

OM84-6-C-126

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42A08NW8966 63.4655 ENGLISH

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MARJEL RESOURCES INC.

Report on Exploration

Activities

English Township Gold

Property

September 20, 1984

Eduard Ludwig
Geologist
Marjel Resources Inc.

LOCATION AND ACCESS

The English Township claim group is located in the west central part of the township, with the northern portion near the 4-mile post on the Beemer-English Township boundary (Fig. 1).

Access to the property is by bush road, 50 miles south of Timmins with winter access by helicopter or ski-equipped airplane. In the near future the road may be maintained year round by timber companies operating in the area.

The Sudbury-Timmins high voltage power line passes about 4 miles east of Muskasenda Lake.

INTRODUCTION

Work completed to date on the Marjel claims includes blasting, sampling, stripping and grid cutting. A four-man crew completed the work within the month of July 1984.

The purpose of the aforementioned programs was to:

- a) establish control, locate trenches and outcrops; and
- b) verify gold values in existing trenches and pits. A trench map was drawn showing geology, trench locations, chip sample locations and some grid lines plotted at a scale of 1 inch equals 10 feet.

PROPERTY OWNERSHIP, CLAIM LIST

At this date, the following mining claims are held by Marjel Resources Inc., Suite 402 - 27 Queen Street East, Toronto, Ontario, M5C 2M6.

<u>Claim List:</u>	<u>Claim No.</u>	<u>In good standing to</u>
	808949 - 808967 (inclusive)	July 13, 1985

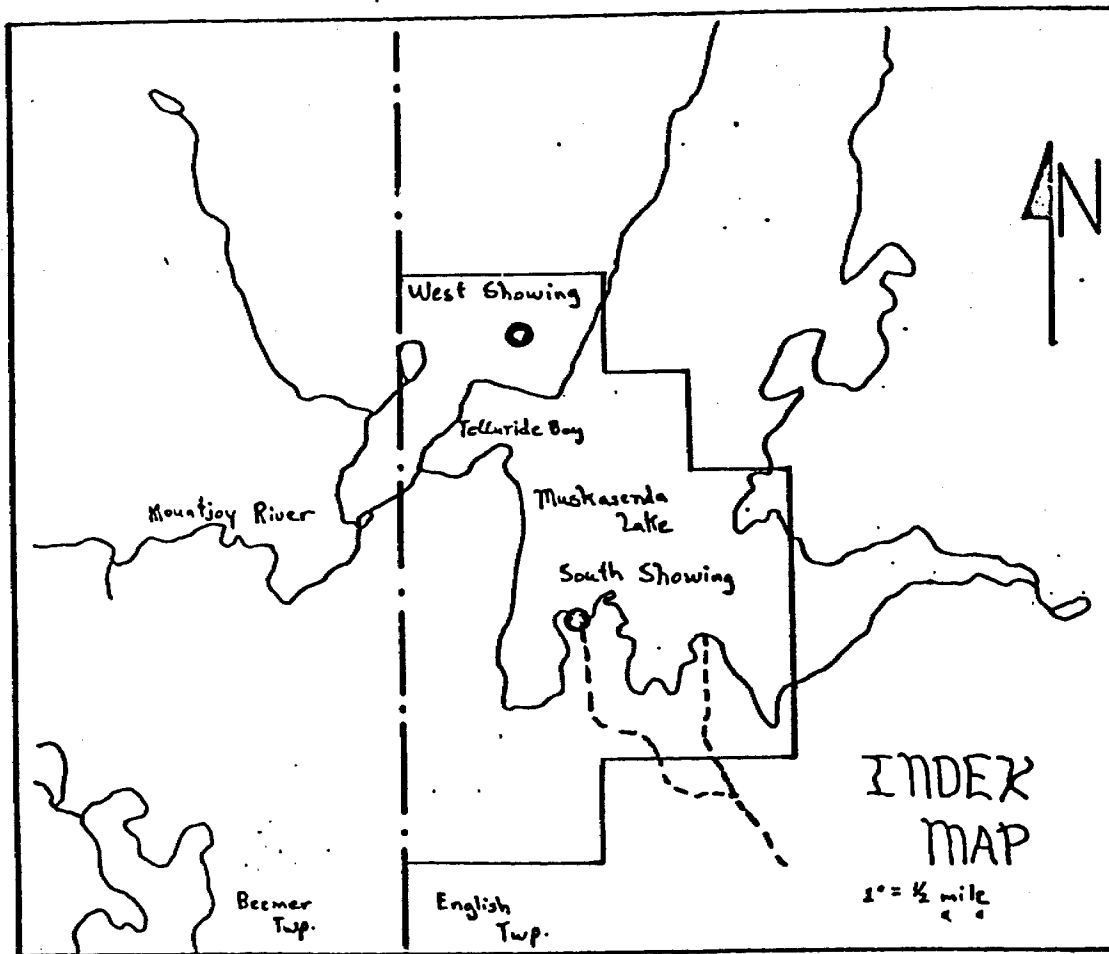
TOPOGRAPHY, VEGETATION, OVERBURDEN

Relief is extreme along the shores of Muskasenda Lake, with large swamps interspersed by northeast trending ridges with topographic highs to 100 feet.

Second growth spruce, jackpine and poplar are locally dense, with cedars and alders in the lower areas.

Overburden is extensive and probably quite variable in depth. The rock exposures, in general, are confined to ridges and knolls in the swampy areas.

The following claims are partially or completely covered by water: 808952-954, 808956-958, 808960-965. Muskasenda Lake is an excellent source of water, for all needs, year round.



Musgrave	Bartlett	Geikie
Beemer	English	Zavitz
Mohr	Scoble	Hutt

1:600,000

Marjel Resources Inc.
 Location of the English
 Township Property
 NTS 42A/3
 September 1984
 Figure 1

PREVIOUS EXPLORATION WORK

The area has received sporadic attention over the years as a gold and copper prospect.

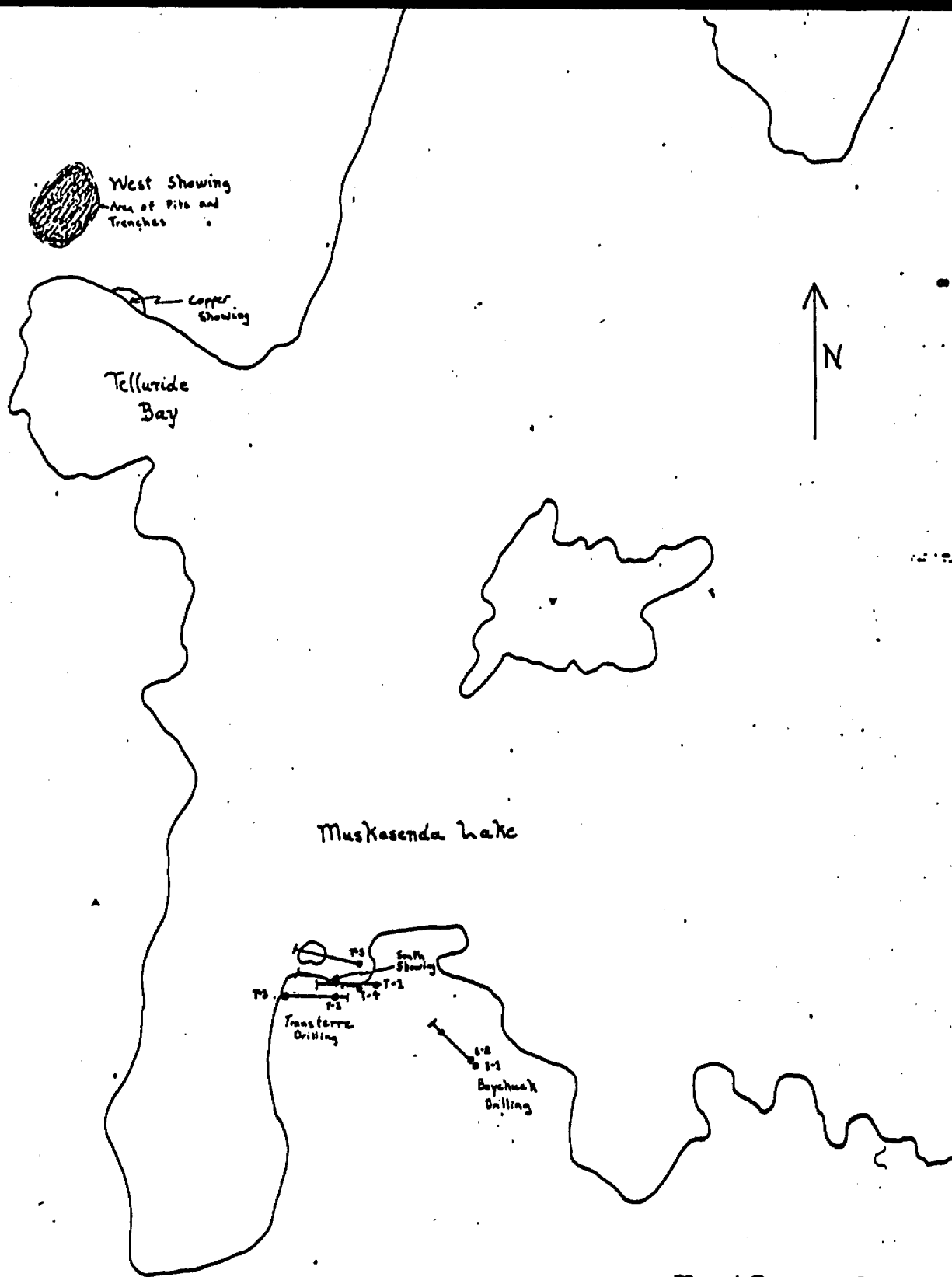
A tabulated history of the English Township property is as follows:

- 1920 - Gold discovered by J. C. Nelson near the west shore of Muskasenda Lake. He carried out limited trenching on this showing, at the same time prospecting the shores of Muskasenda Lake and areas around Telluride Lake in Beemer Township (File-264, Erie Canadian Mines Limited).
- 1935 - Sylvanite Gold Mines Limited optioned the Nelson prospect in 1935 and carried out a trenching and sampling program. On the west showing, a shear 80 feet wide and traceable for 700 feet, was uncovered in which a 28-foot length assayed 0.144 ounce of gold per ton over 3.2 feet. Sylvanite concluded that this zone was open to the north-east (N 75° E) with gold values and widths increasing. Grab samples from different areas within the aforementioned zone assayed from 0.20 - 1.32 ounces of gold per ton. The option was dropped in early 1937. Nelson allowed the claims to lapse, eventually being reverted back to the crown.
- 1965 - Transterre Exploration Limited optioned the claims encompassing the south showing from Ned Bragagnola in early 1965. Detailed geological work in the immediate

vicinity of the showing was initially completed, followed by 1800 feet of diamond drilling. Five holes were put down to test a gold-bearing sericite schist and associated quartz veining, along strike and at depth (Fig. 2). Directly beneath the showing, at a vertical depth of 260 feet, the schist was intersected for 5 feet and assayed 0.14 ounce of gold per ton (Hole T-1, Fig. 2). In the same hole, 20 feet below the schist, a quartz vein was intersected which assayed 0.32 ounce of gold per ton over two feet. A second hole (T-4) was put down beneath the showing at a shallower depth, intersecting similar geology, but no assays were reported. The other 3 holes intersected mineralization in the range of 0.01 - 0.03 ounce of gold per ton over short sections. The option was dropped in 1966.

1968 - Frank Boychuck, of Timmins, Ontario, acquired 44 claims encompassing both the south and west showings. Nineteen of the 44, along the west shore of Muskasenda Lake, were optioned to Cyprus Exploration Limited as part of their base metal exploration program. These claims also surrounded the west gold showing, but apparently were not examined or evaluated by Cyprus Exploration Limited. On the south showing Frank Boychuck trenched and blasted a 20-foot section, exposing three gold-bearing veins. An engineer's report was completed on these veins by C.T. Bischoff of Noranda, Quebec, in 1974, in which he chip sampled the veins and reported the following results:

No. 1 vein, Au: 0.96 oz/ton, Ag: 3.40 oz/ton over 0.5 feet
 No. 2 vein, Au: 0.11 oz/ton, Ag: 0.10 oz/ton over 3.0 feet
 No. 3 vein, Au: 0.02 oz/ton, Ag: 0.14 oz/ton over 2.0 feet



Marjel Resources Inc.
 Location of Previous
 Drilling - South Showing
 English Township
 1" = 500'
 September 1984
 E. Ludwig
 Figure 2

Boychuck drilled 2 holes south of the showing (B-1, B-2, Fig. 2), totalling 1,200 feet, of which the first hole (B-1) drilled vertically intersected 30 feet of porphyritic material. The entire 30 feet was mineralized with about 10% pyrite. Only 3 feet of this material was assayed, yielding 0.18 ounce of gold per ton. The second hole (B-2) did not intersect any economic mineralization (personal communication).

- 1982 - Amax Minerals Exploration (now Canamax Resources Inc.) acquired 24 claims encompassing both showings. Work completed included an airborne geophysical survey and a geological survey using airphotos at a scale of 1" = $\frac{1}{4}$ mile. Amax assayed material from a small shear on the south showing returning values up to 0.244 ounce of gold per ton. No work is evident on the west showing, with only minor work indicated on the south showing. The claims were dropped in late 1983.
- 1984 - In July 1984, Marjel Resources acquired 19 claims covering the known gold deposits around Muskasenda Lake. Line cutting, blasting and chip sampling were completed over both the south and west showings to date. Gold values returned from both showings have been extremely encouraging and will be discussed further in this report. (See Map 1, August 1984, in envelope.)

REGIONAL GEOLOGY

The property is situated between Timmins and Shiningtree in the west-central part of the Abitibi Metavolcanic - Metasedimentary Belt in the Superior province of the Canadian Shield. Bedrock units (Table 1) consist mainly of Early Precambrian (Archean) metavolcanics and mafic to felsic plutonic rocks; however, a few Middle to Late Precambrian diabase dykes are present. Most of the bedrock is mantled by thick Pleistocene glacial deposits of silt and sand, or recent alluvium (Bright, 1984). English Township and surrounding areas were initially folded into broad easterly plunging anticlines with later north to northeast plunging open cross-folds created by the late tectonic emplacement of the Moher Pluton. Faults, trending north-northwest, interpreted by offset, are the Mattagami River Fault extending through Beemer and Moher Townships, and the Grassy River Fault (Burrows-Benedict Fault) extending across southern Zavitz and northern Halliday Townships. The most prominent northeast trending faults are the Parting Lake Fault, located in southwest Semple Township, and the Redwing Fault, located in northeastern Hutt Township (Bright, 1984).

TABLE 1Table Of Formations

Phanerozoic

Cenozoic

Quaternary

Pleistocene and Recent

Sand, Silt, Gravel, Till, Swamps

Precambrian

Proterozoic

Mafic Intrusive Rocks

Olivine Diabase, Quartz Diabase

Early Precambrian

Mafic Intrusive Rocks

Diabase

Intrusive Contact

Felsic Intrusive and Metamorphic Rocks

Late Granitic Rocks

Biotite Granite, Hornblende Granodiorite,
Aplite, Lamprophyre, Quartz-Feldspar Porphyry

Early Granitic Rocks

Quartz Monzonite, Trondjemite, Diorite Gneiss
Amphibole Gneiss, Gneissic Granodiorite

Intrusive Contact

Metamorphosed Mafic and Ultramafic Intrusive Rocks
Gabbro, Quartz Gabbro, Diorite, Peridotite

Intrusive Contact

Metavolcanics and Metasediments

Metasediments

Conglomerate, with minor Tuffaceous Siltstone
and Graphitic slate interbeds

Iron Formation: Pyritic Graphitic Slate, Magnetite

Intermediate To Felsic Metavolcanics

Dacitic to Rhyolitic Massive Flows, Tuff,
Lapilli Tuff, Volcanic Breccia, Amygdaloidal
and Pillowed Dacitic Flows; Sericite Schist,
Chlorite-Sericite Schist

Mafic To Intermediate Metavolcanics

Massive and Pillowed Basaltic to Andesitic
Flows; Variolitic, Amygdaloidal and Porphyritic
Flows, minor Tuff and Agglomerate

PROPERTY GEOLOGY

A preliminary survey was carried out by Marjel in the 1984 field season, emphasis being placed on evaluating the economic potential of the known gold showings.

Precambrian rocks of Archean age are exposed within the property boundaries. There are probably Nipissing and Matachewan diabase dykes in the area. The basic metavolcanics are tightly folded and relatively steep dipping to the north, intercalated with rhyolites and dacites. Tuffs, lapilli tuffs and agglomerates are abundant as chlorite and chlorite-sericite schists and make up a large percentage of the property. Epiclastic sedimentary rocks are not verified on the property, although sericite schists containing minor fuchsite can be interpreted as such. Metavolcanics have been intruded by gabbroic to dioritic dykes, which have been interpreted as having sill proportions.

Metamorphism is variable, grading from lower greenschist to mid amphibolite facies. Contact metamorphism is visible around the edges of mafic to felsic intrusives, demonstrating a range of hornfelsic rocks. Schistose rocks are probably the most abundant on the property and exhibit varying degrees of alteration.

Interpreted through the centre of Muskasenda Lake is a broad, northeast trending, plunging anticline, caused by east-west compression during geologic time. Cross-folding of the lithologies is said to have taken place as a result of the late tectonic emplacement of the Moher Pluton. Quartz veining paralleling the axial trace of the anticline through the centre of Muskasenda Lake is very abundant, healing fractures caused by the broad folding. Minor, small-scale structural features include shear fractures and tension fractures, caused by pure shear.

Alteration

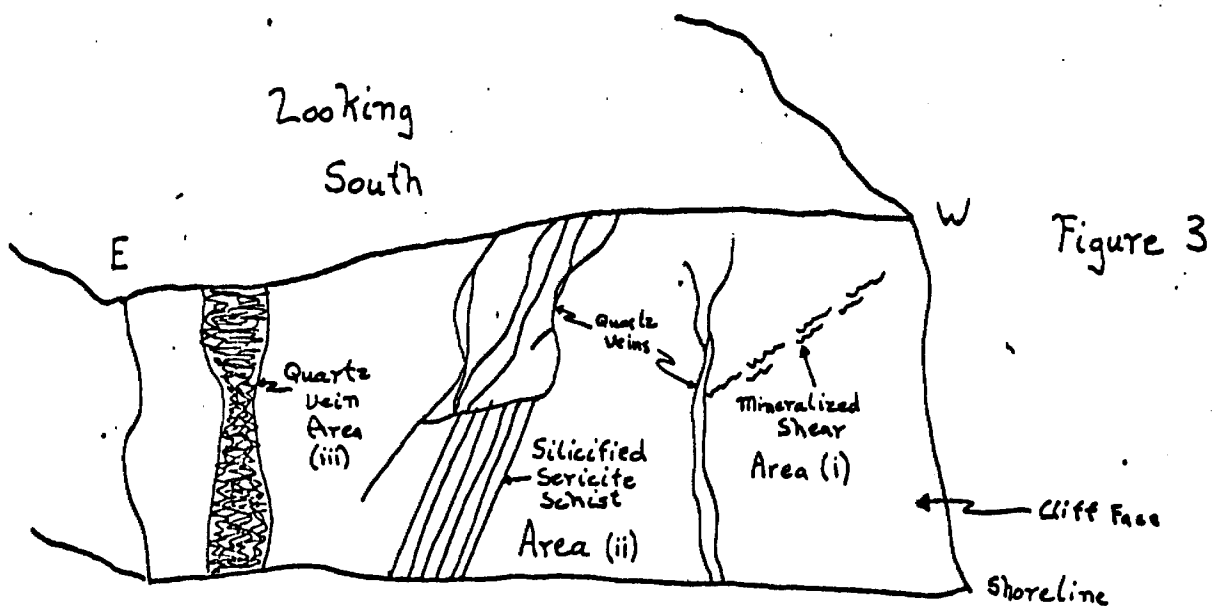
A broad region of silicification follows a zone of structural weakness, trending northeast near the west shore of Muskasenda Lake. Rhyolites and intermediate tuffs display abundant bluish quartz eyes indicative of later silicification. More mafic schistose rocks contain lenses of sugary quartz between foliation planes. Silicification appears to have occurred at more than one time period, with evidence observed as quartz veins crosscutting silicified chlorite schists. This altered region hosts the west gold showing and a small copper showing on the north shore of Telluride Bay (Fig. 2).

Other alteration is associated with mineralization on a smaller scale and, thus, will be dealt with under that heading.

Mineralization

A) SOUTH SHOWING

Three distinct areas of gold mineralization, spaced 50 feet apart, hosted by a rhyo-dacite containing 2% disseminated pyrite, are located on the south shore of Muskasenda Lake (Fig. 3).



Area (i)

Occurs as a shear 6 inches wide, mineralized with massive pyrite and chalcopyrite and cut by quartz carbonate stringers. The shear strikes north and dips 35 degrees northeast. Government documents reported an assay of 13.4 ounces of gold per ton and 13.1 ounces of silver per ton. Other assays from the shear are 0.96 ounce of gold per ton (Bischoff 1974) and 0.244 ounce of gold per ton (Amax Minerals Exploration).

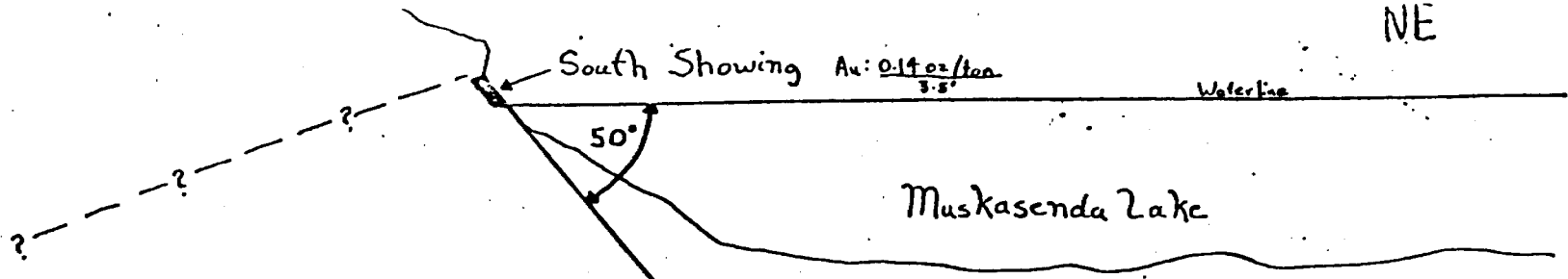
Area (ii)

Is a silicified sericite schist, 3.5 feet wide, striking N 35° E, dipping 50 degrees east and plunging 50 degrees. This exposure seems to represent the top of the schist. Transterre drilling intersected it at a vertical depth of 260 feet (Fig. 4). The schist is foliated, mineralized with 10 - 30% disseminated pyrite and 1 - 2% chalcopyrite, also containing blebs of chlorite and fuchsite. Minor quartz carbonate veinlets cut the schist along foliation planes and at random orientations. Assay data from the schist is as follows:

- 1) 0.11 ounce of gold per ton over 3 feet (Bischoff 1974)
- 2) 0.144 ounce of gold per ton over 3.5 feet (Marjel 1984)
- 3) 0.22 oz Au/ton - Grab sample (Marjel 1984)
- 4) 0.04 oz Au/ton - Grab sample (Marjel 1984)
- 5) 0.154 oz Au/ton - Grab sample (Marjel 1984)
- 6) 0.340 oz Au/ton - Grab sample (Marjel 1984)
- 7) 0.083 oz Au/ton - Grab sample (Marjel 1984)
- 8) 0.027 oz Au/ton - Grab sample (Marjel 1984)

Sw

NE



DDH: T-4
 ① - Same lithology and mineralization
 - No Assays Reported

② DDH: T-5

Ore Estimation:

Length: 190'
 Width: 5'
 Depth: 260'

Calculation:

$190 \times 260 \times 5 = 247,000 \text{ ft}^3$
 $\div 7 \text{ (tonnage factor)}$
 $= 35,285 \text{ tons}$
 Grade: 0.14 oz/ton
 $= 35,285 \times 0.14$
 $= 4,940 \text{ ounces Au}$

Note: Slickensides were measured to determine plunge

DDH: T-1
 ① Au: $\frac{0.14 \text{ oz/ton}}{5'}$

DDH: T-3

260'

190'

Marjel Resources Inc.
 Longitudinal Projection of
 Transerre Exploration
 Drill Holes
 English Township
 1" = 50'
 E. Ludwig
 Figure 4

Area (iii)

Is a quartz vein that is mineralized with 5% disseminated pyrite and chalcopyrite, containing minor carbonate and sparse flakes of fuchsite. Drilling intersected this vein at a vertical depth of 275 feet (Hole T-1, Fig. 2), where a two-foot section assayed 0.32 ounce of gold per ton. Grab samples taken by Marjel in 1984 averaged 0.16 ounce of gold per ton.

B) WEST SHOWING

The west gold showing is hosted by a silicified chlorite schist mineralized with 5 - 50% disseminated pyrite and traces of chalcopyrite (Map 1). An average strike of the schist is N 75° E, dipping 70 degrees north and plunging 50 degrees. Much of the pyrite in highly silicified areas has been changed to specularite, indicating a high partial pressure of oxygen existed at one point in geologic time. Many later quartz carbonate veinlets cut the schist at random orientations, with movements along foliation planes causing them to be contorted into drag folds and small scale plunging synclines and anticlines.

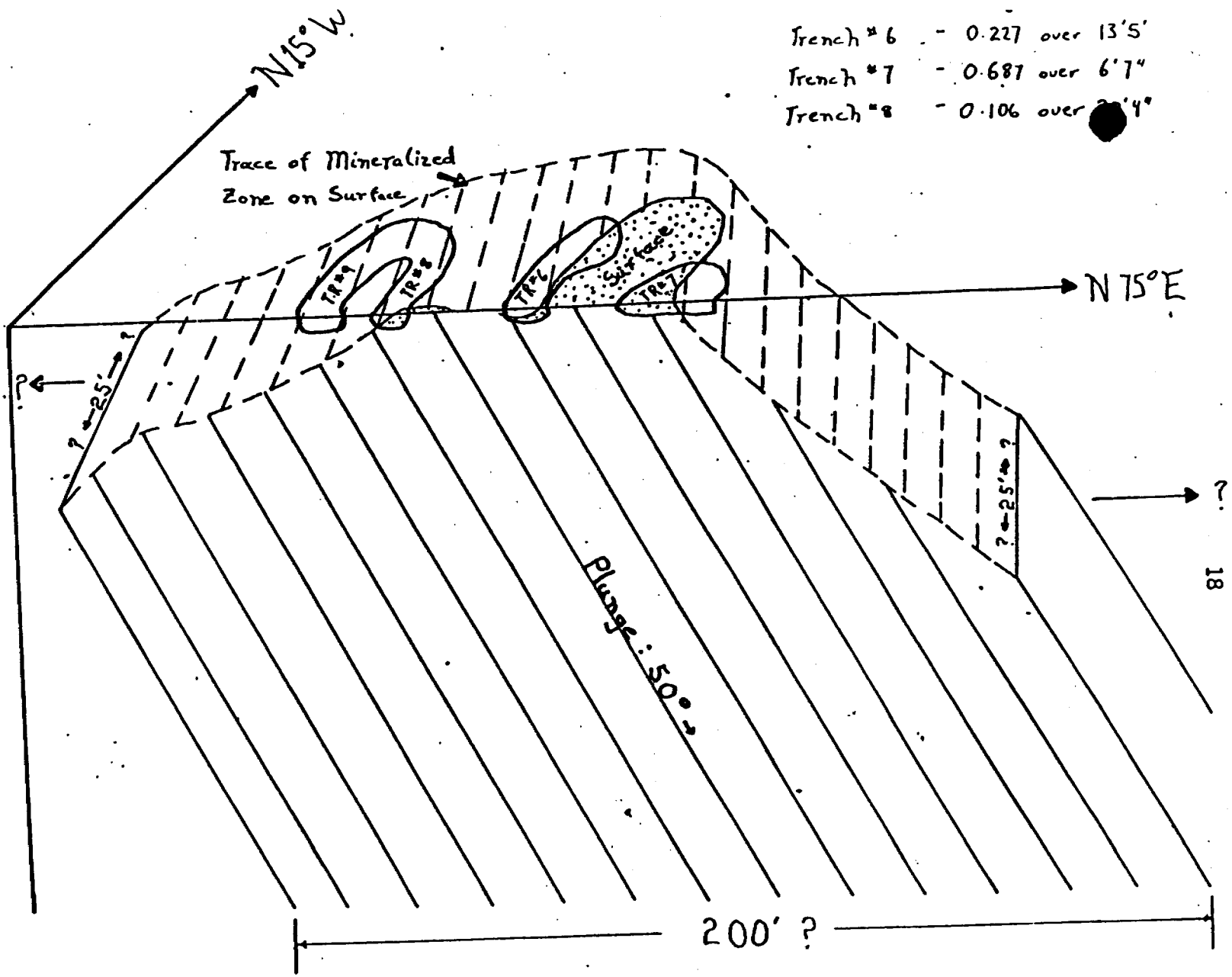
Highest gold values appear associated with a highly silicified, carbonated, chlorite schist containing 20% disseminated pyrite and 10% specularite (in areas, specularite has completely replaced pyrite). The altered zone has sharp contacts with the unaltered rock making it a distinctive map unit. This unit may be cross-folded or has an irregular top edge (Fig. 5), explaining why it is difficult to trace along strike on surface. Gold values support this idea, with the top of trench #7 and the bottom of trench #6 yielding the best gold values (Map 1 in envelope). Slickensides were measured to determine plunge, implying movement at this orientation, which may have caused the irregular top edge.

Quartz veinlets which cross the mineralized zone also carry gold values, explaining why regions within the trenches returned anomalous and sometimes economic gold values.

ASSAY DATA (Map 1 in envelope) WEST ZONE

	<u>Sample</u>	<u>Length (ft.)</u>	<u>Oz/Au</u>
(1) Trench #6	27	3.2	0.503
	28	3.25	0.233
OR		6.45	0.365
	30	2.67	0.308
	31	3.3	0.143
	32	4.0	0.99
	33	2.83	0.169
OR		12.8	0.447
(2) Trench #7	22	3.75	0.302
	23	2.83	1.197
OR		6.58	0.686

Trench #6 - 0.227 over 13'5"
 Trench #7 - 0.687 over 6'7"
 Trench #8 - 0.106 over 2'4"



Note: Depth, Length and Width are extrapolated for demonstrating structural trends

* Note: Not to Scale

Marjel Resources Inc.
 Sketch of cross-folded, plunging mineralized zone
 West Showing
 English Township
 E. Ludwig

SUMMARY

Located along the western boundary of Beemer and English Townships, encompassing the southern half of Muskasenda Lake, 19 claims were staked by Marjel Resources covering two known gold deposits.

The first of these deposits lies on the southern shore of Muskasenda Lake, although being poorly exposed, a chip sample (Marjel 1984) across 3.5 feet assayed 0.14 ounce of gold per ton. Mineralization is hosted by a silicified sericite schist containing minor fuchsite and 2-10% disseminated pyrite. This same unit was intersected by diamond drilling, in 1965, at a vertical depth of 260 feet, where 5' assayed 0.14 ounce of gold per ton. Other drill holes attempted to intersect the same schist but, due to the schist plunging, these holes encountered no mineralization.

The second deposit is found as a series of old pits and trenches near the west shore of Muskasenda Lake. Chip samples (Marjel (1984) across strike of a silicified chlorite schist, containing 5-50% disseminated pyrite, assayed as high as 1.197 ounces of gold per ton over 2.8 feet. Highlighted weighted average assays from 2 trenches are as follows:

Trench #6 - 0.365 ounce of gold per ton over 6.45'

Trench #6 - 0.447 ounce of gold per ton over 12.8'

Trench #7 - 0.686 ounce of gold per ton over 6.58'

Strike length of both deposits has not been explored, although attempts were made by various individuals and corporations. The structural complexity of both deposits has made them less obvious, creating problems in the past for proving an economic deposit.

Recommended work for the future includes grid cutting, geophysics, geochemistry, geology and diamond drilling to test gold mineralization along strike and at depth.

RECOMMENDATIONS AND ESTIMATED COSTS

The following exploration program is recommended for the 19-claim Marjel Resources Inc. English Township gold property:

Phase I 1985

1. Linecutting at 400-foot centres, complete coverage except for the water-covered claims.
2. Geological mapping, prospecting, sampling.
3. Ground geophysics (Mag, VLF).
4. Diamond drilling of known gold-bearing structures, veins and all viable anomalies to locate gold oreshoots.

Phase I 1985 Costs

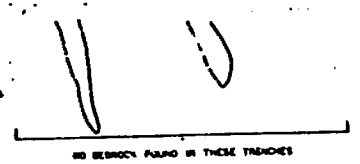
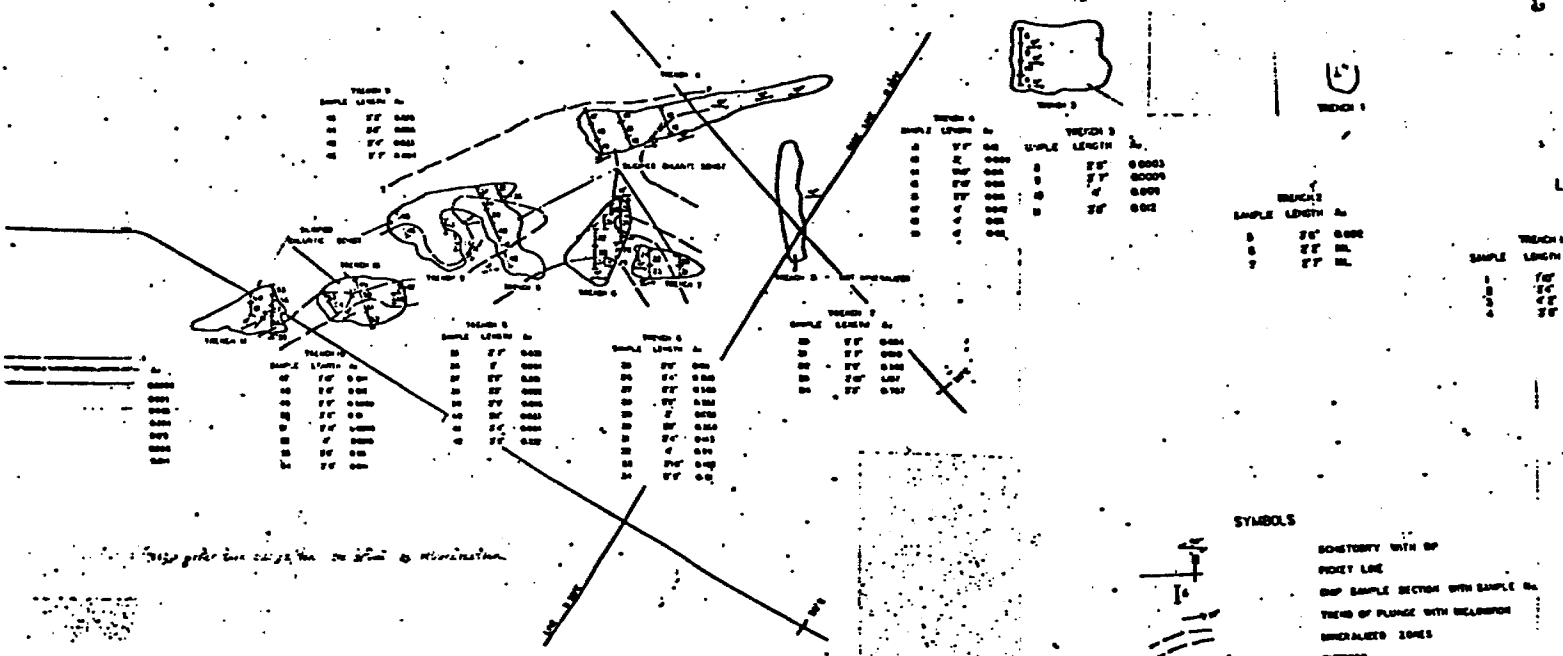
1. Linecutting, 20 miles @ \$300/mile	\$ 6,000.00
2. Geological Mapping (Wages, Sampling, Support)	3,000.00
3. Ground Geophysics, 20 miles @ \$300/mile	6,000.00
4. Diamond drilling, all inclusive, 5000 feet of B.Q. (+15 holes) @ \$25/foot	125,000.00
5. Assaying	12,000.00
6. Supervision	5,000.00
7. Office Overhead - 5%	<u>7,850.00</u>
	164,850.00
8. Contingency Fund - 15%	<u>24,727.00</u>
Total Phase I 1985	<u>\$189,577.00</u>

Phase II

The nature and cost of Phase II work for the 1985 (1986?) field season will depend on the results of the work recommended for Phase I. Diamond drilling would predominate, and costs for this alone could be in the \$250,000 range.

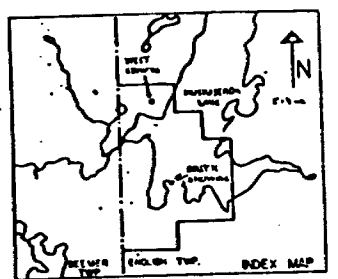
REFERENCES

- 1984 All pertinent assessment files, Kirkland Lake, Ontario.
- 1984 Bright, E.G.; Geology of the Ferrier Lake - Canoeshed Lake Area, District of Sudbury; Ontario Geological Survey Report 231, 60p. Map 2290.



TRENCH 1

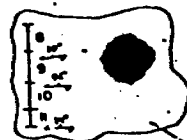
SAMPLE	LENGTH	IN
1	2'	0.00
2	2'	0.00
3	2'	0.00



SYMBOLS

- BOUNDARY WITH 10' PICKET LINE
- DRIP SAMPLE SECTION WITH SAMPLE IN
- TRENCH OF PLUNGE WITH NEARBY
- GENERALIZED ZONES
- OUTCROP

MARJEL RESOURCES INC
 TRENCH & CHIP SAMPLE LOCATION MAP
 ENGLISH TOWNSHIP
 DISTRICT OF SUDBURY
 WEST SHOWING
 1" = 10'
 AUGUST 1984
 E. LUDWIG



TRENCH 3

TRENCH 4		
SAMPLE	LENGTH	As
12	3'7"	012
13	3'	0009
14	3'10"	006
15	2'10"	005
16	3'2"	005
17	4'	0042
18	4'	006
19	4'	002

TRENCH 9		
SAMPLE	LENGTH	As
43	3'2"	0026
44	3'6"	0056
45	3'4"	0023
46	3'7"	0004

SPLITTED CALCITE SCHIST

SPLITTED CALCITIC SCHIST

TRENCH 5 - NOT MINERALIZED

TRENCH 7		
SAMPLE	LENGTH	As
20	2'8"	0004
21	2'7"	0018
22	3'9"	0302
23	2'10"	087
24	3'5"	0787

TRENCH 8		
SAMPLE	LENGTH	As
35	2'7"	0035
36	2'	0094
37	2'5"	052
38	3'5"	0002
39	3'9"	0006
40	3'11"	0005
41	3'4"	0004
42	3'8"	022

TRENCH 6		
SAMPLE	LENGTH	As
25	3'6"	006
26	3'4"	0008
27	3'2"	0503
28	3'7"	0233
29	2'	0003
30	2'8"	0368
31	3'4"	043
32	4'	099
33	2'10"	0469
34	2'6"	001

TRENCH 10		
SAMPLE	LENGTH	As
47	1'0"	004
48	2'6"	0042
49	2'8"	0008
50	2'6"	001
51	2'11"	0006
52	4'	0008
53	3'6"	006
54	2'6"	004

As
00009
0003
0005
0004
008
0006
004

They prefer their own way of mineralization.