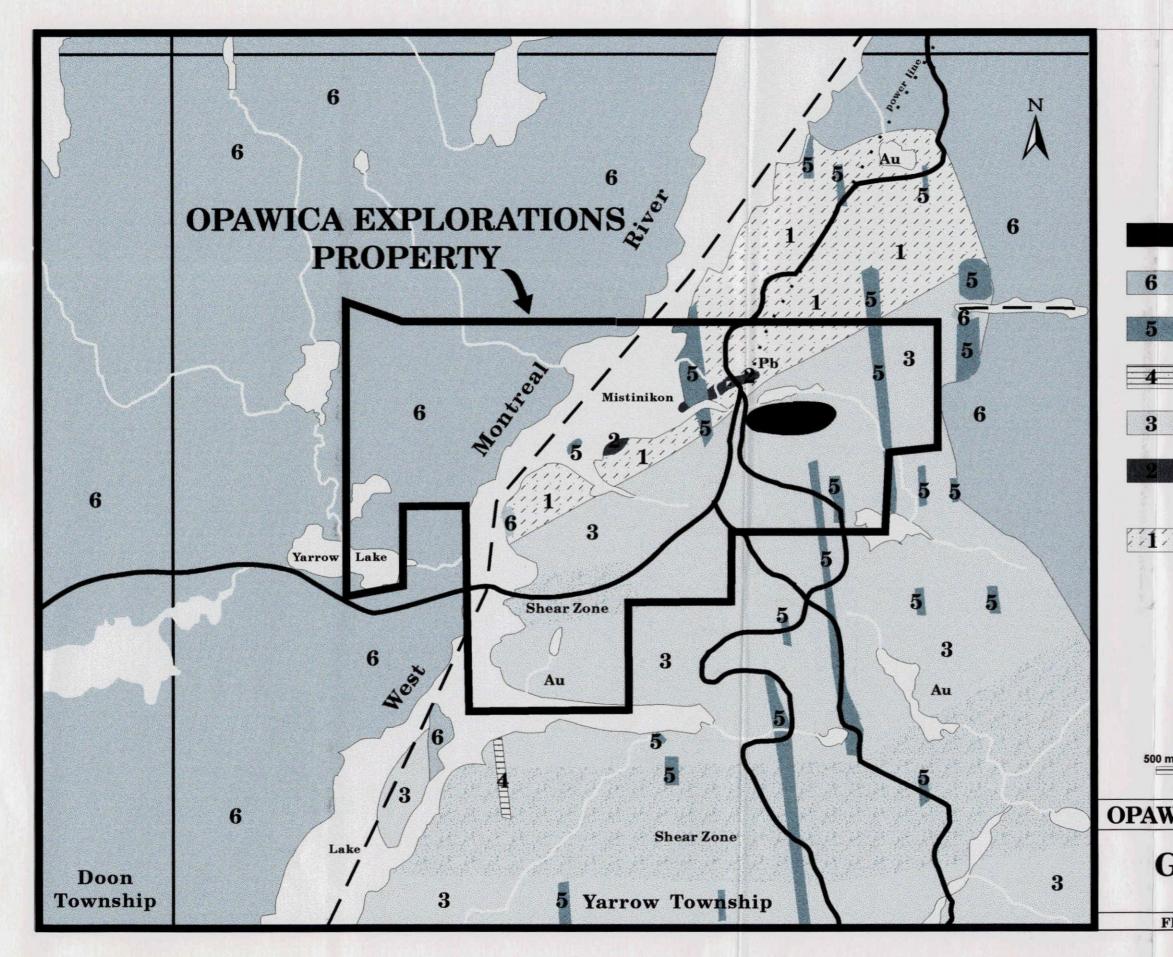
The volcanics and intrusives are in turn intruded by numerous north-northwest striking Matachewan diabase dykes. A 500 x 200 m body of fine to coarse-grained Nipissing diabase occurs in the northeast corner of the property. Refer to Figure 3.

#### **PREVIOUS WORK**

Regionally, the first geological investigations in the vicinity were conducted by Bell in 1876. Bell described the geology along the shore of the Montreal and West Montreal rivers. Burwash mapped along the Nipissing-Algoma survey line west of the project area in 1896. The southern half of Yarrow Township was mapped by Collins in 1913. Following the discovery of gold in Powell Township in 1913 Burrows



 $\bigcirc$ 



# LEGEND



**Nipissing Intrusive Rocks** 

**Gowganda Formation** 

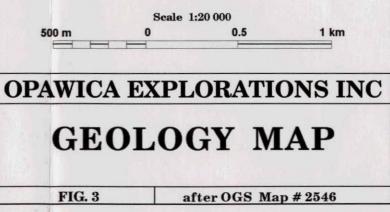
Matachewan Diabase

**Diorite Dike** 

**Granitic Rocks and Gneisses** 

**Metasedimentary Rocks** 

Intermediate to Felsic **Metavolcanic Rocks** 



mapped the north half of Yarrow Township on a reconnaissance scale. Cooke mapped, in more detail, the northern half of Yarrow Township in 1919. Following renewed gold exploration activity in the area Dyer (1936) mapped the area around Matachewan in detail and studied local mine sites and mineral occurrences. During 1987 the Ministry of Northern Development and Mines examined previously unmapped areas of Yarrow Township inferred to be underlain by rocks of the Huronian Supergroup.

Locally, the property was originally staked in 1928 with the belief that the pyrrhotite may contain nickel.

During the summer of 1948 a short program of trenching and drilling was conducted. The property at this time was known as the Robb Option. Details of this activity are in a report prepared by Cyril W. Knight. The drilling consisted of four holes totalling 349.3 m (1,146 feet). Only one significant intersection (in hole 3), averaging 9.4% Pb and 2.7% Zn, was encountered.

Matarrow Mines Limited was incorporated on July 26, 1948 on a group of 20 unpatented claims located in the north-central part of Yarrow Township. During the summer of 1948 a program of mapping, trenching, X-ray drilling and diamond drilling ("A size") was conducted. This drilling comprised 9 holes totalling 885.7 m (2,906 feet). Also during this period five bulk samples totalling 1,148 pounds were taken. The results of this drilling averaged 5.94% Pb and 2.27 % Zn over an average width of 6.4 feet. A more extensive program of drilling was completed during the winter of 1948-49. During this second campaign of drilling, 25 holes totalling 2,638.5 m (8,656.5 feet) were completed. A third drilling of drilling in 1952 consisted of 5 holes totalling 450.6 m (1,478.3 feet). The property produced 2.6 million pounds of Pb, 1.1 million pounds of zinc and 4,853 ounces of silver from approximately 40,000 tons of ore during 1952/53.

New Jason Mines Limited completed 16 holes, two with wedges, totalling 2,366.4 m (7,763.8 feet) in 1965. No additional production was conducted at this time.

#### PRESENT WORK

A program of linecutting, under the supervision of Fred Kiernicki of Kirkland Lake, was completed in August 1996.

A magnetic survey conducted by Geola Ltee was completed in August 1996. The survey was conducted to provide magnetic profiles for assistance in geophysical interpretation of the property.

An IP survey conducted by Remy Belanger Geophysics was completed in August 1996. The IP results are presented in a report by Gerard Lambert Geosciences. The purpose of the survey was "to map with a better accuracy the distribution of potentially auriferous disseminated and stringer sulphides in the bedrock."

A program of data review and compilation of information provided to the author was completed prior to commencement of drilling.

Diamond drilling, BQ and NQ size, was done by Kozy Drilling of Kirkland Lake under the field supervision of Fred Kiernicki of Kirkland Lake. The drilling completed during September and October consisted of 6 holes totalling 1077.6 m (3,535.4 feet).

#### RESULTS

Opawica conducted linecutting, magnetic and IP surveys, trenching, data compilation and diamond drilling during the summer and fall of 1996.

Linecutting was completed at a 200 m line separation. The previous historic baseline was re-established and used as a starting point for the current metric grid. The new grid was started at 0+00 on the old baseline. The baseline azimuth is N66°37'30" E and passes immediately south of the shaft. The 0+00 picket is located on the lakeshore, approximately 215 m (700 feet), southwest of the shaft. The magnetic declination for the area is  $12^{\circ}$  W.

The property was completely covered by magnetic and IP surveys. The results of these surveys are available under separate covers. A summary table, compiled by the author, listing all IP anomalies located during the course of the geophysical survey, is shown in Table 1. This Table shows the IP ranking of the anomaly (obtained from the IP report) and a relative magnetic response as determined by the author. The anomalies were labelled sequentially from west to east and from south to north. The number and reference line and station (columns 2 & 3 in Table 1) refers to the west end of the anomaly. Map 1, showing the anomalies listed in Table 1, is included in a back pocket. The strongest magnetic and IP response, Anomaly #18, were encountered over the banded iron formation situated along the baseline.

Field investigations, trenching and diamond drilling, evaluated numerous geophysical anomalies. Trenching reached bedrock on only two of six trenches

Table 1:		Mata	arrow Pr	oject		
SUM	MARY OF	1996 GE	OPHYSI	CAL SURVE	Y RESUL	TS
Anomaly	Line	Station	Length	IP	Magnetic	Comments
#	т	m	m	rank	response	i :
1	L1400W	1290S	50	lo	hi	
2	L1400W	920S	350	lo-hi	hi	
3	L1200W	1065S	400	lo	lo	
4	L1200W	745S	375	med	med	trenched: gte/dia
5	L1200W	615S	600	lo-med	med	
6	L1200W	240S	150	med	hi	MAT96-1
7	L1200W	195S	400	med	hi	
8	L1000W	1290S	50	lo	hi	
9	L1000W	890S	50	lo	lo	power line(pl)
10	L800W	440S	550	lo	lo	
11	L600W	810S	600	lo	med	power line
12	L600W	160S	200'	hi	dipole	
13	L400W	1135S	50	lo	hi	
14	L200W	645S	600	med-hi-med	lo	gte/dia & no bdrk,p
15	L200W	545S	600	lo	med	sand
16	LO	610S	350	lo	hi	
17	LO	195S	50	lo	med	
18	L200E	15S	1000	hi-med-lo	dipole	MAT96-2 to -6
19	L200E	135N	400	med	lo	gravel/sand
20	L200E	230N	350	med	med	gravel
21	L200E	395N	400	med	hi	Ŭ
22	L600E	180N	350	lo-hi	hì	
23	L600E	285N	600	hi-lo-hi	lo	
24	L1000E	290S	50	lo	lo	ļ
25	L1000E	165S	200	hi	lo	
26	L1000E	1055	50	lo	hi	
27	L1000E	315N	250	hi	hì	
28	L1000E	440N	50	lo	lo	

attempted. These bedrock results, IP Anomalies 4 and 14, consisted of diabase dykes hosted by granite. The remaining four trenches encountered thick deposits of sand and gravel. Refer to Tables 1 and 2.

The data supplied, for the compilation, consisted of a few short technical, geological and geophysical, reports with numerous drill logs, maps and sections. Also, included in the data package were plans and sections for the Matarrow Mine. The compilation consisted of computerization of drill logs to generate sections for diamond drilling and interpretation of geophysical anomalies.

The diamond drilling, concentrated along the baseline on Anomaly #18, was conducted to evaluate the geophysical responses coincident with the iron formation(IF) and to evaluate the IF below the limits of the previous mining. Some of this drilling was conducted on portions of the IF that were not previously examined.

Results of the drilling were mixed. The first hole, MAT96-1 on the west end of the grid (L1200W), intersected a sequence of silicified sediments interbedded with minor intermediate chloritic and pyritic volcanics intruded by numerous felsic and mafic sills and dykes. The hole was drilled to test a dual IP response on the west end of the property on strike with the main IF. No significant results were obtained.

Hole MAT96-2, on L400E, encountered a sequence of quartzites and silicified sediments with interbedded intermediate volcanics. A section of approximately 30 meters (102.0 to 130.2) of semi-massive to massive po and py, with individual beds up to 1 meter in thickness, was intersected. This hole was drilled to test a single IP response on the main trend of IF. A geochemical anomaly (21.2 m wide) hosted by a portion of the sulphides and overlying andesite (109-130.2 m) returned a value of 308 ppm Pb and 923 ppm Zn and includes a 5 m interval averaging 1016 ppm Pb and 3194 Zn.

Hole MAT96-3, on L600E, intersected a sequence of quartzites and silicified sediments with a mineralized section of approximately 19 meters (61.1 to 79.8). This interval contains individual sulphide beds up to 3 cm in thickness concentrated in an interval of 5 meters (75 to 79.8). This hole ended in ultramafic volcanics. This hole was drilled to test the main IF. Results from this hole returned a weak geochemical anomaly in lead and zinc.

Hole MAT96-4, on L200E, intersected a sequence of quartzites with interbedded intermediate volcanics. This hole ended in a sequence of ultramafic volcanics and silicified sediments (altered greywacke??). This hole contained po and py mineralization over a thickness of approximately 14 meters (85.2 to 99.1) which is concentrated in a 1m unit (92 to 93). The hole was drilled to test the main IF. An underground opening was hit at 108.4 meters. The results include a weak, narrow (3.1 m), geochemical anomaly (Pb-Zn) hosted by sulphide enriched volcanics. A second anomaly, the last 1.4 meters in the hole returned a value of 4070 ppm Pb and 11600 ppm Zn.

Table 2:		Matarrow Project 1996 TRENCHING RESULTS							
Trench	Line	Anomaly	Location	Comments					
#	т	#							
1	L1200W	4	west end	gte/dia					
2	L200W	14	west end	gte/dia					
3	LO	14	center	sand					
4	LO	15	center	sand					
5	L200E	19	west end	sand & gravel					
6	L200E	20	west end	sand & gravel					

Hole MAT96-5, on L0, intersected a sequence of silicified sediments and quartzites with minor interbedded intermediate volcanics. The main zone of po and py mineralization was intersected at 136.4 meters to 154. meters. There are numerous translucent qtz veins less than 2 cm wide. One vein contains a 8 mm splash of chalcopyrite. The hole ended in a sequence of ultramafic volcanics. This hole was drilled to test the main IF. Assay results returned anomalous results of 455 ppm Pb and 1686 ppm Zn over 14.6 m(136.4 - 151 m).

Hole MAT96-6, on L200E and beneath MAT96-4, intersected a sequence of silicified sediments and quartzites and ended in a sequence of unaltered and altered greywacke. Sulphide mineralization(po and py) was intersected from 172.7 meters to 239.1 meters. Two large quartz veins (228.5 to 230.3 and 238 to 239.1) were intersected. These veins contained massive and disseminated galena and numerous irregular seams of sphalerite. The grade, extending over 21.0 meters, averaged 6182 ppm Pb and 5971 ppm Zn. The upper or southern vein contained 9.57% Pb and 2.78% Zn over 1 m and the lower or northern vein contained 2.29% Pb and 0.87% Zn over 1.1 meters. These veins appear to be the South and North Veins that hosted previous production. The two veins are separated by a sequence of unaltered greywacke, felsic porphyry and silicified sediments.

A set of drill logs from the recent drilling are included in Appendix A. Appendix B contains all assay certificate and a single page of whole rock results for a suite of samples from MAT96-6. A set of sections showing these drill holes are included in Appendix C. Refer to Map 2 for a plan view of the drilling. The analytical results are summarized in Table 3.

Map 3 shows a longitudinal section of the Pb-Zn values, from the latest campaign, in the Main IF. Although the mining was conducted from two distinct quartz veins this is strong evidence for a much larger "halo" of base metal values surrounding the veins. A cutoff value of 100 ppm for either element was used to define the halo. A grade x true thickness (GxT) value for each of lead and zinc is plotted beside each pierce point. The background value for lead is approximately 10 ppm and the background value for zinc is approximately 50 ppm. The true thickness of each defined interval was calculated by LOGII software. Contours are not provided. The upper four values which occur just below the 2800 m elevation (relative elevation) have low gxt values on each end and higher values in the middle. The values shown for MAT96-4 on L2+00E are partial values as the hole struck an underground opening. Only the last sample, 1.4 meters in length, was used in the calculation. Hole MAT96-6, which intersected two base metal bearing quartz veins. returned the highest gxt value. The pierce point for MAT96-6 is approximately 150 meters down dip from MAT96-4. The values for the five most recent drill holes within the vicinity of the mine show a definite trend which increases with depth. Values from historical drilling were not used in the longitudinal due to the moderate

Table 3:			Matar	row Pro	oject:				
	1996 D	IAMO	ND DF	RILLING	ASSAY	SUMM/	ARY		
Hole #	From	То	Len	Pb	Zn	Au	Ag	Cu	Ni
	m	m	m	ррт	ррт	gpt	ррт	ррт	ррт
MAT96-2	109.0	130.2	21.2	308	923	0.027	0.893	23	25
Inc	116.0	121.0	5.0	1016	3194	0.026	1.620	45	28
MAT96-3	62.0	68.0	6.0	46	171	0.000	0.217	48	36
MAT96-4	96.0	99.1	3.1	678	2530	0.026	0.329	26	25
	107.0	108.4	1.4	4070	11600	0.030	1.400	350	27
MAT96-5	136.4	151.0	14.6	455	1686	0.005	0.707	35	39
Inc	136.4	139.0	2.6	1607	4850	0.011	2.046	28	33
MAT96-6	219.0	240.0	21.0	6182	5971	0.028	2.080	55	25
Inc	228.0	230.0	2.0	48595	16179	0.030	15.550	330	36
Inc	238.0	240.0	2.0	14062	8969	0.016	1.250	29	18

to poor core recoveries.

#### Conclusions

The geophysical surveys were successful in outlining numerous anomalies. The IP returned resistivity lows and polarization highs coincident with the IF. Two of the IP anomalies south of the baseline were caused by diabase dykes in granite. Trenching on anomalies north of the baseline failed to reach bedrock. Additional anomalies on the northern limits of the property were found to extend onto the adjoining property.

Diamond drilling was successful in outlining a geochemical base metal. Pb and Zn, anomaly approximately 600 meters in length. The anomaly increases with depth with the highest response, ddh MAT96-6, located below the limits of previous development. This anomaly is hosted by sulphide enriched cherty-magnetite IF which occurs at or near the sediment mafic/ultramafic contact.

A single, 3.12 grams per tonne, Au assay was obtained from silicified sediments in hole MAT96-6 that are interbedded with relatively fresh, unaltered greywacke. This one meter sample contained a few minute, 1-5 mm, irregular quartz stringers.

#### Recommendations

The following recommendations are suggested for continued evaluation of the property<sub>l</sub>

- 1. examine all remaining IP anomalies by sampling/trenching/drilling.
- 2. continue to negotiate with property holders on the north side of the property in an effort to share the costs of examining/testing the unexplored anomalies at or near the common boundary.
- 3. map and sample all exposed IF along the baseline to obtain geochemical data.
- 4. continue examination of the IF at depth by drilling additional holes west of and below hole MAT96-6.

### References

Assessment files, Ministry of Natural Development and Mines, Kirkland Lake.

Junnila, R.M., 1990 Precambrian Geology Yarrow and Doon Township with Emphasis on the Huronian Supergroup, Ministry of Northern Development and Mines, Ontario Geological Survey Report 277, containing Geological Map 2546, 33 pp.

## **Certificate of Qualifications**

I, Bryan Joseph McKay, do certify that;

- 1. I am a resident of Porcupine, Ontario.
- 2. I am a graduate of St. Francis Xavier University, Antigonish, Nova Scotia and I obtained a B.Sc. (Major in Geology) in 1974.
- 3. I am a graduate of McGill University, Montreal, Quebec and I obtained a M.Sc.(A.) in Mineral Exploration in 1982.
- 4. I am a Fellow of the Geological Association of Canada.
- 5. I am a member of the Prospectors and Developers Association of Canada.
- 6. I visited the property in Yarrow Township as discussed in this report and was responsible for data compilation and core logging.
- 7. I have no interest, direct or indirect, in the claims in Yarrow Township or securities of Opawica Explorations Inc or intend to receive any interest, direct of indirect.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 1997 in the City of Kirkland Lake, Ontario.

Bryan J. McKay / M.Sc. (A.), F.G.A.C.

Appendix A Diamond Drill Logs, MAT 96-1 to 96-6

Date: 4 Mar, 1997		MATARR	PLORATIONS INC OW PROJECT OLE RECORD	Page: 1 of 6
	1000.00			
REF CORD: -300.00	-1200.00		SURVEYED: NO	HOLE NO: MAT96-1
LOCATION: 3+00S	12+00W		GRID: Mine	PROPERTY: Matarrow
AZIMUTH: 360.0	Deg. DIP:	-45.0 Deg.	LENGTH: 226.0 m	PROJECT: Matarrow
ELEVATION: 3022.00	m SECTIO	DN: 12+00W	CORE SIZE: BQ	LOGGED BY: BJ McKay
ASSAY TYPE: FA-AA	STARTI	ED: 21 Sep 1996	COMPLETED: 24 Sep 1996	DATE LOGGED: 2-3 Oct 96
PURPOSE: to test dou	ole IP anomaly o	on IF	CLAIM NO: 1206097	DRILLED BY: Kozy

COMMENTS: Grid bearings used

DIP TESTS (corrected) DEPTH AZIMUTH DIP DEPTH AZIMUTH DIP

CORE STORED (all holes) in Martachewan at fred klernickis warehouse.

From (m)	ТО (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
.00	7.00		CASING									
7.00	12.80		<pre>SILICIFIED SEDIMENTS Very fine-grained to fine-grained, grey. Fractured, silicified throughout. Jointing perpendicular to bedding. 7.00 56.00 RQD=10% increasing to</pre>									
12.80	19.00		DIABASE DYKE Felsic and mafic dykelets; intermixed.									
19.00	136.50		SILICIFIED SEDIMENTS Very fine-grained, grey, reddish orange, cherty similar to above.	23851 23852	19.00 20.00		1 2	8 8	.01 .00	.1 .1	29 25	8

Date: 4 Mar, 1997

MATARROW PROJECT DRILL HOLE RECORD Hole No: MAT96-1 Page : 2 of 6

					T	·	······				·····	
From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			Fractured parallel to bedding, jointing perpendicular bedding. Otz veinlets perpendicular to	23853	21.00	1.00	5	7	.00	.1	22	7
			bedding, scattered throughout. 58.00 78.00 Predominantly fine-grained, grey unit locally bleached with minor reddish orange alteration. Locally brecciated	23854	82.60 103.80	.70 1.00	26 1	18 5	.00 .00	.1 .1	10 8	20 11
			with hem staining. 108.50 132.10 Predominantly grey, similar to above. Minor bleaching, no reddish alternation. Extensive pervasive silicification. Locally brecciated.									
			Parallel and perpendicular hairline qtz filled fractures and joints. 132.10 136.50 Cherty, very fine-grained, silicified, pervasive strong alteration. Irregular variable bedding 10 to 45 dca.	23857	132.10 133.00 134.00	.90 1.00 1.00	1 1 1	17 15 13	.00 .02 .00	.1 .1 .1	15 17 11	14 10 12
136.50	137.00		DIABASE DYKE Black, fine-grained, massive, weakly magnetite. Broken contacts.									
137.00	139.60		SILICIFIED SEDIMENTS Very fine-grained, silicified, similar to above. Brownish-grey locally tinted orange. Strong pervasive silification.	23860	137.00 138.00 139.00	1.00 1.00 .60	1 1 1	10 10 18	.00 .00 .00	.1 .1 .1	11 10 75	10 16 9
139.60	139.90		VOLCANICS Fine to medium-grained, green, moderately foliated.	23862	139.60	.50	1	39	.00	.1	32	10

Date: 4 Mar, 1997

MATARROW PROJEC. DRILL HOLE RECORD Hole No: MAT96-1 Page : 3 of 6

	T	т <u>т</u>								-	I	
From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			Chloritic, with 3% pyrite as discontinuous seams and disseminations. Lower contact 45 dca.									
139.90	140.10	x x x x x x x x x x x x x x x x x x x	FELSIC INTRUSIVE Felsic dykelet. Orange brown qtz porphyry. Poorly developed foliation of fattened phenocrysts and wisps of sericite.									
140.10	141.30		VOLCANICS Similar to above with up to 5% pyrite. Silicification deceasing downhole.	23863	140.10	1.20	1	32	.00	.1	12	7
141.30	151.60		SILICIFIED SEDIMENTS Similar to units above. Predominantly grey. Randomly fractured and sheared throughout. Locally brecciated with minor creamy white gtz filler. Occasional healed joint (gtz) perpendicular to bedding. Lower contact at 50 dca.									
151.60	153.80		FELSIC INTRUSIVE Felsic Dyke. Orange-brown qtz porphyry. Weak to moderately developed foliation. Three 1cm qtz veins at lower contact. Lower contact sheared and broken.									
153.80	160.60		SILICIFIED SEDIMENTS Similar to above. Lower contact 65 dca.									
160.60	161.80		DIABASE DYKE Fine-grained, dark grey, non-magnetic, fractured. Qtz filler in fractures. Scattered euhedral and disseminated pyrite. Lower contact 85 dca.									

OPAWICA EXPLORATI INC MATARROW PROJL

DRILL HOLE RECORD

Date: 4 Mar, 1997

Hole No: MAT96-1 Page : 4 of 6

		,		r		T						
From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
161.80	162.20		SILICIFIED SEDIMENTS Very fine-grained, finely laminated cherty beds and fine-grained green chloritic beds up to 1 cm thick. Bedding 45-50 dca. Lower contact 50 dca.									
162.20	162.30		DIABASE DYKE Similar to above. Lower contact sheared, brecciated with chloritic filler.									
162.30	166.25	0 0 0 0 0 0 0 0 0 0 0 0	orange grey, porphyry.									
166.25	167.80		SILICIFIED SEDIMENTS Grey unit, similar to above.									
167.80	168.90		VOLCANICS Fine-grained, green, black, mafic dyke. Sheared and foliated. Up to 3% py as disseminations and fracture filler.	23864	167.80	2.10	1	43	.02	.5	21	17
168.90	179.60		SILICIFIED SEDIMENTS Grey unit, similar to above. 177.50 A 10 cm breccia/shear zone with chlorite.									
179.60	180.20		VOLCANICS Brecciated mafic volcanics. 1% Py, tr po.									
180.20	182.20		SILICIFIED SEDIMENTS Similar to above. Lower contact 40 dca.									

Date: 4 Mar, 1997

MATARROW PROJE

Hole No: MAT96-1 Page : 5 of 6

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
182.20	187.20	0 0 0 0 0 0	PORPHYRY Fine to medium-grained, grey, felsic porphyry with orange-white siliceous phenocrysts. Poorly developed foliation at 45 dca. Scattered parallel and perpendicular fractures locally with creamy white qtz filler. Lower contact 35 dca.									
187.20	193.45		SILICIFIED SEDIMENTS Very fine-grained to fine-grained, grey unit, locally cherty, locally tinted orange. 190.70 FAULT with grey green clayey gouge.									
193.45	194.90		DIABASE DYKE Fine-grained, grey, green, silicified with moderate pervasive silicification. 194.20 194.35 Very fine-grained, light brownish green dykelet, silicified. A chill margin, 2-3cm wide, in host dyke, at upper contact of unit. Lower contact of dykelet sheared, chloritic.									
194.90	202.40		SILICIFIED SEDIMENTS Very fine-grained to fine-grained, cherty, silicified units, interbedded with fine-grained, grey units measured in mm. 1-2% Py, locally brecciated with hem staining.		195.00 196.00		1 1	16 13	.00 .00	.1 .1	43 14	12 16
			197.00 197.20 Quartz VEIN, 20 dca with 1 % pyrite.	23867	197.00	.60	1	20	.00	.1	16	13

MATARROW PROJECT DRILL HOLE RECORD Hole No: MAT96-1 Page: 6 of 6

	Date:	4 Mar	, 1997 DRILL HOLE					<u>,                                    </u>		age :	6 of	
From (m)	ТО (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
202.40	226.00		Upper edge sheared. DIABASE DYKE Dark green, chloritic, massive, locally sheared. Multiple phases: several chill margins throughout unit. Fractured, broken. Numerous qtz-epidote seams with	-								
226.00			Numerous qtz-epidote seams with alteration halos, up to 5 mm wide. 202.40 Contact, healed chlorite shear with minute fractures cutting across the contact. END OF HOLE Collar elevation is approximate.									

Date: 4 Mar, 1997	r	ICA EXPLORATION, INC MATARROW PROJECT RILL HOLE RECORD	Page: 1 of 6
REF CORD: -100.00	400.00	SURVEYED: NO	HOLE NO: MAT96-
LOCATION: 1+00S	4+00E	GRID: Mine	PROPERTY: Matarrow
AZIMUTH: 360.0	Deg. DIP: -45.0	Deg. LENGTH: 173.2 m	PROJECT: Matarrow
ELEVATION: 3032.00	m SECTION: 4+05E	CORE SIZE: BQ	LOGGED BY: BJ McKay
ASSAY TYPE: FA-AA	STARTED: 25 Sept	t 1996 COMPLETED: 1 Oct 1996	DATE LOGGED: 1 Oct 96
PURPOSE: to test doub	ble IP anomaly on IF	CLAIM NO: 494 581 -	DRILLED BY: Kozy
COMMENTS: Grid bearing	ngs used	444 579	
COMMENTS: Grid beari	- DIP TES	STS (corrected) IP DEPTH AZIMUTH DIP	

From (m)	TO (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
.00	5.00 15.10	FpFpF Sogo FpFpF	CASING QUARTZITE									
			Very fine-grained to fine-grained, grey unit. Locally poorly to moderately developed foliation/bedding at 45 dca. Occasional minute chl seam with scattered speck of py. Healed fractures both parallel and perpendicular to bedding. Occasional healed fracture subparallel to bedding. Both sets of fractures offset by microfaults. 12.15 12.90 Very fine-grained, brownish-white, silicified, brecciated	23868	12.15	.75	4	48	.02	.2	26	21

Date: 4 Mar, 1997

MATARROW PROJECT DRILL HOLE RECORD Hole No: MAT96-2 Page : 2 of 6

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
15.10	18.40		with rusted qtz filler. 13.70 14.40 Similar to above. ANDESITE Fine to medium-grained, black,	23869	13.70	.70	1	27	.01	.2	26	21
			<pre>dark green, browuish grey silicified, chloritic. Locally brecciated with graphitic slip planes. Trace to 2% pyrite as irregular seams, scattered blebs, and disseminated specks. Trace honey brown mineral;</pre>									
			sphalerite??. Locally bleached with 5–8mm alteration halos. 15.10 Lower contact 45 dca.	23870	16.00	1.00	1	57	.00	.3	24	26
18.40	48.70		QUARTZITE Similar to above. Locally sheared, brecciated with minor quartz filler. Irregular chlorite seams up to 2 or 3 cm.									
			20.30 Splash of chalcopyrite. 24.10 25.10 Andesite interbed. 25.10 27.90 Eight qtz veins, up to 15 cm wide, locally vuggy. Wallrock is bleached and fractured with euhedral pyrite up to 4 mm across. 3% total py.	23871 23872 23873	25.10 26.00 27.00	.90 1.00 .90	4 1 1	100 27 32	.00 .00 .00	.2 .1 .1	62 57 46	164 17 16
48.70			PORPHYRY Grey, felsic intrusive with rounded white and white-orange phenocrysts up to 3 mm across. Poorly defined contacts.									
51.20		0 0 0	QUARTZITE 51.20 51.60 Similar to above. 51.60 53.50 Medium-grained,									

MATARROW PROJECT DRILL HOLE RECORD Hole No: MAT96-2 Page : 3 of 6

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			sugary, massive, locally fractured. Scattered speck pyrite. 53.50 55.00 Typical grey unit, locally bleached with narrow, <5mm, alteration halos around irregular chlorite seams.									
55.00	102.00		ANDESITE Very fine-grained to fine-grained, grey, green, locally silicified, sheared, brecciated. RQD = 60%. 55.00 62.40 Silicified, bleached,									
			broken throughout. Splash sphalerite?? at contact. Trace to 0.5% pyrite. 62.40 81.20 Dark green, black, chloritic section.	23874	62.40 63.00	.60 1.00	1	28 33	.00	.1 .1	21 19	17 16
			Locally strongly magnetite sheared. Pyritic. Trace pyrrhotite : 3-5% pyrite, 1-2% pyrrhotite. Sulphides	23876 23877 23878 23879	64.00 65.00 66.00 67.00	1.00 1.00 1.00 1.00	13 1 1 1	56 29 34 45	.06 .08 .01 .00	.8 .3 .2 .2	26 46 31 28	23 23 24 19
			as irregular seams, bands, splashes and irregular blebs and disseminated specks. 67.60 69.40 Sheared, faulted.		68.00	1.00	1	47	.00	.1	20	21
			71.00 75.00 Pyrrhotite enriched section.	23881 23882 23883	69.00 70.00 71.00	1.00 1.00 1.00	1 1 1	25 28 29	.00 .01 .01	.2 .3 .2	20 38 41	15 11 19
			71.30 72.00 Brecciated with rounded fragments of pyrrhotite in chlorite - pyrite matrix.	23885	72.00 73.00 74.00 75.00 76.00 77.00	$ \begin{array}{r} 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ \end{array} $	1 1 1 1 1	27 29 31 30 47 37	.02 .02 .00 .00 .01 .00	.2 .4 .2 .1 .1	39 67 56 29 44 27	26 27 23 17 33 15
				23003	//.00	1.00	I	51	.00	• 1	21	CT.

Date: 4 Mar, 1997

DRILL HOLE RECORD

Date: 4 Mar, 1997

MATARROW PROJECT

Hole No: MAT96-2 Page : 4 of 6

From	То	Rock	Geology	Sample	From	Lngth	Pb	Zn	Au	Ag	Cu	Ni
(m)	(m)	Туре	······		(m)	(m)	ppm	ppm	gpt	ppm	ppm	ppm
			81.20 84.60 Section with 2% pyrite. Trace pyrrhotite with SULPHIDES ALSO IN JOINTS perpendicular to bedding. Three quartz VEINs up to 3 cm wide.	23890 23891 23892 23893 23894 23895 23896	78.00 79.00 80.00 81.00 82.00 83.00 84.00	1.00 1.00 1.00 1.00 1.00 1.00	1 1 1 1 20	31 40 32 30 28 41 47	.00 .02 .01 .02 .01 .01 .37	.1 .1 .4 .3 1.9	22 23 24 18 18 26	18 18 17 15 16 17 28
			cm wide. 84.60 102.00 Very fine-grained, fine-grained, bleached		85.00 86.00 87.00 89.00 90.00 91.00 93.00 95.00 95.00 97.00 98.00 99.00 100.00 100.00 100.00	$\begin{array}{c} 1.00\\$	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	29 29 30 31 41 35 33 40 51 61 112 52 40 43 32 38 36	.01 .02 .03 .33 .02 .03 .02 .03 .00 .01 .03 .01 .00 .01 .00 .00 .00	.32 .24 .24 .22 .31 .22 .31 .22 .31 .22 .32 .32 .33	11 14 21 39 24 41 31 52 24 49 36 28 43 38 26 19 20	18 22 17 25 20 37 25 29 17 26 21 32 26 28 23 26 28
102.00	108.20		Locally broken, fractured. Occasional brecciated. Nil to 1% pyrite, nil to 2% pyrrhotite. MINERALIZED SECTION Semi-massive to massive po and py. Massive sections up to 10 cm thick. Green chloritic sections and siliceous sections up to 3 cm thick. Bedding 45 to 70 dca.	23914 23915 23916 23917 23918 23919	102.00 103.00 104.00 105.00 106.00 107.00 108.00	1.00 1.00 1.00 1.00 1.00 1.00	1 1 1 2 4 4 4 14	36 37 25 17 23 25 154	.03 .04 .02 .12 .02 .04 .02	.3 .7 .7 .7 .9 .8 .6	21 19 15 28 20 15 14	28 26 22 20 33 28 19 35

MATARROW PROJEC. DRILL HOLE RECORD

Date: 4 Mar, 1997

Hole No: MAT96-2 Page : 5 of 6

						_						
From (m)	то (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
108.20	115.00		ANDESITE Fine-grained, grey, green, silicified with trace to 3% pyrrhotite and pyrite as irregular seams, disseminated specks and scattered blebs. Locally brecciated with chlorite filler.	23922 23923 23924 23925	109.00 110.00 111.00 112.00 113.00 114.00	1.00 1.00 1.00 1.00 1.00 1.00	149 225 111 16 6 10	268 273 351 61 45 31	.01 .01 .00 .00 .01 .01	1.7 1.7 .2 .3 .3	14 13 13 21 17 23	16 20 18 21 19 23
115.00	125.50		MINERALIZED SECTION ANDESITE Similar to above with massive pyrrhotite up to 70 cm thick. Silicified VOLCANICS as interbeds. 116.40 Irregular quartz - carbonate seam perpendicular to bedding with splash of sphalerite and trace galena.	23928 23929 23930 23931 23932 23933 23934 23935 23936	115.00 116.00 117.00 118.00 119.00 120.00 121.00 122.00 123.00 124.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	31 1210 381 280 2080 1130 112 322 166 21	52 5640 2670 1670 3010 2980 255 1020 400 118	.01 .01 .00 .04 .07 .00 .00 .00 .02	.3 1.1 2.0 1.6 2.3 .2 .1 .2	18 59 24 32 49 16 13 12	13 31 18 26 35 33 26 22 26
125.50	130.20		MINERALIZED SECTION Predominantly massive pyrrhotite beds up to 100 cm thick with minute siliceous interbeds. Locally faulted with minor gouge. Locally brecciated with pyrite fragments in pyrrhotite matrix. Bedding locally disrupted by complex folding.	23938 23939 23940	125.00 126.00 127.00 128.00 129.00	1.00 1.00 1.00 1.20	17 5 9 6 200	17 15 16 24 543	.04 .09 .12 .04 .07	1.1 1.3 1.6 .6 .7	16 17 15 18	37 4 42 34 22
130.20	145.80		VOLCANICS Black, grey, chloritic. Faulted with minor green chloritic gouge. RQD 40%.									
145.80			DIORITE Fine to medium-grained, massive, poorly foliated, fractured throughout, locally sheared.	23942	158.00	1.00	10	50	.00	.2	800	35

OPAWICA EXPLORATI INC MATARROW PROJE

DRILL HOLE RECORD

Hole No: MAT96-2 Page : 6 of 6

From (m)To (m)Rock TypeGeologySampleFrom (m)Lngth (m)Pb ppmZn ppmAu gptAg ppmCu ppm	
173.20       0 ccasional hematite stained quartz stringer with trace chalcopyrite. epidoized filler. sone with quartz filler and trace chalcopyrite. conc sone chalcopyrite.       23943       168.00       .50       4       31       .00       .2       160         173.20       0 conc sone conc sone conc sone conc sone conc sone chalcopyrite.       23943       168.00       .50       4       31       .00       .2       160	20

Date: 4 Mar, 1997

Date: 4 Mar, 1997			MATARRO	PLORATIC OW PROJECT OLE RECORD	INC		i	Page:	1 of 2
								- 1090.	
REF CORD: -100.00	600.	00		SURVEYED:	No			нс	LE NO: MAT96-3
LOCATION: 1+00S	6+00E			GRID:	Mine		PROPI	ERTY:	Matarrow
AZIMUTH: 360.0	Deg.	DIP: -45.0	Deg.	LENGTH:	109.0	m	PROJE	ect:	
ELEVATION: 3035.00	m	SECTION: 6+00E		CORE SIZE	: NQ		LOGGI	ED BY:	BJ McKay
ASSAY TYPE: FA-AA	;	STARTED: 1 Oct	96	COMPLETED	: 2 Oct 2	1996	DATE	LOGGED:	3 Oct 96
PURPOSE: to test dou	ble IP ano	maly on IF		CLAIM NO:	4945	979	DRILI	LED BY:	Kozy
COMMENTS: Grid beari	ngs used								
		DIP TI	ESTS (CO	orrected)					

DEPTH AZIMUTH DIP DEPTH AZIMUTH DIP

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
.00	24.70	P.p.P.p.P.	CASING									
24.70	39.05	PpPpP	DIABASE DYKE Fine-grained, massive, black, dark green, weakly magnetic. RQD 70%. Sheared, fractured throughout. Locally foliated and foliated with gouge. Scattered silicified, greenish white vesicles. Lower contact 15 cm chill margin, sharp, 45 dca.									
39.05			FELSIC INTRUSIVE Medium to coarse-grained, orange-red. Fractured throughout, locally sheared. Lower contact 45 dca.									

MATARROW PROJŁ DRILL HOLE RECORD

Date: 4 Mar, 1997

Hole No: MAT96-Page : 2 of 2

	r					r						2 01 2		
From (m)	ТО (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm		
61.10	79.80	· · · · · · · · · · · · · · · · · · ·	<ul> <li>43.10 A 4cm mafic xenolith.</li> <li>45.95 46.50 Grey green, silicified mafic xenolith.</li> <li>SILICIFIED SEDIMENTS MINERALIZED</li> </ul>											
			ZONE Very fine-grained to fine-grained, grey, locally bleached. Finely bedded sediments. Bedding locally distorted and complexly folded. Distorted sections are usually bleached. Trace to 3% pyrite as euhedral crystals, disseminated specks and minute seams parallel to bedding. 75.00 79.00 5-15% sul, 50:50 py &	23945 23946 23947 23948 23949 23950 23951	62.00 63.00 64.00 65.00 66.00 67.00 74.00	.90 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1 24 23 25 21 80 105 127 3	59 210 70 35 70 381 261 288 23	.00 .00 .00 .00 .00 .00 .01	.1 .2 .2 .3 .2 .3 .2 .3 .3	24 24 49 51 44 39 80 24 28	38 26 42 45 41 31 33 13 24		
			<ul> <li>po.</li> <li>75.00 75.50 Semi-massive po, moderately magnetic.</li> <li>78.50 A 3cm band of po.</li> <li>Lower contact 45 dca, sheared.</li> </ul>	23953 23954 23955 23956	76.00 77.00 78.00	1.00 1.00 1.00 .80	1 1 1 3	22 13 11 13	.01 .01 .02 .01	.1 .1 .5 .3	11 11 19 15	32 9 13 139		
	109.00		VOLCANICS Ultramafics. RQD=20%. Fine to medium-grained, black, sheared, foliated, broken thruout, talcose. 97.00 99.00 FAULT with green gouge.											
109.00			END OF HOLE Collar elevation is approximate.											

	_		PLORATIC INC OW PROJECT									
Date: 4 Mar, 1997			OLE RECORD	Page: 1 of 4								
REF CORD: -100.00	20	0.00	SURVEYED: No	HOLE NO: MAT96-4								
LOCATION: 1+00S	2+00E		GRID: Mine	PROPERTY: Matarrow								
AZIMUTH: 360.0	Deg.	DIP: -45.0 Deg.	LENGTH: 108.4 m	PROJECT:								
ELEVATION: 3028.00	m	SECTION: 1+95E	CORE SIZE: NQ	LOGGED BY: BJ MCKay								
ASSAY TYPE: FA-AA		STARTED: 3 Oct 1996	COMPLETED: 6 Oct 1996	DATE LOGGED: 8 Oct 96								
PURPOSE: to test dou	uble IP an	nomaly on IF	CLAIM NO: 446423	DRILLED BY: Kozy								
COMMENTS: Grid bear:	ings used											

DIP TESTS (corrected) DEPTH AZIMUTH DIP DEPTH AZIMUTH DIP

From (m)	то (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
.00	24.70	2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2	CASING .00 13.00 Casing. 13.00 24.70 Broken, RQD=0%. Section appears to be boulders. Only 2 footage tags in first 3 boxes.									
24.70	28.80		QUARTZITE Fine-grained, brownish grey, grey, silicified. Bleached throughout, finely disseminated, 0.5%, pyrite. Three, 3 to 8 cm qtz veins.	23957 23958 23959 23960	24.70 26.00 27.00 28.00	$1.00 \\ 1.00$	1 1 1 1	34 38 34 50	.07 .05 .02 .02	.2 .1 .1 .1	26 33 20 12	1 1 1 2
28.80	60.20		QUARTZITE Fine-grained, grey, silicified. Trace to 1% pyrite decreasing with depth. Locally strong pervasive bleaching.									

### OPAWICA EXPLORATIO' INC MATARROW PROJE DRILL HOLE RECORD

Hole No: MAT96-Page : 2 of 4

	· · · · · · · · · · · · · · · · · · ·					r						
From (m)	ТО (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			Numerous irregular seams and bands of qtz-epid with garnets??. Seams and bands have a white alteration halo up to 1 cm wide. Locally sheared with epidotized slips and slickensides. Jointed, fractured, RQD 75%. 40.00 41.00 A 20 cm seam subparallel to core axis. 49.00 52.30 Upper half, chloritic with 2-3% seam and disseminated pyrite. Lower half bleached with py dec to 0% with depth. 54.00 54.20 Section with 5% pyrite with minute bleached alteration halos with chlorite as fracture filler. 55.10 55.30 Similar to above, fractured, with 5% pyrite in chlorite filled fracture. Creamy wh qtz, 3 cm, 45 dca with 10% py.	23962 23963 23964 23965 23966 23966	40.00 49.00 50.00 51.00 52.00 53.00 54.00 55.00	1.00 1.00 1.00 1.00 1.00 1.00	10 1 1 1 1 1 1 1	42 32 19 16 27 27 24 24	.01 .00 .00 .00 .00 .01 .02	.3 .1 .1 .1 .1 .2 .5	17 28 18 16 14 21 32 19	16 18 16 19 17 26 15
60.20	60.60	X X X X X X X X X X X X X X X X X X X X	FELSIC INTRUSIVE Very fine-grained to fine-grained, grey, silicified, PORPHYRY, unit with 3% rounded white clasts.									
60.60	84.05		QUARTZITE Continued from above with occassional chlorite section as noted. 60.60 60.90 Chloritic section with trace pyrite. 66.60 66.80 Chloritic with trace pyrite. 69.90 79.00 Several chloritic sections, with trace	23969 23970	74.00 75.00	1.00 1.00	1	38 59	.01 .00	.1 .1	22 24	24 19

Date: 4 Mar, 1997

OPAWICA EXPLORATIC INC MATARROW PROJE

Hole No: MAT96-Page : 3 of 4

. <u></u>	Date:	4 Mar	r, 1997 DRILL HOLE	-						age :	3 of	
From (m)	ТО (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ní ppm
			to 3% pyrite, up to 50 cm thick, 50 to 80 cm apart. Chlorite sections locally brecciated.									
84.05	85.20	0 0 0 0 0 0 0 0 0 0 0 0	Poorly developed foliation, 45 dca.									
85.20	92.00		QUARTZITE VOLCANICS 50:50 Fine-grained, grey, Quartzite(similar to above) with pyrite chloritic LAYERS and bands, up to 1 cm. Sulphides increasing with depth. Predominantly pyrite with minor pyrrhotite to massive pyrite with 50:50 pyrite and pyrrhotite.	23973 23974 23975 23976	85.20 86.00 87.00 88.00 89.00 90.00 91.00	.80 1.00 1.00 1.00 1.00 1.00 1.00	1 1 1 1 1 1 1	39 41 81 71 116 21 14	.02 .01 .01 .00 .03 .03 .02	.2 .1 .1 .2 .3 .2	21 11 10 11 14 17 14	26 18 25 22 21 30 29
92.00	93.00	X X	MINERALIZED SECTION Massive pyrrhotite, strongly magnetite, with 1% pyrite. Brecciated with scattered cherty fragments.	23978	92.00	1.10	1	13	.02	.6	22	43
93.00	99.10		VOLCANICS QUARTZITE Reverse of 85.2-92 with chloritic bands up to 10 cm. Semi-massive po and py decreasing to 1% py. Bedding distorted, locally foliated and sheared.	23980 23981 23982	93.10 94.00 95.00 96.00 97.00 98.00	.90 1.00 1.00 1.00 1.00 1.10	1 34 163 1610 299	19 28 261 459 6130 1140	.02 .02 .01 .01 .06 .01	.2 .3 .1 .2 .6 .2	12 12 21 17 36 24	21 28 25 22 29 24
99.10	104.40		ULTRAMAFICS Fine to medium-grained, dark green to black. Chloritic, sheared, locally talcose. Occasional rusted qtz seams.									

OPAWICA EXPLORATIO' INC MATARROW PROJE

Hole No: MAT96-Page: 4 of 4

	Date:	4 Mar	, 1997 DRILL HOLE							age :	4 of	
From (m)	ТО (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
104.40			Locally cracked and minor brecciation with creamy qtz filler. Lower contact 60 dca. PORPHYRY Typical unit with sheared contacts. SILICIFIED SEDIMENTS									
	100.40		Very fine-grained to fine-grained, finely bedded, black and grey silicified sediments. Bedding 65 dca. Broken and sheared, (blasted??). 5% To massive pyrrhotite and pyrite with bands up to 60 cm thick. Similar ratios to above but with more silifified seams, (silica flooding??). Locally brecciated, fractured, jointed. 105.80 Small shear with a smear of galena?.		104.80	1.20	114	360	.01	.4	46	59
108.40			END OF HOLE Hit an opening: stope/shaft?????. North Zone??. Collar elevation is approximate.		106.00		18 4070	20 11600	.01	.9 1.4	37 350	31 27

Date: 4 Mar, 1997		MATARE	EPLORATIONS INC COW PROJECT IOLE RECORD	Page: 1 of 5
REF CORD: -100.00		.00	SURVEYED: No	HOLE NO: MAT96-5
LOCATION: 1+00S	0+00		GRID: Mine	PROPERTY: Matarrow
AZIMUTH: 360.0	Deg.	DIP: -45.0 Deg.	LENGTH: 201.0 m	PROJECT: Matarrow
ELEVATION: 3024.00	m	SECTION: 0+00	CORE SIZE: NQ & BQ	LOGGED BY: BJ McKay
ASSAY TYPE: FA-AA		STARTED: 8 Pct 1996	COMPLETED: 14 Oct 1996	DATE LOGGED: 15 Oct 96
PURPOSE: to test IP	anomaly	on Main IF	CLAIM NO: 446423	DRILLED BY: Kozy
COMMENTS: Grid beari	ngs used	l		
		DIP TESTS (c	corrected)	

DIP TESTS (corrected) DEPTH AZIMUTH DIP DEPTH AZIMUTH DIP

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
.00	4.80	102020 102020	CASING									
4.80	24.40		QUARTZITE Very fine-grained to fine-grained, grey, silicified, locally rusted and fractured. Locally poor to moderate bedding. 4.80 25.00 Broken throughout. 10.00 11.80 Very fine-grained, hard, black, 2-3% euhedral and disseminated pyrite. 13.00 Bedding 50 dca.	23988			1 1	87 129	.00 .00		<b>44</b> 63	12 19
24.40	25.80	X X X X X X X X X X X X X X X X X X X X	FELSIC INTRUSIVE Medium-grained, greyish brown with orange white siliceous phenocrysts. 24.40 Lower contact broken. 25.00 Change from NQ to BQ									

MATARROW PROJECT DRILL HOLE RECORD

Date: 4 Mar, 1997

Hole No: MAT96-5 Page : 2 of 5

r		1								- -		· · · · · · · · · · · · · · · · · · ·
From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
25.80	31.20		core size. QUARTZITE SILICIFIED SEDIMENTS Very fine-grained, cherty, grey, silicified, poorly developed bedding. Fractured throughout with epidote filler.									
			Scattered irregular, discontinuous quartz seams with alteration halos less than 5 mm. Numerous minute hairline fractures with 3-8 mm orange-white(hem?) alteration halos. Epidote fractures offset by above altered fractures. Lower contact, irregular, 25 dca. 25.80 Lower contact 40 dca.									
31.20	65.20		DIABASE DYKE Fine to medium-grained, black, locally slight magnetic. Fractured, brecciated, broken, epidote filler increasing (to moderate) downhole. Lower contact, sharp, 50 dca. 45.00 48.00 FAULT, broken, RQD 0%.									
65.20	86.20		SILICIFIED SEDIMENTS Very fine-grained, cherty, brown, grey, tinted orange-brown. Locally fractured with hematite alteration halos, also a set of fractures without alteration. Locally jointed with vuggy quartz filler perpendicular to poorly developed bedding. Occasional, discontinous translucent and creamy white qtz VEINs < 1 cm. Minor pyrite in green chlorite enriched sections up to 20 cm thick									

MATARROW PROJE

Hole No: MAT96-5 Page : 3 of 5

	Date:	4 Mar	, 1997 DRILL HOLE		T					age :	: MAT9 3 of	
From (m)	ТО (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
86.20	86.70	X X X X X X X X X X X X X X X X X X X X	FELSIC INTRUSIVE Very fine-grained, green, silicified with orange-white and white phenocrysts. Contacts irregular.									
86.70	95.10		SILICIFIED SEDIMENTS Similar to above.									
95.10	96.80		FELSIC INTRUSIVE Similar to above.									
96.80	99.30		SILICIFIED SEDIMENTS Similar to above, bleached throughout. Lower contact, brecciated.									
99.30	136.40		DIABASE DYKE Fine-grained, dark green, black. Fractured, locally sheared. Locally brecciated with creamy white quartz and minor epidotized filler. Lower contact, brecciated, fractured.									
136.40	154.30		SILICIFIED SEDIMENTS Very fine-grained, grey, black, green. Strong pervasive silicification. Fractured, brecciated, sheared, throughout. 136.40 139.20 Broken, foliated with gouge. Locally ground core, 90% recovery. Brecciated creamy white quartz VEINs up to 5 cm. Numerous 1-2 cm, translucent white quartz VEINS. 140.30 140.90 Fine-grained, grey, 3% pyrite as	23991 23992 23993 23994	137.00 138.00	1.00 1.00 1.00 1.00	2040 383 2570 595 198 110	10900 4300 1770 1060 178 2400	.03 .01 .00 .01	1.2 1.2 3.4 .7 .7	28 18 39 28 13 37	24 37 35 27 22 22
			quartz VEINs. 140.30 140.90 Fine-grained, grey,	23995	141.00	1.00	110	2400	.00	.4	37	

MATARROW PROJEC. DRILL HOLE RECORD Hole No: MAT96-5 Page : 4 of 5

	Date:	4 Mar	, 1997 DRILL HOLH	RECORD					Pa	ige :	4 of	5
From (m)	TO (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			fracture filler. 141.80 142.70 Fine-grained, grey, 3% pyrite as fracture filler.		142.00	1.00	101	431	.01	.3	21	28
			142.30 A 3 cm breccia zone. 144.40 A 1 cm quartz VEIN	23998	143.00 144.00 145.00	1.00	41 174 235	265 462 917	.00 .00 .00	.3 .3 .3	15 23 14	32 47 46
			with a 8 mm splash of chalcopyrite. VEIN is fractured with disseminated chalcopyrite ir wallrock.	24000	146.00		71	430	.00	.2	13	37
			146.30 149.70 Brecciated with orange-white white filler.	7952 7953 7954 7955 7956	147.00 148.00 149.00 150.00 151.00 152.00 153.00	$1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.30$	591 134 80 140 66 45 42	3430 303 614 1510 206 173 156	.01 .01 .00 .01 .01 .01	.6 .4 .4 .4 .4 .4 .3	86 58 73 55 33 31 37	74 66 49 32 73 52 58
154.30	181.60		ULTRAMAFICS FELSIC INTRUSIVE Medium-grained, green, black, sheared, talcose, brecciated, foliated. Locally brecciated sections with orange-white quartz filler. 154.30 Lower contact, 80 dca 155.50 156.40 Felsic, por, dyke. 157.20 157.40 Similar to above. 157.60 157.80 Felsic dyke, mass, sugary. 158.40 158.70 Similar to above. 170.80 174.10 Fine-grained, massive, flow.									
181.60	184.30		FELSIC INTRUSIVE Very fine-grained, orange-white qtz phenocrysts in a grey green, silicified matrix. 181.60 Lower contact, sheared, 35 dca.									

Date: 4 Mar, 1997

MATARROW PROJE

	Date:	4 Mar	<b>, 1997</b>	DRILL HOLE	RECORD					р. Р.	ole No age :	5 of	5
From (m)	ТО (m)	Rock Type	Geology		Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
184.30	201.00		ULTRAMAFICS Similar to above. 184.30 Lower sheared, 40 185.00 187.40 FAULT.	contact, dca.									
201.00			END OF HOLE										

Hole No: MAT96-5

		PLORATION, INC DW PROJECT	P
Date: 4 Mar, 1997		DLE RECORD	Page: 1 of 9
REF CORD: -125.00	195.00	SURVEYED: No	HOLE NO: MAT96-6
LOCATION: 1+25S	1+95E	GRID: Mine	PROPERTY: Matarrow
AZIMUTH: 360.0	Deg. DIP: -70.0 Deg.	LENGTH: 260.0 m	PROJECT:
ELEVATION: 3028.00	m SECTION: 2+05E	CORE SIZE: NQ	LOGGED BY: BJ McKay
ASSAY TYPE: FA-AA	STARTED: 14 Oct 96	COMPLETED: 20 Oct 96	DATE LOGGED: 13-15 Nov 96
PURPOSE: to test IF ]	below mine workings	CLAIM NO: 446423	DRILLED BY: Kozy
COMMENTS: Grid bearing	ngs used		
		(mage of a l)	

DIP TESTS (corrected) DEPTH AZIMUTH DIP DEPTH AZIMUTH DIP

From To (m) (m)	Rock Type		Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
.00 6.	40 Ph Ph P	CASING									
6.40 35.	503030	SILICIFIED SEDIMENTS Very fine-grained to fine-grained, grey, massive to locally well BEDDED, RQD=40%. Fractured, jointed with bleached halos < 1 cm wide. 6.40 11.00 Locally Broken. Bedding 15 dca. 17.90 21.00 Orange brown section, silicified, brecciated. 19.70 22.10 Extensive strong faulting, RQD 0%. 23.00 Bedding 40 dca. 24.80 35.20 Faulted, broken section, locally brecciated. 33.00 Bedding 40 dca.									

DRILL HOLE RECORD

Date: 4 Mar, 1997

MATARROW PROJECT

Hole No: MAT96-6 Page : 2 of 9

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
35.20	45.60		QUARTZITE Fine-grained, grey, massive. Jointed with quartz filled joints, up to 3 per meter. 42.10 Whole Rock Sample 7451.	4901 4902 4903	35.20 36.70 40.40	.80 .60 1.00	2 3 16	19 15 247	.00 .05 .01	.1 .2 .5	23 26 26	22 12 10
45.60	107.70		SILICIFIED SEDIMENTS Similar to above, locally finely bedded, occasional offset by steep to vertical micro-faults. Jointed throughout. 52.50 Irregular, discontinous sphalerite seam at 45	4905 4906 4907	45.60 46.60 47.60 48.60	1.00 1.00 1.00 1.00	27 5 7 28	496 26 52 173	.00 .01 .01 .00	.1 .3 .5 .2	12 15 16 19	16 26 46 14
			dca. 61.00 Whole Rock Sample 7452. 78.60 79.20 Network of minute fracture filled qtz veinlets, with a very fine-grained, shattered, greyish	4908 4909 <b>4</b> 910	68.50 69.50 70.50	1.00 1.00 1.00	7 1 1	91 27 23	.01 .00 .00	.3 .1 .1	44 10 15	15 18 11
			white host. 84.00 Whole Rock Sample 7453. 85.00 107.70 Increase in amount, width and intensity of bleaching around joints and fractures. Also bleaching in irregular discontinous seams parallel to bedding. Also irregular qtz-garnet seams with augen texture. Altered bleached	4911 4912	90.60 91.40	.80 .40	1 2	26 67	.00	.3 .1	60 312	12 104
			layers wrap around augens of garnets. 102.00 Whole Rock Sample 7454.									

Date: 4 Mar, 1997

MATARROW PROJL.

Hole No: MAT96-0 Page : 3 of 9

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
107.70	108.00		DIABASE DYKE Fine-grained, dark green, non-magnetic, fractured, brecciated, broken. Irregular contacts.									
108.00	132.20		SILICIFIED SEDIMENTSContinuedfrom above. Beddinglocallydisrupted, numerousirregularquartzseamsscatteredgarnets.Occasionalsilicifiedlayerstintedorange.Sulphideincreasesto3-5%withdepth.SilicificationincreasingwithGrainsizedecreasingwithdepth.Grainsizedecreasingwithdepth.Pyriteasdisseminated, irregularmasses,minutecontinuousanddiscontinuousseams.Alsoasbrecciafillerwithandwithoutqtz.124.90WholeRockSample129.90Orangewhiteqtz131.10Orangewhiteandwhiteqtzvein, 10cmcmwide.	4914 4915 4916 4917 4918 4920 4921 4922 4923 4924 4925 4926 4927 4928 4926 4927 4928 4929 4930 4931 4931 4932 4933 4934 4935	108.50 110.20 111.20 112.20 113.20 114.20 115.00 116.00 117.00 119.00 120.00 122.00 122.00 123.00 124.00 125.00 125.00 126.00 127.00 128.00 129.00 130.00 131.00 132.00	$\begin{array}{c} 1.20\\ 1.00\\$	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20 47 22 46 31 28 26 36 20 23 23 31 24 23 40 40 28 30 41 30 19 46 114 103	.00 .00 .00 .01 .01 .00 .00 .00 .00 .00	.11.1.1.2 .1.1.1.2 .1.1.1.1.2 .1.1.1.1	32 38 26 23 21 23 40 37 24 18 37 39 25 21 41 28 12 25 48 7 12	12 39 14 57 9 9 10 14 12 10 12 43 10 11 13 11 15 26 14 15 10 93 188 302
132.20	132.90		FELSIC INTRUSIVE Fine to medium-grained, black and white, massive, trace pyrite. 132.40 Whole Rock Sample 7456.				-					
132.90	171.20		SILICIFIED SEDIMENTS FELSIC INTRUSIVE Similar to above. Sulphide content	4937	133.00	1.00	1	22	.01	.1	25	9

OPAWICA EXPLORATI( INC MATARROW PROJECT

DRILL HOLE RECORD

Date: 4 Mar, 1997

			·········							· · · · · · · · · · · · · · · · · · ·	r		r	,
	From (m)	То (m)	Rock Type		Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
				• • • • • • • • •		4020	124 00	1 00		0.1	01	-	0.7	10
				decreasing chlorite.	to 0%. Increase in		134.00	1.00		21	.01	.1	27 31	10 111
				141.70	Whole Rock Sample		136.00	1.00		18	.01	.2	27	
					7457.		137.00	1.00	<u>1</u>	20	.02	.1	23	11
						4942	138.00	1.00	1	18	.01	.1	20	10
							139.00	1.00	9	170	.01	.4	28	12
							140.00	1.00	6	60	.01	.2	25	11
				140 00 150 00	mrada to 0% purito		141.00	1.00		26 61	.00	.1 .2	14 24	10 12
				142.00 150.00	Trace to 0% pyrite.		142.00	1.00	5	69	.01	.2	24	13
				144.00 144.60	Felsic porphyry,		144.00	1.00	3	34	.01	.2	12	10
			調査	111100 111100	very fine-grained,							•-	~	
					grey, with white									
					quartz phenocrysts.									
				144.00	Bedding 45 dca.									
				144.50	Whole Rock Sample 7458.									
				148.50 150.40		4949	148.50	.90	1	42	.00	.1	20	8
				110.50 150.10	foliated, broken,		149.40	1.00	1	47	.00	.2	23	11
			前日		1-3% pyrite, locally									
					SMEARED ALONG									
					chlorite slips.	40-4	4						- 4	
				155.00 163.00	Section with 1-2% scattered minute	4951	157.60	1.10	1	39	.01	.2	54	10
					pinkish brown									
					garnets. Locally									
			調査		developed chlorite									
					foliation 45 dca.									
				161.00 165.00			162.00	1.00	1	42	.00	.1	42	16
					with creamy white		163.00 164.00	$1.00 \\ 1.00$	1	53 38	.00	.1 .1	34 20	14 13
					qtz filler. Trace to 2% pyrite.	4904	104.00	1.00	T	20	.00	• 1	20	13
				165.00	Whole Rock Sample	4955	165.00	1.00	1	83	.00	.2	25	12
					7459.	4956	166.00	1.00	1	35	.00	.1	18	10
			開始				167.00	1.00	1	40	.00	.1	29	12
							168.00	1.00	1	61	.00	.1	21	15
			E H	169.00 171.20	Section with pyrite		169.00	1.00	1	31 33	.00	.2	27	16
			問題		to pyrite :1 to 10. Scattered pinkish	4960	170.00	1.20	1	33	.00	.1	23	12
					brown garnet.									
					Chloritic slips.									
:	171.20	172.70		PORPHYRY										

MATARROW PROJEC. DRILL HOLE RECORD Hole No: MAT96-6 Page : 5 of 9

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			Silicified, sheared, broken. Contacts, sheared, 45 dca.									
172.70	186.40		SILICIFIED SEDIMENTS MINERALIZED ZONE Very fine-grained to fine-grained, black. Locally finely bedded, weakly to strongly magnetic. 10 to 100% po with very little pyrite. Pyrrhotite as irregular to massive seams and beds, discontinuous seams, fracture and breccia filler. Individual beds up to 5 cm and CONTAIN occasional FRAGMENTS OF SILICA. Bedding locally exhibits complex z and s folding. Occasional healed chlorite slip with minor quartz.	4962 4963 4964 4965 4966	172.70 173.70 175.00 176.00 177.00 178.00 179.00	1.00 1.30 1.00 1.00 1.00 1.00	2 1 1 1 1 1 1	61 82 25 24 14 16 12	.02 .01 .00 .03 .04 .03 .07	.3 .2 .3 .3 .5	52 17 28 14 12 11 14	34 17 15 21 21 20 20
			Minor chlorite in first 3m of section. 179.60 Whole Rock Sample 7461.	4969 4970 4971 4972 4973	180.00 181.00 182.00 183.00 184.00 185.00 186.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00	1 1 1 1 1 1	14 10 12 16 19 20 31	.03 .04 .05 .07 .01 .01	.3 .1 .3 .5 .2 .2 .1	11 8 14 18 11 13 16	17 17 21 22 6 10 37
	187.70 192.70	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PORPHYRY Felsic unit with orange-white and white phenocrysts in a 3 to 2 ratio. 186.70 Whole Rock Sample 7462. SILICIFIED SEDIMENTS IRON	4975	187.00	1.00	1	30	.01	.2	21	39

Date: 4 Mar, 1997

MATARROW PROJEC. DRILL HOLE RECORD

Date: 4 Mar, 1997

Hole No: MAT96-6 Page : 6 of 9

From (m)	ТО (m)	Rock Type	Geology S		From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			FORMATION Fine-grained, black, locally sheared. Py:po is 1:1, with total content locally up to 2%. Sulphides occur as discontinuous and irregular seams, joint and fracture filler and as discontinuous bands parallel to bedding. 10% Pinkish brown garnets. Unit is weakly to strongly magnetic Lower 1.5m is brecciated, foliated.		188.00 189.00	1.00	1 1	19 17	.00 .00	.2 .2	17 15	13 10
			Occasional healed chloritic slip with minor pyrite. 189.10 Whole Rock Sample 7463.	4978	190.00 191.00 192.00	1.00 1.00 .70	11 1 1	14 17 18	.00 .00 .01	.1 .1 .1	12 10 11	5 5 15
192.70	195.00		FELSIC INTRUSIVE 192.70 193.40 Fine-grained, brownish white, massive. Occasional white and orange white phenocrysts within first 15cm of section.	7021	192.70	.70	2	42	.00	.1	28	12
			193.10 Whole Rock Sample 7464. 193.40 Lower contact, sharp, 40 dca. 193.40 195.00 Fine-grained, grey Brown, PORPHYRY with scattered white and white-orange phenocrysts throughout.	7022	193.40	2.40	1	48	.00	.1	18	69
195.00	203.40		194.40 Whole Rock Sample 7465. MINERALIZED ZONE Massive pyrrhotite with minor pyrite and scattered fragments of	4980	195.80	1.20	2	15	.09	.5	22	39

MATARROW PROJECT DRILL HOLE RECORD Hole No: MAT96-6 Page : 7 of 9

From (m)	То (m)	Rock Type			From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
		X, Z, X,	cherty silicous sediment. 197.00 199.00 Section with only 20% pyrrhotite. Bedding distorted throughout, locally parallel to core axis. Locally sheared	4982 4983 4984 4985 4985	197.00 198.00 199.00 200.00 201.00 202.00 203.00	1.00 1.00 1.00 1.00 1.00 1.00 .40	1 1 2 3 5 5 5 10	16 12 10 11 12 13 11	.04 .04 .08 .03 .06 .07 .04	.2 .3 .3 .6 .7 .5	13 14 14 23 25 20 22	25 25 22 47 50 37 51
203.40	209.40		GREYWACKE Fine-grained, alternating black and light grey layers. Well bedded, locally undisturbed and unaltered. Jointed perpendicular to bedding. Bedding 35 to 45 dca. Contacts sheared, lower contact faulted and with gouge.									
209.40	211.40		GREYWACKE Very fine-grained, silicified, bleached, cherty sediment. Bedding locally microfaulted with fault planes varying from 40 to 90 dca. 210.10 Whole Rock Sample 7466.		209.40 210.40		60 83	323 385	.00	.3	35 40	29 28
211.40	219.00		GREYWACKE Similar to 203.4 to 209.4. Lower 1.5m brecciated and foliated with creamy white quartz veining in upper 50 cm.									
219.00	231.80		MINERALIZED ZONE Similar to MINERALIZED ZONE above. Fine-grained, black, sheared, brecciated, jointed. Bedding locally distorted. 45 dca. 10 to 100% massive pyrrhotite with MINOR pyrite. 227.00 Whole Rock Sample	4991 4992 4993 4994 4995 4996 4997	219.00 220.00 221.00 222.00 223.00 224.00 225.00 226.00 227.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	400 19 20 5 11 245 991 32 39	740 50 41 29 25 411 1410 29 231	.02 .04 .08 .04 .01 .01 .02 .05 .11	.4 .6 .7 .3 .3 .6 .5 .5 1.0	19 23 21 12 14 20 18 19 107	28 34 39 15 14 35 18 27 31

Date: 4 Mar, 1997

### OPAWICA EXPLORATI( INC MATARROW PROJECT

Hole No: MAT96-t Page : 8 of 9

Date:	4	Mar,	1997
-------	---	------	------

DRILL HOLE RECORD

	T			···	<u> </u>	<u> </u>	······································					a
From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
		x x x x x x x x x x x x x x x x x x x	7467. 228.50 230.30 Creamy white quartz VEIN with sphalerite, galena, as massive and disseminated seams.		228.00	1.00	95700	27777	.05	30.6	637	64
		X, X, X, X, X, X X, Y, X, X, X, X X, X, X, X, X, X X, Y, X, X, X, X X, X, X, X, X, X	Minor pyrrhotite and pyrite. 228.65 A 8 cm seam of massive galena. 228.80 Whole Rock Sample	5000	229.00	1.00	1490	4580	.01	F	23	8
		x, x, x, x, x, x, x x, x'x, x, x x, x x, x, x, x, x, x, x x, x, x, x, x, x, x x, x, x, x, x, x, x x, x'x, x, x, x, x	7468.	7001	230.00	1.00	204 251	4580 22100 12400	.01 .01 .01	.5 .8 .4	23 14 17	8 15 28
231.80	232.80		GREYWACKE Typical grey, moderately silicified sediment.	7023	231.80	1.00	9	48	.00	.1	14	27
232.80	235.20		PORPHYRY Medium-grained, grey felsic unit with white phenocrysts. 234.30 Whole Rock Sample 7469.	7004	232.80 234.00 235.00	1.00	86 283 404	6120 7540 15600	.01 .03 .04	.3 .6 .8	33 30 25	20 18 23
235.20	239.10		SILICIFIED SEDIMENTS Fine-grained, black, silicified, brecciated. 236.00 237.00 FAULT zone, brecciated, with 30%		236.00 237.00		677 875	4620 4950	.00	.9 1.3	18 22	29 27
			core recovery. 238.00 239.10 Brecciated with creamy white qtz filler (70%) with disseminated and euhedral galena and scattered wisps of sphalerite.	7007	238.00	1.10	22900	8740	.02	1.7	24	16
			238.65 A 12 cm creamy white quartz VEIN.				ĺ					
239.10	253.00		SILICIFIED SEDIMENTS Fine-grained, greyish brown, strong pervasive bleaching		239.10 240.00		3260 61	9250 64	.01 .02	.7 .1	34 12	20 4

Date: 4 Mar, 1997

MATARROW PROJECT DRILL HOLE RECORD Hole No: MAT96-b Page : 9 of 9

From (m)	То (m)	Rock Type	Geology	Sample	From (m)	Lngth (m)	Pb ppm	Zn ppm	Au gpt	Ag ppm	Cu ppm	Ni ppm
			throughout. Locally sheared, brecciated, scattered trace pyrite.	7009 7010 7011 7012	241.00 242.00 243.00 244.00 245.00	1.00 1.00 1.00 1.00 1.00	57	84 187 72 97 218	.01 .00 .00 .02 .22	.1 .2 .3 .2 1.1	18 17 35 35 40	9 9 20 18 25
			247.20 Whole Rock Sample 7470.	7014 7015	246.00 247.00 248.00 249.00	1.00 1.00 1.00 1.00	49 27 12 16	32 115 39 259	3.12 .04 .05 .02	2.4 .3 .3 .2	41 64 49 58	23 27 29 28
253.00	257.00		PORPHYRY Felsic unit, fine to medium-grained, grey with white phenocrysts. 256.00 Whole Rock Sample 7471.	7018	253.00 254.00 255.00	1.00 1.00 1.00	57 11 8	191 68 35	.01 .03 .01	.2 .1 .1	28 37 85	137 49 23
257.00	260.00	0 0 0	GREYWACKE Typical unaltered, black and grey, sediment.									
260.00			END OF HOLE Elevation ia approximate.									
							-					

Appendix B Assay Certificates



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

Page 1 of 3

Assay Certificate

6W-4625-RA1

## Company: OPAWICA EXPLORATION INC

Date: NOV-07-96

Project: Mattarrow Attn: B.J. McKay/D. Clark

We hereby certify the following Assay of 90 Core samples submitted NOV-05-96 by .

Sample Number	Au g/tonne	Au Check g/tonne	Ag P <b>P</b> M	Cu PPM	Ni PPM	Pb PPM	Zn PPM
4901	Nil		0.1	23	22	2	19
4902	0.05	_	0.2	26	12	3	15
4903	0.01	-	0.5	26	10	16	247
4904	Ni I	-	0.1	12	16	27	496
4905	0.01	-	0.3	15	26	5	26
4906	0.01	0.01	0.5	16	46	7	52
4907	Nil	-	0.2	19	14	28	173
4908	0.01	-	0.3	44	15	7	91
4909	Ni I	-	0.1	10	18	1	27
4910	Nil	-	0.1	15	11	1	23
4911	Nil		0.3	60	12	1	26
4912	Ni 1	-	0.1	32	104	2	67
4913	Nil	-	0.1	32	12	7	20
4914	Nil	-	0.1	38	39	1	47
4915	Nil	-	0.1	28	14	1	22
4916	Nil	-	0.1	26	57	1	46
4917	0.01	-	0.2	23	9	1	31
4918	0.01	-	0.1	21	9	1	28
4919	Nil	-	0.1	23	10	1	26
4920	0.04	0.01	0.1	40	14	1	36
4921	0.01		0,2	37	12	1	20
4922	Nil	-	0.1	24	10	1	23
4923	Nil	-	0.1	18	12	1	23
4924	Ni l	-	0.1	37	43	1	31
4925	Nil	-	0.1	39	10	1	24
4926	Nil	-	0.1	25	11	1	23
4927	0.01	-	0.2	21	13	1	40
4928	Ni 1	0.01	0.2	41	11	1	40
4929	0.01	-	0.1	28	15	1	28
4930	0.01	-	0.1	12	26	1	30
One assay ton porti	on used						

One assay ton portion used.

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Page 2 of 3

Established 1928

## Assay Certificate

6W-4625-RA1

## Company: OPAWICA EXPLORATION INC

Project: Mattarrow Attn: B.J. McKay/D. Clark

We hereby certify the following Assay of 90 Core samples submitted NOV-05-96 by .

Sample Number	Au g/tonne	Au Check g/tonne	Ag PPM	Cu PPM	Ni P <b>PM</b>	Pb PPM	Zn PFM
4931	0.01		0.1	19		1	
4932	Q.01	Nil	0.1	25	14 15	1	41 30
4933	0.01		0.2	48	10	1	30 19
4934	Nil	_	0.1	18	93	1	46
4935	Ni I	-	0.1	7	188	1	114
4936	0.01		0.1	12	302	 l	103
4937	0.01	-	0.1	25	9	1	22
4938	0.01	-	0.1	27	10	1	21
4939	Ni l	-	0.1	31	111	1	44
4940	0.01	-	0.2	27	11	1	18
4941	0.02	-	0.1	23	11	1	20
4942	0.01	-	0.1	20	10	1	18
4943	0.01	-	0.4	28	12	9	170
4944	0.01	-	0.2	25	11	6	60
4945	Nil		0.1	14	10	1	26
4946	0.01	-	0.2	24	12	7	61
4947	0.01	-	0.2	28	13	5	69
4948	0.01	-	0.2	12	10	3	34
4949	Nil	-	0.1	20	8	1	42
4950	Nil	-	0,2	23	11	1	47
4951	0.01	~	0.2	54	10	1	39
4952	Ni l	Nil	0.1	42	16	1	42
4953	Nil	-	0.1	34	14	1	53
4954	Ni l	-	0.1	20	13	1	38
4955	Nil		0.2	25	12	1	83
4956	Nil	-	0.1	18	10	1	35
4957	Nil	-	0.1	29	12	1	40
4958	Nil	-	0.1	21	15	1	61
4959	Ni l	Nil	0.2	27	16	1	31
4960	Nil	-	0.1	23	12	1	33
One assay ton po	ortion used.			4	$\mathcal{O}\Lambda$	Λ	

Certified by\_\_\_\_

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300

Date: NOV-07-96



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

## Assay Certificate

6W-4625-RA1

## Company: OPAWICA EXPLORATION INC

Mattarrow Project: B.J. McKay/D. Clark Attn:

We hereby certify the following Assay of 90 Core samples submitted NOV-05-96 by.

Sample Number	Au g/tonne	Au Check g/tonne	Ag PPM	Cu PPM	Ni PPM	Pb PPM	Zn PPM
4961	0.02	-	0.3	52	34	2	61
4962	0.01	-	0.2	17	17	1	82
4963	Nil	-	0.2	28	15	1	25
4964	0.03	0.02	0.3	14	21	1	24
4965	0.04	-	0.2	12	21	1	14
4966	0.03		0.3	11	20	1	16
4967	0.07	0.07	0.5	14	20	1	12
4968	0.03	-	0.3	11	17	1	14
4969	0.04	-	0.1	8	17	1	10
4970	0.05	0.05	0.3	14	21	1	12
7951	0.01	-	0.6	86	74	591	3430
7952	0.01	-	0.4	58	66	134	303
7953	0.01	-	0.4	73	49	80	614
7954	Nil	-	0.4	55	32	140	1510
7955	0.01		0.4	33	73	66	206
7956	0.01	-	0.4	31	52	45	173
7957	Ni l	-	0.3	37	58	42	156
23988	Ni l	-	0.2	44	12	1	87
23989	Nil	-	0.2	63	19	1	129
23990	0.03	-	1.2	28	24	2040	10900
23991	0.01	-	1.2	18	37	383	4300
23992	Nil	-	3.4	39	35	2570	1770
23993	Nil	-	0.7	28	27	595	1060
23994	0.01	-	0.7	13	22	198	178
23995	Ni l	-	0.4	37	22	110	2400
23996	0.01	-	0.3	21	28	101	431
23997	Nil	-	0.3	15	32	41	265
23998	Nil	-	0.3	23	47	174	462
23999	Nil	-	0.3	14	46	235	917
24000	Nil		0.2	13	37	71	430

One assay ton portion used.

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705)642-3300

Date: NOV-07-96

Page 3 of 3

A Division of TSL/Assayers Inc.

SD

Assaying - Consulting - Representation

Established 1928

Assay Certificate

6W-4632-RA1

Page 1 of 2

Date: NOV-08-96

ſ

7

6

Company: OPAWICA EXPLORATION INC Project: Matarrow

Attn: D. Clark / B.J. McKay

We hereby certify the following Assay of 49 Core samples submitted NOV-05-96 by . 2

	z z			4	ッ	Û	1	2
Sample Number	Au g/tonne	Au Check g/tonne	Au 2nd g/tonne	Åg g/tonne	Cu P <b>RM</b>	Ni PPM	Pb P <b>PM</b>	Zn PPM
4971	0.07	0.06		0.5	18	22		16
4972	0.01	-	-	0.2	11	6	1	19
4973	0.01	-	-	0.2	13	10	1	20
4974	0.01	-	-	0.1	16	37	1	31
4975	0.01	-	-	0.2	21	39	1	30
4976	Nil			0.2	17	13	1	19
4977	Nil	-	-	0.2	15	10	1	17
4978	Nil	-	-	0.1	10	5	1	17
4979	0.01	-	-	0.1	11	15	1	18
4980	0.09	-	-	0.5	22	39	2	15
4981	0.04		-	0.2	13	25	1	16
4982	0.04		-	0.3	14	25	1	12
4983	0.08		-	0.3	14	22	2	10
4984	0.03		-	0.6	23	47	3	11
4985	0.06	-	-	0.7	25	50	5	12
4986	0.07		-	0.5	20	37	5	13
4987	0.04		-	0.5	22	51	10	11
4988	Nil		-	0.3	35	29	60	323
4989	Nil		-	0.2	40	28	83	385
4990	0.02	-	-	0.4	19	28	400	740
4991	0.04		-	0.6	23	34	19	50
4992	0.08		-	0.7	21	39	20	4
4993	0.04		-	0.3	12	15	5	29
4994	0.01		-	0.3	14	14	11	25
4995	0.01	-	-	0.6	20	35	245	411
4996	0.02		-	0.5	18	18	991	1410
4997	0.05		-	0.5	19	27	32	29
4998	0.11		-	1.0	107	31	39	231
4999	0.04		-	30.6	637	04	* 9.57 % *	4.17.70
5000	0.0	1 -	-	0.5	23	8	1490	4580
				2000				

One assay ton portion used. \* Indicates where results were over 20000 PPM and done using the assay method.

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244 FAX (705)642-3300



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

Page 2 of 2

## Assay Certificate

6W-4632-RA1 Date: NOV-08-96

Company: OPAWICA EXPLORATION INC Project: Matarrow

Attn: D. Clark / B.J. McKay

We hereby certify the following Assay of 49 Core samples submitted NOV-05-96 by

Sample Number	Au g/tonne	Au Check g/tonne	Au 2nd g/tonne	Ag g/tonne	Cu PPM	Ni PPM	Pb PPM	Zn PPM
7001	0.01			0.8	14	15	204	* 2.21 %
7002	0.01	-	-	0.4	17	28	251	12400
7003	0.01	-	-	0.3	33	20	86	6120
7004	0.03	-	-	0.6	30	18	283	7540
7005	0.04	-	-	0.8	25	23	404	15600
7006	0.01			1.3	22	27	875	4950
7007	0.02	0.02	-	1.7	24	16	* 2.29 %	8740
7008	0.01	-	-	0.1	18	9	40	84
7009	Nil	-	-	0.2	17	9	92	187
7010	Ni l	-	-	0.3	35	20	10	72
7011	0.02		-	0.2	35	18	5	97
7012	0.22	-	-	1.1	40	25	57	218
7013	3.09	3.16	3.19	2.4	41	23	49	32
7014	0.04	-	-	0.3	64	27	27	115
7015	0.05	0.04	-	0.3	59	29	12	39
7016	0.02			0.2	58	28	16	259
7017	0.01	-	-	0.2	28	137	57	191
7018	0.03	-	-	0.1	37	49	11	68
7019	0.01	-	-	0.1	85	23	8	35
								~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

One assay ton portion used. \* Indicates where results were over 20000 PPM and done using the assay method.

1. Pelal Certified by\_

P.O. Box 10. Swastika, Ontario P0K 1T0 Telephone (705)642-3244 FAX (705)642-3300



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

## Assay Certificate

6W-4358-RA1

Date: OCT-30-96

Company: OPAWICA EXPLORATION INC

Project: Matarrow Aun: D. Clark/B. McKay

We hereby certify the following Assay of 31 Core samples submitted OCT-18-96 by .

Sample Number	Au g/tonne	Au Check g/tonne	Ag PPM	Cu PPM	Ni PIM	Pb PPM	Zn PFM
23957	0.07	0.07	0,2	26	13		34
23958	0.05	0.07	0,1	33	18	,	38
23959	0.02	-	0.1	20	15	1	34
23960	0.02	-	0.1	12	22	l	50
23961	0.01	•	0.3	17	16	10	42
23962	0.01		0.2	28	16	1	32
23963	Ni 1	-	0.1	18	18	1	19
23964	Nil	•	0.1	16	16	1	16
23965	NH	-	0.1	14	19	ł	27
23966	Nil	-	0.1	21	17	]	27
23967	0.01		0.2	32	26	]	24
23968	0.02	-	0.5	19	15	1	24
23969	0.01	Nil	0.1	22	24	1	38
23970	Nil	-	0.1	24	19	1	59
23971	0.02	-	0,2	21	26	}	39
23972	0.01		0.1	11	18	1	41
23973	0.01	-	0.1	10	25	1	81
23974	Nil	-	0.1	11	22	1	71
23975	0.03	-	0.2	14	21	1	116
23976	0.03	-	0.3	17	30	1	21
23977	0.02	-	0.2	14	29	1	14
23978	0.02	-	0.6	22	43	]	13
23979	0.02	-	0.2	12	21	1	19
23980	0.02	-	0.3	12	28	1	28
23981	0.01	•	0.1	21	25	34	261
23982	0.01	•	0.2	17	22	163	459
23983	0.06	0.10	0.6	36	29	1610	6130
23984	0.01	•	0.2	24	24	299	1140
23985	0.01	-	0.4	46	59	114	360
23986	0.01	-	0.9	37	31	18	20
23987	0.03	•	1.4	350	27	4070	11600
One assay ton portion us	ed.			le i	011	,	
		Certif	Fied by	1. 7	the		
			•	······································			

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244 FAX (705)642-3300



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Page 1 of 2

Established 1928

6W-3955-RA1

#### **OPAWICA EXPLORATIONS INC** Company:

Date: OCT-09-96

Matarrow PO# 96-101 Project: Attn: D. Clark/B. McKay

Assay Certificate

copy 1. B.J. McKay Phone 567-5351 FOR PICK-UP

M

We hereby certify the following Assay of 50 Core samples submitted OCT-04-96 by . 15

submitted OCT-04-96 h		y of 50 core s	hampies	5	6	)	L
Sample	Au	Au Check	7	Cu	-	1 Dh	7
Number	g/tonne	g/tonne	Ag PPM	PPM	Ni PPM	Pb PPM	Zn PPM
		g/tonne					
23851	0.01	-	0.1	29	8	1	8
23852	Nil	-	0.1	25	8	2	8
23853	Ni l	- NT 1	0.1	22	7	5	7
23854	Ni l	Ni l	0.1	10	20	26	18
23855	Nil	- 	0.1		11		5
23856	Nil	-	0.1	15	14	1	17
23857	0.02	-	0.1	17	10	1	15
23858	Nil	-	0.1	11	12	1	13
23859	Nil	-	0.1	11	10	1	10
23860	Nil	-	0.1	10	16	1	10
23861	Ni l	-	0.1	75	9	1	18
23862	Nil	-	0.1	32	10	1	39
23863	Ni l	-	0.1	12	7	1	32
23864	0.02	0.02	0.5	21	17	1	43
23865	Ni l	-	0.1	43	12	1	16
23866	Nil		0.1	14	16	1	13
23867	Ni l	-	0.1	16	13	1	20
23868	0.02	-	0.2	26	21	4	48
23869	0.01	-	0.2	84	14	1	27
23870	Nil	0.01	0.3	24	26	1	57
23871	Nil		0.2	62	164	4	100
23872	Ni l	-	0.1	57	17	1	27
23873	Nil	-	0.1	46	16	1	32
23874	Ni l	-	0.1	21	17	1	28
23875	Ni l	-	0.1	19	16	1	33
23876	0.06		0.8	26	23	13	56
23877	0.08	0.07	0.3	46	23	1	29
23878	0.01	-	0.2	31	24	1	34
23879	Nil	-	0.2	28	19	1	45
23880	Nil	-	0.1	20	21	1	47

One assay ton portion used.

Certified by



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

Page 2 of 2 6W-3955-RA1

## Assay Certificate

## Company: OPAWICA EXPLORATIONS INC

Date: OCT-09-96

Сору

Project: Matarrow PO# 96-101 Attn: D. Clark/B. McKay Copy 1. B.J. McKay Phone 567-5351 FOR PICK-UP

We hereby certify the following Assay of 50 Core samples

submitted OCT-04-96		) 01 00 0010	umpies U	ς	1	i	~
	>		۱.		ط	l	2
Sample	Au	Au Check	Ag	Cu	Ni	Pb	Zn
Number	g/tonne	g/tonne	PPM	PPM	PPM	PPM	PPM
23881	Ni l	-	0.2	20	15	1	25
23882	0.01	-	0.3	38	11	1	28
23883	0.01	-	0.2	41	19	1	29
23884	0.02	-	0.2	39	26	1	27
23885	0.02	0.02	0.4	67	27	1	29
23886	Nil		0.2	56	23	1	31
23887	Ni l	-	0.1	29	17	1	30
23888	0.01	-	0.1	44	33	1	47
23889	Nil	-	0.1	27	15	1	37
23890	Nil	-	0.1	22	18	1	31
23891	0.02	-	0.1	23	18	1	40
23892	0.01	-	0.1	24	17	1	32
23893	0.02	-	0.4	21	15	1	30
23894	0.01	-	0.4	18	16	1	28
23895	0.01	-	0.3	18	17	1	41
23896	0.36	0.39	1.9	26	28	20	47
23897	0.01	-	0.3	11	18	1	29
23898	0.02	-	0.2	14	22	1	29
23899	0.03	-	0.2	21	17	1	30
23900	0.33	-	1.4	39	25		31

One assay ton portion used.

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Page 1 of 2

6W-3956-RA1

Established 1928

Assay Certificate

## Company: OPAWICA EXPLORATIONS INC Project: Matarrow PO# 96-101

Date: OCT-10-96 Copy 1. B.J. McKay Phone 567-5351 FOR PICK-UP

Attn: D. Clark/B. McKay

We hereby certify the submitted OCT-04-96		y of 56 Core sa	amples ل <i>ل</i>	Z	6	١	2
Sample	Au	Au Check	Ag	Cu	Ni	Pb	Zn
Number	g/tonne	g/tonne	PPM	PPM	PPM	PPM	PPM
23901	0.02	-	0.2	24	20	1	41
23902	0.03	0.03	0.2	41	37	1	35
23903	0.02	-	0.2	31	25	1	33
23904	0.03	-	0.3	52	29	1	40
23905	Nil	-	0.1	24	17	1	51
23906	0.01		0.2	49	26	1	61
23907	0.03	-	0.2	36	21	1	112
23908	0.01	-	0.1	28	32	1	52
23909	Ni l	-	0.2	43	26	1	40
23910	0.01	-	0.2	38	28	1	43
23911	0.01		0.3	26	23	1	32
23912	Nil	-	0.2	19	26	1	38
23913	Nil	-	0.3	20	28	1	36
23914	0.03	-	0.7	21	26	1	35
23915	0.04	-	0.7	19	22	1	37
23916	0.02	-	0.7	15	20	1	25
23917	0.12	-	0.7	28	33	2	17
23918	0.02	-	0.9	20	28	4	23
23919	0.04	0.04	0.8	15	19	4	25
23920	0.02	-	0.6	14	35	14	154
23921	0.01		1.7	14	16	149	268
23922	0.01	-	1.7	13	20	225	273
23923	Nil	-	0.2	13	18	111	351
23924	Nil	-	0.2	21	21	16	61
23925	0.01	-	0.3	17	19	6	45
23926	0.01		0.3	23	23	10	31
23927	0.01	-	0.3	18	13	31	52
23928	0.01	0.02	1.1	59	31	1210	5640
23929	0.01	-	1.0	17	15	381	2670
23930	Nil		2.0	24	18	280	1670

One assay ton portion used.

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Page 2 of 2

Established 1928

6W-3956-RA1

7

Zn

PPM

3010

2980

255

1020

400 118

17

15 16

24 543 50

31

59

210 70 35

70 381

261 288 23

#### **OPAWICA EXPLORATIONS INC** Company:

Date: OCT-10-96 Copy 1. B.J. McKay Phone 567-5351 FOR PICK-UP

Matarrow PO# 96-101 Project: Attn: D. Clark/B. McKay

Assay Certificate

We hereby certify the for submitted OCT-04-96 b		y of 56 Core s	amples	C	Ĭ.		
	y. 3		-\		6	\	
Samp l e	Au	Au Check	Ag	Cu	Ni	Pb	
Numb e r	g/tonne	g/tonne	PPM	PPM	PPM	PPM	
23931	0.04		1.6	32	26	2080	
23932	0.07	0.06	2.3	49	35	1130	
23933	Ni l	-	0.2	16	33	112	
23934	Nil	-	0.2	13	26	322	
23935	Ni I	-	0.1	15	22	166	
23936	0.02	-	0.2	12	26	21	
23937	0.04	-	1.1	16	37	17	
23938	0.09	-	1.3	16	42	5	
23939	0.12	0.11	1.6	17	42	9	
23940	0.04	-	0.6	15	34	6	
23941	0.07	-	0.7	18	22	200	
23942	Nil	-	0.2	800	35	10	
23943	Nil	-	0.2	160	21	4	
23944	Nil	-	0.1	24	38	1	
23945	Nil	-	0.2	24	26	24	
23946	Nil	-	0.2	49	42	23	
23947	Nil	-	0.2	51	45	25	
23948	Ni l	-	0.3	44	41	21	
23949	Ni l	-	0.2	39	31	80	
23950	Nil	-	0.2	80	33	105	
23951	0.01	-	0.3	24	13	127	
23952	0.04	0.03	0.8	28	24	3	
23953	0.01	-	0.1	11	32	1	
23954	0.01	-	0.1	11	9	1	
23955	0.02	-	0.5	19	13	1	
23956	0.01		0.3	15	139	3	

One assay ton portion used.

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705)642-3300



A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

6W-4832-RA1

Company: OPAWICA EXPL

Assay Certificate

Date: NOV-22-96

Project: Attn: D. Clark/B. McKay

We hereby certify the following Assay of 7 Core samples submitted NOV-17-96 by .

Sample Number	Au g/tonne	Au Check g/tonne	Ag PPM	Cu PPM	Ni PPM	Pb PPM	Zn PPM
7020	Nil	Nil	0.1	12	5	11	14
7021	Ni I	-	0.1	28	12	2	42
7022	Nil	-	0.1	18	69	1	48
7023	Ni l	-	0.1	14	27	9	48
7024	Ni l	-	0.9	18	29	677	4620
7025	0.01	0.01	0.7	34	20	3260	9250
7026	0.02	-	0.1	12	4	61	64

One assay ton portion used.

*Certified* by

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300 OPAWICA EXPLORATIONS

ATTN: 8.J. MCKAY

PROJ: MATARROW

### TSL/ASSAYF ' Laboratories

1270 PEWSTER DRIVE, UN. 3 MISSISSAUGA, ONTARIO L4W-1A4 PHONE #: (905)602-8236 FAX #: (905)206-0513

## I.C.A.P. TOTAL OXIDE ANALYSIS

REPORT NO. : ML\_67 Page No. : 1 of 1 File No. : NV27RA Date : NOV-27-1996

#### Lithium MetaBorate Fusion

6W-4850-RG1

2 3MPLE / 3MPLE /																				
x         x         x         x         x         x         y	i.																			
7451       68,75       14.74       3.49       3.42       0.79       3.97       0.96       0.29       0.10       0.12       190       250       160       10       6       4 30       41       30       470       20       451       15       1.15       97.75         7453       70.12       15.31       2.16       0.77       4.83       1.20       0.20       0.14       0.14       246       220       110       4       3       4 30       11       10       555       10       45       5       50       15       45       1.15       97.75         7653       70.12       15.31       4.13       0.25       0.15       0.15       0.15       0.15       0.16       100       26       13       4.30       11       100       755       5       45       10       0.73       97.77         7456       51.67       9.80       5.47       12.31       0.25       0.46       0.15       0.38       70       110       100       26       13       4 30       140       61       63       61       61       63       61       61       63       61       61       63       61       6	SAMPLE #	S102 AL	203 F•20	3 CaO	HgO (	Na20 X20	TLO2	NnO	P205 Ba	3r	Zr	Y	Sc	NЪ	Bet	NI Cr	Cu ¥	<b>co</b> 🗟	Zn.	LOI TOTAL
7452       68.46       14.31       4.34       2.43       6.72       4.93       1.20       0.29       0.14       0.14       2.00       100       c 2       4       c 30       c 1       2.55       550       10       451       1.19       9.13         7453       70.12       15.31       2.71       2.05       0.55       5.48       1.18       0.32       0.11       0.14       200       100       4       6       c 30       c 1       100       505       55       50       15       51       51       1.57       6.05       9.0       110       14       6       c 30       c 1       30       655       5       45       15       1.2100.43         7455       67.16       1.4.4       9.46       1.77       0.14       0.05       0.77       0.00       1.01       100       26       13       c 30       c 1       4.25       610       c 5       55       10       1.119.77       7.17       1.76       2.43       2.75       666       0.20       27       0.00       1.8       4.30       c 30       1       1.5       4.53       1.5       1.6       1.01       1.01       0.01       0.11		* 5	r is r	1 <b>X</b> 1	*	<b>x x</b>	*	3	s ppm	ppm.	ppm	pp <del>a</del>	ppm	ppa	ppm	ppm ppm	ppm ppm	ppm	ppm	* *
7452       68.46       14.31       4.34       2.43       6.72       4.93       1.20       0.29       0.14       0.14       2.00       100       c 2       4       c 30       c 1       2.55       550       10       451       1.19       9.13         7453       70.12       15.31       2.71       2.05       0.55       5.48       1.18       0.32       0.11       0.14       200       100       4       6       c 30       c 1       100       505       55       50       15       51       51       1.57       6.05       9.0       110       14       6       c 30       c 1       30       655       5       45       15       1.2100.43         7455       67.16       1.4.4       9.46       1.77       0.14       0.05       0.77       0.00       1.01       100       26       13       c 30       c 1       4.25       610       c 5       55       10       1.119.77       7.17       1.76       2.43       2.75       666       0.20       27       0.00       1.8       4.30       c 30       1       1.5       4.53       1.5       1.6       1.01       1.01       0.01       0.11				2011 								·.								
7453       70.12       15.31       2.71       2.36       0.57       5.48       1.10       0.32       0.11       0.14       240       220       110       4       3       4.30       <1       10       505       55       50       10       51       119       99.48         7453       67.16       1.4.4       4.37       0.57       5.45       1.57       0.57       5.47       1.57       0.57       5.47       1.57       0.57       5.47       1.57       0.15       0.57       0.15       0.15       0.15       0.15       0.16       0.10       100       26       13       < 0.30       1.15       0.56       0.17       1.11       0.10       100       26       13       < 0.30       1       1.0       100       15       70       1.15       0.56       0.10       1.11       9.00       26       13       < 0.30       1       10       100       2.5       15       10       1.11       9.01       1.11       9.02       1.11       9.02       1.11       9.02       1.11       9.02       1.11       9.02       1.11       9.02       1.11       9.02       1.11       9.02       1.11       9.02       1.	7451	68.75 14	74 3.4	3.42 0	.79 3	3.97 0.96	0.29	0.10	0.12 190	250	100	10	6	( 30	. ( 1	30 670	20 45	15	15	1.15 97.78
7454       69.04 15.38 4.17       4.07       0.57       4.15       1.22       0.32       0.16       0.14       150       100       4       6       6 30       6 1       20       50       10       50       15       45       6 30       6 1       20       505       15       6 5       15       10       0.75       97.77         7456       51.67       9.60       5.47       12.13       7.25       1.51       0.56       0.40       0.15       0.38       70       110       100       26       13       6 30       6 1       45       5       6 30       6 1       6 5       6 5       6 5       10       1.11       9.77         7456       51.16       2.48       2.48       0.77       5.66       0.20       2.70       0.16       40       5 40       1       15       4 5       10       11       10.1       100       26       10       6       4       6 4       30       1       15       15       1.61       10.2       10       6       4       6 30       6       1       10       10       10       10       10       10       10       10       10       10	7452	68.48 14	31 4.3	2.18 0	5.72	4.93 1.20	0.29	0.14	0.14 280	200	100	(2)	14	c 30	۲. ۲	25 550	10 45	15	5	0.95 97.67
7455       67.16 14.44 9.46 1.87       0.81       5.74       0.90       0.15       0.10       100       100       26       13 $< 30$ $< 5$ 5       65       15       10       0.75 9.77         7456       51.67       9.80       5.47       12.13       7.25       1.51       0.56       0.49       0.15       0.38       70       110       100       26       13 $< 30$ $< 1$ 45       50 $< 5$ 45       15       10       0.77 9.77         7456       71.27       1.76       2.49       2.78       0.56       4.79       1.41       6.00       0.09       0.11       0.6       3 $< 30$ 1       10       400 $< 5$ 30       10       35       1.10       10       40 $< 5$ 30       10       35       1.10       0.40       1.11       9.79       7       5.6       6.9       1.11       9.10       1.11       9.00       1.11       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00       1.00 <td< td=""><td>7453</td><td>70.12 15.</td><td>31 2.7</td><td>2.36 0</td><td>.57 5</td><td>5.48 1.18</td><td>0.32</td><td>0.11</td><td>0.14 240</td><td>220</td><td>110</td><td>4.</td><td>3</td><td>&lt; 30</td><td>&lt; 1</td><td>10 505</td><td>&lt; 5 50</td><td>10</td><td>5</td><td>1.19 99.48</td></td<>	7453	70.12 15.	31 2.7	2.36 0	.57 5	5.48 1.18	0.32	0.11	0.14 240	220	110	4.	3	< 30	< 1	10 505	< 5 50	10	5	1.19 99.48
7456       51.67       9.80       5.47       1.15       0.56       0.40       0.15       0.36       70       110       100       26       13       4       430       4       457       11       15       70       5       457       71.27       14.76       2.49       2.78       0.55       4.79       1.44       0.30       0.09       0.14       300       220       110       6       3       <30	7454	69.04 15.	38 4:11	4.07 0	.57 4	4.15 1.22	0.32	0.16	0.14 290	270	110	4,	6	¢ 30	-11	20 535	10 50	15	45	1.23100.43
7456       51.67       9.00       5.47       12.13       7.25       1.51       0.56       0.40       0.15       0.38       70       110       100       26       13 $< 30$ $< 1$ 425       510 $< 5$ 95       30       50       1.1       1.10       100       26       13 $< 30$ 20       1       15       470 $< 5$ 55       5       50       1.1       1.10 $< 5$ 45       50       1.1       1.1       97.7       56 $< 30$ 1.0       1.0       60       1       1.5       470 $< 5$ 45       5       1.0       1.1       97.2       99.3       20       110       6       3 $< 30$ 1.0       1.0       1.0       1.0       1.0       6       3       6       3       1.0 <t< td=""><td>7455</td><td>67.16 14.</td><td>44 5.40</td><td>5 1.87 0</td><td>.81 5</td><td>5.74 0.96</td><td>0.30</td><td>0.15</td><td>0.14 150</td><td>190</td><td>90</td><td>4</td><td>5</td><td>&lt; 30</td><td>&lt; 1</td><td>30 755</td><td>5 45</td><td>15</td><td>10</td><td>0.75 97.77</td></t<>	7455	67.16 14.	44 5.40	5 1.87 0	.81 5	5.74 0.96	0.30	0.15	0.14 150	190	90	4	5	< 30	< 1	30 755	5 45	15	10	0.75 97.77
7457       71.27 14.76       2.48       2.78       0.55       4.79       1.46       0.00       0.14       300       260       110       9       4       4       4       4       4       50       1       15       470       c.5       45       5       10       1.11       99.79         7459       69.27       1.37       5.43       3.68       0.80       4.07       1.06       0.28       0.27       0.00       0.18       300       260       90       6       4       4.30       1       15       450       15       33       16       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       400       1.01       1.01       400       60       60       6       6       1.01       50       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01       1.01				•••				· · ·		ء د			•							
7458       70.96       15.19       2.34       2.43       0.77       5.66       0.22       0.27       0.10       10       40       c 3       c 30       1       10       480       c 5       30       10       35       1.22       9.99         7459       69.27       13.75       5.43       3.68       0.80       4.07       1.06       0.28       0.27       0.12       310       260       90       6       4       c 30       c 1       10       540       15       35       15       40       1.40100.12         7460       56.37       1.42       6.90       2.00       1.0       6       4       c 30       c 1       10       540       15       35       15       40       1.40100.12         7461       50.63       7.14       26.90       2.60       1.45       5.15       1.39       0.30       0.11       0.16       40       2       c 30       c 1       20       55       c 5       35       10       10       1.45       1.610.0.21       1.66       6       5       60       6       5       60       6       5       60       1.1       1.61       1.610.0.12       1.610.0<	7456	51.67 9.	80 5.47	12.13 7	.25 1	1.51 0.56	0.40	0.15	0.38 70	110	100	26	13	< 30 <sup>°</sup>	< 1	425 610	c 5 95	30	50	11.41100.70
7459       69.27 13.75 5.43 3.66 0.80 4.07 1.06 0.28 0.27 0.12 330 260 90 6       4       4       4       50       1       10       540 15       35       15       40       1.40100.12         7460       66.49 15.73 2.93 2.69 1.43 5.06 2.32 0.30 0.08 0.18       630 380 100 8       4       4       30       1       5       435       c<5	7457	71.27 14.	76 2.45	2.78 0	.56 4	4.79 1.46	0.30	0.09	0.14 300	260	110	9	. 4	< 30	1	15 470	c 5 45	5	- 10	1.11 99.79
7460       68.49 15.73 2.93 2.69 1.13 5.06 2.32 0.30 0.88 0.18 650 380 100 8 4 4 30 1 5 435 c 5 40 10 75 1.4110.31         7461       50.63 7.14 26.96 2.96 2.90 1.45 6.54 0.10 1.11 0.06 120 120 20 4 2 30 6 1 20 6 5 c 30 1 3 0 50 5 1 5 3 3 .70 2.69 1.48 5.15 1.38 0.30 0.11 0.16 740 50 90 6 5 c 30 1 3 0 50 5 1 5 3 1 5 1 5 1 5 1 5 1 5 1 5 1 1 5 1 5	7458	70.96 15.	19 2.34	2.43 0	.77 5	5.66 0.82	0.27	0.08	0.18 430	520	110	6	3	¢ 30	1.	10 480	c 5 30	10	35	1.22 99.93
7461       50.63       7.14       26.96       2.96       1.45       0.54       0.10       1.11       0.06       120       120       20       4       2       < 30	7459	69.27 13.	75 5.43	3.68 0	.80 4	1.07 1.06	0.28	0.27	0.12 330	260	90	6	• • • 4	¢ 30	< 1	10 540	15 35	15	40	1.40100.12
7462       69.52 15.33 3.70 2.69 1.48 5.15 1.38 0.30 0.11 0.16 740 580 90 6 5 (30 1 30 510 5 45 15 45 1.6400.97         7463       41.83 9.50 34;36 6.27 4.13 1.05 0.44 0.12 1.94 0.66 80 90 20 6 2 (30 (1 20 270 10 20 10 (5 1.22100.91)         7464       69.20 14.83 4.39 2.56 0.98 5.05 1.68 0.28 0.22 0.14 740 520 100 4 3 (30 (1 15 475 10 35 10 10 1.04100.36)         7465       67.13 14.52 4.25 3.46 2.90 4.97 1.02 0.40 0.18 0.20 540 510 100 6 7 (30 (1 15 550 10 60 15 45 1.44100.46)         7466       71.13 14.94 1.71 2.02 0.69 5.16 1.04 0.22 0.06 0.12 230 350 60 4 3 (30 (1 15 5 135 60 55 30 (5 14.25 97.74)         7468       73.47 0.24 2.80 52.45 0.29 (0.01 0.02 0.02 0.39 0.00 (1 0.30 20.99 0.10 120 10 58 10 (4 (3 0 (1 15 10 10 (5 30 (1 15 10 10 (5 30 (1 15 10 (0 33 (1 15 10 (1 15 30.89 8.98.09)         7469       66.04 1.44 2 3.72 1.90 1.24 4.10 1.66 0.25 0.06 0.10 280 220 90 18 2 (30 (1 25 (3 30 (1 15 10 (0 33 (3 1 15 (1 15 10 (0 35 30.89 8.98.09)         7469       69.71 15.35 2.98 1.79 1.72 6.25 0.74 0.35 0.05 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 35 1.6110.78)         7470       70.40 14.42 3.72 1.90 1.24 4.10 1.66 0.25 0.06 0.10 280 220 90 8 2 (3 0 (1 15 5 (1 2 5 65 25 30 15 50 2.45 10 35 1.51100.78)         7471       69.71 15.35 2.98 1.79 1.72 6.25 0.74 0.35 0.05 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 15 10 135 1.51100.68)         7440       70.40 14.42 3.72 1.90 1.24 4.10 3.50 0.55 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 15 1.51100.68)         7440       70.40 14.42 3.72 1.90 1.24 4.10 3.50 0.55 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 15 50 2.45100.30)	7460	68.49 15.	73 2.93	2.69 1	. 13 5	5.06 2.32	0.30	0.08	0.18 690	380	100	8	- 4	< 30	1	5 435	< 5 40	10	75	1.41100.31
7462       69.52 15.33 3.70 2.69 1.48 5.15 1.38 0.30 0.11 0.16 740 580 90 6 5 (30 1 30 510 5 45 15 45 1.6400.97         7463       41.83 9.50 34;36 6.27 4.13 1.05 0.44 0.12 1.94 0.66 80 90 20 6 2 (30 (1 20 270 10 20 10 (5 1.22100.91)         7464       69.20 14.83 4.39 2.56 0.98 5.05 1.68 0.28 0.22 0.14 740 520 100 4 3 (30 (1 15 475 10 35 10 10 1.04100.36)         7465       67.13 14.52 4.25 3.46 2.90 4.97 1.02 0.40 0.18 0.20 540 510 100 6 7 (30 (1 15 550 10 60 15 45 1.44100.46)         7466       71.13 14.94 1.71 2.02 0.69 5.16 1.04 0.22 0.06 0.12 230 350 60 4 3 (30 (1 15 5 135 60 55 30 (5 14.25 97.74)         7468       73.47 0.24 2.80 52.45 0.29 (0.01 0.02 0.02 0.39 0.00 (1 0.30 20.99 0.10 120 10 58 10 (4 (3 0 (1 15 10 10 (5 30 (1 15 10 10 (5 30 (1 15 10 (0 33 (1 15 10 (1 15 30.89 8.98.09)         7469       66.04 1.44 2 3.72 1.90 1.24 4.10 1.66 0.25 0.06 0.10 280 220 90 18 2 (30 (1 25 (3 30 (1 15 10 (0 33 (3 1 15 (1 15 10 (0 35 30.89 8.98.09)         7469       69.71 15.35 2.98 1.79 1.72 6.25 0.74 0.35 0.05 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 35 1.6110.78)         7470       70.40 14.42 3.72 1.90 1.24 4.10 1.66 0.25 0.06 0.10 280 220 90 8 2 (3 0 (1 15 5 (1 2 5 65 25 30 15 50 2.45 10 35 1.51100.78)         7471       69.71 15.35 2.98 1.79 1.72 6.25 0.74 0.35 0.05 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 15 10 135 1.51100.68)         7440       70.40 14.42 3.72 1.90 1.24 4.10 3.50 0.55 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 15 1.51100.68)         7440       70.40 14.42 3.72 1.90 1.24 4.10 3.50 0.55 0.20 290 370 100 6 5 (3 0 (1 1 15 430 25 45 10 15 50 2.45100.30)						-	•	÷			, Alaria			÷,					•	
7463       41.63 9.50 34.36       6.27       4.13       1.05       0.44       0.12       1.94       0.06       60       90       20       6       2 $4.30$ $c.1$ 20       270       10       20       10 $c.5$ 1.22100.91         7464       65 20       14.83       4.39       2.56       0.98       5.05       1.68       0.28       0.22       0.14       740       520       100       4       3 $4.30$ $c.1$ 15       475       10       35       10       10       1.04100.36         7465       67.13       14.52       4.25       3.46       2.90       4.97       1.02       0.40       0.18       0.20       540       510       100       6       7 $c.30$ 1       85       550       10       60       15       45       1.44100.46         7466       71.13       14.94       1.71       2.02       0.69       5.16       0.04       0.12       230       350       60       4       3 $c.30$ $c.1$ 15       555 $c.5$ 30 $c.5$ $c.5$ $a.6$ $b.5$ $a.6$ $b.16$	7461	50.63 7.	14 26.96	2.96 2	.90 1	.45 0.54	0,10	1.11	0.06 120	120	20	4	2	< 30	<b>i</b> 1	20 665	c 5 25	20	35	5.74 99.59
7464       69.20       14.83       4.39       2.56       0.98       5.05       1.68       0.22       0.14       740       520       100       4       3       4.30       4.1       15       475       10       35       10       10       1.04100.36         7465       67.13       14.52       4.25       3.46       2.90       4.97       1.02       0.40       0.18       0.26       540       510       100       6       7       4.30       4       1       15       475       10       35       10       10       1.04100.36         7466       71.13       14.94       1.71       2.02       0.69       5.16       1.04       0.22       0.06       0.12       230       350       60       4       3       4.30       4       1       15       55       30       15       75       0.98       98.04         19457       10.2       2.05       5.64       0.39       0.02       0.00       50       60       4       3<	7462	\$9.52 15.	33 <b>3.70</b>	2.69 1	.48 5	5.15 1.38	0.30	0.11	0.16 740	580	90	6	5	¢ 30	1	30 510	5 45	15	45	1.06100.87
7465       67.13 14.52       4.25 3.46       2.90       4.97       1.02       0.40       0.18       0.20       540       510       100       6       7       < 30	7463	41.83 9.	50 34:36	6.27 4	.13 1	.05 0.44	0.12	1.94	0.06 80	90	20	6	2	< 30	< 1	20 270	10 20	10	< 5	1.22100_91
7466       71.13       14.94       1.71       2.02       0.69       5.16       1.04       0.22       0.06       0.12       230       350       80       4       3       4 30       <1	7464	69.20 14.	83 4.39	2.56 0	.98 5	.05 1.68	0.28	0.22	0.14 740	520	100	4	3	< 30	- ( 1	15 475	10 35	10	10	1.04100.36
15:95       2.95       56.25       3.30       3.40       0.16       0.18       0.36       0.90       0.06       50       60       \$10       8       5       30       \$1       55       135       60       55       30       \$5       14.25       97.74         11/468       3.47       0.24       2.80       52.45       0.29       \$0.01       0.02       0.39       0.02       \$10       58       10       \$30       \$1       15       10       \$5       10 <t< td=""><td>7465</td><td>67.13 14.</td><td>52 4.25</td><td>3.46 2</td><td>.90 4</td><td>.97 1.02</td><td>0.40</td><td>0.18</td><td>0.20 540</td><td>510</td><td>100</td><td>6</td><td>7</td><td>( 30</td><td><u>í</u> t</td><td>85 550</td><td>10 60</td><td>15</td><td>45</td><td>1.44100.46</td></t<>	7465	67.13 14.	52 4.25	3.46 2	.90 4	.97 1.02	0.40	0.18	0.20 540	510	100	6	7	( 30	<u>í</u> t	85 550	10 60	15	45	1.44100.46
15:95       2.95       56.25       3.30       3.40       0.16       0.18       0.36       0.90       0.06       50       60       \$10       8       5       30       \$1       55       135       60       55       30       \$5       14.25       97.74         11/468       3.47       0.24       2.80       52.45       0.29       \$0.01       0.02       0.39       0.02       \$10       58       10       \$30       \$1       15       10       \$5       10 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>, i</td><td></td><td></td><td></td><td>문</td><td></td><td></td><td></td><td></td><td>te difi Stol</td><td></td></t<>										, i				문					te difi Stol	
Liptes       3.47       0.24       2.80       52.45       0.29       (0.01       0.02       0.39       0.02       (10       120       10       58       10       (30)       (1)       15       10       (5)       10       15       10       15       10       15       10       15       10       15       10       10       15       10       15       10       15       10       15       10       15       10       15       10       15       10       15       10       15       10       15       10       15	7466	71.13 14.	94 1.71	2.02 0	.69 5	.16 1.04	0.22	0.06	0.12 230	350	60	4	Э	< 3Q	(1	15 565	< 5 30	15	75	0.98 98.04
Tr469       68.04 14.34 4.24 3.96 1.91 5.66 0.46 0.29 0.11 0.16 130 290 90 10 4 < 30 < 1 25 415 < 5 40 10 35 1.61100.78	ហ្ <b>វិ467</b>	15.95 2.	95 56.25	3.30 3	.40 0	.16 0.18	0.35	0.90	0.06 50	60	< 10	8	- 5	<b>〈</b> 30	< 1	55 135	60 55	30	( 5	14.25 97.74
$\begin{array}{c} & & & & & & & & & & & & & & & & & & &$	ដែ <b>រ</b> 468	3.47 D.	24 2.80	52.45 0	.29 (0	.01 0.02	0.02	0.39	0.02 < 10	120	10	58	10	( 30	< 1	15 10	10 < 5	10	<:5.	38.38.98.09
Image: Constraint of the state of the s	( <u>1</u> 7469	58.04 14.	34 4.24	3.96 1	.91 5	.66 0.46	0.29	0.11	0.16 130	290	90	10	. 4	< 30	< 1	25 415	< 5 40	10	35	1.61100.78
1       69,71 15.35 2.98 1.79 1.72 6.25 0.74 0.35 0.05 0.20 290 370 100 6 5 430 45 10 15 1.51100.68         1       1         1	<u>@</u> 1470	70.40 14.	42 3.72	1.90 1	. 24 4	.10 1.66	0.25	0.06	0.10 280	220	90	8	2	< 30	< 1	25 665		15	50	2.45100.30
	Î 												. '	đ						
	<sup>(()</sup> /471	69.71 15.	35 <b>2.98</b>	1.79. 1	.72 6	. 25 0.74	0.35	0.05	0.20 290	370	100	6	5	< 30	( <b>1</b>	15 430	· · · · · · · · · · · · · · · · · · ·	10	15	1.51100.68
	ហ្	n de la compañía de En compañía de la comp En compañía de la comp		.e.,									•	17 20	-			÷.	5	
$\begin{array}{c} \mathbf{g}_{\mathbf{r}} \\ \mathbf{g}_{\mathbf{r}} \\ \mathbf{z} \\ \mathbf{z} \end{array} \qquad $			in the second																	
	7																			
. 2011년 - 1913년 1월 1월 1월 1월 2월 1월			14.00				÷	•					ł.		et. Electro					
n na several de la construcción de N	×								net Net an an an train Age an an an train Age an an an train			÷.,	÷							
	$\sim$	8 18 40 <sup>10</sup>				4219					-					: ·				

May SIGNED :

T31/96

NON

## Appendix C Diamond Drill Sections, 1996 DDHs

Ministry of Northern Development and Mines	Declaration of Assessm Performed on Mining L Mining Act, Subsection 65(2) and 66	and	Tiansection Number Laffich und. O 014 g
Personal information collected Mining Act, the information is a Questions about this collectio 933 Ramsey Lake Road, Sudb 41P15NE0020 2.1	17169 YARROW	proc	Mining ct. Under section 8 Sine respond with the mining land holder. evelopment and Mines, 6th Floor, RECEIVED
Instructions: - For work performed on - Please type or print in i	Crown Lands before recording a nk.	a claim, use form	
1. Recorded holder(s) (Attach a list i	f necessary)	Client Number	MINING LANDS BRANCH
Name Fred Stan Kiernig	cki.		2022
Address Sz Aeru handt	Dn	567	1-4858
Kickland Lo	ks.		-415r
Name		Client Number	
Address		Telephone Number	·
		Fax Number	
2. Type of work performed: Check ( Geotechnical: prospecting, surveys assays and work under section 18 Work Type	Physical: drilling		
Knowching, diaman	d dir this	Commodity	
		Total \$ Value of Work Claimed	103189
Dates Work Performed From J 8 16 Day Month Year	To 75 10 96	NTS Reference	
Global Positioning System Data (if available) To	wnship/Area	Mining Division	Lunder Lake
м	or G-Plan Number MLGD	Resident Geolog District	pist
- complete and att - provide a map sl		Resources as re- fore starting worl 0212;	k;
3. Person or companies who prepare	ed the technical report (Attach	a list if necessa	ry)
Name Owan Jy Kau	(	Telephone Number 入る	5-3101
Address ZO3 Danyermen,	Poncypins	Fax Number	
Name		Telephone Number	197
Address		Fax Number	
Name		Telephone Number	
Address	<u></u>	Fax Number	
		1	
4. Certification by Recorded Holder	or Agent		1/SIO:
I, <u><u><u>Ryan</u></u><u>J</u><u>Y</u><u>C</u><u>Lar</u> (Print Name) forth in this Declaration of Assessment V or after its completion and, to the best of</u>	Work having caused the work to	be performed or	al knowledge of the facts set witnessed the same during
Signature of Recorded Holder or Agent			Date J March
Agent's Address KO'S Dawerma	in, Porchaya Telephone N	lumber - 3/0/	Fax Number
0241 (02/96)	MERMAN T.		197

\* Jchedule

17169	ر  - -	<i>claim #</i> 446423 446424 446425 - 494579 494581 1206080 1206093		performed \$6,140 \$6,140 \$1,400 \$800 \$800 \$800 \$800 \$2,320	applied \$1,880 \$1,880 \$1,880 \$2,206 \$1,480 \$24,000 \$9,600	assigned	<b>bank</b> \$4,260 \$4,260
Ш	997 SRANCH	1206094 1206095 1206096 1206097 1206098 1206099 1206100	1 4 2 2 4 2	\$560 \$59,777 \$5,300 \$14,312 \$2,800 \$1,400 \$640 \$103,189	\$2,400 \$9,600 \$4,800 \$9,600 \$4,800 \$2,400 \$81,326	<b>\$46,846</b> \$46,846	\$3,331 \$500 \$9,512 \$21,86 <b>3</b> <sub>రివ</sub> గ్గ

אטוע שטוווווושט.

....

DOCUMENT NO.

hort	
work	
Value of the	
W Istribudate	

work was mining li column	Claim Number. Or if s done on other eligible and, show in this the location number of on the claim map.	Number of Claim Units. For other mining land, list of hectares. So there	performe ; claim or c , mining la	nd, an of bea	applied to this	assig minin	of work and to other liaims.	to b	k. Valu e distribut future date.
93	TB 7827	16 ha	\$26,	825	N/A	े जाय	\$24,000		\$2,825
eg	1234567	12 1317	3:-13	0 1 <b>0</b> 1 1 1	5r \$24,000	2 3 14	0		0
eg	1234568	2.	1 4	892	- \$ 4,000	1	0		\$4,892
1	440423	1	46,14	682	R, 962.50		17.38	R	
2	HH GAN		6,14	60.	A, 962. 50	3		5	
3	440425	1 3	440	gr#8	7, 963.00			-	
4	494 579		60	00	X 163.00	al l			
5	494 581		80		3.62.00 B		1		
6	1206010	10	500	00	29, 625.00	1	intrat	115	•
7	120 6093	4	7,33	06	11,830.00	-	11		
8	1206094		770	0	3911.00	243	10 mpt	•	
9	120 6095	4	59,77		11, 5-30.00	47	926,02		•.
10	120 6096	K	5,3	A.B.	5172508				
11	120 6097	ス	14, 31	2 20 54	5,45	81	3 87.00	क्रम्	
12	120 6001	Ч	7,80	00.00	11,850				
13	13 0099	ス	1,40	30 00	3,923.00	1			
14	170 6100		61	10-10	3 962.00				
15	tanan ana kata sa sa s	¢.		-	· · · · · · · · · · · · · · · · · · ·				
e c	ittache ats.	Column Totals	103,	18640	103,688.50	63	16 . 20	54	
quie	Burger	- 4 16	14	, do here	by certify that the	61 above		ts and	elicible un
subse	Ction 7 (1) of the Ass	il Name)		2 · · • • •					
	aim where the work v	:	-	-		St. 7	2		
Signatur	e of Recorded Holder or Ag	ent Authorized in Wri	ting	<u> </u>	······		Date	Me	1.477
<u></u>		recour				<u>_</u>			
6. In	structions for cuttin	g back credits	that are r	not appro	ved.	- 14 - 14	:* <u>.</u>		.*
Some	of the credits claime	d in this declarat	tion may	be cut ba	ck. Please check	( – ) in	the boxes	below	to show h
you w	ish to prioritize the de					A!	<b>-</b>		
	·				irst, followed by op claims listed last,				cated.
				-	claims listed pth		-		
					the attached app			s (des	cribe):
					Т.	MAR (	7 1997		
					MINI	NG LAI	NDS BRAN	сн	
								i	
	If you have not india.	ated how your o	radite ara	to be del	leted, credits will t	oe cut l	hack from t	he Ra	nk first

ved Stamp	24 E WA 4 PM 3 42	Deemed Approved Date 97 AUN 2	Date Notification Sent
	VOISINIO DNINIW	Date Approved	Total Value of Credit Approved
2/96)	LARDER LAKE	Approved for Becording by Mining Recorder (S	signature)

0241 (02/96)



Ministry of Northern Development and Mines

# Statement of Costs for Assessment Credit

rans	action	Number (office use)
	DC	CUMENT NO
		9780 · 00149

9

Personal-information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilo- metres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
treaching			44, 381.02
Huewthing	32km	400	
Ser 1/14	ISTI.Gm	4247	12, 500.01) 46, 307.32
· · · · · · · · · · · · · · · · · · ·			
ociated Costs (e.g. supp	blies, mobilization and demobilization).		
		REC	EIVED
Tra	ansportation Costs	MAR	7 1997
		MINING LA	DS BRANCH
Fo	ood and Lodging Costs		
			JI
	Total Value of	Assessment Work	103,688,7

## **Calculations of Filing Discounts:**

- Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
   If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total
- Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK	× 0.50 =	Total \$ value of worked claimed.

### Note:

- Work older than 5 years is not eligible for credit.

- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

## Certification verifying costs:

I,, do hereby certify, that the amounts shown are as accurate (please print full name)	as may
reasonably be determined and the costs were incurred while conducting assessment work on the lands inc	dicated on
the accompanying Declaration of Work form as (recorded holded agent, or state company position with signing authority) I am	authorized
to make this certification.	

Date Signature 3 March 97 M Claus

Ministry of Northern Development and Mines

June 23, 1997

Roy Spooner Mining Recorder 4 Government Road East Kirkland Lake, ON P2N 1A2

Dear Sir or Madam:

Ministère du Développement du Nord et des Mines



Geoscience Assessment Office 933 Ramsey Lake Road 6th Floor Sudbury, Ontario P3E 6B5

Telephone:	(705)	670-5853
Fax:	(705)	670-5863

Submission Number: 2.17169

				Status
Subject:	Transaction	Number(s):	W9780.00149	Approval After Notice

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

NOTE: This correspondence may affect the status of your mining lands. Please contact the Mining Recorder to determine the available options and the status of your claims.

If you have any questions regarding this correspondence, please contact Bruce Gates by e-mail at gates\_b@torv05.ndm.gov.on.ca or by telephone at (705) 670-5856.

Yours sincerely,

ACGAN.

ORIGINAL SIGNED BY Ron C. Gashinski Senior Manager, Mining Lands Section Mines and Minerals Division

Correspondence ID: 10972 Copy for: Assessment Library

## Work Report Assessment Results

Submission Number: 2.17169

Date Correspondence Sent: June 23, 1997

Assessor: Bruce Gates

### **General Comment:**

Note: the corrections were not in duplicate as required. To ensure approval of future submissions submit all corrections in duplicate.

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9780.00149	446423	YARROW	Approval After Notice	June 22, 1997

## Section:

10 Physical PDRILL

The revisions outlined in the Notice dated May 08, 1997, have been corrected for the diamond drilling portion of this submission. Accordingly, assessment work credit of \$46, 307 has been approved for diamond drilling. The costs associated with linecutting and trenching has been deleted from this submission.

Assessment credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet.

Correspondence to:	Recorded Holder(s) and/or Agent(s):
Mining Recorder	Bryan J. McKay
Kirkland Lake, ON	PORCUPINE, ONTARIO, CANADA
Resident Geologist	FRED STAN KIERNICKI
Kirkland Lake, ON	KIRKLAND LAKE, Ontario

Assessment Files Library Sudbury, ON

## **Distribution of Assessment Work Credit**

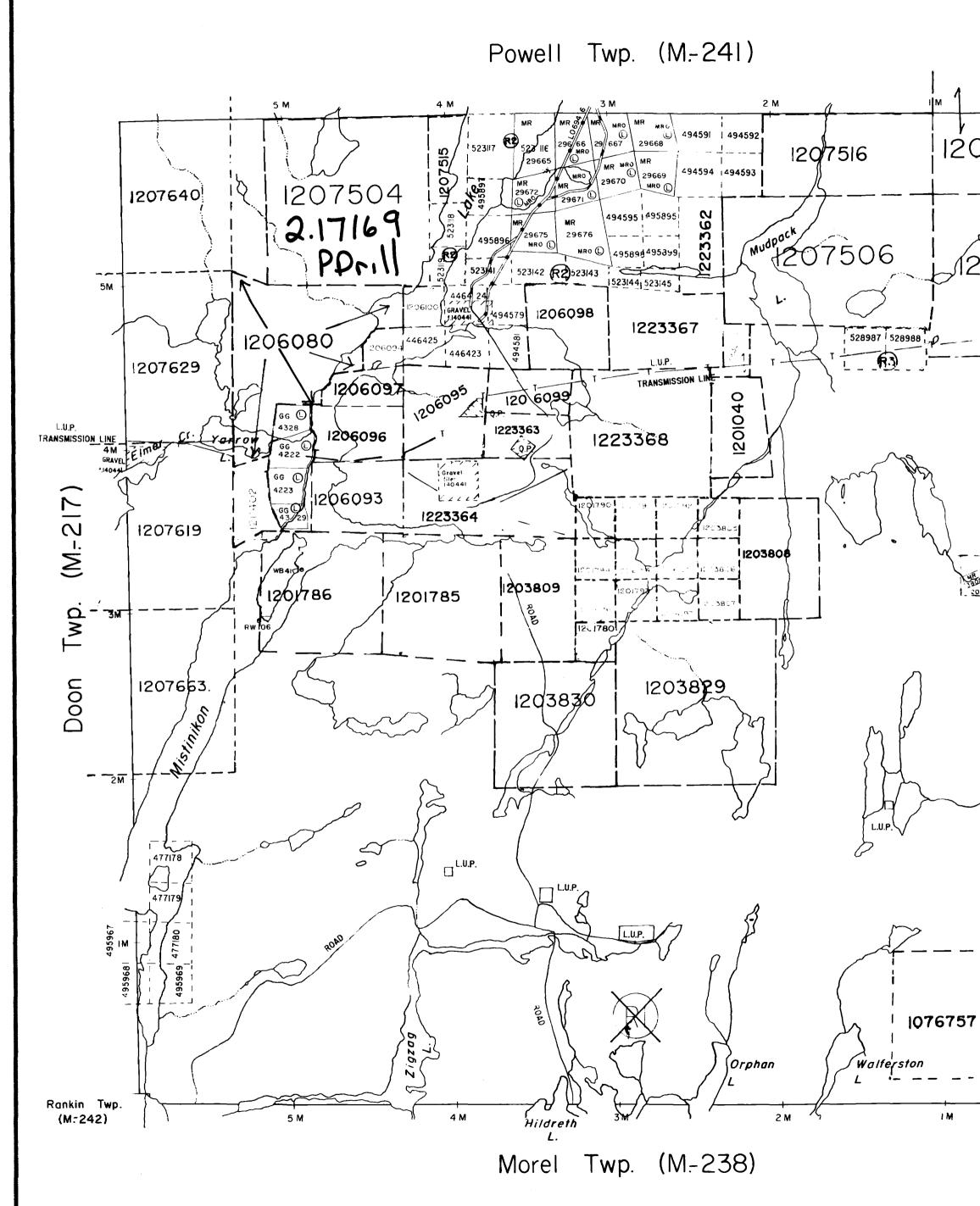
The following credit distribution reflects the value of assessment work performed on the mining land(s). Please contact the Mining Recorder to determine if this affects the status of your claims.

Date: June 23, 1997

Submission Number: 2.17169

## Transaction Number: W9780.00149

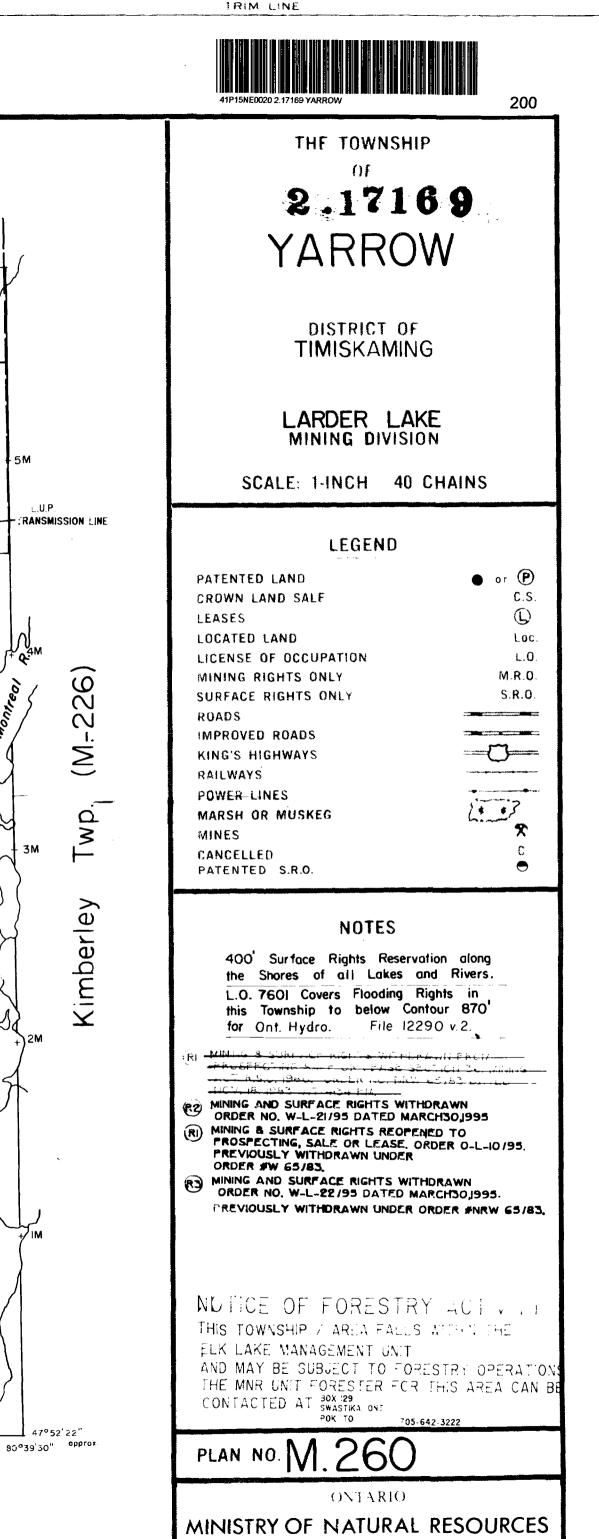
Claim Number	Value Of Work Performed
446423	24,467.00
494579	9,410.00
494581	2,719.00
1206097	9,711.00
Tota	al: \$ 46,307.00



THORMATICIN THAT OUS ON THIS MAP BEEN COMPHED ARIOUS SOURCES ACOURACY IS NOT ANTEED THOSE NG TO STAKE MIN AMS SHOLLE CON WITH THE MINING REFR. MINISTRY OF HERRI DEVELOP AND MINES FOR AD. TAL INFORMATION HE STATES OF THE

SHOWN HEREON

.



SURVEYS AND MAPPING BRANCH

CIRCULA FU JAN 1, 1995

I M

1207505

20750

203975

 $\diamond$ 

Ĺ,

Sisseney

١.



M. 260

M.260

