J. V. SCHWOMME PROPERTY

Ogden Township, Ontario

GEOLOGY

GOLD DEPOSITS

and

DIAMOND DRILLING 1934 to 1981

Timmins, Ontario,

April 24, 1981.

R. J. Bradshaw, P. Eng.,

Geologist.

TABLE OF CONTENTS

MAPS and SECTIONS

		Figure
Diamond Drill Hole Plan	1" = 100'	1
Section A1	1" = 100'	2
Section A	1" = 100'	2
Section B	1" = 100'	3
Section C	1" = 100'	4
Section D	1" = 100'	5
Section E	1" = 200'	6
Diamond Drilling & Geology	1" = 200'	7

SUMMARY

J. V. Bonhomme holds a group of 48 claims, including the old De Santis gold property, in Ogden Township. Situated a few miles south of Timmins, Ontario, the property is readily accessible.

A drill programme consisting of 30 holes, totalling over 25,000 feet, has recently been completed mainly in an area adjacent to and west of the old mine site. This work confirms the presence of a 125,000 ton gold deposit averaging 0.16 oz. gold per ton. The tabular deposit located between 500 and 750 feet below surface is accessible by a flooded vertical shaft and underground workings.

Other locations on the property have potential for gold mineralization. A zone of gold values near surface adjacent to the old No. 1 shaft offers the most promise. A programme of earth removal is proposed for this area to expose bedrock for detailed mapping and sampling. Based on the results of this work drilling is recommended for this location and two other gold occurrences in the south half of the property.

A programme of up to 10,000 feet of drilling may be required to evaluate these gold occurrences. At an overall cost of $20. per foot, the drilling would cost $200,000. An additional amount of $10,000. is estimated for earth removal, sampling and assaying for a total cost of $210,000.

INTRODUCTION

The J. V. Bonhomme holdings include the former De Santis mine property and adjacent claims in Ogden Township, a few miles south of the centre of Timmins.

Since the closing of the De Santis mine, in 1942, two major drill programmes and limited underground development work have been undertaken on the property. All of the previous work has been reviewed and significant data has been recorded on accompanying plans and sections.

An interpretation of the geology on former De Santis claims and adjacent area to the west is presented on a plan at a scale of one inch to two hundred feet. This work indicates unexplored areas favourable to gold mineralization. The report also includes tonnage and grade of a gold deposit based on the 1980-81 and previous drilling programmes, and underground development work.

The writer planned the 1980-81 drill programme and logged the holes. Information concerning this programme and previous diamond drilling is provided in an Appendix to this report.

PROPERTY AND LOCATION

A total of 48 contiguous mining claims in the north central sector of Ogden Township comprise the J. V. Bonhomme property. These claims are described as follows:

Claim Numbers	Number	Status
P525987 & P525988	2	requires 99 days
P549069 & P539976	2	ready for lease
P480779 to P480791 incl.	13	ready for lease
P508675 & P508676	2	ready for lease
P516477 to P516479 incl.	3	ready for lease
P517109 to P517112 incl.	4	ready for lease
P522488 & P522489	2	ready for lease
P21514 to P21517 incl.	4	patented
P24768 to P24770 incl.	3	patented
P17798, P17799, P17801 P17802 & P18161	5	patented
HS953 to HS958 incl., HS805 & HS961	8	patented
	48	

The property is located within the City of Timmins, a few miles south of the downtown area.

ACCESS AND LOCAL RESOURCES

From Pine Street South, access is by a gravel road about two miles long, west to the mine site and centre of the property. Near the east boundary of the property a temporary wooden bridge provides crossing of the Mountjoy River.

Westward from the mine site to the Dalton road, a road has been cleared and ditched over a length of about two miles. This road requires gravel surfacing for use in the nonwinter months.

All services associated with a large mining community are available within a few miles.

HISTORY

De Santis Porcupine Mines Limited operated a mill on the property during the period May, 1939, to October, 1942. Total production amounted to 35784 oz. gold, 3142 oz. silver and 193 lbs. of scheelite.

According to Dunbar (1945) the mine produced 196928 tons with an average mill head grade of 0.19 oz. gold per ton. Production was at the rate of 160 tons per day and gold recovery was better than 90%. In the same report Dunbar estimated that there may be 20,000 tons of ore, mostly in the form of remnants, available for mining.

Including the recently completed project, there have been four drill programmes on the property since 1934. These include the S Series of holes totalling 12,816 feet, apparently carried out by several sponsoring companies, between 1934 and 1944; the H Series of holes totalling 26,708 feet by New Hope Porcupine Gold Mines Limited; two holes by Biko Resources Limited in 1972 totalling 1444 feet; and the J. V. Bonhomme programme which totalled 25,077 feet. Records of previous surface drilling, therefore, indicate a total of 66,045 feet in 86 holes.

Most of the drilling prior to 1980 was supervised and recorded by W. R. Dunbar and R. A. Shatford, both deceased. The approach to logging of drill core prevalent at the time severely curtails the usefulness of the records for stratigraphic interpretation. Moreover, many of the drill hole locations are only approximate.

During the period December, 1965, to August, 1966, the

mine was reopened by Kenilworth Mines Limited and underground development work was carried out. As reported by W. R. Dunbar, 1967, 30 holes were drilled, totalling 2088 feet, and 796 feet of drifting and crosscutting were completed on three levels. This programme was suspended because high costs and an insufficient labour supply indicated poor prospects of profitable production.

RESULTS OF DIAMOND DRILLING

1980-81 Programme

Holes 80-1 to 80-4 were drilled generally north of the mine site in an area underlain by sediments and holes 80-5 to 80-8 were drilled west of the mine. The remaining holes, 80-9 to 81-28 inclusive, were concentrated adjacent and west of the mine site on strike with the known gold-bearing rocks.

The holes to the north in an area of fine grained sediments demonstrated that this environment has little potential for gold mineralization. Drilling immediately adjacent to the west of the mine site, shown on Figure 1, outlined a gold-bearing zone at depth within a buff coloured carbonate rock. More specifically the gold horizon is located within a hydrothermal alteration zone up to 100 feet wide. To the west the carbonate rock with accompanying hydrothermal alteration has been located further south at an apparently different stratigraphic horizon (hole 81-26).

All of the gold values are located in quartz-tourmaline stringer zones within the carbonate rock with the exception of two occurrences. In hole 81-20 a quartz-tourmaline stringer zone 9.6

feet wide averaging 0.098 oz. gold occurs near a contact between mafic volcanics and an ultramafic rock. To the west in hole 81-27 pyritized banded carbonate-quartz stringers, 5.8 feet wide, assayed 0.12 oz. gold per ton in a mafic volcanic rock. Some low gold values occur in pyritized graphitic zones in holes 80-5 and 80-6 west and on strike with the gold-bearing carbonate rock.

The drilling indicates some previously unknown geological features in the vicinity of the mine site that are associated with the gold mineralization.

1973 Drill Programme

No values were encountered in the two holes drilled east and west of the mine site.

H Series Programme 1960-63

The gold values intersected in holes immediately west of the mine site (shaft No. 2) have been confirmed by the 1980-81 programme.

Just west of shaft No. 1 several shallow holes outlined a near surface gold mineralized zone which is shown on the surface plan (Figure 7). Apparently a drift at the 200 foot level from shaft No. 1, below this gold zone, encountered gold values (Dunbar, 1963).

Holes H17, H26, and H30, northwest of shaft No. 2, are significant in that a hydrothermal alteration zone containing gold values was intersected near surface. This mineralized zone is

apparently the up-dip extension of the hydrothermal zone outlined by holes 81-9 to 81-26 inclusive.

Gold values near the bottom of hole H2 south of the main gold deposit apparently occur in a favourable geological environment.

S Series Programme 1934-44

The lack of significant gold values in this programme is unusual. In hole S1 a 2 foot section, near the top of the hole, assayed 0.41 oz. gold; the log notes basalt with 1 inch of pyrite and arsenopyrite. No log is available for hole S8; Bracken (1972), however, notes intersections of 5 and 4 feet with assays of 0.22 and 0.11 respectively, at about 1000 feet in the hole.

GENERAL GEOLOGY

The most recent geological study of the Timmins area is provided by Pyke, 1980; a more specific study related to the genesis of the Timmins gold deposits has been made by Karvinen, 1980.

Metasedimentary rocks consisting of a turbiditic sequence of greywacke, slates, and conglomerates are in contact with a variety of formations of the Tisdale group. Known formerly as Keewatin and Temiskaming sediments, these rocks are now thought to be facies equivalents of the Tisdale Group volcanics (Pyke, 1980). The sediments were classified as the Porcupine Group by Lorsong (Karvinen, 1980).

Sediments of the Porcupine Group are in contact with Tisdale Group rocks on the J. V. Bonhomme property.

It is suggested by John Thompson, Da Santis mine geologist in a report in government assessment work files, that the mine is situated near the nose and on the north limb of an overturned anticlinal fold which pitches to the west at 9 degrees and dips south at 46 degrees. He also refers to a light brown lava as being an excellent host rock for gold mineralization.

Drilling indicates that the rocks dip to the south at 45 to 50 degrees and the light brown lava apparently coincides with the buff coloured carbonate rock in which a gold deposit has been outlined by the present drilling.

Thompson further states that an albetite intrusive, composed chiefly of albite feldspar, is the most important for gold deposition. There was little evidence of this rock in the 1980-81 drill programme.

GEOLOGY OF J. V. BONHOMME PROPERTY

ROCK TYPES

Based on Pyke's stratigraphic column and the possible existence of an anticline in the mine site area, the rocks are described as follows with the great thickness of Porcupine Group sediments to the north being the youngest and the mafic and ultramafic rocks in the centre of the property being the oldest.

Porcupine Group Sediments

Drilling and a magnetic survey indicates that the entire north half of the property is underlain by greywacke and slate. Occasional pyritized graphitic zones occur within slate beds.

All of the rocks to the south belong to the Tisdale Group which are described as follows:

Greywacke and Slate

These rocks are separated from the Porcupine Group sediments by a pyritized graphitic zone which may in part represent an unconformity. Otherwise these rocks are very similar to the Porcupine Group.

Carbonate Rock

This rock is generally buff coloured, very fine grained and without volcanic structures. Occasional narrow carbonaceous sections and partings account for the banding in the rock. Dilute hydrochloric acid indicates a composition of more than 50 per cent carbonate.

Within and conformable to this rock is present a hydrothermal alteration zone hosting a gold deposit, outlined at depth west of shaft No. 2.

Between hole S14 and the section formed by holes 80-5 and 80-6 a facies change occurs, whereby the carbonate content of the rock diminishes and greywacke type minerals increase. This feature confirms that the carbonate rock is sedimentary in origin.

Intermediate Volcanics

These rocks generally exhibit volcanic structures such as pillows, bombs, lapilli and are locally amygdaloidal. They are light green to green in colour. Without structure these rocks are similar to the carbonate rock.

Mafic Volcanics

Dark green and chloritic, these rocks often contain abundant carbonate stringers. Generally well banded most of these rocks were probably deposited as tuffs. Features characteristic of massive flows and pillow lava are also present. A well defined carbonate stringer zone exists at the contact between mafic volcanics and carbonate rock west of the mine site.

Ultramafic Rock

This rock may be intrusive or extrusive. It is blue black in colour, talcose, and very soft. Much carbonate as irregular stringers is normally present.

STRUCTURAL GEOLOGY

All of the rocks trend generally west-southwest and dip south at 45 to 50 degrees.

An open z-shaped warp or drag fold, just west of shaft No. 2, is the most significant structural feature on the property. Marker horizons, including mafic volcanics and ultramafic rocks, suggest that a north trending fault zone bisects the structure. If the faulting does not exist the warp of the drag fold is more extreme. The gold deposit outlined by drilling is located immediately east of the postulated fault.

In general the stratigraphy supports a fold structure perhaps anticlinal with its west-southwest axis located just south of the mine site. If as suggested by Thompson (1938) the structure

plunges 9 degrees west closure of the fold to the west would be very gradual and difficult to recognize. In the western part of the map area the stratigraphic section, as marked by graphitic horizons, show a closure of several hundred feet.

ECONOMIC GEOLOGY

General

As previously described under the section dealing with structural geology, a gold mineralized zone has been outlined west of shaft No. 2 and 733 W drift. The deposit is shown on figures 1 and 7, and Sections A1, A, and B. It is located in a hydrothermal zone conformable to a carbonate host rock of sedimentary origin.

Hydrothermal Zone

Up to 150 feet wide, this zone of alteration is harder & lighter coloured than the carbonate host rock. It is generally massive and variably fractured except for a central portion which exhibits light green coloured banding with chert-like characteristics. Within this zone are quartz and quartz-carbonate stringer zones, concentrations of heavy pyrite, up to 10 per cent, often associated with tourmaline, up to 30 per cent. In turn the tourmaline zones are associated with narrow zones of tiny vugs. Where the rock is massive and without mineralization it exhibits characteristics of an aplite which may be equivalent to the albatite referred to by previous writers.

Mineralization & Structure of Gold Deposit

The gold values are associated with a zone of relatively sparse and irregular quartz- carbonate stringers. The quartz-carbonate ranges from 5 to 80 per cent but averages about 20 per cent. A little tourmaline and up to 5 per cent pyrite is associated with the quartz-carbonate stringer zone. Below the gold-bearing zone, less than 25 feet, are heavy concentrations of tourmaline with pyrite but without gold values.

Striking slightly south of west and dipping about 45 degrees south, the deposit is situated between 550 and 750 feet below surface. The drilling, and development work along 733 W drift indicate a maximum slope dimension of 350 feet and a strike length of 450 feet.

Tonnage and Grade

Diamond drilling from the 1980-81 and the 1960-63 (N Series) programmes and sampling from the 733 W drift provide the data for calculations. Because of the differing sets of data the gold mineralization adjacent to 733 W drift is handled separately. In the calculations 12 cubic feet are representative of one ton and values are cut to one ounce.

The drill indicated tonnage is divided into two blocks corresponding to Sections A & B as follows:

Section A - Grade

Hole No.	Intersection(ft.) apparent	true	Grade Uncut	Cut	Product Uncut	Cut
H19	21.0	(19)	0.15	0.15	3.15	3.15
80-10	23.7	(22)	0.20	0.20	4.74	4.74
H15	(3.9) * 7.8	(7)	3.90	0.19	30.42	1.482
	52.5	(48)			38.31	9.372
Average true width		16	Ave.		0.730	0.179

*intersection is doubled to achieve a minimum mining width

Section B - Grade

Hole No.	Intersection(ft.) apparent	true	Grade Uncut	Cut	Product Uncut	Cut
80-17	17.7	(15)	0.29	0.29	5.133	5.133
80-11	12.0	(10)	0.037	0.037	0.444	0.444
H23	12.1	(10)	0.049	0.049	0.593	0.593
80-12	13.0	(11)	0.066	0.066	0.858	0.858
	54.8	(46)			7.028	7.028
Average true width		11.5	Ave.		0.128	0.128

Section A - Tonnage

Height(slope)	Length	Width	Tons	Grade Uncut	Cut	Product Uncut	Cut
250	190	16	63333	0.730	0.179	46133	11336

Section B - Tonnage

360	160	11.5	55200	0.128	0.128	7065	7065
	Total Tons		118533	0.450	0.159	53298	18401

733 W Drift Zone

According to Dunbar's report of November, 1967, the last 185 feet of 733 W drift averaged 0.37 oz. gold per ton over a width of 3.6 feet. The location of 733 W drift on Figure 1 indicates

that almost half of the drift vein is within the Section A tonnage block. The east portion of this 185 foot section averaged 0.69 oz. over 3.1 feet. It is proposed that the length of the zone be 100 feet with a grade of 0.69 oz. over 3.1 feet.

From the 733 W drift the upward extension is limited by negative results in hole 80-18 and the downward extension by sampling results in 833-20 stope. It is, therefore, proposed that the block be 100 feet in slope height. With a minimum mining width of 7 feet the east sector of 733 W drift is representative of 5833 tons as follows:

Height(slope)	Length	Width		
100	100	7	=	5833 tons

at a grade of 0.69 oz. over 3.1 feet, equivalent to 0.266 oz. over ? a mining width of 7 feet.

Total Tonnage and Grade

	Tonnage	Grade Uncut	Grade Cut
Drill indicated on Sections A & B	118533	0.450	0.155
733 W drift	5833	0.266	0.266
	124366	0.441	0.160

Potential Elsewhere

The most obvious location for the discovery of additional gold mineralization would be in the drag fold structure controlling the above described gold deposit This structure, however, has been well investigated to a depth of about 900 feet. Deep drilling would be required to further explore the structure.

West of shaft No. 1 shallow drilling and underground development work at the 200 foot level has indicated generally low grade values for a length of about 300 feet. Further work in the area may indicate the presence of ore grade mineralization.

Gold values were intersected in hole M2. A hydrothermal zone was intersected within the favourable carbonate rock in hole 81-28. Gold values, as yet unsubstantiated, are reported in hole 58. These intersections appear to be located at the same stratigraphic horizon in the carbonate rock which may be the south limb of the carbonate horizon hosting the gold zone west of shaft No. 2.

CONCLUSIONS

Approximately 66,000 feet of surface drilling has been completed on the J. W. Bonhomme holdings mainly on the part formerly known as the De Santis mine property.

This work, particularly the 1980-81 programme, has clarified the geology especially west of shaft No. 2 where a drag fold structure is associated with a gold deposit. This deposit up to 22 feet wide strikes slightly south of west and dips 40 to 50 degrees south. It is approximately 450 feet long, and 350 feet high along the dip, between 500 and 750 feet vertical below surface.

Based on 7 drill hole intersections and sampling data from 733 W drift (650 foot level) the deposit is estimated to contain 125,000 tons averaging 0.441 uncut and 0.160 cut ounces of gold per ton. The high uncut grade is based on one high grade intersection

(hole H15). The average grade in 733 W drift adjacent to hole H15 indicates that a grade in the order of 0.160 oz. should be anticipated.

Subsequent to the closure of the mine in 1942, Dunbar (1945) suggested that there may be an additional 20,000 tons of mineralized rock occurring as remnants in the mine.

Further work in selected areas of the property may outline additional gold deposits. Surface stripping to enable detailed mapping and sampling on a gold mineralized zone adjacent to shaft No. 2 is necessary to evaluate this occurrence. Encouraging results from such a programme would necessitate additional drilling below this zone to outline the deposit. Because of the shallow overburden a deposit in this area could be developed by ramp, separate from the underground workings.

Comparitively little exploratory drilling has been undertaken in the south half of the property where a carbonate horizon with gold values is apparently present. Values were intersected in hole H2, possibly S8, and hydrothermal alteration in hole 81-28. Drilling adjacent to H2 and S8 would provide an adequate evaluation of the potential in this area.

RECOMMENDATIONS

As previously indicated some additional work is required to more fully evaluate the potential of the property.

To determine a more reliable grade and establish dimensions, overburden stripping is recommended on an area of gold values

adjacent to the west of shaft No. 2. Cost of such a programme is estimated at $10,000. Encouraging results would justify additional drilling in this area.

Listed in terms of priority, four areas are proposed for exploratory drilling:

1. Adjacent, east and west of hole H2
   2 holes each 1000 feet 2,000

2. Adjacent east of hole S8 - 1 hole 1,000

3. Below the drag fold structure hosting
   the gold deposit - one deep hole 2,000

4. Contingent upon results from surface
   sampling west of shaft No. 2 5,000

   Total Footage 10,000

This programme, if fully implemented, would cost $210,000. with overall drilling costs estimated at $20 per foot.

Respectfully submitted,

SHIELD GEOPHYSICS LIMITED,

REGISTERED PROFESSIONAL ENGINEER
R.J. BRADSHAW
PROVINCE OF ONTARIO

R. J. Bradshaw, P. Eng.,
Geologist.

Timmins, Ontario,
April 24, 1981.

C E R T I F I C A T E

I, Ronald J. Bradshaw, residing at R. R. 2, Airport Road, Timmins, Ontario, a consulting geologist with office at R. R. 2, Airport Road, Timmins, Ontario, do hereby certify that:

I attended Queen's University, Kingston, Ontario, and graduated with an Honours B.A. degree in Geological Sciences in 1958.

I am a Fellow of the Geological Association of Canada, a Member of the Canadian Institute of Mining and Metallurgy and of the Association of Professional Engineers of the Province of Ontario.

I have no interest either directly or indirectly in the shares or securities of J. V. Bonhomme.

Timmins, Ontario
April 24, 1981.

REGISTERED PROFESSIONAL ENGINEER
R.J.BRADSHAW
PROVINCE OF ONTARIO

R. J. Bradshaw, P. Eng.,
Geologist.

REFERENCES

Bracken, J. M.
1972 — Report for New Hope Porcupine Gold Mines Limited

Dunbar, W. J.
1945 — Report for De Santis Porcupine Mines Limited
1963 — Report for New Hope Porcupine Gold Mines Limited
1967 — Report for New Hope Porcupine Gold Mines Limited

Karvinen, W. O.
1980 — Geology and Evaluation of Gold Deposits, Timmins area, Ontario, Open File Report 5293, O.G.S.

Pyke, D. R.
1980 — Relationship of Gold Mineralization to Stratigraphy & Structure in the Timmins Area, Open File Report 5293, O.G.S.
1975 — On the Relationship of Gold Mineralization and Ultramafic Rocks in Timmins Area, Paper 62, Ontario Division of Mines

Shatford, R. A.
1942-44 — Drill Sections - S Series

Thompson, John
1938 — Report on De Santis Property

_____ O.L.S.
1961 — Plan of Drill Hole Locations

APPENDIX

SUMMARY OF SURFACE DRILLING

1980-81 Programme

The AQ drill core recovered from this programme is stored at 79 Pine Street South, Timmins, Ontario.

Commencing in July, 1980, and finishing in March, 1981, the programme is summarized as follows:

Hole No.	Location	Direction	Dip	Depth
80-1	Base line 70+00 East	grid North	50°	301'
80-2	Line 48 East 48+00 North	grid North	50°	245'
80-3	Line 48 East 37+50 North	grid North	50°	553'
80-4	Line 36 East 10+00 North	grid North	50°	552'
80-5	Line 32 East 6+50 South	grid North	50°	770'
80-6	Line 32 East 10+00 South	grid North	50°	857'
80-7	Line 16 East 24+50 South	grid North	53°	747'
80-8	Line 24 East 20+00 South	grid North	50°	757'
80-9	116' West & 75.5' south of hole H-15	N10°E	70°	1397'
80-10	116' West & 57.5' north of hole H-15	North	70°	1067'
80-11	267' West & 92' south of hole H-15	North	70°	1257'
80-12	267' West & 57.5' north of hole H-15	North	70°	857'
80-13	116' West & 176' south of hole H-15	North	70°	985'
80-14	116' West & 326' south of hole H-15	North	70°	977'

Hole No.	Location	Direction	Dip	Depth
80-15	116' West & 207' north of hole H-15	North	70°	887'
80-16	267' West & 157' north of hole H-15	North	70°	650'
80-17	267' West & 192' south of hole H-15	North	70°	854'
80-18	34' East & 60' north of hole H-15	North	70°	757'
81-19	34' East & 210' north of hole H-15	North	70°	650'
81-20	267' West & 342' south of hole H-15	North	70°	1090'
81-21	418' West & 220' south of hole H-15	North	70°	1007'
81-22	418' West & 370' south of hole H-15	North	70°	1097'
81-23	418' West & 70' south of hole H-15	North	70°	900'
81-24	568' West & 220' south of hole H-15	North	70°	1000'
81-25	568' West & 370' south of hole H-15	North	70°	1100'
81-26	220' South & 720' west of hole H-15	North	70°	185'
81-26	220' South & 720' west of hole H-15	North	70°	537'
81-26A	225' South & 720' west of hole H-15	North	70°	997'
81-27	Line 32 East 15+00 South	grid North	70°	937'
81-28	Line 32 East 20+00 South	grid North	70°	1107'
Holes 80-1 to 81-28 incl., hole 81-26A, and two holes number 81-26; total of 30 holes				25077'

Holes 80-1 to 80-8, 81-27 and 81-28 are located with reference to a grid established in 1978-79 for the purpose of controlling geophysical surveys on most of the property. Holes 80-9 to 81-26A inclusive are located with reference to the collar of hole H-15 which is 641 feet S52°W from the centre of shaft No. 1, a line crossing shaft No. 2.

Holes 80-1 to 80-8 inclusive were drilled on unpatented claims to satisfy assessment work requirements. This drilling may be classified as basic exploration having as targets, in most instances, conductive zones representative of sulphide-bearing shear zones. The remaining holes, including 80-9 to 81-28 inclusive, were located to confirm the presence of gold-bearing mineralization several hundred feet west of shaft No. 2 and extend this zone to the west if possible.

Overall cost of this drilling including engineering, assaying and preparation of storage facilities was approximately $16.70 per foot.

1973 Programme

In 1973, Sico Resources Inc. drilled two holes on the Barnhouse property as follows:

Hole No.	Location	Direction	Dip	Depth(ft.)
N-73-1	SW corner of claim P525987	N10°W	45°	801
N-73-2	adjacent to hole 81-27	N13°W	65°	643
			Total of	1444 ft.

Based on hole N-73-2, adjacent to hole 81-27, the rock description and classification compares fairly well with that used in the 1980-81 series. No gold values were encountered.

H Series Programme, 1960-63

No drill core is available from this programme. The drill logs were only recently located which accounts for some apparent

duplication by the 1980-81 programme. The summary, as follows, is basically that prepared in a report by J. M. Bracken, 1972.

Hole No.	Location	Direction (magnetic)	Dip	Depth
H1	10+00 W 14+50 S	North	67°	1182'
H2	6+10 W 14+70 S	North	67°	1710'
H3	1+30 W 10+50 S	North	67°	1144'
H4	14+00 E 5+00 S	327°	55°	1108'
H5	15+50 E 4+00 S	327°	49°	993'
H6	12+00 E 5+50 S	327°	55°	1110'
H7	*approximate; determined from 1961 survey plan	N37°W (astronomic)	45°	193'
H8	"	Northwest	44°	150'
H9	"	Northwest	35°	219'
H10	"	Northwest	45°	183'
H11	"	Northwest	45°	127'
H12	"	Northwest	45°	140'
H13	"	Northwest	45°	239'
H14	50 E 20 N	North	67°	711'
H15	1+30 W 1+00 S	North	67°	745'
H16	6+00 E 4+50 N			221'
H17	1+30 W 3+50 N	North	50°	570'
H18	3+60 W 1+50 N	North	50°	416'
H 19	2+30 W 1+00 S	North	67½°	753'

Hole No.	Location	Direction (magnetic)	Dip	Depth
H20	8+00 E 5+50 N			117'
H21	3+60 W 0+00	North	67°	780'
H22	5+10 W 90 S	North	67°	792'
H23	3+60 W 1+10 S	North	67°	791'
H24	6+10 W 1+00 S	North	67°	773'
H25	1+30 W 2+50 S	North	67½°	1006'
H26	7+30 W 4+00 N	North	50°	402'
H27	13+40 W 2+00 N	North	55°	531'
H28	3+60 W 8+00 S	North	67°	1229'
H29	13+40 W 8+30 S	North	67°?	709'
H30	7+30 W 6+50 N	North	48°	321'
H31	48+00 W 2+50 S	North	47°	225'
H32	46+00 W 0+00	North		92'
H33	2+00 E 2+00 S	North	67°	764'
H34	2+00 E 1+40 N	North	65°	580'
H35	2+00 E 10+00 S	North	67½°	1065'
H36	2+30 W 5+00 S	North	67½°	1107'
H37	5+10 W 5+00 S	North	67½°	1257'
H38	1+30 W 1+60 N	North	67°	650'

Hole No.	Location	Direction (magnetic)	Dip	Depth
H39	2+30 W 1+40 N		67½°	760'
H40	1+30 W 2+40 S	North	67½°	843'
H41	2+30 W 2+40 S	North	67½°	not completed
	Holes H1 to H41 inclusive, total			26708'

*The location of these holes is based on the coordinates of shaft No. 1 being N920.00 and E890.00, according to an unidentified O.L.S. on a plan dated April 29, 1961.

The drill core from this programme was logged and sampled by W. R. Dunbar with the exception of hole H35 which was logged by former government resident geologist R. M. Ginn, on behalf of New Hope Porcupine Gold Mines Limited. The logs by Dunbar consisted of hand written field notes. An effort was made to prepare a new set of logs from the notes. However, the usefulness of the logs is severely curtailed by the lack of rock classification according to chemical composition. The logs mainly describe real or apparent volcanic structures, a common practice up until the last ten or twenty years when the importance of rock classification according to their basic chemical composition was determined to be of primary importance.

Wherever noted, gold values in the logs have been plotted as accurately as possible to assist in the evaluation of the property.

S Series Programme, 1934-44

This programme, undertaken during the period 1934 to 1944, initially was sponsored by McIntyre Mines but subsequently,

after the completion of hole S5, other mining groups provided financing and supervision.

Apparently several geologists were involved in the programme; those shown on the records include W. R. Dunbar and R. A. Shatford. Detailed sections of hole S9 to S16, prepared by Shatford are the most useful records, although they tend to emphasize volcanic structures rather than differences between rock types based on chemistry.

Few significant gold values were encountered in this drilling. J. M. Bracken (1972) reports interesting values in hole S8 for which no log is available.

Apparently two different coordinate systems have been used in locating these holes; locations on the plans, therefore, are only approximate.

Hole No.	Location	Direction (astronomic)	Dip	Depth(ft.)
S1 McIntyre	claims P480785 P480789	N28°W	45°	1524
S2 McIntyre	claim P480790	N30°W	45°	1553
S8	claims P480788 P480791	North	60°?	1696 ?
S9	claims HS958 HS805	N 6°E	55°	766
S10	claims HS958 HS955	N10°W	52°	800
S11	claim HS954	N15°W	50°	1316
S12	claim HS955	N15°W	50°	818
S13	south of claim HS955	N15°W	47°	688

Hole No.	Location	Direction (astronomic)	Dip	Depth(ft.)
S14	S 145 W 931 survey plan	N10°W	48°	668
S15	S1080 W 838 survey plan	N10°W	48°	900
S16	claim HS954	N10°W	50°	987
S17	claim HS954	N10°W	45°	500
S18	claim HS805	N20°W	?	300 ?
S19	claim HS805	N10°W	?	300 ?
				12816

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-19

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 34' East & 210' North of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED January 5, 1981

COMPLETED January 8, 1981

DEPTH 650'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 48	Casing (overburden).						
48 - 87	Ultramafic Rock: grey, f. grained, irregular						
	white carbonate seaming in talcose rock.						
	53.0-55.0 core ground						
	62.0-67.0 core ground						
87 - 255	Mafic Volcanic Tuff ?: green, v. f. gr.; slight						
	mineral foliation @ 60° coincides with slaty						
	cleavage, some carbonate banding.						
	227-255 occasional seams of epidote						
255 - 385	Intermediate Volcanic Tuff ?: buff grey, v. f.						
	gr., apparently massive with odd qtz or carb str.						
	262-263 3" qtz-carb-tourm str. @ 70° + py,po	19-1	1.0	Tr			
	287-288 3" qtz-carb-tourm str. @ 70° + po,cpy	19-2	1.0	nil			
	332-340 well developed cleavage with fine						
	carbonaceous seaming, some grey						
	carbonate stringers						
	333.8-334.5 rusted, perhaps water seam						
	335.8-340.8 10% carb seaming, talcose slips	19-3	5.0	Tr			
	conforming to schistosity representing fault, sli. py, po						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-19

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
385 - 508	Carbonaceous Intermediate Tuff: buff to grey						
	colour, v. f. gr. banded showing thin graphite						
	seams & vari coloured tuff bands; some sulphide						
	bands.						
	477.0-490.0 generally black carbonaceous with						
	heavy py-po mineralization (+10%)						
	481.5-486.5 12% massive py	19-4	5.0	0.01			
	486.5-490.3 5% py seams	19-5	3.8	0.01			
508 - 607.7	Carbonatized Intermediate Volcanic: grey-green						
	to buff, v. f. gr., generally massive except for						
	strs. of grey carbonate containing pyrite.						
	575.0-607.7 banding developed after seams of						
	light brown tourmaline, sericite,						
	carbonate						
607.7 - 650	Mafic Volcanic Flow: green, v. f. gr. chloritic						
	fairly massive.						
650	END.						
	SURVEY TEST						
	Dip Direction						
	300' 65° 001 (mag)						
	600' 60° 360 (mag)						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-20

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 267' West & 342' South of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED January 9, 1981

COMPLETED January 14, 1981

DEPTH 1090'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 56	Casing (overburden).						
56 - 248	Mafic Volcanic Tuff: green, v. f. gr., chloritic						
	quite soft in places.						
	56.0-100.0 core is quite vuggy & soft						
	63-67 core ground						
	68-77 core ground						
	79-87 core ground						
	90-97 core ground						
	101-102 5% diss. py						
	103 3" qtz-carb str. @ 50° to c.a.						
	105-107 core ground						
	104-109 fine carb. seams @ 45° show banding						
	109 4" qtz-carb str. @ 45°						
	111-116 25% qtz-carb strs. @ 50°, 1% py	20-1	5.0	Tr			
	116-121 20% qtz-carb strs. @ 50°, 1% py	20-2	5.0	Tr			
	121-125.5 30% qtz-carb strs. @ 50°, 2% py	20-3	4.5	Tr			
	125.5-130.5 40% qtz-carb strs. @ 60°, 1% py	20-4	5.0	Tr			
	131 well defined banding @ 70-45° after						
	fine carbonate seams						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-20

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	214 1" massive magnetite						
	217 2" qtz-carb banding @ 60°						
	227 finely banded from carbonatization						
	& silicification						
	229-232 fine qtz-tourm stre., sli. py						
	235.8-240.8 50% qtz-tourm stre., patches of	20-6	5.0	0.16	.80		
	sericite, 2% diss. py					.098	9.6'
	240.8-245.4 mariposite-fuchsite + 2% py	20-7	4.6	0.03	.138		
	245.4-247.1 70% qtz-carb, some m.f., 1% py	20-8	1.7	Tr			
248 - 466	Ultramafic Rock: grey, f. grained, soft,						
	granular texture, talcose, with irreg. carbonate						
	seaming, some qtz, minor pyrite.						
	281.0-285.0 mafic volc. inclusion						
	415-448 mafic volcanic inclusion, dark green						
	chloritic						
	418-419.5 2-6" white qtz-carb stre. @ 45°						
	423.5 6" white qtz-carb str. @ 45°						
466 - 604.5	Intermediate Volcanic: dark grey, v. f. gr.,						
	massive to poorly defined foliation.						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-20

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	516 5" qtz-tourm str.						
	527.4-532.0 10% qtz-carb strs., 1% pyrite	20-9	4.6	Tr			
	532.0-533.2 1' qtz-tourm v.	20-10	1.2	nil			
604.5 - 646	Carbonatized Intermediate Tuff: green to grey,						
	f. gr. numerous carbonate strs. forming banding						
	@ 60°.						
646 - 864	Carbonatized Intermediate Tuff: grey to buff, v.						
	f. gr. banded at 60-70° with carbonate, pyrite						
	seams, qtz at about 70° to c.a., contact						
	gradational.						
	768.0-792.0 intensely schistose with grey						
	carbonate, sericite, some pyrite						
	seams @ 70°						
	768.0-773.0 20% carb seams, 2% pyrite	20-11	5.0	Tr			
	773.0-778.0 40% carb seams, 2% pyrite	20-12	5.0	Tr			
	778.0-782.0 50% carb seams, 3% pyrite	20-13	5.0	Tr			
	782.0-787.0 60% carb seams, 2% pyrite	20-14	5.0	Tr			
	787.0-792.0 30% carb seams, 3% pyrite	20-15	5.0	Tr			
	849.4-854.4 25% carb seams, 3% pyrite	20-16	5.0	Tr			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-20

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
864 - 971	Aplite or Silicified Volcanic: brown, v. f. gr.,						
	fairly massive, medium hard, numerous altered						
	phases.						
	877.0-882.0 irregular diss. tourmaline,	20-17	5.0	Tr			
	mariposite, qtz-carb, 1% pyrite						
	882.0-883.0 white qtz //ing c.s., diss. tourm,	20-18	1.0	0.03			
	pyrite in wallrock			Reject .005	Reassay 0.015		
	883.0-887.0 sli. diss. tourm, pyrite	20-19	4.0	1.10	0.010		
	887.0-893.0 30% diss. tourm, med. green alter-	20-20	6.0	Tr			
	ation						
	893.0-898.0 20% tourm, 8" apple green mineral,	20-21	5.0	Tr			
	green with pink cast, 1% pyrite						
	898.0-903.0 10% tourm altered green	20-22	5.0	Tr			
	903.0-905.0 some tourm, 1% py, banded	20-23	2.0	Tr			
	905.0-907.4 35% qtz-tourm strs. @ 60°, 2% py in	20-24	2.4	0.01			
	v. & wlrk						
	907.4-913.0 grey, fine tourm banding, 3% pyrite	20-25	5.6	Tr			
	913.0-915.8 2-4" qtz-tourm str. @ 45°, 1% py wlrk	20-26	2.8	0.06			
	915.8-919.8 grey banded, 1% pyrite	20-27	4.0	Tr			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-20

TOWNSHIP _____ PAGE NO. 5

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	919.8-924.5 20% tourm. brecciated wlrk. 1% py	20-28	4.7	0.02			
	924.5-929.5 2% py. tourm	20-29	5.0	0.02			
	929.5-934.0 4" & 2" qtz strs., tourm banded. 1% py	20-30	4.5	0.01			
	934 intensely altered. grey to green, irregular to banded @ 70°, tourmaline, minor pyrite						
971 - 1090	Intermediate Volcanic Tuff: v. f. gr., carb & py seams, conf. to schistosity @ 60-70°; deeper - becomes more massive with slaty cleavage.						
	1089-1090 graphite seaming with pyrite						
1090	END.						
	SURVEY						
	Depth Dip Direction						
	500' 61° 05° (Mag)						
	1000' 54° 05° (Mag)						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-21

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 418' West & 220' South of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED January , 1981

COMPLETED January 16, 1981

DEPTH 1007'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 62	Casing (overburden).						
62 - 67	Core ground						
67 - 204	Mafic Volcanic Tuff ?: green, v. f. gr., massive						
	to poorly foliated at 60°-45° after carbonate						
	seams, chloritic with carbonate strs. conf. to						
	foliation, with some cubic pyrite.						
	77.5-81.5 90% irreg. qtz-carb. sli. tourm	21-1	4.0	nil			
	epidote, sli. pyrite						
	133-204 less chlorite with more carbonate						
204 - 372	Ultramafic Rock: grey to green, v. f. gr.						
	roughly banded at 50°, soft, talcose, much carb						
	banding at approx. 50°; upper contact is						
	gradational.						
	304.0-307.0 core ground						
	294.5-295.0 talcose shear @ 60°						
	314-317 core ground						
	324.5-372 becomes harder with much more carb						
372 - 486.7	Intermediate Volcanic: grey to green, v. f. gr.						
	massive, to poorly banded, carbonate strs.						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-21

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	380 1" carb str. @ 70° - fault						
	391.7-393.0 brown carbonate alteration						
	393-397 much carbonate as strs. @ 50°						
	397 1" carbonate & mud @ 45° - fault						
	411-449.4 massive with apparent diss. carb						
	449.4 banding after carbonate strs.						
	462-479.5 cream bleached						
	467 & 468.5 1" & 2" qtz strs. respect. @ 50°						
	479.4-484.5 20% qtz & carb seams with tourm,	21-1A	5.0	Tr			
	chlorite wlrk, 3% py						
486.7 - 783	Intermediate Volcanic Tuff: light green to buff						
	v. f. gr. fairly well banded with carb strs.						
	cubic pyrite, soft, chloritic to sericitic, @ 50°						
	occasional carbonaceous seams up to 2", slaty						
	cleavage; in contact area rather minor change.						
	546.5 3" qtz-carb str. @ 45°						
	556 7" qtz-carb str.						
	650 2" qtz-tourm str.						
	653-655 shearing with carbonaceous seaming						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-21

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION		SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	673	3" graphite represent shearing						
	681-683	sheared, carbonate, graphite seams						
	752	1" graphite with pyrite						
	778	1" qtz str.						
	379.7	1" qtz-tourm str.						
783 - 871	Tourmaline Zone: with hydrothermal alteration.							
	787-791.7	2" qtz-tourm str. @ 50° + 10% tourm	21-2	4.7	Tr			
		diss.						
	791.7-796.6	10% qtz str., 10% tourm, silicified	21-3	4.9	Tr			
		1% py						
	796.6-801.6	10% tourm, bleached, 1% py	21-4	5.0	0.01			
	801.6-806.6	4% tourm, 1% py, green, silic.	21-5	5.0	Tr			
	806.6-811.0	5% tourm, silicified, brecciated,	21-6	4.4	Tr			
		2% py						
	811.0-816.0	5% tourm, 2-1" qtz str., bleached	21-7	5.0	0.01			
		silicified, 25% epidote						
	816.0-821.0	5% tourm, 30% epidote min., 1% py	21-8	5.0	nil			
	821.0-829.0	bleached, silicified, sli. py						
	829.0-834.0	20% qtz-tourm, carb, 3% py	21-9	5.0	0.01			

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-21

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	834.0-839.0 10% qtz-tourm strs., banding @ 70-30°, 2% py	21-10	5.0	nil			
	839.0-844.0 10% qtz-tourm strs. @ 60°, banded @ 50°; 1% py	21-11	5.0	0.01			
	844.0-847.0 20% qtz-tourm strs.dragged, sli. py	21-12	3.0	nil			
	847.0-855.0 some tourm - altered						
	855.0-861.0 bleached banded & slaty cleavage @ 70°, 1% py						
	861.0-866.0 as above sericite seams, 2% pyrite	21-13	5.0	nil			
	866.0-871.0 80% qtz-tourm-albite, brecciated wlrk, 2% diss. py, aspy, cpy	21-14	5.0	Tr			
	871.0-874.7 banded as above, 1% pyrite	21-15	3.7	nil			
871 - 985.5	Intermediate Volcanic Tuff: grey to grey-buff, v. f. gr. banded except where altered from fine carbonatization (bleached & massive).						
	892.0-893.0 10% qtz strs. @ 60-70°, wlrk is bleached (carbonatized ?) with 3% diss. pyrite	21-16	5.0	nil			
	893.0-908.5 bleached less than 1% pyrite						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-21

TOWNSHIP _____ PAGE NO. 5

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz
	908.5-913.5 5" qtz-carb str. & banded sericite,	21-17	5.0	Tr
	carbonate, 1% pyrite			
	913.5-918.5 1" qtz str., wlrk bleached, with 2%	21-18	5.0	nil
	pyrite			
	947.5-949.5 muddy with fault -carbonate stre.			
	964 5" qtz-carb str.			
	977 increasingly sheared to			
	982.8-985.5 grephite-carbonate-pyrite zone	21-19	2.7	nil
985.5 - 1007	Intermediate Volcanic Flow ?: grey-green, v. f.			
	gr. massive, chloritic, some carbonate, sli. py.			
1007	END.			
	SURVEY			
	Depth Dip Direction			
	400' 65° 08° (mag)			
	800' 57° 02° (mag)			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-22

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 418' West & 370' South of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED January 19, 1981

COMPLETED January 25, 1981

DEPTH 1097'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 60	Casing (overburden).						
60 - 61	Felsic Volcanic: brown, v. f. gr., hard,						
	probable boulder.						
61 - 67	Core ground.						
67 - 332	Mafic Volcanic: green, v. f. gr., massive to						
	banded at 45°, chloritic, with fine carb seams.						
	67.0-117.0 core is vuggy, soft schistose						
	72-77 core ground						
	82-83 " "						
	84-87 " "						
	93-97 " "						
	100-102 " "						
	103-107 " "						
	108-117 " "						
	128-133 15% qtz stre. @ 45°, sli. py	22-1	5.0	Tr			
	133-137.8 fine banding after carb @ 45°						
	135-137 core ground						
	137.8-142.8 90% white qtz, sli. py in chloritic	22-2	5.0	Tr			
	wallrock						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-22

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	142.8-147.0 90% white qtz, sli. py in wlrk	22-3	4.2	0.01			
	147.0-150.5 35% qtz, 1% py	22-4	3.5	Tr			
	150.5-192.5 fairly well defined banding @ 45-60°						
	204.6 4" qtz-tourm str. @ 70°						
	192.5-261 banding less pronounced						
	261-265.7 bleached with 10% qtz-tourm strs. @	22-5	4.7	Tr			
	70° & 1% py						
	265.7-271.0 90% white qtz, pink albite, vuggy	22-6	5.3	Tr			
	with rusty fractures, less than 1%						
	py, cpy						
	271.0-273.0 40% irreg. qtz-tourm, sli. py	22-7	2.0	0.01			
	273 well banded @ 40-60° after carb						
	285.5 7" white qtz						
	305.8 rusty crack - water seam						
	312.4 7" white qtz						
	325 6" white qtz						
	327-332 silicified with mariposite etc.						
332 - 513	Ultramafic Rock: grey. v. f. gr., talc with						
	numerous irreg. carb strs., occ. xst. of pyrite.						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-22

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	443.0-445.5 up to 10" mud sections						
	450.0-451.0 6" mud						
513 - 557	Carbonatized Intermediate Volcanic: med. green,						
	v. f. gr., moderately schistose, with abundant						
	carbonate stre., in sericitized rock.						
	513.0-526.0 60% carbonate						
557 - 905.6	Intermediate Volcanic Tuff ?: medium grey, v. f.						
	gr., massive to finely banded @ 60° to c.a., odd						
	irreg. qtz-carb str.						
	626 banding becomes more pronounced at						
	60-70°, differing colour, carbonate,						
	graphite						
	645-648 60% black, graphite, 1% pyrite						
	650· colours becomes buff brown						
	661-662.8 60% carb-qtz, sericite wlrk, 1% py	22-8	1.8	Tr			
	683-684.8 50% qtz-carbonate + tourmaline	22-9	1.8	nil			
	722-824.4 70% grey to black carb, sli. sulp.	22-10	2.4	nil			
	727 5" qtz-carbonate						
	737-738.4 4" qtz-carb, minor tourmaline	22-11	1.4	nil			

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-22

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	756.5-758.5 carb-qtz with 4% pyrite seams	22-12	2.0	Tr			
	756.5-763.5 carbonaceous partings						
	815-957 banding becomes less pronounced &						
	rock lighter colour to grey-cream;						
	appears that carb strs. have become						
	digested or diffused into wlrk from						
	hydrothermal alteration, gradually						
	rock becomes essentially massive						
	887.7 3" qtz str. @ 70°						
	901 carbonaceous flame-like structure						
905.6 - 981.8	Vein Zone: in hydrothermal altered zone.						
	905.6-909.2 80% qtz-carb + tourmaline, vuggy	22-13	3.6	0.01			
	albite or carbonate, 3% seemed py						
	909.2-939.2 sli. pyrite dissemination						
	939.2-940.4 4" qtz-carb str., 3% py in wlrk	22-14	1.2	Tr			
	940.4-944.2 1% diss. py	22-15	3.8	nil			
	944.2-947.0 5% py in grey carb; ½" qtz str.	22-16	2.8	0.01			
	947.0-951.6 4" qtz-tourm. tourm fracture & 2%	22-17	4.6	Tr			
	pyrite in buff wlrk						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-22

TOWNSHIP _____ PAGE NO. 5

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	951.6-956.6 2% diss. py	22-18	5.0	Tr			
	956.6-961.6 light green silicitic banding up to 40°, 1% pyrite	22-19	5.0	nil			
	961.6-967.8 60% qtz, some carb, tourm, 2% py	22-20	6.2	Tr			
	967.8-972.1 darker colour with diss. tourm ?, 1% pyrite	22-21	4.3	Tr			
	972.1-976.8 10% qtz str. in carbonaceous & sericitized banded wlrk @ 40-70°, 2% pyrite	22-22	4.7	Tr			
	976.8-981.8 20% qtz in wlrk as above, 1% pyrite	22-23	5.0	0.01			
981.8 - 1097	Intermediate Volcanic Tuff: buff brown, v. f. gr., fine banding @ 70°, some pyrite, graphite & grey carbonate bands.						
	1076.5-1081.5 30% qtz-carb-tourm strs., 1% py	22-24	5.0	Tr			
	1081.5-1084.7 10% qtz-carb-tourm strs., 1% py	22-25	3.2	nil			
1097	END.						
	Dip angle @ 1097' is 56°						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-23

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 418' West & 70' South of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

STARTED January 26, 1981

COMPLETED January 30, 1981

DEPTH 900'

ELEVATION

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 56	Casing (overburden).						
56 - 75.5	Mafic Volcanic: green, v. f. gr., soft, chloritic, schistose @ 60° conformable to some carbonate seams.						
	66.0-67.0 core ground						
75.5 - 178.5	Ultramafic Rock: blue green, v. f. gr., soft, talcose with carbonate strs. & seams, occ. xstals of pyrite.						
	85.0-87.0 core ground						
	95.0-97.0 core ground						
	146-147 core ground						
	154-157 core ground						
	167 1' white carbonate						
	171 1' white carbonate						
178.5 - 233.4	Carbonatized Intermediate to Mafic Volcanic: green, f. gr., banded at 50-60° with carbonate strs. totalling over 50%; both contacts well defined.						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-23

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
233.4 - 270	Carbonatized Intermediate Volcanic Tuff ?:						
	light green, v. f. gr., seamed with carbonate						
	averaging 1/8" @ 50-60°, slaty to schistose.						
270 - 406	Intermediate Tuff: grey to buff brown, v. f. gr.						
	finely banded @ 50-60° apparently with fine carb						
	seams, locally more massive.						
	324.0-327.0 2" & 1" qtz strs., 10" bleached &	23-1	3.0	Tr			
	rusty section						
	354.5-356 cream coloured bleaching						
	362-363 70% qtz-carb @ 65°						
	368-372 10% qtz-carb-tourm & 11" qtz-carb @	23-2	4.0	Tr			
	45-60°						
	376-384 pronounced banding perhaps after						
	shearing, some conformable lapilli or						
	rounded breccia fragments						
	392.4-394.0 2" white carb str., sli. py	23-3	1.6	Tr			
	394.0-399.0 100% qtz-carb-tourm, sericite, sli.py	23-4	5.0	nil			
	399.0-404.0 90% qtz-carb, sli. tourm, sericite	23-5	5.0	Tr			
	404.0-406.6 90% qtz-carb cont. @ 50-60°	23-6	2.6	Tr			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-23

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	406.6-409.0 banding (shearing) @ 45°, 1% pyrite	23-7	2.4	Tr			
406 - 625.5	Intermediate Tuff: buff brown, v. f. gr., massive						
	to banded @ 50-60°, may be almost totally brown						
	carbonate with secondary grey carbonate strs.,						
	some pyrite.						
	421.5-422.5 70% qtz-carb, 2% py	23-8	1.0	Tr			
	427.0-427.8 70% qtz-carb, 2% py	23-9	0.8	Tr			
	440 4" qtz-carb-tourm, sli. py @ 50°						
	545-557 shear zone @ 60-70° with seaming of						
	carbonate, graphite, pyrite						
	548-551 core ground						
	557-577 shearing less intense						
625.5 - 737.5	Hydrothermal Alteration Zone: light grey, fairly						
	massive but with few fractures; seems to be almost						
	totally carbonate composed of v. fine gr. frag-						
	ments in coarser matrix; upper contact marked by						
	1" carbonate stringer & sharp change.						
	625-630 finely fractured + 2% diss. py	23-10	5.0	Tr			
	630-647 appears brecciated						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-23

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	647.0-684.0 incipient banding green altered						
	carbonate grains & seams of tourm						
	with bleached wlrk contacts & diss.						
	yellow cpy. locally vuggy						
	650.0-655.0 tourmaline + 2% diss. py ?	23-11	5.0	Tr			
	664.5-667.0 as above + 2" qtz str., some pyrite	23-12	2.5	Tr			
	680.1 vuggy with specularite remaining						
	684.0-715.5 generally cream coloured + tourm						
	some pyrite						
	715.5-737.5 mostly green alteration with tourm						
737.5 - 900	Carbonatized Volcanic ?: light green then buff,						
	banded @ 60° or massive may be totally carbonate						
	with few secondary stre. some pyrite.						
	861.7-870.0 breccia & fracture zone						
	873-875 core ground						
	890.0-891.2 4" & 2" qtz-carb stre. + diss. py	23-13	1.2	nil			
900	END.						
	No Test						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-24

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 568' West & 220' South of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED February 1, 1981

COMPLETED February 6, 1981

DEPTH 1000

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 60	Casing (overburden).						
60 - 80.5	Mafic Volcanics: dark green, v. f. gr. slaty cleavage @ 80° with odd conf. carb str., chloritic.						
80.5 - 105	Ultramafic Rock: blue grey, v. f. gr., talcose with odd str. of carbonate.						
105 - 211.7	Mafic Volcanic: dark green, v. f. gr., chloritic carbonate foliation @ 45° suggests tuff.						
	137.5-138.5 irreg. qtz-carb						
	142.5-143.5 barren qtz-carb @ 70°						
	156 3" qtz-carb @ 45°						
	168.5 7" qtz-carb @ 50°						
	170 3" qtz-carb @ 50°						
	175.7 4" qtz-carb @ 70°						
	176.5 4" qtz-carb @ 40°						
	177.6 6" qtz-carb @ 45°						
	182 2" qtz with fragments of brown chlorite ?						
211.7 - 382.5	Ultramafic Rock: blue grey, v. f. gr., soft, talcose, with irreg. seams & sts. of carbonate.						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-24

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	241.0-251.0 mafic volcanic, harder, nontalcose						
	242-245 core ground						
	305-306 core ground						
	304-305 qtz-carbonate						
382.5 - 757	Carbonatized Intermediate Volcanic: medium grey-green to buff colour, v. f. gr. carbonate, disseminated as stringers, totalling +50%, mineral foliation about 50° to c.a., upper cont. fairly abrupt.						
	384.6 1" qtz str.						
	438.5 1" qtz-carb str.						
	442 1" qtz-carb str. @ 90°						
	458.2 3" qtz-carb str. @ 50°, diss. py						
	467-537 graphitic partings, some pyrite						
	527-529 up to 50% graphitic material @ 50°						
	567.7-568.7 9" qtz-carb v. @ 70°	24-1	1.0	0.01			
	604-687 schistose after sericite, carbonate & pyrite @ 50°						
	619-622 60% carbonate-qtz, 2% pyrite	24-2	3.0	0.01			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-24

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	649.3-651.0 graphite & pyrite seaming						
	664.5-669.5 +50% grey carbonate, 2% pyrite	24-3	5.0	Tr			
	706.5 6" qtz-carb str. @ 50°						
757 - 878.8	Hydrothermal Altered Zone: no definite contact;						
	description as follows:						
	757-771.5 grey massive with fine black						
	fractures, sli. pyrite						
	771.5-775.0 10% irreg. qtz strs.; 2% pyrite	24-4	3.5	Tr			
	775.0-781.5 3% py in lightly fractured massive	24-5	6.5	Tr			
	rock						
	781.5-786.0 2% py in massive rock	24-6	4.5	0.01			
	786.0-790.0 70% qtz-tourm v., 2% pyrite	24-7	4.0	Tr			
	790.0-796.0 10% irreg. carb, qtz-tourm, 3% py	24-8	6.0	0.01			
	796.0-800.5 70% carb-qtz, 2% pyrite	24-9	4.5	0.01			
	800.5-805.0 10% qtz-carb strs., 3% seams pyrite	24-10	4.5	0.01			
	805.0-808.5 10% qtz strs., diss. tourm, 1% py	24-11	3.5	nil			
	808.5-810.0 70% qtz, 4% py in wlrk	24-12	1.5	Tr			
	810.0-815.0 light green bands, dressed, vuggy	24-13	5.0	Tr			
	sdi. rock, 1% pyrite						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-24

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	815.0-819.0 grey, silicified, 3% pyrite	24-14	4.0	Tr			
	819.0-823.0 10% qtz-carb, heavy conc. pyrite	24-15	4.0	Tr			
	near bottom						
	823.0-828.0 sheared, graphitic @ 60°, 2% pyrite	24-16	5.0	Tr			
	828.0-829.2 90% qtz-carb, 1% py wlrk	24-17	1.2	Tr			
	829.2-834.0 2" qtz-carb str. conf. to banding	24-18	4.8	0.01			
	(shearing) @ 50°, 3% pyrite						
	834.0-847.0 shearing marked by graphite seams,						
	sericite, pyrite						
	847-861 more massive, but banded @ 70° &						
	vuggy						
	861-864 3% pyrite seams, vuggy at start	24-19	3.0	Tr			
	864-869 60% qtz-tourm strs. @ 70°, 3% pyrite	24-20	5.0	nil			
	in wlrk						
	869-873.8 massive, few fractures, 3% pyrite	24-21	4.8	nil			
	873.8-878.8 1" qtz-tourm str. @ 50°, 2% pyrite	24-22	5.0	Tr			
	878.8-880.8 2" carb str., 1% pyrite	24-23	2.0	nil			
878.8 - 971	Carbonatized Intermediate Volcanic: grey to buff,						
	f. gr. mineral foliation @ 80° to c.a., some						
	seeming of carbonate & pyrite.						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-24

TOWNSHIP _____ PAGE NO. 5

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
971 - 1000	Carbonaceous Agglomerate: light green lapilli up						
	to 3" in carbonaceous matrix, some carb stre.,						
	slight pyrite						
	996.0-997.0 core ground						
	997-1000 5% py in carbonate-carbonaceous	24-24	3.0	nil			
	section						
1000	END.						
	SURVEY						
	Dip Direction						
	400 65° 357° (mag)						
	800 60° 04° (mag)						
	1000 60° (dip test)						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-25

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 568' West & 370' South of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED February 7, 1981

COMPLETED February 12, 1981

DEPTH 1100'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 64	Casing (overburden).						
64 - 108	Intermediate Volcanic: light green, v. f. gr.,						
	massive with faded amygdules to banded @ 50° to						
	c.a.						
	77.5-80.2 90% qtz-carbonate	25-1	2.7	nil			
	97.2-98.2 90% qtz-carbonate as above						
108 - 175	Mafic Volcanic: medium to dark green, softer						
	than above, chloritic with fine carbonate banding						
	@ 50-60°, slaty cleavage.						
	108-110 core ground						
	146-147 core ground						
	152-157 core ground						
	159-160 core ground						
	160.2-160.7 vuggy						
175 - 204	Intermediate Volcanic: light green, v. f. gr.						
	massive with faded amygdules-as above.						
204 - 236.5	Mafic Volcanic: dark green, chloritic, with carb						
	seams @ 45°-60° - as above, contacts between						
	units not well defined.						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-25

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
236.5 - 247.0	Ultramafic Rock: grey to blue black, v. f. gr.						
	soft, banded after carbonate, talcose.						
247.0 - 336.0	Mafic Volcanic: green, chloritic, carbonate						
	seams @ 60° as above.						
	273.7-278.7 20% qtz-carb-tourm, 2% py	25-2	5.0	0.02			
	278.7-282.7 30% qtz-carb-tourm, 4% py	25-3	4.0	0.01			
	284 3" qtz str.						
336 - 482	Ultramafic Rock: grey to blue black, v. f. gr.,						
	banded after carbonate, talcose, occ. sections of						
	mafic volcanic.						
	410.5-412.0 75% irreg. white qtz						
482 - 560	Carbonate Zone: grey, f. gr., irreg. banding at						
	about 50° of carbonate totalling +50%, remainder						
	probably chlorite, scattered mariposite-fuchsite.						
	507.0-514.0 20% white qtz	25-4	7.0	Tr			
	518.2-524.0 20% white qtz, 1% py	25-5	5.8	Tr			
	524.0-530.3 60% qtz with tourm., mariposite, 1%py	25-6	6.3	Tr			
	530.3-535.3 much mariposite, 1% py	25-7	5.0	nil			
	535.3-540.0 10% qtz-tourm, some mariposite, 1%py cpy	25-8	4.7	nil			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-25

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	540.0-545.0 20% qtz with tourm, some mariposite, sli. pyrite	25-9	5.0	Tr			
560 - 908.3	Carbonatized Intermediate Volcanic: green-brown, v. f. gr. more massive then above, few carbonate seams.						
	580 1" white qtz-carbonate						
	621-642 slaty cleavage after fine carbon seams @ 60°						
	642-677 light buff colour, fine banding & slaty cleavage suggests tuff or sediment						
	748.8-764 carbonaceous seams, sli. pyrite						
	799-856 comparitively massive, v. f. gr. foliation features are faded suggesting secondary hydrothermal alteration, becomes increasingly lighter colour (cream) to 856						
	853.6-856.2 30% carb-qtz, some tourm, 2" py	25-10	2.6	Tr			
	859.7-860.8 30% qtz-carb stre. @ 90°, 2% py	25-11	1.1	Tr			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-25

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	860.8-874.5 some seaming of tourm & diss. py						
	874.5-879.2 few tourm seams, 2% py	25-12	4.7	nil			
	903.5-908.3 15% qtz-tourm, 3% py	25-13	4.8	Tr			
908.3 - 930	Banded Carbonatized Intermediate Volcanic: light						
	green alternates with grey carbonate seams.						
	929 4" qtz-carbonate						
930 - 944	Slate: grey to black, v. f. gr. bands @ 90°.						
944 - 1082	Greywacke or Carbonate Sediment: grey to brown,						
	v. f. gr., some banding @ 70-80°, similar to units						
	above; but syngenetic carbonate ?						
	972.0-974.8 3% py in fractures	25-14	2.8	Tr			
	974.8-979.8 60% qtz-carb-tourm, 3% py in wlrk	25-15	5.0	Tr			
	979.8-982.8 25% qtz-carb-tourm, 2% py in wlrk	25-16	3.0	Tr			
	1033 2" qtz-carb str.						
1082 - 1100	Volcanic Fragmental: light green to brown,						
	initially banded then displays agglomeratic						
	appearance with some pyrite.						
	1086.7 3" qtz-carbonate						
1100	END.						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-25

TOWNSHIP _____ PAGE NO. 5

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE				
	SURVEY						
	Depth Dip Direction						
	500' 66° 05° (mag)						
	1000' 53° 02° (mag)						
	1100' 51° (dip test)						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-26

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 220' South & 720' West of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED February 16, 1981

COMPLETED February 17, 1981

DEPTH 185'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 56	Casing (overburden).						
56 - 185	Mafic Volcanic: green, v. f. gr., slightly schistose after banding of carbonate seams @ 60° & chlorite.						
	66.0-67.0 core ground						
	76.0-77.0 core ground						
	108.0-115.0 ultramafic rock-blue black, talcose						
185	END.						
	-						
	Hole restarted after cementing collar.						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-26

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION 220' South & 720' West of hole H-15

CORE LOCATION 79 Pine St. S.

DATUM

BEARING North (est.)

DIP 70°

ELEVATION

STARTED February 18, 1981

COMPLETED February 21, 1981

DEPTH 537'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 61	Casing (overburden).						
61 - 66	Cement (because of cement drill bit missed original hole)						
66 - 208	Mafic Volcanic: green, v. f. gr., banded at 40-60° after carbonate seams, slightly schistose ∴ after chlorite.						
	103.0-111.0 ultramafic rock, blue black-talcose gradational contacts						
	113 1" red hematite						
	166.4-168.4 95% qtz-carbonate						
	175-177 core ground						
208 - 327	Ultramafic Rock: blue black, v. f. gr., soft, talcose, with irreg. carbonate stringers.						
327 - 347.2	Carbonatized Mafic Volcanic: white banded carb @ 60° in light green host rock accounts for 70%.						
	344.9-347.4 50% qtz-carbonate, sli. pyrite	26-1	2.5	nil			
347.2 - 537	Carbonatized Intermediate Volcanic: grey to buff colour, v. f. gr., almost 100% carbonate, may be carbonate sediment, odd qtz str., sli. pyrite.						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-26

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	427.0-447.0 some carbonaceous material in seams						
	445.6-447.5 40% qtz-carb, sli. py	26-2	1.9	nil			
	476.5-448.5 75% qtz-carb, some tourm, sericite, sli. py	26-3	2.0	nil			
	481.7-485.7 50% qtz-carb, tourm, ser.	26-4	4.0	nil			
	485.7-490.7 80% qtz-carb, tourm, ser.	26-5	5.0	nil			
	501.2-502.7 50% qtz-carb, tourm, ser., sli. py	26-6	1.5	nil			
	505.2-507.3 90% qtz-carb, tourm, ser., sli. py	26-7	2.1	nil			
	522.4-523.9 50% qtz-carb, tourm, ser., sli. py	26-8	1.5	nil			
	529.0-562.7 60% qtz-carb, tourm, ser., sli. py	26-9	3.7	nil			
537	END.						
	Hole lost when core barrel & bit stuck in bottom of hole.						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME — HOLE NO. 81-26A

TOWNSHIP Ogden Township — PAGE NO. 1

LOCATION 225' South & 720' West of hole H-15 — CORE LOCATION 79 Pine St. S. — STARTED February 22, 1981

DATUM — COMPLETED February 27, 1981

BEARING North (est.) — DEPTH 997'

ELEVATION — DIP 70°

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 66	Casing (overburden).						
66 - 212	Mafic Volcanic: green, v. f. gr., chloritic with carbonate strs. @ 60° to c.a.						
	110.0-118.3 ultramafic rock-blue black, v. f. gr. talcose						
	172.8 6" qtz str.						
	120.0-121.2 heavy epidote						
212 - 330.7	Ultramafic Rock: blue black, v. f. gr. numerous carbonate strs., talcose, minor pyrite.						
	295-297 core ground						
330.7 - 358.5	Carbonatized Mafic Rock: grey green, f. gr., numerous (+ 50%) white carbonate strs. @ 60° to c.a.						
	336.7-338.2 80% qtz-carb	26A-1	1.5	nil			
	346.8-353.4 75% qtz-carb + mariposite, sli. py	26A-2	6.6	nil			
358.5 - 724	Carbonate Rock: grey to buff colour, v. f. gr., massive as compared to unit above, with odd conformable carbonate str. @ 60° to c.a., previously termed "carbonatized intermediate volcanic".						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-26A

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	385.0-390.0 60% qtz-carb with tourm, sericite,	26A-3	5.0	nil			
	sli. py						
	390.0-394.0 40% qtz-carb with tourm, sericite,	26A-4	4.0	nil			
	sli. py						
	396.9-400.2 much grey to black carb, sericite,	26A-5	3.3	nil			
	sli. py						
	400.2-403.3 70% qtz-carb + sericite, sli. py	26A-6	3.1	nil			
	403.3-420.0 some qtz-carb + mariposite, sericite						
	456-459.4 70% qtz-carb + tourmaline, sericite	26A-7	3.4	nil			
	459.4-463.5 carbonate & graphitic material						
	469-479 graphitic with carbonate						
	479-585.5 grey to buff colour, slaty cleavage						
	@ 60° with odd grey to black carb str.						
	570 1" carbonaceous						
	585.5-587.3 80% qtz-carb + tourm	26A-8	1.8	nil			
	593-594.3 80% qtz-carb, tourm	26A-9	1.3	nil			
	594.3-617 pronounced carbonate banding, almost						
	schistose						
	597.2 10" qtz-carb v.						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-26A

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	604.6-607.5 90% qtz-carb, tourm, sli. py	26A-10	2.9	nil			
	612.6 2" carb, rust, & gouge - fault						
	613.3 1" rust - fault						
	617-724 buff colour & more massive						
	682.6-683.6 50% qtz-carb + tourmaline	26A-11	1.0	nil			
	704.5-709.5 30% irreg. qtz-carb + tourmaline	26A-12	5.0	nil			
	710.7 3" qtz-carb + tourm						
724 - 773.5	Hydrothermal Alteration Zone: fairly massive buff						
	carbonate with heavy local concentrations of						
	tourmaline.						
	742.0-743.4 2" qtz str. @ 45°, tourm, 1% py	26A-13	1.4	nil			
	in wlrk						
	747-751.6 few irreg. strs. of tourm & qtz	26A-14	4.6	nil			
	751.6-756.6 60% brecciated tourm, 10% grey qtz	26A-15	5.0	nil			
	strs., 3% pyrite						
	756.6-758.1 75% tourmaline-qtz, 5% py	26A-16	1.5	nil			
	758.1-761.5 massive, sli. py	26A-17	3.4	nil			
	761.5-767.0 10% qtz-carb strs., 3% py, sericite	26A-18	5.5	nil			
	767.0-772.0 60% carb-qtz @ 50°, 3% py, sericite	26A-19	5.0	nil			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-26A

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	772.0-773.5 1% pyrite	26A-20	1.5	nil			
773.5 - 837	Slate & Carbonate Rock: black bands of slate @						
	45-90° with intervening carbonate.						
	774 3" gouge - fault						
	832.4-837.0 80% qtz-carb v. + 1" massive pyrite	26A-21	4.6	nil			
837 - 977	Carbonate Rock: grey, f. gr., slaty carbonaceous						
	cleavage @ 70°.						
	843.6-849.0 20% qtz-carb, tourm, 2% py	26A-22	5.4	nil			
	877-879.8 20% qtz-carb @ 45%, sli. py	26A-23	2.8	nil			
	903 3" qtz-carb str.						
	929.5-932 20% qtz-carb str. + tourm, sli. py	26A-24	2.5	nil			
	944.7-946 60% qtz-carb + tourm, sli. py	26A-25	1.3	nil			
	972-977 core shows parting at 70° after						
	shearing, carbonaceous planes &						
	schistosity						
977 - 986.4	Pyritized Graphite Carbonate Zone: foliated at						
	80°.						
	977-981.5 25% grey carbonate, 4% pyrite	26A-26	4.5	nil			
	981.5-986.5 grey carb, black graphite, 8% pyrite	26A-27	5.0	nil			

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-26A

TOWNSHIP _____ PAGE NO. 5

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
986.4 - 997	Carbonate Rock: as above.						
997	End.						
	Dip Test @ 977' - 53.5°						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-27

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION Line 32 East
Station 15+00 South
(geophysical grid)

CORE LOCATION 79 Pine St. S.

DATUM

BEARING grid North

DIP 70°

STARTED March 1, 1981

COMPLETED March 7, 1981

DEPTH 937'

ELEVATION

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz	Ag/oz		
0 - 64	Casing (overburden).						
64 - 98.5	Intermediate Carbonatized Volcanic: light green, v. f. gr., poorly defined small grey spheroids at intervals - amygdules.						
98.5 - 177	Carbonate Rock: grey to buff colour, colour banding at 45° may represent bedding, little by few carbonate strs.						
	134.6-137.0 80% white qtz v.; at contact with sericite & in sericite seams is pink metallic perhaps native silver or tellurids	27-1	2.4	nil	Tr		
	137.0-140.2 100% barren white qtz	27-2	3.2	nil	Tr		
	140.2-142.4 90% white qtz, few seams light brown tourm. sericite, speck of pink metallic	27-3	2.2	nil	Tr		
	142.4-144.6 green carbonatized wlrk	27-4	2.2	nil	Tr		
	144.6-149.6 75% qtz-carb with irreg freq. of wlrk	27-5	5.0	nil	Tr		
	149.6-155.1 50% qtz-carb + wlrk & some tourm. sericite	27-6	5.5	nil	Tr		

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-27

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz	Ag/oz		
	155.1-157.0 core ground						
	157.0-161.0 50% qtz-carb, irreg. frag. of wlrk, sli. tourm, sericite	27-7	4.0	nil	Tr		
	161.0-166.0 80% carb-qtz, some tourm, ser.	27-8	5.0	nil	Tr		
	166.0-169.8 60% carb-qtz	27-9	3.8	nil	Tr		
	176.5-177.5 carbonate, silica, pyrite, etc. banded at 45°	27-10	1.0	nil	Tr		
177 - 448	Intermediate to Mafic Carbonatized Volcanic: grey to green, v. f. gr. with scattered amygdules chloritic & epidotized locally & banded @ 60°.						
	232.7-238.5 1st & last ft. banded carbonate-qtz with 8% pyrite	27-11	5.8	0.12			
	302-309 ultramafic, blue-black, talcose						
	326 6" qtz-epidote-hematite str.						
	366-409 carb filling, amygdules & epidote						
	409-448 banded, chloritic						
448 - 476	Ultramafic Rock: blue black, v. f. gr. talcose: bottom contact fairly sharp.						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-27

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz	Ag/oz		
476 - 901.7	Greywacke-Slate: grey to black, v. f. gr.						
	uniform banding @ 65° to c.a., odd carb-qtz str.						
	576.0 4" carbonate-qtz str.						
	648 6" carbonate-qtz in breccia zone						
	adjacent to dragged sediments						
	656.5 4" carbonate-qtz						
	777 7" of qtz-carb str.						
	801-802.8 6" & 1" qtz-carb str., some pyrite	27-12	1.8	0.03			
901.7 - 910.5	Carbonate-Quartz Vein: grey, sli. pyrite.						
	901.7-905.9 90% carb-qtz, 1" gouge at start	27-13	4.2	Tr			
	indicates fault						
	905.9-910.9 90% carb-qtz	27-14	5.0	Tr			
910.5 - 937	Carbonate Rock: light green, v. f. gr., faded						
	banding at 70°, very high carbonate content, 1% diss.						
	pyrite as seams.						
	925.6-930.6 representative sample	27-15	5.0	Tr			
937	END.						
	Dip Test at 937' - 61°						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY J. V. BONHOMME HOLE NO. 81-28

TOWNSHIP Ogden Township PAGE NO. 1

LOCATION Line 32 East
Station 20+00 South
(geophysical grid)

CORE LOCATION 79 Pine St. S.

DATUM

BEARING grid North

DIP 70°

STARTED March 9, 1981

COMPLETED March 15, 1981

DEPTH 1107'

ELEVATION

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
0 - 88	Casing (overburden).						
88 - 277	Carbonate Rock: light grey-green, v. f. gr., generally massive with local banding @ 50-60°.						
	192.0-193.0 brecciated rusty qtz	28-1	1.0	nil			
	241-263 cream stretched ovoids may represent old amygdules						
	269-274 colour is light brown						
	261-277 cream to buff colour						
	274-277 core ground						
277 - 301	Hydrothermal Alteration Zone: grey to light green, banded at 45°-50° marked by secondary carbonate, mariposite, pyrite.						
	277-283 light green to buff						
	283-288.8 buff colour with slaty shearing may be contact zone of differing rock types						
	283-289 70% carbonate with 5% py @ 50°	28-2	6.0	Tr			
301 - 404	Carbonate Rock: brown, v. f. gr. generally massive, occ. with banding at 50-60°, very high carbonate.						

Drilled By Dominik

Signed

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-28

TOWNSHIP _____ PAGE NO. 2

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	330.0-331.0 some banded qtz-carb						
	376.0-387.0 colour changes to light grey-green						
	404.0-441.0 light green, incipient banding at						
	50° acc. diss. pyrite						
441 - 484	Amygdaloidal Intermediate Volcanic: light green,						
	v. f. gr., scattered zones of faded amygdaloids,						
	dark green, chloritic sections probably represent						
	pillow or lapilli selvages, carbonate is secondary						
	as stringers, upper contact poorly defined.						
484 - 619.5	Carbonate Rock: light green to brown, v. f. gr.						
	generally massive very high CO_2, no volcanic						
	structures.						
	539.5-562.5 40% qtz-carb @ 70°	28-3	3.0	Tr			
	616 & 617 4" & 2" pink qtz strs.						
619.5 - 737.5	Intermediate Volcanic: light green, v. f. gr.						
	locally amygdaloidal in part fragmental with						
	lapilli up to 5", in part possible pillow lava.						
	620.7-622 80% pink qtz & carbonate						
	657-677.4 well banded @ 50° suggesting tuff						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-28

TOWNSHIP _____ PAGE NO. 3

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
	624 4" barren white qtz						
	717.1-720.1 70% carb-qtz, tourm, 2% py	28-4	3.0	0.01			
737.5 - 782.3	Carbonate Rock ?: grey to green, f. gr., faded						
	banding at 50°, bottom contact at 50°.						
	753 7" qtz-carb str.						
	762.0-766.0 4-1" qtz strs. with bleached contacts						
	769.6-772.6 70° qtz-carb, tourm, 1% pyrite	28-5	3.0	Tr			
782.3 - 942.5	Intermediate to Mafic Volcanic: green to dark						
	green, v. f. gr., rough colour banding @ 50°,						
	tuff & minor fragmental; fairly chloritic through-						
	out with fine carbonate seems.						
	864 10" qtz-chlorite str.						
	885-893 2% diss. pyrite						
942.5 - 989.5	Ultramafic Rock: blue-black, f. gr., soft						
	talcose, much carbonate.						
	942.5-944 white carbonate						
	954 1" carbonate-qtz						

Drilled By _____

Signed _____

SHIELD GEOPHYSICS LIMITED

DIAMOND DRILL RECORD

PROPERTY _____ HOLE NO. 81-28

TOWNSHIP _____ PAGE NO. 4

LOCATION _____ CORE LOCATION _____ STARTED _____

_____ DATUM _____ COMPLETED _____

_____ BEARING _____ DEPTH _____

ELEVATION _____ DIP _____ _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	Au/oz			
989.5 - 1107	Slate-Greywacke: grey to black, v. f. gr.,						
	banded at 60-70°.						
	993.7 1" carb str., sli. pyrite						
	1007 3" qtz-carb str. @ 90°						
	1086.3 4" qtz str. @ 90°						
	1088.7 3" qtz-carb str.						
	1091-1093 80% qtz-carb @ 50°; 1% pyrite	28-6	2.0	Tr			
1107	END.						
	DIP TESTS						
	500' - 66°						
	1107' - 56°						

Drilled By _____ Signed _____

SHIELD GEOPHYSICS LIMITED

OM71-PE67-C-81 Dup)

APPENDIX

SUMMARY OF SURFACE DRILLING

1980-81 Programme

The AQ drill core recovered from this programme is stored at 79 Pine Street South, Timmins, Ontario.

Commencing in July, 1980, and finishing in March, 1981, the programme is summarized as follows:

Hole No.	Location	Direction	Dip	Depth
80-1	Base line 70+00 East	grid North	50°	301'
80-2	Line 48 East 48+00 North	grid North	50°	245'
80-3	Line 48 East 37+50 North	grid North	50°	553'
80-4	Line 36 East 10+00 North	grid North	50°	552'
80-5	Line 32 East 6+50 South	grid North	50°	770'
80-6	Line 32 East 10+00 South	grid North	50°	857'
80-7	Line 16 East 24+50 South	grid North	53°	747'
80-8	Line 24 East 20+00 South	grid North	50°	757'
80-9	116' West & 75.5' south of hole H-15	N10°E	70°	1397'
80-10	116' West & 57.5' north of hole H-15	North	70°	1067'
80-11	267' West & 92' south of hole H-15	North	70°	1257'
80-12	267' West & 57.5' north of hole H-15	North	70°	857'
80-13	116' West & 176' south of hole H-15	North	70°	985'
80-14	116' West & 326' south of hole H-15	North	70°	977'

Hole No.	Location	Direction	Dip	Depth
80-15	116' west & 207' north of hole H-15	North	70°	887'
80-16	267' West & 157' north of hole H-15	North	70°	650'
80-17	267' west & 192' south of hole H-15	North	70°	854'
80-18	34' East & 60' north of hole H-15	North	70°	757'
81-19	34' East & 210' north of hole H-15	North	70°	650'
81-20	267' West & 342' south of hole H-15	North	70°	1090'
81-21	418' West & 220' south of hole H-15	North	70°	1007'
81-22	418' West & 370' south of hole H-15	North	70°	1097'
81-23	418' West & 70' south of hole H-15	North	70°	900'
81-24	568' West & 220' south of hole H-15	North	70°	1000'
81-25	568' West & 370' south of hole H-15	North	70°	1100'
81-26	220' South & 720' west of hole H-15	North	70°	185'
81-26	220' South & 720' west of hole H-15	North	70°	537'
81-26A	225' South & 720' west of hole H-15	North	70°	997'
81-27	Line 32 East 15+00 South	grid North	70°	937'
81-28	Line 32 East 20+00 South	grid North	70°	1107'
Holes 80-1 to 81-28 incl., hole 81-26A, and two holes number 81-26; total of 30 holes				25077'

Holes 80-1 to 80-8, 81-27 and 81-28 are located with reference to a grid established in 1978-79 for the purpose of controlling geophysical surveys on most of the property. Holes 80-9 to 81-26A inclusive are located with reference to the collar of hole H-15 which is 641 feet S52°W from the centre of shaft No. 1, a line crossing shaft No. 2.

Holes 80-1 to 80-8 inclusive were drilled on unpatented claims to satisfy assessment work requirements. This drilling may be classified as basic exploration having as targets, in most instances, conductive zones representative of sulphide-bearing shear zones. The remaining holes, including 80-9 to 81-28 inclusive, were located to confirm the presence of gold-bearing mineralization several hundred feet west of shaft No. 2 and extend this zone to the west if possible.

Overall cost of this drilling including engineering, assaying and preparation of storage facilities was approximately $16.70 per foot.

1973 Programme

In 1973, Bico Resources Inc. drilled two holes on the Bonhomme property as follows:

Hole No.	Location	Direction	Dip	Depth(ft.)
N-73-1	SW corner of claim P525987	N10°W	45°	801
N-73-2	adjacent to hole 81-27	N13°W	65°	643
			Total of	1444 ft.

Based on hole N-73-2, adjacent to hole 81-27, the rock description and classification compares fairly well with that used in the 1980-81 series. No gold values were encountered.

H Series Programme, 1960-63

No drill core is available from this programme. The drill logs were only recently located which accounts for some apparent

duplication by the 1980-81 programme. The summary, as follows, is basically that prepared in a report by J. M. Bracken, 1972.

Hole No.	Location	Direction (magnetic)	Dip	Depth
H1	10+00 W 14+50 S	North	67°	1182'
H2	6+10 W 14+70 S	North	67°	1710'
H3	1+30 W 10+50 S	North	67°	1144'
H4	14+00 E 5+00 S	327°	55°	1108'
H5	15+50 E 4+00 S	327°	49°	993'
H6	12+00 E 5+50 S	327°	55°	1110'
H7	*approximate; determined from 1961 survey plan	N37°W (astronomic)	45°	193'
H8	"	Northwest	44°	150'
H9	"	Northwest	35°	219'
H10	"	Northwest	45°	183'
H11	"	Northwest	45°	127'
H12	"	Northwest	45°	140'
H13	"	Northwest	45°	239'
H14	50 E 20 N	North	67°	711'
H15	1+30 W 1+00 S	North	67°	745'
H16	6+00 E 4+50 N			221'
H17	1+30 W 3+50 N	North	50°	570'
H18	3+60 W 1+50 N	North	50°	416'
H 19	2+30 W 1+00 S	North	67½°	753'

Hole No.	Location	Direction (magnetic)	Dip	Depth
H20	8+00 E 5+50 N			117'
H21	3+60 W 0+00	North	67°	780'
H22	5+10 W 90 S	North	67°	792'
H23	3+60 W 1+10 S	North	67°	791'
H24	6+10 W 1+00 S	North	67°	773'
H25	1+30 W 2+50 S	North	67½°	1006'
H26	7+30 W 4+00 N	North	50°	402'
H27	13+40 W 2+00 N	North	55°	531'
H28	3+60 W 8+00 S	North	67°	1229'
H29	13+40 W 8+30 S	North	67°?	709'
H30	7+30 W 6+50 N	North	48°	321'
H31	48+00 W 2+50 S	North	47°	225'
H32	46+00 W 0+00	North		92'
H33	2+00 E 2+00 S	North	67°	764'
H34	2+00 E 1+40 N	North	65°	580'
H35	2+00 E 10+00 S	North	67½°	1065'
H36	2+30 W 5+00 S	North	67½°	1107'
H37	5+10 W 5+00 S	North	67½°	1257'
H38	1+30 W 1+60 N	North	67°	650'

after the completion of hole S5, other mining groups provided financing and supervision.

Apparently several geologists were involved in the programme; those shown on the records include W. R. Dunbar and R. A. Shatford. Detailed sections of hole S9 to S16, prepared by Shatford are the most useful records, although they tend to emphasize volcanic structures rather than differences between rock types based on chemistry.

Few significant gold values were encountered in this drilling. J. M. Bracken (1972) reports interesting values in hole S8 for which no log is available.

Apparently two different coordinate systems have been used in locating these holes; locations on the plans, therefore, are only approximate.

Hole No.	Location	Direction (astronomic)	Dip	Depth(ft.)
S1 McIntyre	claims P480785 P480789	N28°W	45°	1524
S2 McIntyre	claim P480790	N30°W	45°	1553
S8	claims P480788 P480791	North	60°?	1696 ?
S9	claims HS958 HS805	N 6°E	55°	766
S10	claims HS958 HS955	N10°W	52°	800
S11	claim HS954	N15°W	50°	1316
S12	claim HS955	N15°W	50°	818
S13	south of claim HS955	N15°W	47°	688

Hole No.	Location	Direction (magnetic)	Dip	Depth
H39	2+30 W 1+40 N		67½°	760'
H40	1+30 W 2+40 S	North	67½°	843'
H41	2+30 W 2+40 S	North	67½°	not completed
	Holes H1 to H41 inclusive, total			26708'

*The location of these holes is based on the coordinates of shaft No. 1 being N920.00 and E890.00, according to an unidentified O.L.S. on a plan dated April 29, 1961.

The drill core from this programme was logged and sampled by W. R. Dunbar with the exception of hole H35 which was logged by former government resident geologist R. H. Ginn, on behalf of New Hope Porcupine Gold Mines Limited. The logs by Dunbar consisted of hand written field notes. An effort was made to prepare a new set of logs from the notes. However, the usefulness of the logs is severely curtailed by the lack of rock classification according to chemical composition. The logs mainly describe real or apparent volcanic structures, a common practice up until the last ten or twenty years when the importance of rock classification according to their basic chemical composition was determined to be of primary importance.

Wherever noted, gold values in the logs have been plotted as accurately as possible to assist in the evaluation of the property.

S Series Programme, 1934-44

This programme, undertaken during the period 1934 to 1944, initially was sponsored by McIntyre Mines but subsequently,

Hole No.	Location	Direction (astronomic)	Dip	Depth(ft.)
S14	S 145 W 931 survey plan	N10°W	48°	668
S15	S1080 W 838 survey plan	N10°W	48°	900
S16	claim HS954	N10°W	50°	987
S17	claim HS954	N10°W	45°	508
S18	claim HS805	N20°W	?	308 ?
S19	claim HS805	N10°W	?	300 ?
				12816

C. P. / P.O. # 550, 147 AVENUE PERRAULT VAL D'OR, QUÉBEC, J9P 4P5, TÉL. (819) 824-4337

CTA

OM71-PE67-C-81

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE

BOURLAMAQUE ASSAY LABORATORIES LTD.

January 26, 1981.

Shield Geophysics Limited,
P.O. Box 630,
Timmins, Ontario.

Att: Mr. R. Bradshaw

Desr Sirs,

Re: Your project "J.V. Bonhomme"

This will confirm that on your samples the fire-assay method is used to determine the gold and/or silver content.

Yours truly,

BOURLAMAQUE ASSAY LABORATOIRE

M. Bernier, Senior technician.

M. Bernier

/jg.

HOLE 19 - 28± INCL.

TEL. (819) 824-4337

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Project: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R.J. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 32738

VAL D'OR, QUÉ., January 20 19 81

ANALYSES / ASSAYS: 35 Au.

Sample No.	Au oz/ton
19 - 1	Trace
2	nil
3	Trace
4	0.01
5	0.01

Sample No.	Au oz/ton
20 - 1	Trace
2	Trace
3	Trace
4	Trace
5	Trace
6	0.16
7	0.03
8	Trace
9	Trace
10	nil
11	Trace
12	Trace
13	Trace
14	Trace
15	Trace
16	Trace
17	Trace
18	0.03
19	1.10
20	Trace
21	Trace
22	Trace
23	Trace
24	0.01
25	Trace
26	0.06
27	Trace
28	0.02
29	0.02
30	0.01

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

(Project: J.V. Bonhomme)

ÉCHANTILLONS SAMPLES: Refer Cert. No. 32738

REÇU DE RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 32774

VAL D'OR, QUÉ., January 26 19 81

ANALYSES ASSAYS: 2 Au (checks)

Sample No.	Au oz/ton	
	Cut 1	Cut 2
pulp: 20-19	0.015	0.010

M. Bourassa

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

ÉCHANTILLONS / SAMPLES reject

REÇU DE / RECEIVED FROM

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 32886

VAL D'OR, QUÉ., February 6 19 8:

ANALYSES / ASSAYS 1 Au check

Sample No.	Reject Au oz/ton
20-19	0.005

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Project: J.V. Bonhomme

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 32787

ÉCHANTILLONS / SAMPLES: core

VAL D'OR, QUÉ., January 26 1981

REÇU DE / RECEIVED FROM: R. Bradshaw

ANALYSES / ASSAYS: 20 Au.

Sample No.	Au oz/ton
21 - 1	nil
21 - 1A	Trace
21 - 2	Trace
21 - 3	Trace
21 - 4	0.01
21 - 5	Trace
21 - 6	Trace
21 - 7	0.01
21 - 8	nil
21 - 9	0.01
21 - 10	nil
21 - 11	0.01
21 - 12	nil
21 - 13	nil
21 - 14	Trace
21 - 15	nil
21 - 16	nil
21 - 17	Trace
21 - 18	nil
21 - 19	nil

J. Ganart
ANALYSTE / ASSAYER
per D. Metakaeli

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE

BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Project: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 32815

VAL D'OR, QUÉ., January 29 19 81

ANALYSES / ASSAYS: 25 Au.

Sample No.	Au oz/ton
22 - 1	Trace
2	Trace
3	0.01
4	Trace
5	Trace
6	Trace
7	0.01
8	Trace
9	nil
10	nil
11	nil
12	Trace
13	0.01
14	Trace
15	nil
16	0.01
17	Trace
18	Trace
19	nil
20	Trace
21	Trace
22	Trace
23	0.01
24	Trace
25	nil

ANALYSTE / ASSAYER

C.P. / P.O. 550 | 147, AVENUE PERRAULT | VAL D'OR, QUÉBEC | J9P 4P5 | TÉL. (819) 824-4337

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Project: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 32906

VAL D'OR, QUÉ., February 10 19 81

ANALYSES / ASSAYS: 13 Au.

Sample No.	Au oz/ton
23 - 1	Trace
23 - 2	Trace
23 - 3	Trace
23 - 4	nil
23 - 5	Trace
23 - 6	Trace
23 - 7	Trace
23 - 8	Trace
23 - 9	Trace
23 - 10	Trace
23 - 11	Trace
23 - 12	Trace
23 - 13	nil

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉ
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Ltd.

Project: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No. 32948

VAL D'OR, QUÉ., February 16 - 19 81

ANALYSES / ASSAYS: 23 Au.

Sample No.	Au oz/ton
24 - 1	0.01
24 - 2	0.01
24 - 3	Trace
24 - 4	Trace
24 - 5	Trace
24 - 6	0.01
24 - 7	Trace
24 - 8	0.01
24 - 9	0.01
24 - 10	0.01
24 - 11	nil
24 - 12	Trace
24 - 13	Trace
24 - 14	Trace
24 - 15	Trace
24 - 16	Trace
24 - 17	Trace
24 - 18	0.01
24 - 19	Trace
24 - 20	nil
24 - 21	nil
24 - 22	Trace
24 - 23	nil

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Projet: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 32986

VAL D'OR, QUÉ., February 19 19 81

ANALYSES / ASSAYS: 16 Au.

Sample No.	Au oz/ton
25 - 1	nil
2	0.02
3	0.01
4	Trace
5	Trace
6	Trace
7	nil
8	nil
9	Trace
10	Trace
11	Trace
12	nil
13	Trace
14	Trace
15	Trace
16	Trace

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Project: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No. 33115

VAL D'OR, QUÉ., March 4 19 81

ANALYSES / ASSAYS: 35 Au.

Sample No.	Au oz/ton
24 - 24	nil
26 - 1	nil
2	nil
3	nil
4	nil
5	nil
6	nil
7	nil
8	nil
9	nil

Sample No.	Au oz/ton
26A - 1	nil
2	nil
3	nil
4	nil
5	nil
6	nil
7	nil
8	nil
9	nil
10	nil
11	nil
12	nil
13	nil
14	nil
15	nil
16	nil
17	nil
18	nil
19	nil
20	nil
21	nil
22	nil
23	nil
24	nil
25	nil

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Projet: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 33172

VAL D'OR, QUÉ., March 10 19 81

ANALYSES / ASSAYS: 12 Au.

Sample No.	Au oz/ton
26A - 26	nil
27	nil

Sample No.	Au oz/ton
27 - 1	nil
2	nil
3	nil
4	nil
5	nil
6	nil
7	nil
8	nil
9	nil
10	nil

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Project: J.V. Bonhomme

ÉCHANTILLONS SAMPLES: pulp

REÇU DE RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No. 33215

VAL D'OR, QUÉ., March 13 19 81

ANALYSES ASSAYS: 10 Ag.

Sample No.	Ag oz/ton
27 - 1	Trace
2	Trace
3	Trace
4	Trace
5	Trace
6	Trace
7	Trace
8	Trace
9	Trace
10	Trace

ANALYSTE / ASSAYER

LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

Shield Geophysics Limited

Project: J.V. Bonhomme

ÉCHANTILLONS / SAMPLES: core

REÇU DE / RECEIVED FROM: R. Bradshaw

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No 33325

VAL D'OR, QUÉ., March 26 19 81

ANALYSES / ASSAYS: 11 Au.

Sample No.	Au oz/ton
27 - 11	0.12
12	0.03
13	Trace
14	Trace
15	Trace
28 - 1	nil
2	Trace
3	Trace
4	0.01
5	Trace
6	Trace

ANALYSTE / ASSAYER

OM 71-PE 67-C-81

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

① GROUND MAG+EM by R.J. BRADSHAW ⇒ 2.4559
FEB. 10/82

②* D.D. HOLES 80-3 TO 80-8 ⇒ REPORT OF WORK #213-80

③* D.D. HOLE 80-1 ⇒ REPORT OF WORK #161-80

④ D.D. HOLES 80-1 TO 80-18 ⇒ O.M.E.P. #24-PE 20-I-80
TORONTO FILE: *OGDEN D.D.R.#18

*THESE HOLES CAN BE VIEWED IN ④ ABOVE

SHIELD GEOPHYSICS LIMITED
MINING EXPLORATION CONSULTANTS & CONTRACTORS
AIRPORT ROAD, TIMMINS, ONTARIO
TELEPHONE (705) 264-9405
MAILING ADDRESS:
P.O. BOX 630
TIMMINS, ONTARIO
P4N 7G2

9 9 : 24

March 3, 1982.

Mining Recorder's Office,
Ministry of Natural Resources,
60 Wilson Avenue,
Timmins, Ontario.

Attention: Mr. Wm. Goode

Dear Sir:

Re: Application for Lease
J. V. Bonhomme Claims - Ogden Township

Mr. J. V. Bonhomme, through a wholly owned Company, holds the following claims in Ogden Township.

Claim Numbers	Number	Status	
P525987 & P525988	2	approval by Ministry of geophysics will complete assessment work requirements	28
P549069 & P539976	2	ready for lease	
P480779 to P480791 incl.	13	ready for lease	
P508675 & P508676	2	ready for lease	
P516477 to P516479 incl.	3	ready for lease	
P517109 to P517112 incl.	4	ready for lease	
P522488 & P522489	2	ready for lease	
P21514 to P21517 incl.	4	patented	20
P24768 to P24770 incl.	3	patented	
P17798, P17799, P17801, P17802 & P18161	5	patented	
HS953 to HS958 incl., HS805 & HS961	8	patented	
	48		

...2

On those claims which are unpatented and ready for lease, Mr. Bonhomme would like to proceed with application for lease.

Many of the claims abut or are surrounded by patented claims as shown on the attached map. I expect that this will effect subsequent instructions concerning survey requirements.

May I hear from you on this matter at your earliest convenience.

Yours truly,
SHIELD GEOPHYSICS LIMITED,

R. J. Bradshaw, P. Eng.

RJB:pd
Encl.

c.c. Mr. J. V. Bonhomme

SHIELD GEOPHYSICS LIMITED

MINING EXPLORATION CONSULTANTS & CONTRACTORS

AIRPORT ROAD, TIMMINS, ONTARIO

TELEPHONE (705) 264-9405
MAILING ADDRESS:
P.O. BOX 630
TIMMINS, ONTARIO
P4N 7G2

March 4, 1982.

82 MAR 9 9:07

Mining Recorder's Office,
Ministry of Natural Resources,
60 Wilson Avenue,
Timmins, Ontario.

Dear Sirs:

Re: Application for Lease
J. V. Bonhomme Claims - Ogden Township

Pursuant to my letter and conversations of March 3rd, please find enclosed a map of J. V. Bonhomme's holdings in Ogden Township.

In view of the distribution of patented and unpatented land held by Mr. Bonhomme and subject to satisfactory survey data being available to the Ministry, a perimeter survey as outlined in yellow would appear to be the most ideal in terms of identifying the unpatented land and proceeding from known survey points along the Township line.

It is, therefore, requested that a survey as shown by the yellow line be undertaken to satisfy the requirements for application of lease of the unpatented claims.

Yours truly,
SHIELD GEOPHYSICS LIMITED,

R. J. Bradshaw.

RJB:pd
Encl.

c.c. J. V. Bonhomme

Pamour Porcupine Mines, Limited
Administration Building
P.O. Bag 2010
Timmins, Ontario, Canada P4N 7X7

pamour

March 8, 1982.

J.V. Bonhomme,
P.O. Box 1023,
Timmins, Ontario.

Attention: Mr. J.V. Bonhomme

Dear Sir:

Re: Assaying and Disposal of Desantis Ore

Enclosed please find a Commercial Transport invoice for $2,027.50 dated March 4, 1982 to cover the cost of moving the Desantis material to a dump location from the main coarse ore stockpile at Pamour Porcupine Mines, Ltd. No. 1 Mine. Would you please make your cheque payable to Commercial Transport, Timmins at the address indicated on the invoice.

Also attached is the assay suite requested for all the trucks of Desantis material delivered to the Pamour 1 Mine. An assay (atomic absorption technique) charge of $647.50 (185 samples x $3.50) has been applied to these samples. It is noteworthy that there has been no charges assessed for the fire assays (16) conducted. Payment of assay charges would be made to Pamour Porcupine Mines, Limited using Account No. 7000 and Reference No. 0694.

Thank you very much for your co-operation in this matter. If you have any questions arising from these charges or handling of same, please contact me at Pamour Porcupine Mines, Limited.

Yours truly,

Roy D. Lindsay,
Area Superintendent,
Metallurgical Operations.

RDL/cn
c.c. W. W. Holmes
D. Towers
Encl.

J.V. Bonhomme
Box 1023
Timmins, Ontario

Pamour Porcupine Mines Limited,
Administration Offices,
Schumacher, Ontario.

Attention: Warren Holmes

Metallurgical Testing of Ore

Dear Sir,

This letter is to confirm that you are authorized to dispose of the rock pile at Pamour # 1 into the cave in pit at your property. This is due to the erratic assays and average low grade obtained on the overall shipment.

I look forward to receiving copies of all individual assays on samples from the trucks that were taken at the scales. So I may conclude a report assessing the stockpile. You can invoice me for charges of moving the rock which I understand will be in the neighbourhood of $ 2,000.00 and also for assay charges.

I thank you for your co-operation.

Yours very truly,

JVB/rm

J.V. Bonhomme.

PAMOUR PORCUPINE MINES LTD. #16

ASSAY REPORT

TRAY - F.A. DATE - FEB. 3/82

TYPE - TRUCK LOCATION - DESTANIS

NO.	SAMPLE NUMBER	F.A. OZ. Per TON Au	Ag	A.A. Au %	Cu %	Zn %	Pb %	Fe %
1	501205	✓		.01				
2	06	✓		TR				
3	07	✓		"				
4	08	✓		.02				
5	09	✓		.01				
6	10	✓		TR				
7	11	.02		.01				
8	12	.01 ✓		.01				
9	13	✓		TR				
10	14	✓		.01				
11	15	.04 ✓		.03				
12	16	✓		TR				
13	17	✓		"				
14	18	.01 ✓		.01				
15	19	✓		.01				
16	501220	✓		TR				
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ASSAYER

PAMOUR PORCUPINE MINES LTD.

ASSAY REPORT

TRAY NO 5

TYPE Truck LOCATION- Desantis

DATE- Feb 12 82

NO.	SAMPLE NUMBER	OZ. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	501317	N.						
2	18	N.						
3	19	.07						
4	20	N.						
5	21							
6	22	N						
7	23	.04						
8	24	.01						
9	25	.02						
10	26	N.						
11	27	.01						
12	28	.01						
13	501329	.01						
14	506447	.01						
15	48	N.						
16	50	.01						
17	51	.04						
18	52	N.						
19	53	.01						
20	54	.04						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ASSAYER

PAMOUR PORCUPINE MINES LTD.

ASSAY REPORT

TRAY NO- 13 B

TYPE - Rocks LOCATION - DESANTIS

DATE - Feb. 1/82.

NO.	SAMPLE NUMBER	OZ. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	501253	.02						
2	501254	.01						
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ASSAYER - D.T.

Property Y

ASSAY REPORT

Area - Trail LOCATION - Decanter DATE - Feb-5-82

NO	SAMPLE NUMBER	oz. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	501233	.01						
2	34	X.						
3	35	.01						
4	36	.01						
5	37	.01						
6	38	X.						
7	39	.01						
8	40	.01						
9	41	.02						
10	42	X						
11	43							
12	44							
13	45	X.						
14	46	.01						
15	47	.01						
16	48	.01						
17	49	.01						
18	50	X.						
19	51	X.						
20	501252	X.						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ASSAYER

ASSAY REPORT

Track Location - DESANTIS

DATE - Jan. 4/83

NO	SAMPLE NUMBER	OZ. Per TON (Au)	Ag	NI %	Cu %	Zn %	Pb %	Fe %
1	501221	T.						
2	22	.01						
3	23	T.						
4	24	.01						
5	25	T.						
6	26	T.						
7	27	.01						
8	28	T.						
9	29	"						
10	30	"						
11	31	T.						
12	501232	.01		Au	Au			
13				AA	FA			
14								
15				70	16			
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ASSAYER -

Lyn-Y

LOCATION- [illegible] DATE- Feb. 24

NO.	SAMPLE NUMBER	OZ. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	9151	.01						
2	52	.10						
3	53	.01						
4	54	.01						
5	55	.01						
6	9156	.X						
7								
8								
9								
10	Ave	0.023						
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ASSAYER- [illegible]

TYPE- Trucks LOCATION- DESANTIS DATE- Feb. 25/82

NO.	SAMPLE NUMBER	OZ. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	501215	"						
2	16							
3	18	"						
4	19	OZ						
5	22	"						
6	23							
7	24							
8	28							
9	29							
10	30							
11	31							
12	32	"						
13	33	.01						
14	37							
15	48							
16	50							
17	51							
18	52							
19	53							
20	55	.01						
21	56							
22	60							
23	61	.01						
24	63	.01						
25	66	"						
26	67							
27	72							
28	73							
29	74							
30	77							
31	78							
32	80							
33	81							
34	83							
35	501284	"						

ASSAYER - G.O.T.

TRAY NO- 3

ASSAY REPORT

TYPE- Tk LOCATION- Desantis DATE- Febr. 25/82

NO.	SAMPLE NUMBER	OZ. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	501201	tr.						
2	02	.03						
3	03	tr.						
4	04	tr.						
5	05	.06						
6	06	.04						
7	07	tr.						
8	08	.01						
9	09	tr.						
10	10							
11	11							
12	13							
13	35							
14	36							
15	39							
16	42							
17	46							
18	47							
19	54							
20	62							
21	65							
22	68	tr.						
23	69	.03						
24	70	tr.						
25	71	tr.						
26	75	.01						
27	82	.17						
28	85	tr.						
29	87							
30	88							
31	90							
32	91							
33	97							
34	501299							
35	501305	tr.						

ASSAYER- DT

HAMOUR-PORCUPINE MINES LTD.

TRAY NO - 2

ASSAY REPORT

TYPE - Tr. LOCATION - Desantis

DATE - FEB. 25/82.

NO.	SAMPLE NUMBER	OZ. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	501212	.01						
2	14	Tr.						
3	21	Tr.						
4	26	.01						
5	27	Tr.						
6	34	Tr						
7	38	Tr						
8	41	.01						
9	49	.01						
10	57	.03						
11	58	Tr.						
12	76							
13	79							
14	86							
15	89							
16	92							
17	93							
18	94	Tr						
19	95	.01						
20	96	Tr						
21	501298	.01						
22	501300	.01						
23	01	.01						
24	02	.02						
25	03	Tr.						
26	04	.01						
27	06	.02						
28	07	.06						
29	08	Tr						
30	09	Tr						
31	11	Tr						
32	12	.01						
33	14	.01						
34	15	Tr						
35	501316	.13						

ASSAYER - DT

PAMOUR PORCUPINE MINES LTD.

ASSAY REPORT

TRAY - 7B

TYPE - Truck LOCATION - Dreaneton

DATE - Feb 24 (62.

NO.	SAMPLE NUMBER	OZ. Per TON Au	Ag	Ni %	Cu %	Zn %	Pb %	Fe %
1	501248	.01						
2	501259	.K.						
3	501310	.01						
4	501313	.01						
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								

ASSAYER - D.F.

SHIELD GEOPHYSICS LIMITED

MINING EXPLORATION CONSULTANTS & CONTRACTORS

AIRPORT ROAD, TIMMINS, ONTARIO

TELEPHONE (705) 264-9405
MAILING ADDRESS:
P.O. BOX 630
TIMMINS, ONTARIO
P4N 7G2

October 23, 1981.

Mr. J. V. Bonhomme,
168 Algonquin Blvd. E.,
Timmins, Ontario.

Dear Sir:

Re: Ogden Township Property

Please be advised that the status of the Ogden Township claims is as follows:

Claim Numbers	Number	Status
P525987 & P525988	2	requires 99 days
P549069 & P539976	2	ready for lease
P480779 to P480791 incl.	13	ready for lease
P508675 & P508676	2	ready for lease
P516477 to P516479 incl.	3	ready for lease
P517109 to P517112 incl.	4	ready for lease
P522488 & P522489	2	ready for lease
P21514 to P21517 incl.	4	patented
P24768 to P24770 incl.	3	patented
P17798, P17799, P17801 P17802 & P18161	5	patented
HS953 to HS958 incl., HS805 & HS961	8	patented
	48	

...2

You will note that all of the claims, with the exception of two, are ready for lease which involves a perimeter land survey about the claim block.

Claims P525987 and P525988 require 99 days additional assessment work. I have recently received at a cost of $1002. geophysical data covering these two claims. On preparation and submission to the Ministry of maps and a report of the geophysical survey data, work requirements are expected to be satisfied. I require your approval to proceed with this matter. Thereafter, applications for lease can be made on claims P525987 and P525988.

Yours truly,

SHIELD GEOPHYSICS LIMITED,

RJB:pd

R. J. Bradshaw, P. Eng.

Ontario

OCT 23 13:22

Ministry of the Environment
Northeastern Region
83 Algonquin Blvd., West,
Timmins, Ontario.
P4N 2R4
(705) 264-9474

October 23, 1981

Mr. J.V. Bonhomme,
168 Algonquin Blvd. E.,
Timmins, Ontario.

Dear Sir:

On August 13, 1981 I submitted for analysis some mine shaft water you obtained from the Desantis Mine. Results of the analysis showed the arsenic level in the water to be at 2.2 mg/l. Our Ministry restricts the input of arsenic to the environment at 0.5 mg/l.

I have reviewed your proposal of emptying the mine water into a ditch. The ditch extends from the mining property eastward to Mountjoy River. The ditch should provide sufficient time for the arsenic to settle out before the mine water enters Mountjoy River. I will be monitoring the flow through the ditch to be sure there is sufficient settling time. I would appreciate a drawing showing the exact location of the ditch.

Please remember that we must approve of any other type of discharge you may be planning.

Yours truly,

B. Cave,
Environmental Officer.

BC/ha

Ministry of Natural Resources
Minister

Whitney Block
Queen's Park
Toronto Ontario
416/965-1301

OCT 26 8:56

October 21st, 1981.

Mr. J.V. Bonhomme,
168 Algonquin St. E.,
Timmins, Ontario.

Dear Mr. Bonhomme:

I refer to our recent telephone conversation concerning the draining of the shafts of a mine in Ogden Township.

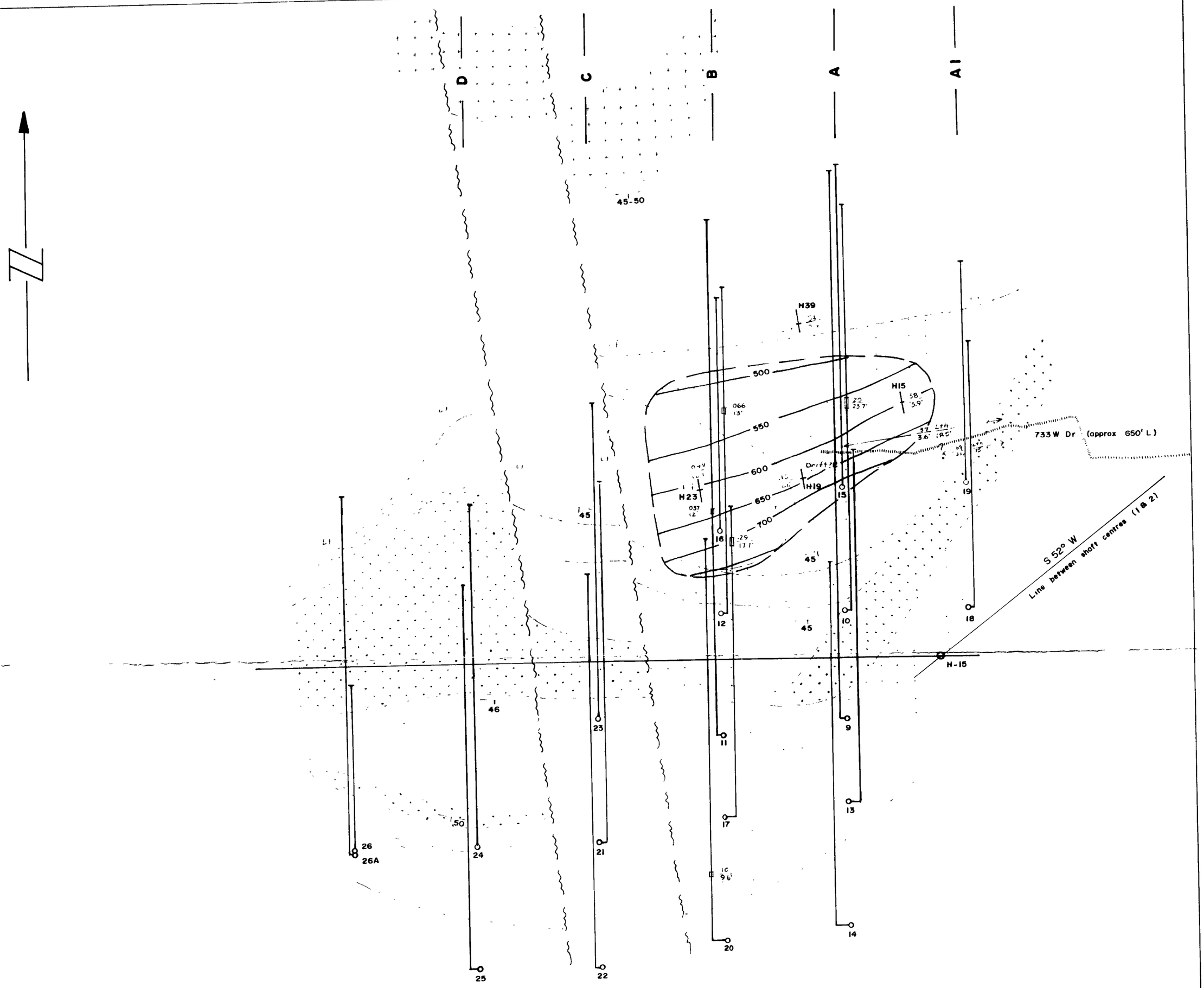
Mr. John Hatton, District Officer, Abatement, Ministry of the Environment, advises me staff of that Ministry have now been in discussion with you and have suggested disposal of waste water to either a tailings type area or a swamp or marsh. This is necessitated by an abnormal amount of arsenic in the water samples. I am told it is five times the accepted limit. We are hopeful that an early solution to this problem will be found.

In respect to your application under the Ontario Mining Exploration Program, there does not appear to be a problem. I understand you had an initial designation from September to December, 1981 and received a grant of $40,636. Your 1981 program was split into two segments and under the initial segment to March 31, 1981 you received $43,061. Your second segment provides you with a possible maximum grant of $226,250 if you incur eligible expenditures of $905,000 before December 31, 1981.

I hope this is a satisfactory explanation of the current status of your problem.

Yours sincerely,

Robert L. Kertson,
Special Assistant to the
Minister.



LEGEND

- Mafic volcanics, probable tuff
- Ultramafic rock
- Intermediate carbonatized volcanics (buff coloured rock - carbonate sediment)
- Slate or greywacke
- Hydrothermal alteration zone
- Carbonate stringer zone

SYMBOLS

- Horizontal projection of drill hole
- Contour and outline of gold zone
- 20 / 23.7' — Gold value - oz./ton over width in feet
- Fault
- 45 — Strike and dip
- H23 — Approx. location of gold intersection - H Series

63.3962

DIAMOND DRILL HOLE PLAN

J. V. BONHOMME PROPERTY

OGDEN TOWNSHIP, ONTARIO

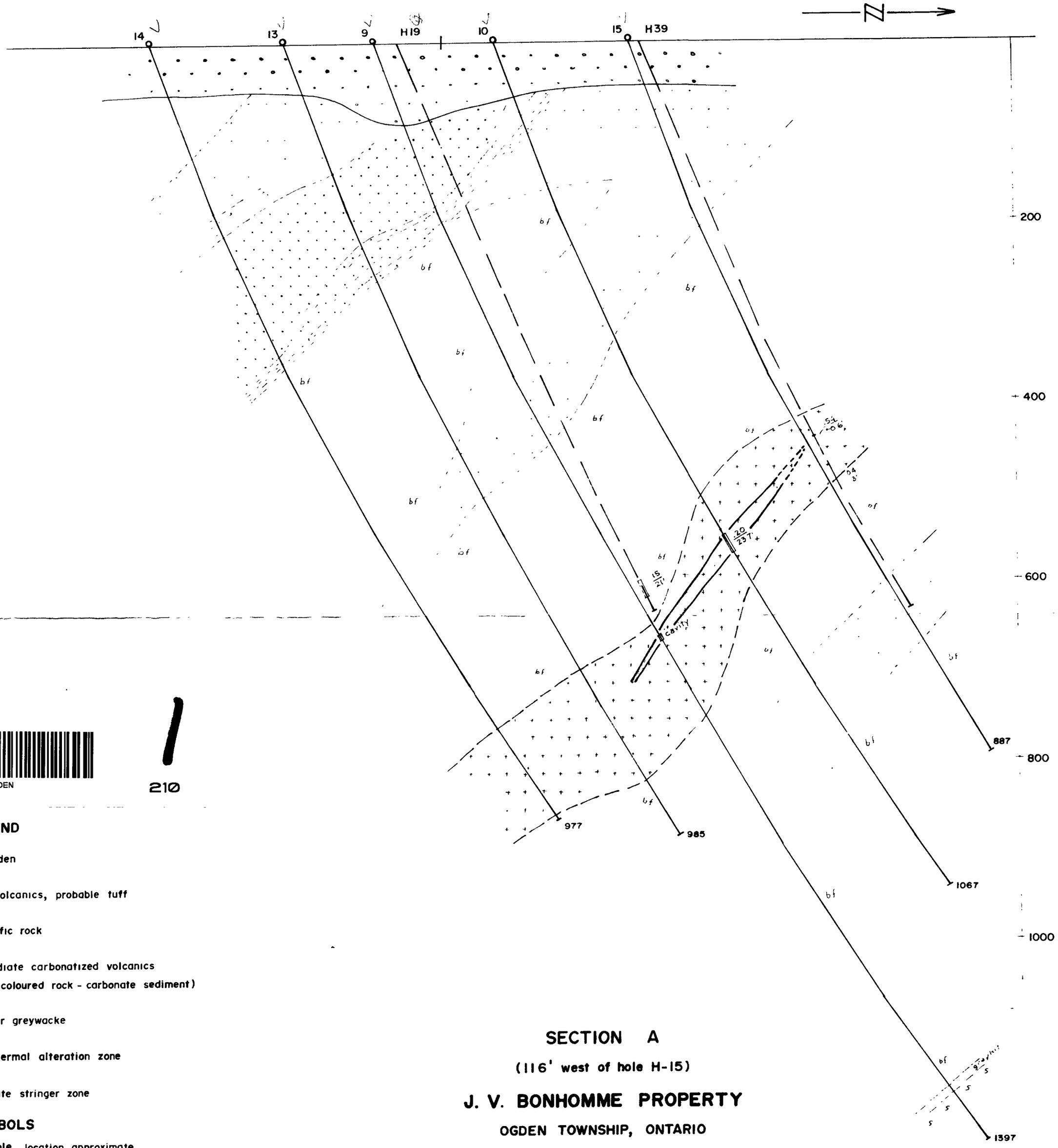
Scale

0 feet 100 200 300

0 metres 30 60 90

FEBRUARY, 1981 FIGURE 1

OM71 - PE67 - C - 81



LEGEND

- Overburden
- Mafic volcanics, probable tuff
- Ultramafic rock
- bf — Intermediate carbonatized volcanics (buff coloured rock - carbonate sediment)
- S — Slate or greywacke
- Hydrothermal alteration zone
- Carbonate stringer zone

SYMBOLS

- Drill hole, location approximate
- 20 / 23.7' — Gold value - oz./ton over width in feet
- Fault

SECTION A

(116' west of hole H-15)

J. V. BONHOMME PROPERTY

OGDEN TOWNSHIP, ONTARIO

Scale

0 feet 100 200 300

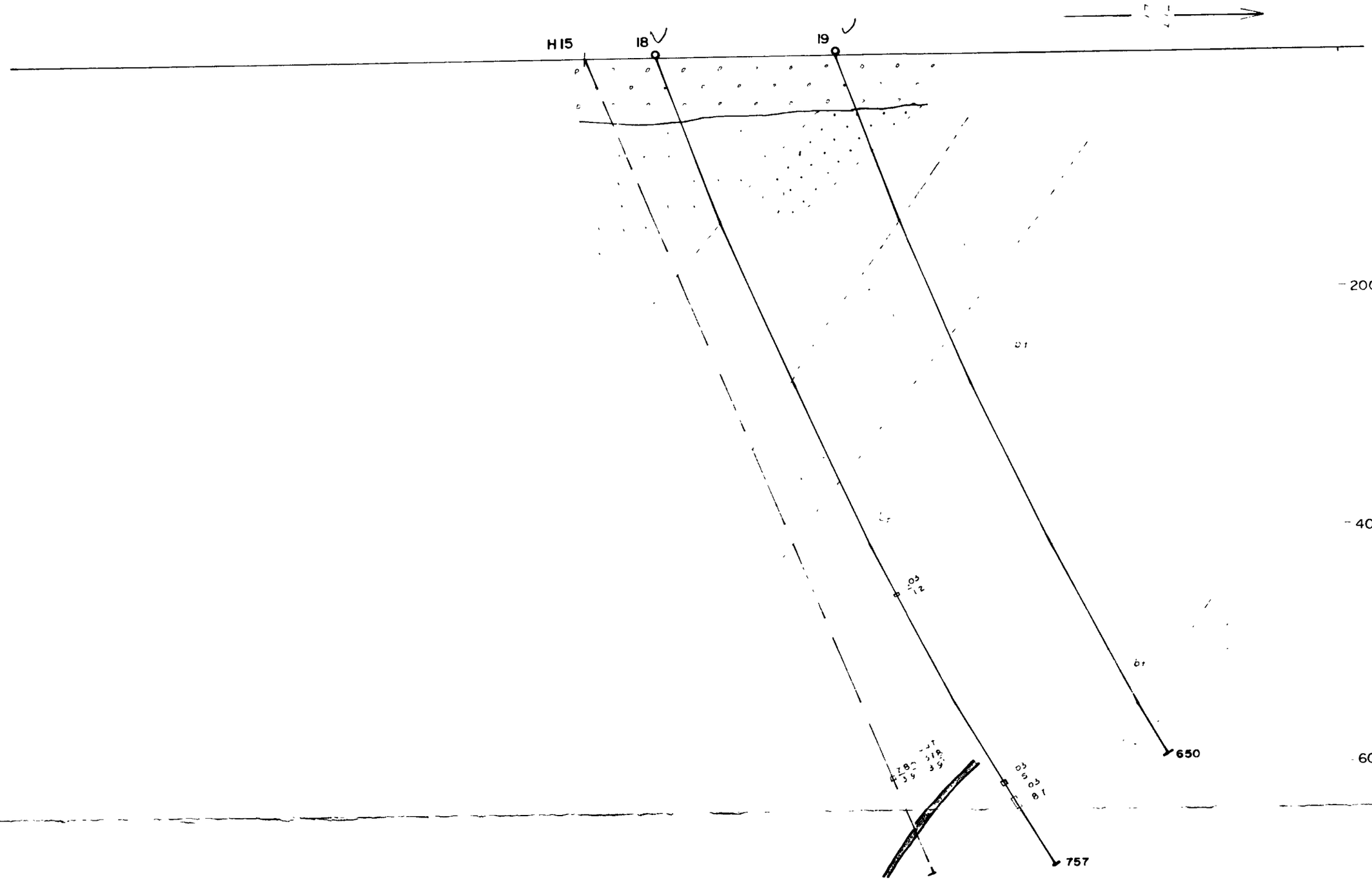
0 metres 30 60 90

FEBRUARY, 1981

FIGURE 2

63.3962

OM 71 - PE67- C -81



63.3962

SECTION AI

(34' east of hole H-15)

J. V. BONHOMME PROPERTY

OGDEN TOWNSHIP, ONTARIO

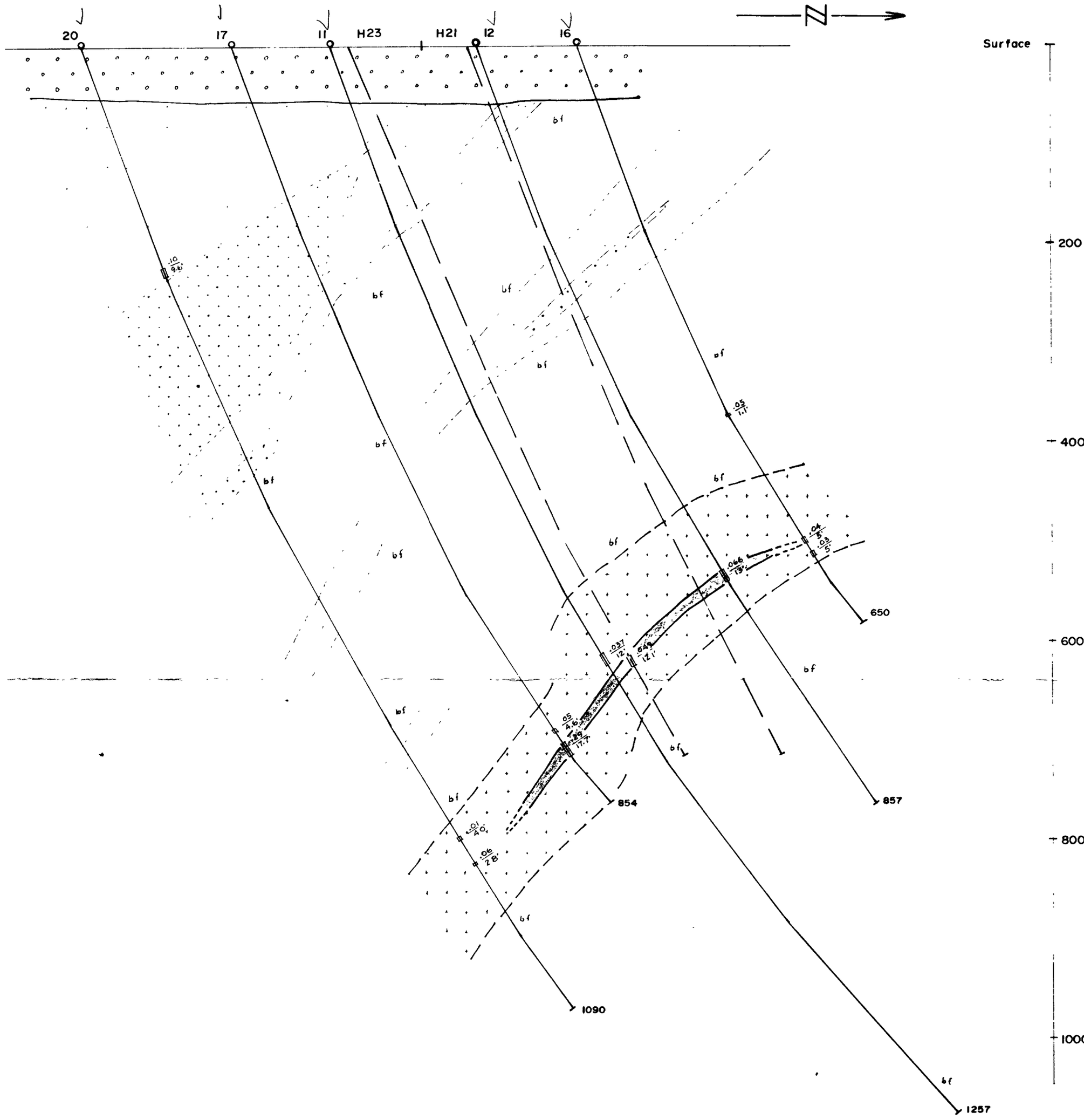
Scale

0 feet 100 200 300

0 metres 30 60 90

FEBRUARY, 1981

FIGURE 2



SECTION B

63-39

(267' west of hole H-15)

J. V. BONHOMME PROPERTY

OGDEN TOWNSHIP, ONTARIO

Scale

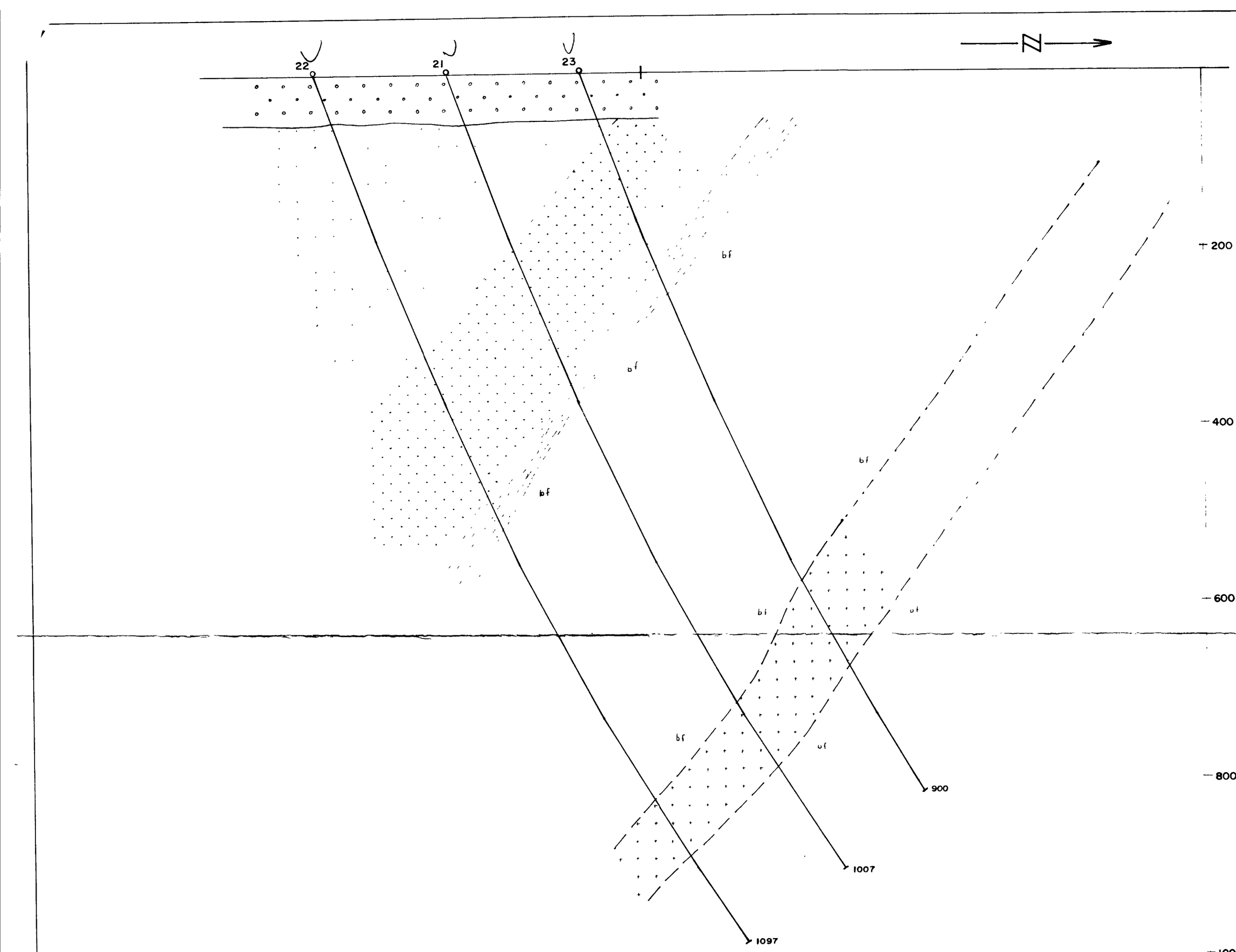
0 feet 100 200 30

0 metres 30 60 90

FEBRUARY, 1981

FIGURE

OM71-PE67-C-81



63.3962

SECTION C

(418' west of hole H-15)

J. V. BONHOMME PROPERTY

OGDEN TOWNSHIP, ONTARIO

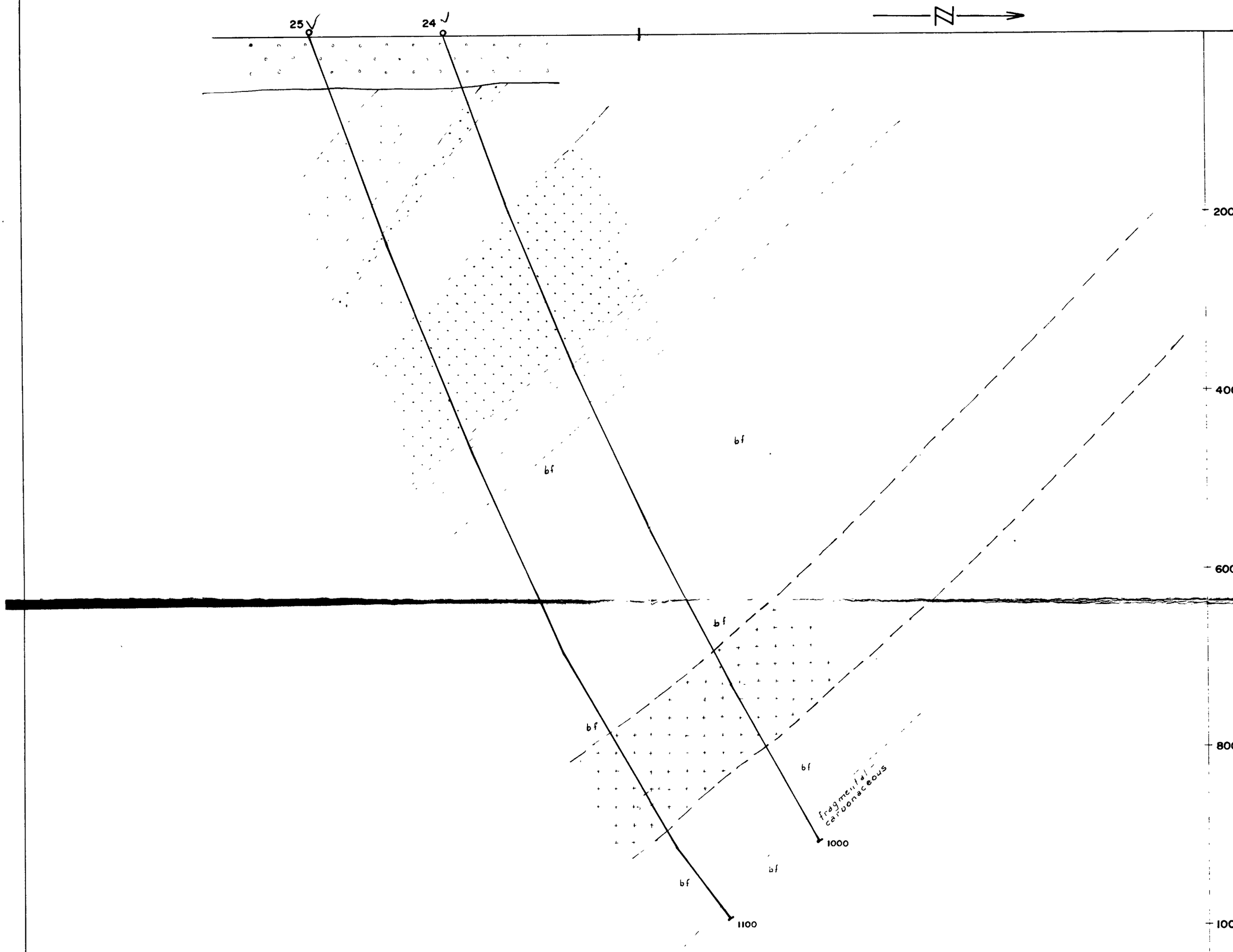
Scale

0 feet 100 200 30

0 metres 30 60 90

FEBRUARY, 1981 FIGURE

OM71 - PE67 - C - 81



63.396

SECTION D

(568' west of hole H-15)

J. V. BONHOMME PROPERTY

OGDEN TOWNSHIP, ONTARIO

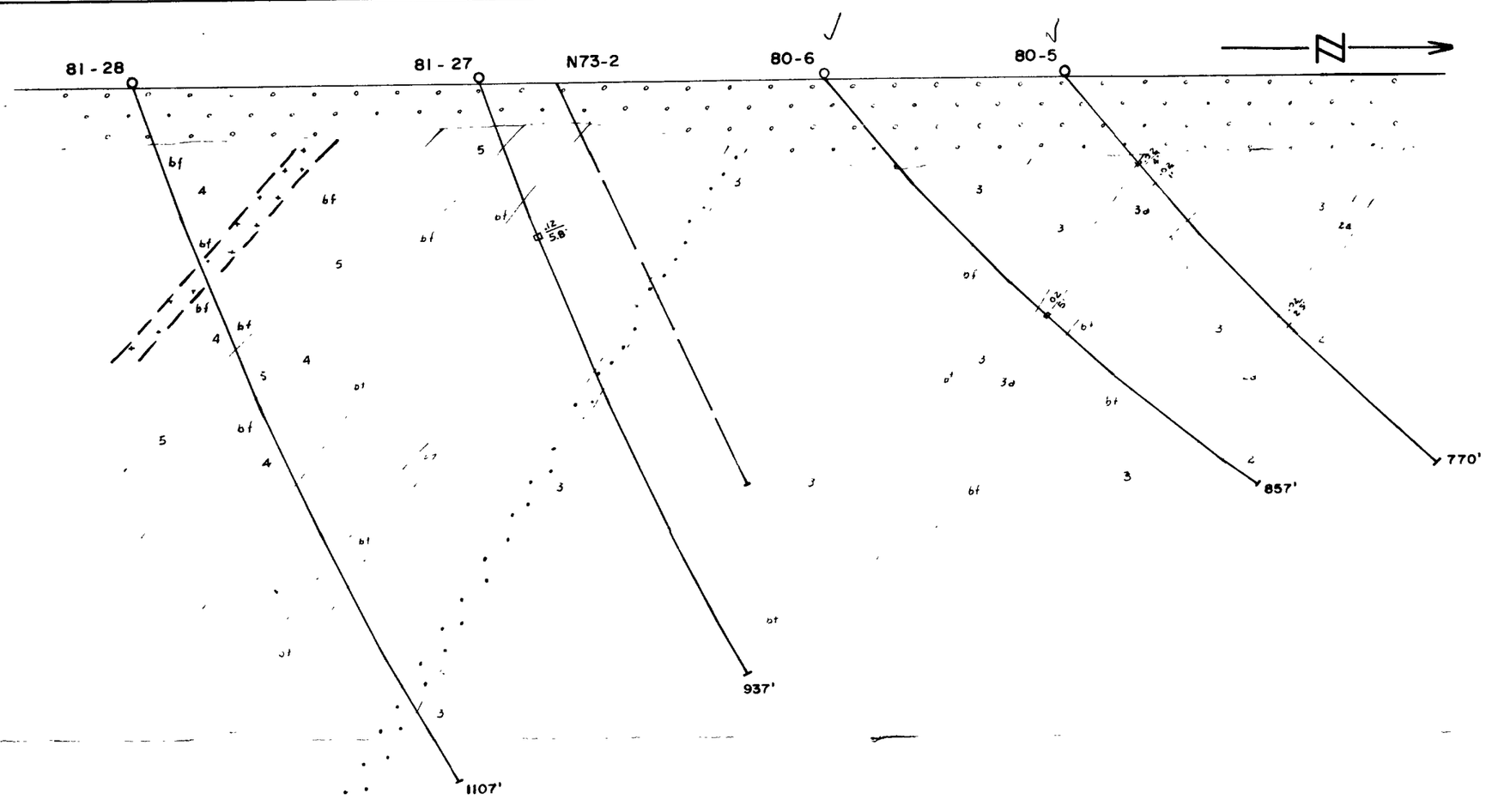
Scale

0 feet 100 200 30

0 metres 30 60 90

FEBRUARY, 1981 FIGURE

OM71 - PE67 - C - 81



63.3962

SECTION E

J. V. BONHOMME PROPERTY

OGDEN TOWNSHIP, ONTARIO

Scale

0 feet 200 400 600

0 metres 60 120 180

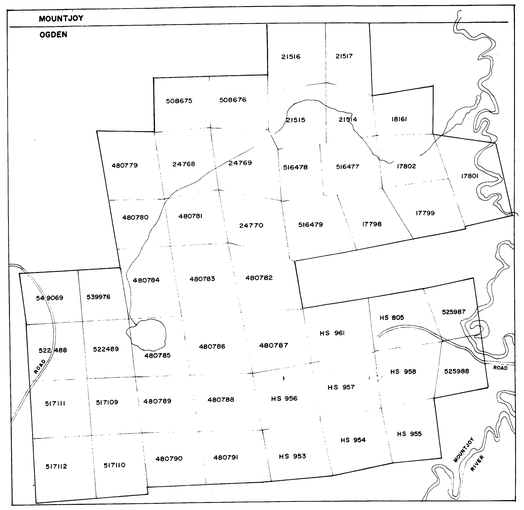
APRIL, 1981

FIGURE 6

OM71-PE67-C-81

For LEGEND see FIG. 7

KEY MAP 1 inch to 1320 feet



SYMBOLS

- Horizontal projection of drill hole — Series BI – location established; Series H – location fairly well established; Series S – location approximate
- Rock contact 70° below surface, established from drill hole, projected
- Strike and dip
- Fault – vertical
- Gold value in oz per ton over width in feet
- Horizontal projection of gold zone, with contours showing depth from surface
- Near surface gold zone west of shaft No. 1

LEGEND

1 — Diabase

PORCUPINE GROUP (Temiskaming Sediments) Pyke et al

2 — Greywacke, slate
2a Graphite with pyrite

TISDALE GROUP Pyke et al

3 — Greywacke, slate
3a Graphite with pyrite

4 — Carbonate rock, buff to cream coloured and generally banded, may in part be intermediate tuff

5 — Intermediate volcanic tuffs and flows
5a Agglomerate

Mafic volcanics, dark green, carbonate stringers and chloritic

Ultramafic rock, blue black and talcose

In some locations, possibly stratigraphically related to 3 by facies change

ALTERATION

Carbonate stringer zone

Hydrothermal zone, abundant tourmaline, quartz, sulphides and locally vuggy

DIAMOND DRILLING & GEOLOGY
J. V. BONHOMME PROPERTY
OGDEN TOWNSHIP, ONTARIO

SCALE
0 feet 200 400 600
0 metres 60 120 180

63.3962

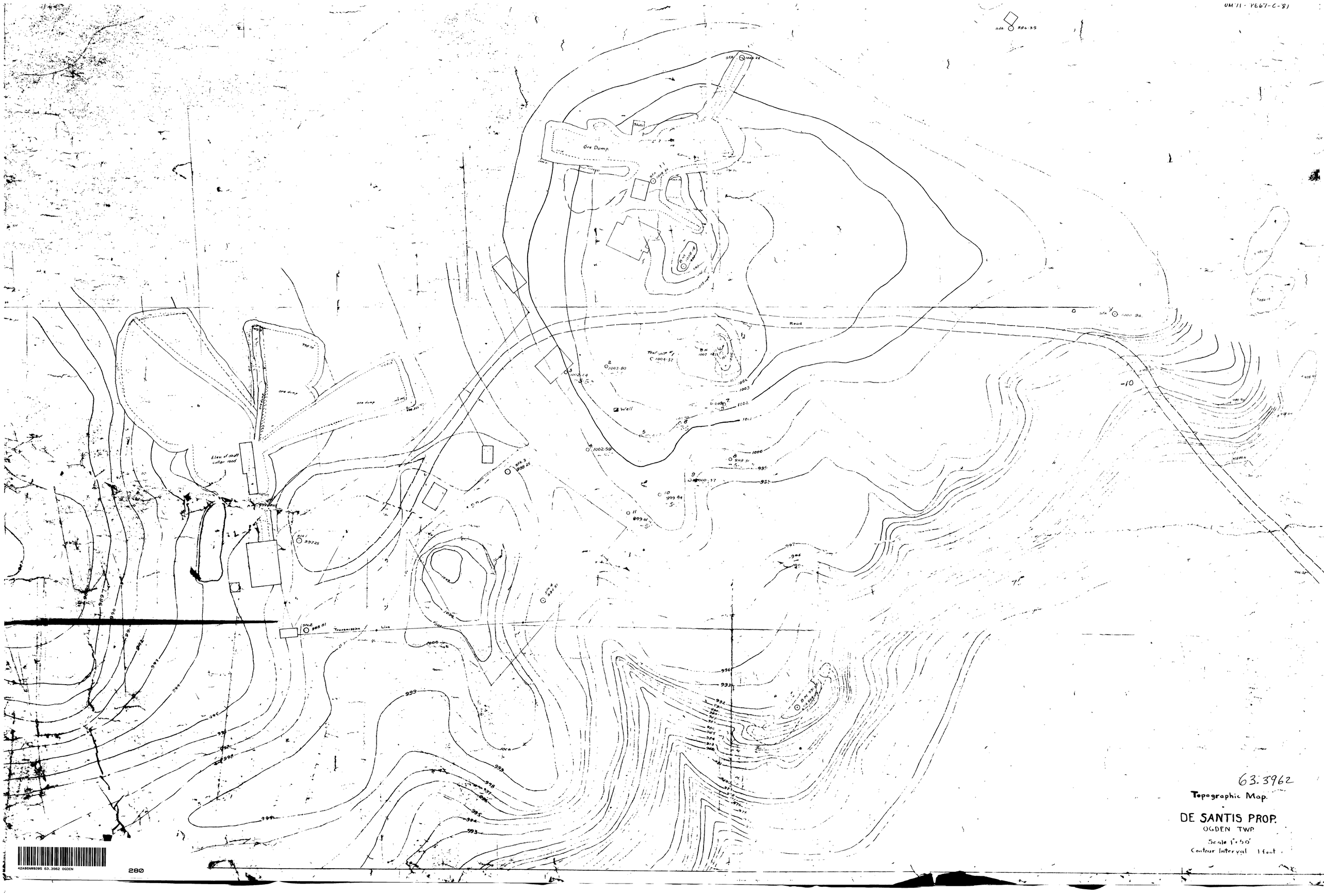
R. J. BRADSHAW APRIL, 1981

FIGURE 7

270

OM 71-PE67-C-81

UM'11 - VE67-C-81



63.3962

Topographic Map.

DE SANTIS PROP.

OGDEN TWP

Scale 1"=50'

Contour Interval 1 foot.

Surface elevations shown in red; depth to rock shown below in black Nos 3, 10 & 11 may possibly be bedrock. + the rock.

Test-pit No. 1
1002.37
-4.0

T.P.-2
1003.0
-5.5

T.P.-3
1002.40
-5.5

T.P.-7
1002.00
-4.25

Wall

T.P.-6
1002.50
-7.5

T.P.-5
1002.85
-8.0

T.P.-4
1002.50
-8.5

T.P.-8
1000.81
-5.0

T.P.-9
1000.47
-9.5

T.P.-10.
999.94
-5.5

T.P.-11.
999.01
-5.0

Ore dump

Ore dump

Elev of shaft collar 1000'

Top of bank 1009
rail 1005'

Office

Hoistroom

Boiler house

63.3962

Portion of Topographic Map
De Santo Porcupine Mine
To show position of proposed
Mill building in relation to
shaft & surface features.

Contour int. = 1 foot. Scale 1/16 = 50'