AN EVALUATION
OF
THE JEROME MINE
1980

Prepared for G. F. Ross, P.Eng.

February, 1980

by

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I. INTRODUCTION

The Jerome Mine near Sudbury was operated intermittently during the years 1941 through 1945 producing approximately 56,800 ounces of gold and 15,100 ounces of silver.

At the closure of the mine in 1945 (caused mainly by the wartime lack of labour) the mine had a reported, in situ, ore reserve of 345,00 tons at 0.19 oz./ton gold.

The report presented here was undertaken by Prospection Limited to evaluate the possibilities of now re-establishing an economic operation at Jerome. Because of the limited amount of detailed information on the mine's operational history, particularly the location, distribution and grades of the remaining reserves, it follows that some of the data used as the basis for the study is uncertain. Nevertheless, the conclusions of the report are believed to be valid within the limits of the order-of-magnitude, appraisal, type of study required at this time.

The report concentrates on two main aspects of the Jerome evaluation:

1. The validity of the 1945 mine reserve figures stated at the time to be 345,000 tons at 0.19 oz. Au per ton; the efforts and costs required to substantiate them; and the chances of finding additional ore in the mine area and surroundings.

2. Following from 1 above, the costs and economics of an operation based on the existing and, if possible, additional reserves.

The report has involved a thorough study of all existing data on the mine, its reserves, etc., obtained from Mr. R. A. MacGregor and others, plus the published company Annual Reports and Ontario Department of Mines records.

It should be stressed here that the costs developed in this report for mining at Jerome are not based on detailed estimating. The capital costs in particular will vary according to the actual conditions encountered on site. On the other hand the operating costs (which are relatively the most critical area) are felt to be better defined estimates.

The Jerome Mine property is owned by E. B. Eddy Forest Products Ltd., Ottawa, Ontario, a wholly-owned unit of George Weston Limited, Toronto, Ontario. This property is under option as of October 31, 1979 to G. F. Ross, P.Eng.

II. SUMMARY

The Jerome gold deposit was discovered in 1938 and brought into production at a mill rate of 500 t.p.d. in 1941. Over the next 5 years the mine operated intermittently until closure in 1945 by which time approximately 56,800 ounces of gold and 15,100 ounces of silver had been recovered.

The gold mineralization occurred as a series of shoots in a shear zone structure near the contact of an intrusive porphyry body with the surrounding metasedimentary rocks. The ore was mined by shrinkage stoping in widths averaging around 10 to 20 ft. with occasional 40 ft. wide swells.

Access to the mining areas was by means of a 1100 ft. deep shaft, leading to haulage drifts on five levels servicing the stopes and development workings over a maximum strike length of nearly 3,500 ft.

Because of a lack of skilled labour, the operation shut down in 1945 at which time the company put the remaining mine reserves at 345,000 tons of 0.19 oz./ton gold. Over the following years the mine workings were allowed to flood and in 1956 a fire destroyed most of the surface facilities including the mill.

No mining or exploration work was done on the property until 1974 when a limited surface drill programme was done in an attempt to verify at least some of the mine reserves of 345,000 tons recorded in 1944/45 plans.

Prospection Limited has now examined all the available information on the Jerome Mine from the 1941/45 mining and the 1974

exploration periods and from this believes there is sufficient evidence to suggest that the 1945 figures can be reliably accepted as approximate indications of the mine's actual potential. It is estimated from the few underground mine drawings still existing, that most of these reserves probably are to be found in the unstoped (but developed) areas both to the east and west of the central stope workings, with the remainder likely occurring as pillars or remnants in stope backs, etc.

There is, furthermore, the possibility of discovering additional tonnages of gold mineralization of ore tenor either as extensions or parallel zones in the area of the existing mine workings and also to depth following the easterly plunging porphyry - metasediment contact which is apparently the most favourable area for gold occurrence. There may also be some chances of gold mineralization occurring nearer surface immediately to the east of the existing underground drifts.

However, even though near-surface tonnages are found, this is unlikely to alter the fact that any mining operation contemplated at Jerome will in the end have to incorporate the assumed 345,000 tons underground reserves which will have to be redefined before mining starts. This will require a dewatering programme to be followed by sampling and other geological work, all of which could cost $500,000 or more depending on the conditions encountered on site.

Assuming the reserve is available for mining, an evaluation was made of establishing an operation at three rates of 100, 200 and 300 t.p.d. (i.e. based on 345,000 tons at 0.19 oz./ton).

Based on previous mining experience, shrinkage mining of the ore is envisaged with rail haulage and hoisting of material in the existing but renovated, shaft. Milling would be straight cyanidation with recoveries around 90% to 95%.

Based on the assumed 345,000 ton reserve of 0.19 oz./ton gold, the costs and economics of the three operating rates are estimated (in order-of-magnitude terms) as follows:

Costs

Rate (t.p.d.)	Total Dev. & Capital Costs ($ M)	Operating Costs $/ton[1]	Operating Costs Total[2] ($ M)
100	4.2	83	27.20
200	7.1	59	19.4
300	9.8	49	16.1

1. For mining, milling and surface (directs and indirects).

2. Over total mine life, milling 328,000 tons (i.e. tons recoverable from mining).

Net Cash Flows
(at U.S.$700, based on estimated costs above)

Rate (t.p.d.)	Total Net Cash Flow ($ M)
100	15.5
200	20.4
300	21.0

1. No account taken of financing, or working capital or taxes.

Breakeven Gold Price

Rate (t.p.d.)	Breakeven Price/oz. (U.S.$)	(Can.$)
100	470	546
200	396	461
300	387	450

Assuming an additional 300,000 tons at 0.19 oz./ton are found that can be used to extend or expand the existing operation, (this is only an assumption at this time), the following figures are estimated:

Net Cash Flow

(at U.S.$700)

Rate (t.p.d.)	Total Net Cash Flow ($ M)
200	47

Breakeven Gold Price

Rate (t.p.d.)	Breakeven Price/oz. (U.S.$)	(Can.$)
200	331	385

A study of custom milling the ore at a mill in the Timmins area (e.g. Pamour), 120 miles away, indicates that although there is no clear-cut advantage in custom milling the ore, it might still be worth considering in the early stages of mining.

III. CONCLUSIONS

Based on an appraisal of the limited information available on the Jerome deposit and mine, and the estimated costs and economics as summarized, Prospection Limited concludes that:

1. Based on the plans, etc., examined the reserves of 345,000 tons at 0.19 oz. Au/ton reported to be on hand when the mine closed in 1945 can be reasonably accepted as existing in the underground mine but can in no way be more accurately categorized until defined by further drilling, sampling, etc.

2. Although there is the possibility for finding additional reserve tonnages near surface, particularly in the eastern mine area, the best chance of developing a worthwhile venture in the shortest time is likely to arise from concentrating efforts on the underground area where there is a potential of 345,000 tons at 0.19 oz. Au/ton and good possibilities of additional discoveries at depth or in extensions to existing zones.

3. An operating capacity of around 200 t.p.d. appears to provide the best combination of costs and economic return based on preliminary data and analysis. An increase in capacity to around 300 t.p.d. might be possible later in the operation's life if additional reserves were discovered.

4. Although custom milling does not offer any clear advantage over milling on-site, it could be a consideration in the early stages of the operation.

IV. DESCRIPTION OF DEPOSIT AND MINE

1. Introduction

Since the Jerome Mine shut down in 1945, almost all the mine records, maps, assays, reserve outlines, etc., have gone missing. The information given here on geology, mining, etc., is therefore based on the limited information available on the underground mine, grades, etc.

2. Location

As shown in Figure 1, the Jerome Mine is located in Osway/Huffman Townships, approximately 100 miles northwest of Sudbury. The nearest settlement to the mine is the town of Ramsay, 10 miles to the south on the C.P.R. railway line.

The mine lies on the south shore of Lake Opeepeesway.

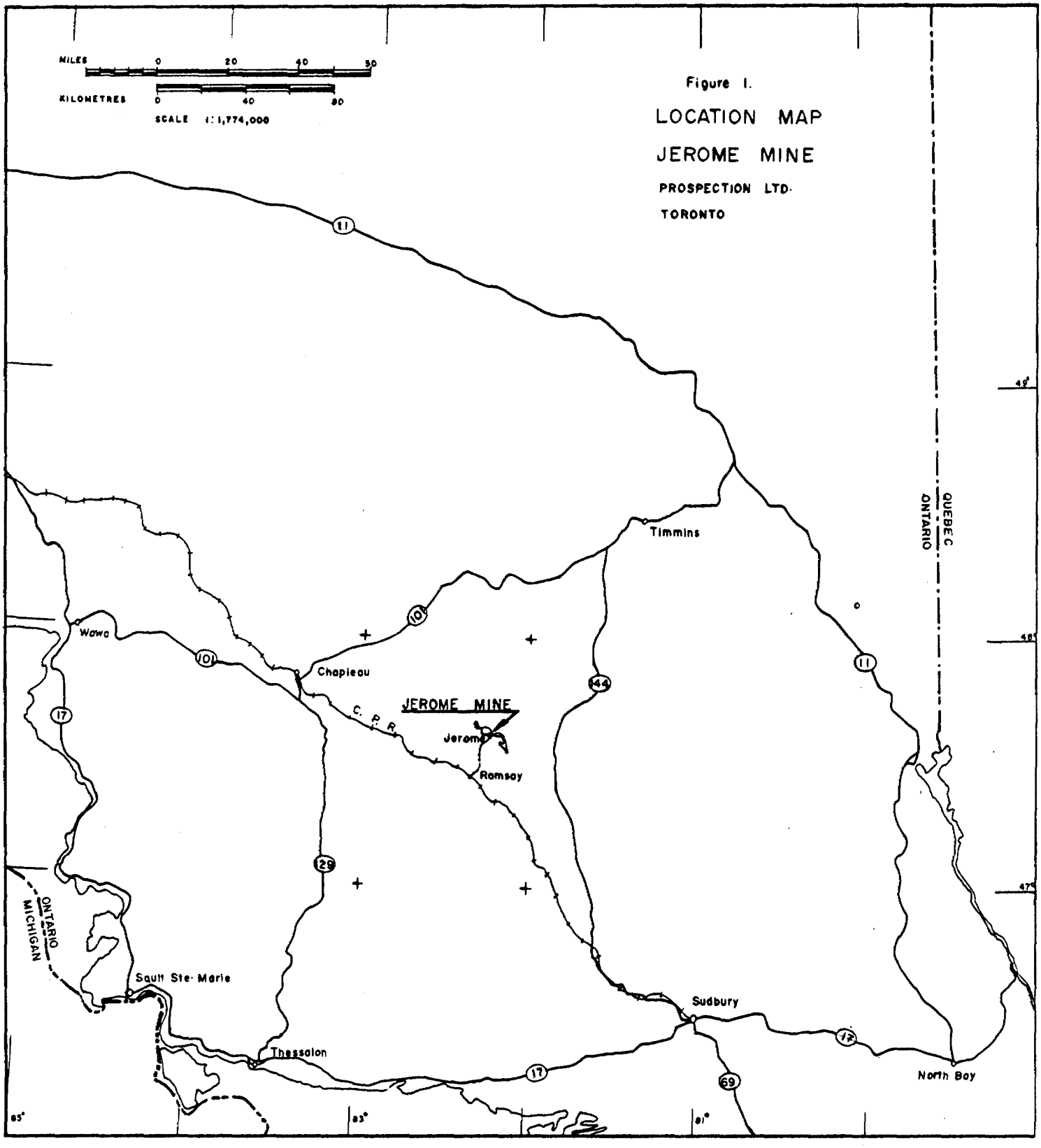
3. Access

The mine is accessible by a number of gravel roads, the shortest being a 10 mile route from Ramsay. At present this road is thought to be in fair shape, although some clearance and culvert work will probably be needed for passage of vehicles.

Access by air is possible via Opeepeesway Lake.

4. History of Exploration and Mining

The Jerome gold deposit was discovered in 1938, and explored in greater detail over the next 2 years both on surface and underground.


MILES 0 20 40 60
KILOMETRES 0 40 80
SCALE 1:1,774,000
Figure 1.
LOCATION MAP
JEROME MINE
PROSPECTION LTD.
TORONTO
11
Timmins
QUEBEC
ONTARIO
Wawa
101
10
Chapleau
JEROME MINE
C. P. R.
Jerome
Ramsay
17
144
11
29
ONTARIO
MICHIGAN
Sault Ste. Marie
Sudbury
Thessalon
17
69
North Bay
85°
83°
81°

Access underground was by means of a 3-compartment shaft sunk to a depth of 500 feet by August 1939, with drifting on the 200, 350 and 500 ft. levels continuing into 1940.

Exploration continued to 1941 when a decision was made to establish a mining operation at 500 t.p.d. The shaft was deepened to 835 feet, levels driven at 650 and 800 ft. and ore and waste passes established for shrinkage mining of the ore.

Ontario Department of Mines reports record that the mine operated intermittently from 1941 through 1945 with the following results:

Year	Tons Milled	Head Grade ozs./ton	Reserves (dilute) at year end Tons	ozs./ton
1940	-	-	663,910	0.172
1941	58,824	0.182	618,948	0.172
1942	168,628	0.189	?	?
1943	107,608	0.185	213,442	0.18 (?)
1944	Shaft deepening to 1,100 ft.		295,373	0.199
1945	No milling, only development		345,000	0.19
Totals	335,060	0.186	345,000	0.19

Total gold recovered from operations 1941-1945 was approximately 56,800 ounces plus approximately 15,100 ounces of silver.

The operation was closed down in 1945, according to the reports because of lack of labour. The 1945 report states that the exploration and development work (mainly to the east of the shaft) disclosed some new ore and extensions, but "nothing of major importance was encountered".

Mine workings completed to 1945 are recorded as follows:

Drifts & crosscuts	24,425 ft.
Raises	3,402 ft.
Shaft	1,100 ft.

In addition, diamond drilling completed to 1945 was:

Underground:	1,082 holes for 47,300 ft.
Surface:	102 holes for 38,150 ft.

In February 1974, a surface drilling programme was undertaken with the principal aim of confirming the shallower portions of ore shoots lying to the east of the shaft, as recorded on original mine drawings.

As discussed and described more fully in Chapter V, the 17 holes drilled in the Jerome zone succeeded in approximately confirming the recorded ore shoots down to the 350 ft. level.

In addition, exploratory drilling (2 holes) indicated the main Jerome structure to be open at both ends but with very low grades, around 0.05 ozs./ton. Drilling in the South Zone intersected the shear zone structure but no significant mineralization was reported.

5. Existing Facilities

In 1956 a fire destroyed the headframe and almost all of the surface facilities except some housing units which were later bought and renovated by a timber company, Eddy Forest Products Ltd., to accommodate some of their personnel (15 families).

There are no other buildings on the property, although the foundations of the original mill, shops, etc., should be in usable condition. The mine workings have been allowed to flood to the shaft collar. Based on the ore tonnage removed and the existing mine workings, there could be approximately 50 million gallons of water in the mine down to the 1100 ft. level.

When the mine was operating, hydro power is reported to have been supplied from Shiningtree but this line has now been dismantled to a point 18 miles away from the mine.

6. Geology

The Jerome mine occurs in an area of PreCambrian sedimentary and intrusive rocks cut by later dyke rocks.

Ore has been mined from shoots in an arcuate, plunging, N.W.-S.E. striking shear zone, known as the Jerome zone, at or near the carbonate sediment/porphyry contact. The mineralized vein material is mapped as easterly-plunging, discontinuous shoots up to 100-200 ft. along strike and in widths varying from 5-10 ft. up to 40 ft. Dips are shown to be generally vertical or steeply to the south.

A number of post-vein faults are recorded on original mine drawings generally lying at low angles to the ore shoots.

In addition to the Jerome zone, a sub-parallel "South Zone" was mapped approximately 425 ft. to the south. Diamond drilling to date has not encountered significant grade material in this shear zone structure.

In both the Jerome and South zones, the gold generally occurs with pyrite and tetrahedrite in silicified, vuggy material.

7. Previous Mining & Milling

Based on the limited data available, ore appears to have been mined in widths of around 10 ft., with occasional 20-40 ft. wide areas. While shrinkage mining methods were reported to be generally successful, some problems apparently arose from the widespread low angle faulting which led to "a good deal of stope preparation" in some areas.

No problems in milling the ore is reported from 1941-1945 records. Recoveries of 90%-92% are recorded.

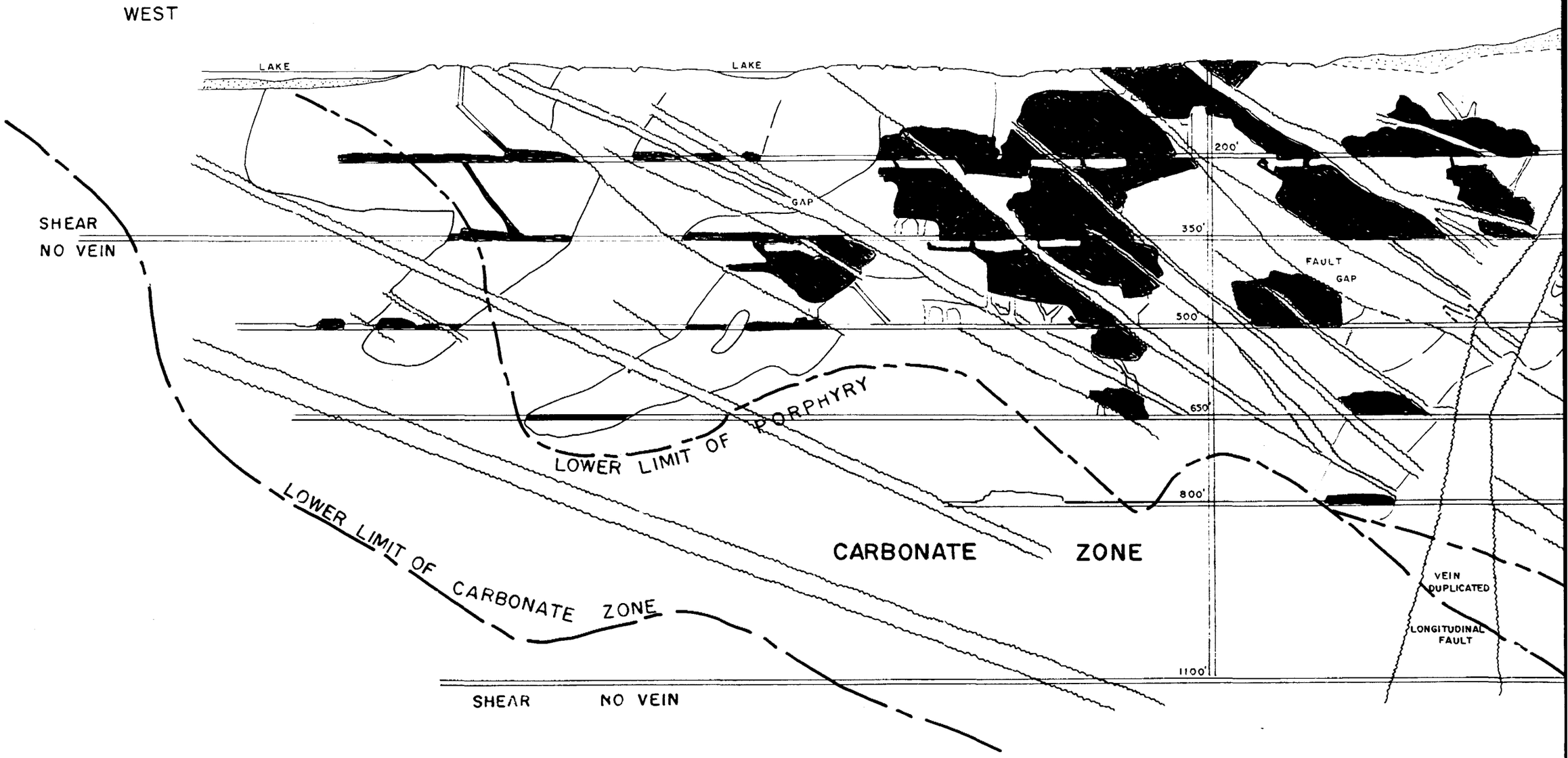
V. ORE RESERVE POSSIBILITIES

There are said to be 345,000 short tons of ore grading 0.19 oz. Au per ton (assumed dilute) remaining in the area of the present underground workings which extend over an approximate length of 3,400 ft. and to a maximum depth of 1,100 ft.

This estimated reserve can not be corroborated or categorized by block or level location due to the absence of pertinent mine records, which have been lost over the years since the mine closed. However, a good perception of the approximate location of the ore that was mined and the ore remaining at the time of shut down (1945) can be gleaned from a longitudinal section, a copy of which occurs in the 1948 C.I.M.M. edition of "Structural Geology of Canadian Ore Deposits".

This longitudinal section indicates that the bulk of the mining (shrinkage stoping) was generally centrally located, from surface down to the 650 ft. level, with developed or partially developed ores remaining to the west and east respectively.

In terms of widths and grade the general disposition and character of the ores mined and the probable ores remaining can be surmised from a series of level assay plans, which were prepared in 1974 (reportedly from original data) by Mr. R. A. MacGregor of Sault Ste. Marie and made available to Prospection Limited for this study. These level plans indicate strongly that stoping was done mainly in areas where the gold bearing mineralization was widest, with widths in excess of 40 ft. shown in some locations. This observation, coupled with the longitudinal section mentioned above, leads to the conclusion that the vertical outlines of the stoped



LEGEND

■ Stoped ore

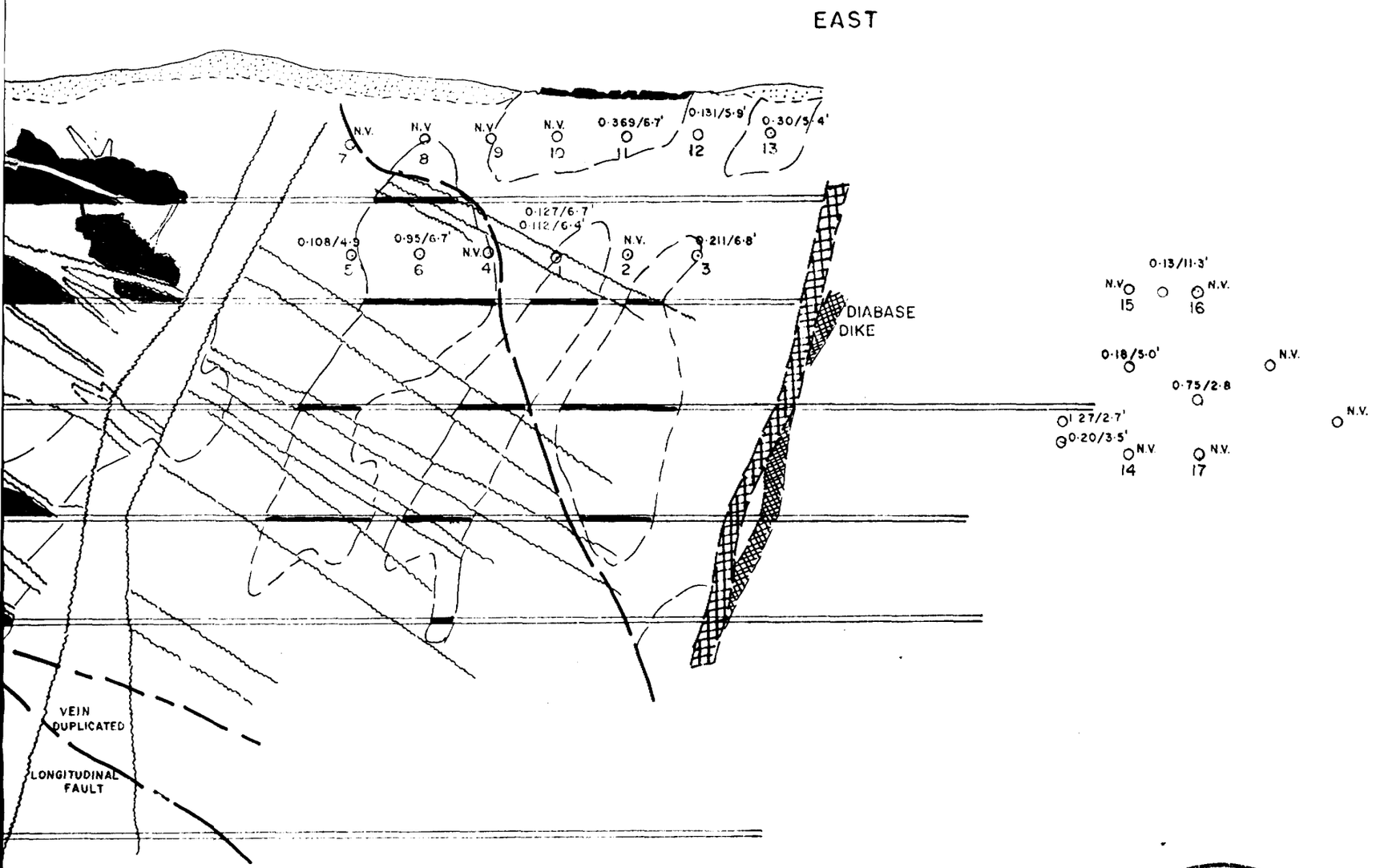
□ Ore in place

TAKEN FROM ORGINAL MINE DRAWING OF 1945

SCALE

1 inch = 200 feet

0 50 100 200 300 400 FEET



REGISTERED PROFESSIONAL ENGINEER
MINING
G. W. GOETTLER
PROVINCE OF ONTARIO

JEROME GOLD MINES LTD

SECTION ALONG VEIN ZONE N.56°W.

SCALE 1 in. = 200 ft.

Traced by
PROSPECTION LIMITED TORONTO
Feb. 1980

○ 25' Carbonate vein
○ Granodiorite

ore probably do closely approximate operational limits before shut down (aggregating some 335,000 tons of production).

Therefore there is also a good probability that the outlines of the un-mined ore shown on the longitudinal section approximately represent the general disposition of the recorded 345,000 tons existing reserve. This supposition is supported by the limited assay plans available which show drift, crosscut and underground diamond drill sample results of significance, especially beyond the indicated stoped limits. It is further supported in probably a more convincing way by the results of the 1974 surface diamond drill investigations. Thirteen holes drilled to investigate the eastern un-mined reserves above the 350 ft. level confirmed the general disposition of the indicated ore zones with mineralized and un-mineralized intersections more or less as expected.

It is therefore considered that there is a good possibility that the underground reserves can be substantiated.

The probable tenor of this reserve, said to be 0.19 oz. Au per ton (assumed dilute) can also be reasonably accepted with confidence based on available data.

The assay plan of the 500 ft. level, which has been arbitrarily chosen for study, especially in areas beyond the indicated stopes, contains mineralized zones with the following tenors:

	Length (ft.)	Avg. Width (ft.)	Oz. Au/Ton (uncut)
West Zone	108	2.14	0.22
	33	3.28	0.28
	144	4.65	0.26
East Zone	67.5	4.16	0.16
	48	3.3	0.195
	65	4.6	0.205
	147	5.8	0.22
	88.5	3.2	0.22
	325	10.5	0.27
	1026	6.13	0.25

From a review of the assay plans for the 200 and 350 ft. levels more or less the same conditions prevail for mineralized zones outside of the stoped areas. Complete assay plans for the 650 ft. level were not made available to Prospection.

The 1974 surface drill holes with "ore" intersections between the surface and the 200 ft. level and between the 200 and 350 ft. levels gave averages (uncut) of 0.27 oz. Au/ton over 6.0 ft. and 0.36 oz. Au/ton over 6.2 ft. respectively.

Although Prospection feels that the stated 345,000 ton reserve at 0.19 oz. Au/ton (assumed dilute) grade probably exists within the present underground workings, it must be emphasized that before any serious exploitation plans be undertaken, this reserve must be confirmed by underground sampling. This sampling would entail both channel sampling in the drifts and limited underground diamond drilling.

VI. EXPLORATION POSSIBILITIES

An appraisal of the available geological data on the Jerome deposit and mine, suggests that the most promising area to explore for additional reserves than can quickly contribute to the potential of the mine is the immediate mine area itself, especially to the east of the stoped areas. This region presents possibilities of extending or finding additional mineralization to depth and also of outlining other ore zones along strike of the vein, which is known to extend at least 1,000 ft. beyond the present workings to the shore of Opeepeesway Lake.

The best exploration target areas are to depth along the easterly-plunging porphyry/sediment sheared contact and in the area to the east of the 500 ft. mine level where previous drilling records show values from "vein - no values" to 1.27 ozs. Au per ton (uncut) over 2.7 ft. (Average of 4 intersections is 0.37 oz. Au/ton over 5.1 ft.)

There may also be exploration possibilities along strike of the known shear zones beyond the immediate mine area but a discovery in these outlying areas would not necessarily enhance the potential of the existing indicated reserves if independent mine access were needed.

The exploration of the most promising area of interest could be done from both the surface and underground.

Surface explorations might involve limited geophysical surveying (Induced Polarization) combined with limited diamond drilling to probe anomalous areas to the east of the mine area.

Underground diamond drilling is believed to be the most practical approach in the circumstances as it offers the best opportunity of quickly outlining additional reserves.

The assay plans available show mineralized zones both in the drifts and in the walls and in many cases immediate drill targets present themselves from either the lack of drilling or inadequate drilling. The known sinuous and poddy nature of the ore zones suggests that many more are likely to be found in this manner.

Therefore, considering the good potential for establishing the indicated 345,000 ton reserve and the possibilities for discovering additional ore it is suggested that the most judicious exploration approach will be to concentrate work underground around the existing mine workings.

This of course entails dewatering but even if additional ores are found from surface, which is not a certainty, the same condition will ultimately apply in order to establish a mining operation.

The estimated costs involved in proceeding with the underground sampling programme to corroborate the existing reserves which must precede an exploration programme are as follows:

1.	Dewatering - dealt with elsewhere in this report.	
2.	Sampling - labour (3 mos.)	$ 45,000
3.	Sample preparation & assay	$ 10,000
4.	Diamond Drilling - underground 2,500 ft. @ $15.00/ft.	$ 40,000
5.	Crew Maintenance & Transportation, etc.	$ 22,000
	Contingency	$ 8,000
	Total	$ 125,000

It is conceivable that in the course of this programme additional ores could be outlined. This then would lead to an expansion of surface and underground exploration for more ore, the cost of which it is impossible to predict with any precision at this time but which could with development acrue to something like one million dollars.

VIII. PRODUCTION COSTS

1. Introduction

Based on the assumption that there is in fact an existing reserve of 345,000 tons at 0.19 ozs./ton gold (dilute) available for mining at Jerome as described in the previous chapter, preliminary estimates have been made for the development, capital and operating costs.

The calculations are based on:

(i) Three alternative mill capacities, 100, 200 and 300 t.p.d.

(ii) Shrinkage mining of ore which was reported to be successful when the mine operated.

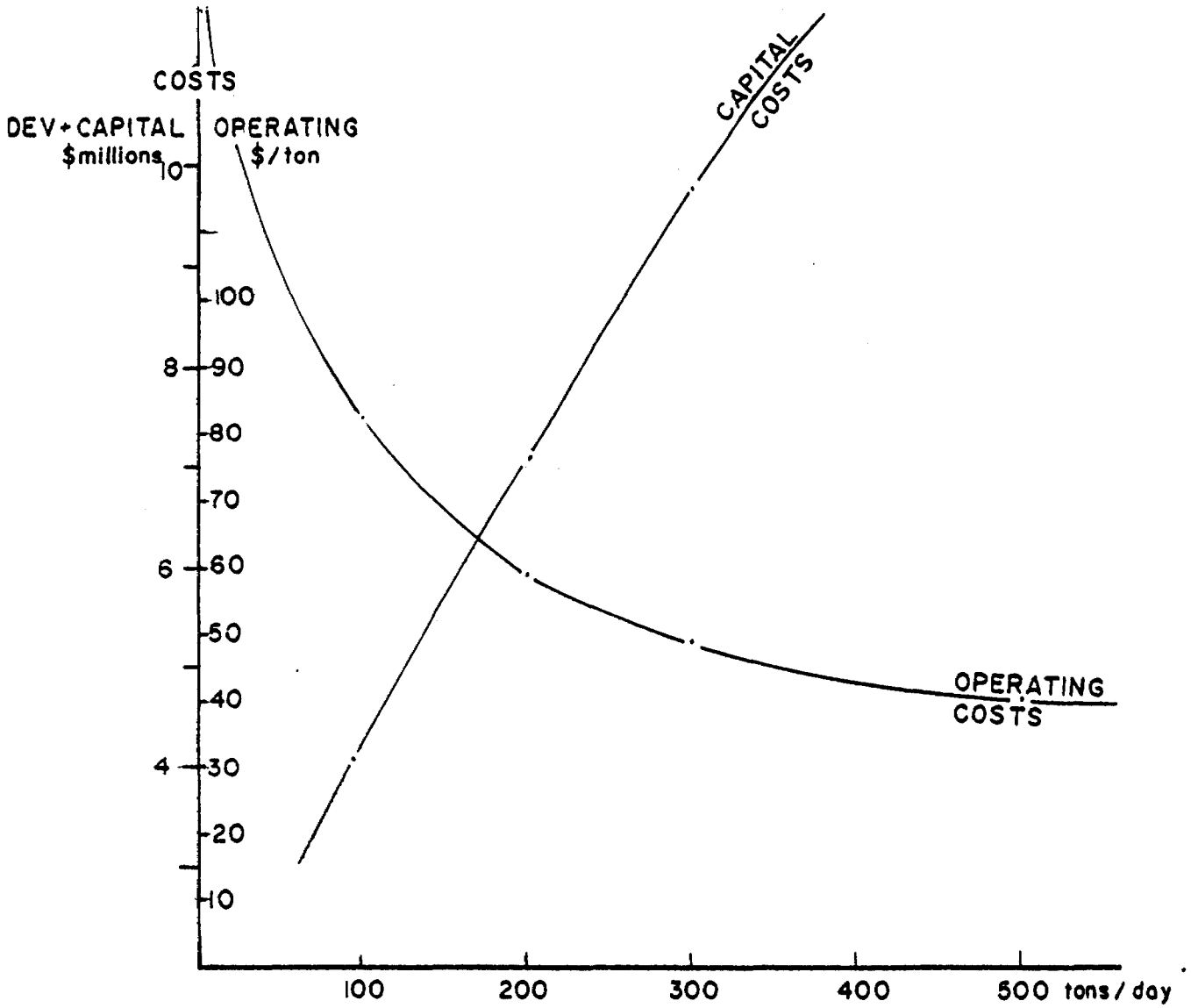
(iii) Rail haulage and shaft hoisting of ore.

(iv) Straight cyanidation milling. Based on the company records, recoveries in the 90%-92% range were previously attained.

Order-of-magnitude costs for the 100 and 300 t.p.d. rates have been estimated in some detail and used to construct a graph of costs versus capacity in order to arrive at the figures for the 200 t.p.d. case, as shown on the following page.

For all capacities, the summarized costs are given within a range in order to reflect the preliminary, order-of-magnitude nature of the estimates.

/21.



JEROME MINE

Costs vs. Capacity

Prospection Limited
Feb 1980

2. Summary of Costs

(a) Development (all capacities)

Dewatering		$220,000
Sampling & underground exploration		125,000
Additional D.D.H. (mining)		50,000
Shaft & drift rehabilitation		150,000
Total Development Costs (± 100,000)	say	$550,000

Note: These costs will vary according to actual conditions encountered on site.

(b) Capital (in $ Thous.)

	100 t.p.d.	200 t.p.d.	300 t.p.d.
Infrastructure & surface facilities	1,000	1,700	2,200
Mine Equipment	600	1,000	1,500
Mill	2,000	3,800	5,500
Total Capital Costs - say	3,600	6,500	9,200

(c) Operating ($/ton milled)

	100 t.p.d.	200 t.p.d.	300 t.p.d.
Direct:			
Mine	29.4	26	23.3
Mill	11.5	8	6.9
Sub-Total Direct	40.9	34	30.2
Indirect:			
Surface, Mine, Mill	42.2	25	18.3
Total - Direct & Indirect	83.1	59	48.5
say	$83/ton (± $8)	59 (± $6)	$49/ton (± $5)

/22.

3. Details of Costs

The detailed assumptions and calculations used to arrive at the above costs can be found in the appendix to this report, as follows:

Exploration	Pages 1 to 4
Capital Costs:	Pages 5 to 10
Operating Costs:	Pages 11 to 16

VIII. ECONOMICS

1. Cash Flow Projections

Based on the assumed existing reserves of 345,000 tons at 0.19 oz./ton gold, and the costs as summarized in the previous Chapter, cash flow projections have been made for the three alternatives (100, 200 and 300 t.p.d.), as detailed in the table on page 24.

The revenue figures are based on operating parameters as follows:

Total Mine Reserves: (assumed cut & dilute)	345,000 short tons at 0.19 oz. Au/ton
Mining Recovery:	Assumed to be 95% to allow for losses in un-mined pillars, remnants, etc.
Therefore, mined & milled tonnage:	328,000 short tons at 0.19 oz. Au/ton
Milling Recovery:	Assumed at 92%, based on 1941-45 records (could possibly be nearer 95% today)
Recoverable Gold:	57,400 ounces

(No account taken of small silver content reported from 1941-45 operations.)

Mine lives for the three alternatives would be as follows:

100 t.p.d.	9.4 years
200 t.p.d.	4.7 years
300 t.p.d.	3.1 years

JEROME MINE

CASH FLOW PROJECTIONS
(i.e. before taxes, etc.)

Gold Price/Oz. U.S.$	Gold Price/Oz. Can.$	Capacity (t.p.d.)	Total Costs (C.$ M) Dev. & Capital	Total Costs (C.$ M) Operating	Total Revenue (C.$ M)	Net Cash Flow (C.$ M)
400	465	100	4.15	27.20	26.7	- 4.65
		200	7.05	19.40	26.7	+ 0.25
		300	9.75	16.10	26.7	+ 0.85
500	580	100	4.15	27.20	33.3	+ 1.95
		200	7.05	19.40	33.3	+ 6.85
		300	9.75	16.10	33.3	+ 7.45
600	708	100	4.15	27.20	40.2	+ 8.85
		200	7.05	19.40	40.2	+13.75
		300	9.25	16.10	40.2	+14.35
700	815	100	4.15	27.20	46.8	+15.45
		200	7.05	19.40	46.8	+20.35
		300	9.75	16.10	46.8	+20.95

Note: No allowance made for financing costs or working capital.

The resulting total net cash flow at approximately today's gold price (of U.S. $700) is summarized as follows (excluding costs of financing, taxes and working capital):

Gold Price/Oz. U.S.$	Gold Price/Oz. Can.$	Rate (t.p.d.)	Total Net Cash Flow ($ M)
700 (near today's price)	815	100	+ 15.45
		200	+ 20.35
		300	+ 20.95

2. Breakeven Gold Prices

The prices of gold at which the three alternative operations would approximately breakeven (on the assumed existing reserves) have been calculated as detailed in the Table on page 26 and are summarized as follows:

Rate (t.p.d.)	Breakeven Gold Price/Oz. U.S.$	Breakeven Gold Price/Oz. Can.$
100	470	546
200	396	461
300	387	450

3. Implications of Discovering Additional Reserves of 300,000 Tons

An evaluation was made assuming an additional tonnage of 300,000 tons is found in the mine area (i.e. at depth, in extensions or parallel zones), at the same grade as the existing reserves, i.e. 0.19 oz. gold per ton (dilute). This would then give a total reserve of 645,000 tons at 0.19 oz. Au/ton, or at 95% recovery, a mined and milled tonnage of around 612,000 tons. At a mill recovery of 92%, approximately 110,000 ounces of gold could then be feasibly recovered.

JEROME MINE

BREAKEVEN GOLD PRICES

	Existing Reserves 345,000 Tons			Existing Reserves plus additional = 645,000 Tons Total
Capacity (t.p.d.	100	200	300	200
Mine Life (years	9.4	4.7	3.1	8.8
1. Rehabilitation & Dewatering ($ M))				
2. Exploration & Development ($ M))	550	550	550	1,550[1]
3. Capital Costs/ton ($ M)	3,600	6,500	9,200	6,500
Operating Cost/ton ($/ton)	83	59	49	56[2]
4. Total Operating Cost ($ M)	27,200	19,400	16,100	34,300
Total Costs (1+2+3+4)	31,350	26,450	25,850	42,350
Total Tonnage	345,000	345,000	345,000	654,000
Total Ozs. Au Recovered	57,400	57,400	57,400	110,000
Breakeven Au Price (Can.$)	546	461	450	385
" Au " (U.S.$)	470	396	387	331

Note 1 - Extra $1,000,000 for discovery and development of new reserves, shaft deepening, etc.

Note 2 - Operating cost for larger tonnage taken at 95% of $59 = $56.

As before, for the assumed existing reserves, operating profit and breakeven price were calculated this time for the expanded reserve of 645,000 tons. Only the costs for the 200 t.p.d. alternative were considered in this case with an additional $1,000,000 being allowed for (hypothetical) discovery and development costs for the additional reserve.

The results are summarized as follows:

Net Cash Flow

Gold Price/Oz. U.S.$	Gold Price/Oz. Can.$	Rate (t.p.d.)	Net Cash Flow (C.$ M)
700	815	200	47.3

Breakeven Gold Price

Rate (t.p.d.)	Breakeven Gold Price/Oz. U.S.$	Breakeven Gold Price/Oz. Can.$
200	331	385

4. Comments on Operating Alternatives Available at Jerome

Based on the analyses above, the following comments are made on the possible operating alternatives available at Jerome:

(a) For the existing reserves assumed (345,000 tons), an operating rate of around 200 t.p.d. is indicated to be the most suitable. Relative to the other alternatives studied, this rate appears

to provide the most favourable combination of total net cash flow and costs with a breakeven gold price of U.S.$396.

(b) In practice, the mine could start operating at 200 t.p.d. with a possible expansion to 300 t.p.d. if additional reserves were found.

(c) If an additional reserve of 300,000 tons is added to give a total of 645,000 tons at 0.19 oz. Au/ton, the resulting cost figures suggest that no advantage would be gained in an expansion from 200 to over 300 t.p.d.

(d) Custom milling at the Pamour mill 120 miles away might be a possibility depending on timing and the condition of the forestry roads around Jerome. Trucking to Pamour would cost around $10.00 per ton (today's dollars) and custom milling $15.00 per ton (almost exactly as estimated for Jerome). Savings at Jerome for a 200 t.p.d. operation would be around $3.8 million since no mill would be needed, leaving total capital costs of $2.7 million (development, surface and mine).

In other words, total additional operating (trucking) costs of $10.00 x 328,000 = $3.3 million would be balanced against a saving of $3.8 million.

(d) Continued.

Therefore custom milling might be a consideration in the early stages of the operation.

All of which is respectfully submitted.

PROSPECTION LIMITED.

G. W. Goettler, P.Eng.

William Hill, P.Eng.

Toronto, Canada.
February 14, 1980.

APPENDICES

Cost Details

Property and Claim Details

Property Map

1. EXPLORATION COSTS

SUMMARY

		$
(A)	Dewatering	220,000
(B)	Sampling and underground exploration/ sampling/D.D.H.	125,000
(C)	Additional D.D.H. (for on-going mining)	50,000
(D)	Shaft & mine rehabilitation	150,000
	TOTAL	$545,000
	say	$550,000
		(± 100,000)

Note: These costs are preliminary estimates based on the limited information available. Actual costs will depend on conditions encountered on site.

/2.

EXPLORATION COSTS DETAILS

(A) Dewatering

Dewatering to 800 ft. level assumed as first step.

Possibly 30 million gallons to be pumped out.

Say, 400 g.p.m. = 500,000 gals./day is possible. Therefore will require 60 days work.

From Contractor, costs per day:

Labour, supplies & Equipment	
$3,000/day for 60 days	$180,000
Allow 25% contingency	$220,000
(also to include mobilization, demobilization, etc.)	

Note: This cost possibly could be reduced if the work were done by the company; this would also have the advantage of providing some pumps, generators, etc., for later use if mining takes place.

Exploration Cost Details (cont'd)

(B) Sampling and Underground Exploration

Labour/month:			
2 Geologists	- $ 6,000		
4 Samplers/Helpers plus burdens	- 6,000		
	$14,400 for 3 mos.,	say	$ 45,000
Sample Preparation/Assay		say	$ 10,000
Vehicles Rental, Fuel			$ 5,000
Crusher Sample Preparation Facilities			$ 2,000
Accommodation & Travel			$ 15,000
Diamond Drill:			
Limited programme of 2,500 ft. 2,500 x $15/ft.		say	$ 40,000
Total			$117,000
Plus Contingency		say	$125,000

(C) Additional D.D.H.
(assuming mining decision taken)

2,500 ft. @ $15/ft.	$ 40,000
Plus misc. geological supplies & services	$ 10,000
Total	$ 50,000

(Supervision in Mining Costs)

Exploration Cost Details (cont'd)

(D) Shaft & Drift Rehabilitation

Assume shaft rehabilitation to 1100 ft. level.

- since under water for 30 years, timbers assumed in fair condition.
- therefore allow $100/ft = $110,000

Drifts, Crosscuts:

Piping, etc., elsewhere.

- allow $35,000 for clearing drifts, slashing, etc.

Therefore, preliminary cost, say $150,000

(The actual cost will depend upon conditions encountered in the mine.)

2. CAPITAL COSTS

SUMMARY

		$ Thous.		
		100 t.p.d.	200 t.p.d.	300 t.p.d.
(A)	Infrastructure & Surface Facilities	1,000	1,700	2,200
(B)	Mine Equipment	600	1,000	1,500
(C)	Mill & Tailings	2,000	3,800	5,500
	TOTAL say	3,600	6,500	9,200

Note: The costs for the 100 t.p.d. have been estimated as shown on the following pages.

The costs for both the 200 and 300 t.p.d. cases have been derived from the 100 t.p.d. figures by factoring, combined with spot checks on the costs of some major items.

It should be stressed that the costs are preliminary estimates only and are of an order-of-magnitude nature. Therefore the actual costs will change according to conditions encountered on site.

CAPITAL COST DETAILS

(A) Infrastructure & Surface Facilities

(i) Road Rehabilitation & Site Preparation

Since road reported to be in fair shape, little work expected, say $2,000/mile for grading, culverts, etc.

i.e. $2,000 x 10 miles	$20,000	
Site Preparation (concrete pads & foundations from 1945 assumed good) allow	$30,000	$ 50,000

(ii) Buildings

No foundations required. Assume little concrete work. Prefab. roof and wall sections needed for:

Mill	$50,000	
Office	25,000	
Shops	10,000	
Additional Camp/Cookery	15,000	
Explosives Storage	15,000	
Miscellaneous (fan housing, etc.)	15,000	$130,000

(iii) Generators & Electrical (Surface)

Total connected power required for 100 t.p.d. = 750 h.p. (mine 300 h.p.; mill 450 h.p.)

Generator and back-up	$150,000	
Electrical Installation (shaft, hoist, pumps)	100,000	$250,000

(iv) Headframe & Hoisting

Hoist 85-100 h.p.	$75,000	
Headframe	25,000	$100,000

/7.

Infrastructure & Surface Facilities (cont'd)

(v)	Compressors		
	Consumption (peak) - 1200 c.f.m.		
	2 z 600 c.f.m. compressors		$120,000
(vi)	Surface Fans/Air Heating		
	Main Fan 75-100 h.p.	$ 50,000	
	Air Heater	25,000	$ 75,000
(vii)	Fuel Storage & Miscellaneous Items		
	Since only 100 miles N.W. of Sudbury minimum fuel storage expected.		
	Allow for 25,000 gals. storage	$ 20,000	
	Miscellaneous Items	10,000	$ 30,000
(viii)	Miscellaneous Surface Facilities and Installation		$100,000
Sub-Total Infrastructure & Surface Facilities			$855,000
	Add Contingency 15%	say	$1,000,000

(B) Mine Facilities & Equipment

(i) Drill Equipment

No. of Stopes Operating (100 t.p.d.) = 2
Stope Preparation = 2

Allow for 12 jacklegs/stopers @ $2,000 per machine	$ 24,000	
Spares, etc.	16,000	$ 40,000

(ii) Haulage Equipment

Assume stoping/preparation on 2 levels.

2 locomotives @ $25,000 each	$ 50,000	
2 loaders @ $30,000 each	40,000	
10 cars @ $2,000 each	20,000	
	$110,000	
Miscellaneous	20,000	$130,000

(iii) Piping, Railing, etc.

Rail - 2,600 ft. @ $20	$ 40,000	
Piping - 6,000 ft. @ $5 (avg.)	30,000	$ 70,000

(iv) Underground Ventilation

6 Fans @ $5,000	$ 30,000	
Tubing - 2,000 ft. @ $5	10,000	
Miscellaneous Electrical	10,000	$ 50,000

(v) Pumping

2 Main Pumps 75 h.p.	$ 4,000	
4 Others	6,000	
Pipe, fittings	2,000	$ 12,000

(vii) General Supplies

Lamps, tugger, hoist, etc.		$ 20,000

Mine Facilities & Equipment (cont'd)

(vii)	Surface Vehicles & Miscellaneous Accessories		$200,000
Sub-Total Mining			$600,000
	Add Contingency 15%	say	$750,000

(C) Mill

(i)	Main Equipment		
	Crushing & Screening	$200,000	
	Grinding & Thickening	300,000	
	Cyanidation	150,000	
	Gold Recovery	100,000	$ 750,000
(ii)	Tailings Disposal		$ 750,000
	Sub-Total Mill		$1,500,000
	Add 15% engineering, etc.		$1,725,000
	Add Contingency 15%	say	$2,000,000

/11.

3. OPERATING COSTS

SUMMARY

		$/Ton Milled		
		100 t.p.d.	200* t.p.d.	300 t.p.d.
(A)	Direct			
(i)	Mine - labour	19.5		13.8
	- supplies	3.9		3.5
	Stope - preparation	5.0		5.0
	- development	1.0		1.0
	Sub-Total Mine	29.4	26	23.3
(ii)	Mill - labour	5.5		2.74
	- supplies	6.0		4.2
	Sub-Total Mill	11.5	8	6.94
	Sub-Total DIRECT (Mine and Mill)	40.9	34	30.24
(B)	Indirects			
	Labour	27.80		11.80
	Supplies	14.35		7.5
	Sub-Total INDIRECTS	42.15	25	18.30
	TOTAL DIRECT/INDIRECTS	83.05		48.54
	say	83	59*	49

*Estimated

/12.

DETAILED OPERATING COSTS

6 days mining; 7 days milling at			$/Ton Milled 100 t.p.d.	200 t.p.d.	300 t.p.d.
(A) Direct Costs					
(i) Mining					
Labour:					
Shrinkage prod. t.p.m.s. (at $12.50/hr. x 1.20 x 8 hrs. = $150/day/man)			10	12	14
Stoping - Cost/ton mined			15.0	12.5	10.7
- Cost/ton milled			18.0	15.0	12.8
Plus haulage			1.5	1.3	1.0
Supplies:					
Drill	1.0)				
Blast	0.8)				
Muck	0.3)	3.9	3.90	3.70	3.50
Ground Support)	1.8)				
Timber)	)				
Stope Preparation			5.00	5.00	5.00
Development - allow 1.0			1.00	0.70	0.50
Total Direct Mining			29.40	25.70	22.80

/13.

Direct Costs (cont'd)

6 days mining; 7 days milling at	$/Ton Milled 100 t.p.d.	200 t.p.d.	300 t.p.d.
(ii) Milling			
Labour (Hourly)			
No. of men	8		12
Avg.$2,000/month	16,000		24,000
One year	192,000		288,000
$/ton	5.5		2.74
Supplies			
Crushing/grinding $/ton	3.50		2.50
Reagents $/ton	1.50		1.20
Miscellaneous $/ton	1.00		0.50
Sub-Total Supplies $/ton	6.50		4.20
Total Direct Mill Cost	11.50	8.0*	6.94
Total DIRECT COSTS	40.90	34.0	30.24

*Estimated

(B) Indirect Costs

	$ Month	No. Required 100 t.p.d.	No. Required 300 t.p.d.	Total Cost $/Month 100 t.p.d.	Total Cost $/Month 300 t.p.d.
(i) Labour					
Supervision:					
Mine - Mgr./Supt.	3,500	1	1		
Eng./Geol.	3,000	1	1		
Surveyor	2,500	1	1		
Captain	2,500	1	1		
Bosses	2,000	2	4		
Sub-Total		6	8	15,500	19,500
Mill - Supt.	3,500	1	1		
Eng.	3,000	1	1		
Foremen	2,500	2	2		
Sub-Total		4	4	11,500	11,500
Other:					
Labour - hoist/cage	2,000	4	4		
underground	1,500	4	6		
mill	1,500	2	4		
Sub-Total		10	14	17,000	23,000
Mntce - underground	2,500	3	4		
mill	2,500	2	2		
Sub-Total		5	6	12,500	15,000
Surface - Camp	1,500	3	5		
General	1,500	3	5		
Assay	2,000	1	1		
Sub-Total		7	11	11,000	17,000
Totals		32	43	67,500	86,000

Indirect Costs (cont'd)

	Total Cost ($)		
	100 t.p.d.	200 t.p.d.	300 t.p.d.
Totals, plus burdens @ 20%	81,000		103,000
Yearly Cost ($)	972,000		1,238,400
Tons milled/year	35,000		105,000
Total Indirect Labour Cost/Ton	27.80	16.00*	11.80

*Estimated

Indirect Costs (cont'd)

	100 t.p.d.	200 t.p.d.	300 t.p.d.
(ii) Supplies			
Power Generation:			
Power required (h.p.)	750		1,750
(Mine	300		550)
(Mill	450		1,200)
Kw.Hr./year	4.2×10^6		9×10^6
Cost/Ton ($)	5.7		2.9
Camp:			
No. of Men	50		75
Cost/day @ $15	750		1,125
Cost/year	230,000		350,000
Cost/Ton ($)	6.6		3.4
General Mine, office ($)	0.75		0.50
Pumping, electrical etc, assume	0.50		0.35
Level maintenance & ground control	0.15		0.10
Ventilation supplies	0.40		0.15
Underground const./grouting, etc.	0.25		0.10
Total Indirect Supplies	14.35	9.0*	7.50
Total INDIRECT COSTS	42.15		18.30

*Estimated

Toronto, Canada.
February 12, 1980.

PROPERTY AND CLAIM DETAILS

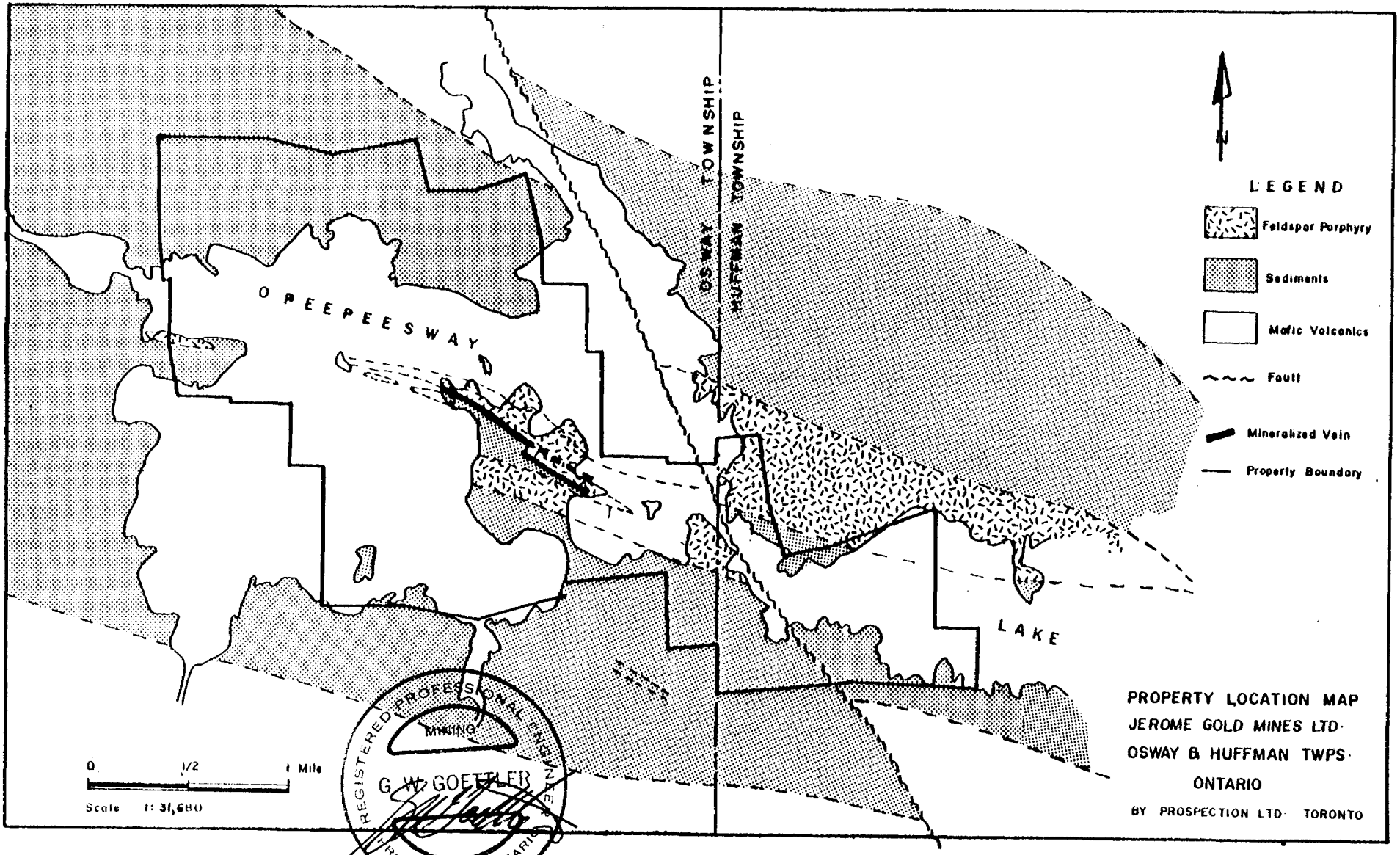
The property consists of 63 patented mining claims owned by Eddy Forest Products Ltd., located in Osway and Huffman Townships, District of Sudbury, Ontario, as shown in the location map attached overleaf. The property is at present under option to Mr. G. F. Ross, P.Eng., as of October 31, 1979.

The claims are designated as follows:

S29951 to 29952 inclusive	2 claims
S31758 to 31759 inclusive	2 claims
S32069 to 32077 inclusive	9 claims
S32113 to 32121 inclusive	9 claims
S32157 to 32162 inclusive	6 claims
S32215 to 32216 inclusive	2 claims
S32218 to 32227 inclusive	10 claims
S32242	1 claim
S32261 to 32269 inclusive	9 claims
S32316	1 claim
S32364 to 32369 inclusive	6 claims
S32386 to 32387 inclusive	2 claims
S32395	1 claim
S33640 to 33642 inclusive	3 claims
Total	63 claims

In addition, the surface rights only are held on claim S32318 and a half interest in the surface rights only of claim S32317. Both these claims are patented to surface rights only.

Water-covered areas are held under licences of occupation.


OSWAY TOWNSHIP
HUFFMAN TOWNSHIP
OPEEPEESWAY
LAKE
N
LEGEND
Feldspar Porphyry
Sediments
Mafic Volcanics
Fault
Mineralized Vein
Property Boundary
0
1/2
1 Mile
Scale 1: 31,680
REGISTERED PROFESSIONAL ENGINEER
MINING
G. W. GOETTLER
PROVINCE OF ONTARIO
PROPERTY LOCATION MAP
JEROME GOLD MINES LTD.
OSWAY & HUFFMAN TWPS.
ONTARIO
BY PROSPECTION LTD. TORONTO

CERTIFICATE OF QUALIFICATION

I, WILLIAM HILL, residing at R.R. #2, Rockwood, Ontario, certify that:

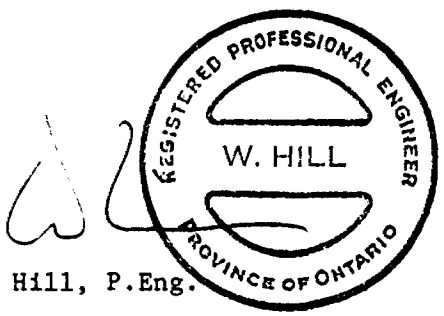
1. I am a mining engineer graduated from the University of Toronto with a degree of Bachelor of Applied Science in 1958 and have practised my profession since graduation.

2. I am a Registered Professional Engineer and Consultant of the Province of Ontario.

3. I have no interest in, nor do I expect to have interest in, directly or indirectly, the Jerome Mine.

4. This report is based on data made available by Mr. George Ross. No examination has been made of the property.

DATED at Toronto, this 14th day of February, 1980.



William Hill, P.Eng.

JEROME MINE

PROGRESS REPORT

SEPTEMBER 1980 - JANUARY 1981

TO

MR. BRIAN McDONOUGH, President

BRIDGEVIEW RESOURCES INCORPORATED

R. J. GRAHAM, P.Eng.
Consulting Geologist
872 Ski Club Road
North Bay, Ont., P1B 8E5
Tel: (705) 472-2085

PROGRESS

During the period September 1980 - January 1981, extensive exploration and mine rehabilitation was carried out on the Jerome Mine Property. Surface trenching and stripping, 23 miles of line cutting, magnetometer, V.L.F.E.-M and induced polarization surveys were followed by a surface diamond drilling program. This aggregated 2710 feet of BQ diamond drilling in 9 holes to verify previous drilling results for ore-reserve purposes, and to evaluate a series of induced polarization and magnetic low anomalies. It is highly significant that the previously known ore-shoots are all clearly defined as magnetic low anomalies. Of great importance is the fact that a series of unexplored magnetic low anomalies lies close to the mine workings. The exploration implications are enormous. The drilling results were generally excellent, the best being 0.22 oz Au/ton over 62 feet in J80-8 and it is recommended by the undersigned that 32 holes be drilled for a total of 6,650 feet to assess the remaining untested magnetic low anomalies.

Underground, the Jerome Mine was dewatered to the 200 foot level, and representative check-sampling was carried out by the undersigned to verify ore-blocks documented by the previous operators. The results showed that these oreshoots are present with good grades and widths. (See "Summary of underground sampling"). It is recommended that dewatering of the mine be continued to provide access for sampling of the other levels. (See attached longitudinal section).

Construction on surface was hampered by unprecedented cold weather over long periods of time, but the following significant work was done.

A 40' x 60' steel shop was built, also a compressor house, generator building, coreshack and corelogging facility with fluorescent lighting. The hoist foundation was poured, with all necessary steel work, and the shaft collar was rebuilt. Eight sets of timber were replaced at the top of the shaft, and filling of a surface open-cut with waste rock was started.

Senior supervisory personnel were W. Manderstrom, Mine Manager, P. Brown, Exploration Manager, R. J. Graham, Consulting Geologist.

The drilling Contractor was Barron Diamond Drilling of Haileybury.

Construction and exploration were carried out during appalling winter conditions and Messrs. Manderstrom and Brown are to be commended for their diligent work.

SUMMARY OF DIAMOND DRILLING RESULTS

Nine B.Q. holes were drilled from surface for a total of 2710 feet.

J80-1, -90° to 247 feet. At 24E and 1+25S. To test an I.P. anomaly. (Best assay 0.01 oz. Au/ton over 2.5 feet from 114.5 - 117.0).

J80-2, -45° to 348 feet. At 8E and 4S. To test an I.P. anomaly. (Best assays 0.12/18.5' from 199.0-217.5 and 0.42/3.0' from 303.0-306.0).

J80-3, -45° to 354 feet. At 2E and 5+50N. To test an I.P. anomaly (No samples taken).

J80-4, -45° to 354 feet. At 2E and 5+50N. To test an I.P. anomaly (No samples taken).

J80-4, -45° to 196 feet. At 7+50E and 1+30N. To test a mag. low. (Best assays 0.16/25.0' from 71.0' - 86.0' and 0.11/20.5' from 108.5 - 129.0, or 0.08/58.0' from 71.0' - 129.0').

J80-5, -70° to 307 feet. At 7 + 50E and 1+30N. To test a mag. low. (Best assays 0.07/31.2' from 164.3' - 195.5' and 0.12/22'5 from 224.5' - 247'0' or 0.06/82.7' from 164.3 - 247.0').

J80-6, -45° to 247 feet. At 10+50E and 1+30N. To test a mag. low. (Best assays 0.15/8.0' from 105.0' - 113.0' and 0.09/9.0' from 127.0 - 136.0 or 0.08/31.0' from 105.0' - 136.0').

J80-7, -70° to 317.0'. At 10+50E and 1+30N. To test a mag low. (Best assay 0.09/17.5 from 221.5'/239.0').

J80-8, -45° to 437.0'. At 6+30E and 0+80S. To test a mag low. (Best assay 0.22/62.0' uncut, or 0.16/62.0' cutting a high erratic to 1.0 oz; from 356.0' - 418.0').

J80-9, -34° to 257.0'. At 23E and 0+30S. To test a mag. low. (No significant values).

In short, 3 holes were drilled to test induced polarization anomalies. One hole (J80-2) returned ore-grade assays. 6 holes were drilled to test magnetic low anomalies, and 5 returned ore-grade values over wide stoping widths.

The obvious correlation between gold ore and magnetic low anomalies is remarkable. This was not known prior to this exploration program by Bridgeview.

Magnetic low anomalies recommended for drilling

1. Lines 18W-14W at 1+00N. Peak low 40 gammas. This is above a known oreshoot on the 200 foot level. Six holes, each 250 feet long, are recommended to verify width and grade.

2. Lines 12W-10W in lake off north edge of small island at 12+00N. Peak low -430 gammas. This could be drilled from the island but would necessitate a helicopter move. Two holes each 250 feet long are recommended to assess the ore potential.

3. Lines 12W-10W at 1+50S. Peak low 22 gammas. One 250 foot hole on line 11+00W is recommended.

4. Lines 4W-2W at 4+50S. Peak low -20 gammas. Can be drilled from shore with one 300 foot hole.

5. Line 4W at 5+00S to Line 2W at 9+00S. This is a strong -20 gamma anomaly some 100 feet in width and a 500 foot strike length. This could be tested from shore with a 650 foot hole.

6. Lines 1E-5E at 0+75N and 2+50N respectively. Peak low -200 gammas. This warrants two 250 foot holes.

7. Lines 4E-6+50E at 0+25N-1+00N. Peak low -100 gammas. Three holes of 250 feet each are recommended.

8. Lines 4E-7E at 1+50S-2+100S. Peak low -770 gammas. This is an excellent target, 50 feet wide and 300 feet in length, and three holes each 200 feet long are recommended.

9. Lines 6E-13E at 2+N. Peak low -90 gammas, 40 feet wide. This was drilled in the present program, and the results follow: Line 6+30E, hole 8 -45^{o} 0.16 oz. Au/ton over 62.0 feet.

Line 7+50E, hole 4 -45° 0.08 oz. Au/ton over 58.0 feet.
hole 5 -70°, 0.06 oz Au/ton over 82.7 feet.

Line 10+50E hole 6 -45° 0.23 oz Au/ton over 3 feet and 0.09 over 9.0 feet.
hole 7 -70° 0.09 oz Au/ton over 17.5'

This indicated ore zone should be further tested with six holes aggregating 1000 feet.

10. Lines 8E-16E at 1+50 - 2+00S. Peak low 40 gammas. This is 60 feet wide, and requires three 200 foot holes for evaluation.

11. Lines 14-26E from 2+00N to the Base Line at 24E. Peak low -210 gammas. Needs one 150 foot hole on line 15E.

12. Lines 7-10E at 5S and 6+50S. Peak low is 10 gammas. This is a good target, and warrants testing with one 200 foot hole to evaluate this 30 foot wide anomaly.

13. Lines 28-38E (still open to E). Peak low 200 gammas. Anomaly width is 300 feet. Merits one 300 foot hole from the shore.

14. Lines 23-31E at 6+00S and 8+00S. Peak low 50 gammas. This is 200 feet wide, and could be tested with a 350 foot hole from the shore.

To summarize, fourteen surface drill targets, with excellent exploration potential for gold lie in favourable geology, within reach of the underground workings. The strength and width of these anomalies warrants drill testing, as substantial additions to the presently indicated ore might be possible.

SUMMARY OF UNDERGROUND SAMPLING

Thirteen representative samples were taken by the undersigned from the 200 foot level. Assays were carried out by Bell White at Haileybury and were double checked by them.

Only one of the samples was not ore-grade. The underground examination showed that the sulphide content of the ore is generally 1% or less, and the best gold values are intimately associated with dark grey quartz, carrying graphite and molybdenite.

Dilution by sloughing is predicted to be minimal when production is resumed as the wallrock is very competent.

A tabulation of the excellent sampling results follows:

Sample No.	Width Ft.	oz Au/ton		Remarks
7040	2	0.18		Face of west drift
41	2	0.19	0.15/6.0'	
42	2	0.09		
43	6	0.13		Back, 6' east of west drift face
44	5	0.19		West stope breast 15' above track 10' east of west drift face
45	2	0.31	0.22/7.0'	
46	5	0.60		8' below track in raise to 350
47	5	0.40		12' below track in raise to 350
48	7	0.03		East stope breast 10' above track
49	0.3	0.36		Character sample of steep stringer near raise to 350 level
50	15	0.13		Slash at drift elevation.
51	-	0.17		Drift muck representing 400' of stoping at a minimum of 10' width.
7052	-	0.17		Drift muck representing 300' of stoping at a minimum of 10' width.

HOLE NO. J-80-1

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			90			

Location	24E 1+25S						
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
0	16	Casing	3012	88.5	90.5	2.0	0.01	
14	38	Conglomerate dark green, chloritic with innumerable well rounded to sub-angular dark grey, pale green.	3013	90.5	94.0	3.5	TR	
			3014	94.0	96.0	2.0	0.005	
38		Generally aphanitic fragments and pebbles to 3". Moderately to strongly magnetic throughout with magnetite crystals to 1/8". Some of the fragments/pebbles are ringed by fine euhedral pyrite. Overall sulphide content less than 1/2%. Considerable zoizite/-epidote. N.B. at ± 38' the pebbles/fragments are dramatically reduced in numbers and the rock becomes more like a graywacke. (The magnetics don't change). At 49' weak open seam, 45° to core axis.	3015	96.0	98.3	2.3	0.005	
			3016	98.3	99.2	0.9	0.005	
			3017	114.5	117.0	2.5	0.01	
			3018	130.5	131.2	0.7	TR	
			3019	155.0	156.5	1.5	0.005	
			3020	216.0	220.0	4.0	0.005	
62	63	Weak shear 60° to CA, local conformable fine euhedral PY.						
63	64	1% fine euhedral PY						
65	66	One 1/2" streak of 20% disseminated PY 30° to core axis.						
66	67	1-3% fine euhedral PY and one 1/2" quartz stringer 50° to CA, (no sulphides) also one blebby 2" patch of heavily disseminated euhedral and subeuhedral PY adjacent to strong open slip 15° to core axis.						
75	82	Open fault slip rolling along core at very small angle to core axis. Weak slickensides at ± 90° core axis.						

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
88.5	90.5	Two open 1/2" seams 60° to CA, vuggy + 3% fine PY and one 1/2" quartz stringer, 60" to CA with 3-5% fine euhedral PY, and hairline QC stringers 35-40 to CA.						
90.5	92.0	Less than 1/2% fine PY and scattered hairline. Q.C. thread veins 35 - 40° to C/A.						
92.0	94.0	1% fine PY and scatt QCths as above.						
94.0	96.0	1% fine PY and scatt QCths as above.						
96.0	98.3	1% fine PY scatt QCths as above.						
98.3	99.2	2-5% fine euhedral PY and 1/8" PY 30".						
		N.B. at 102 one 1/8" grain of CPY.						
		N.B. at 102.2 strong open fault slip 25° to CA Slickensides ell to CA, i.e. V						
		N.B. at 104 strong open fault slip 40° to C.A.						
114.5	117.0	2-3% fine euhedral PY and occ black tourmaline crystals. Several low angle slips in this section.						
		N.B. at 126' blebby areas of tourmaline Crystals.						
130.5	131.2	One 1/2" Qtz carb stringer 35° to CA - 1% PY. Numerous open slips 35 - 50° to CA.						
155.0	156.5	Five 1/4" QC threads, with 2-5% fine PY, and greater than 1% PY						
Logged	to 199'	(Much Less mag towards end).						
at	204.3	Vuggy cb slip 25° to C/A - carb/py/gpi.						
207.5	210	45 to 50° to C/A open vuggy Cb veins less than 1/8" at 212 1/8" pink Cb 40° to C/A						
		slickensides and fine py						

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
216.2	220	3/4" carb vein down core + 5 TO 10% euhedral py + GRAPHITE FLAKES. Some Red Hematatite stain.						
Hematite at	228	1/8" pink cb vein 40° to C/A. 1/2" pebbles seen and still magnetic, py content about 1%.						
at	244	Irregular Qtz CB STRINGER PLUS PY SOME CPY.						
247.3		END OF HOLE						
16/Dec.	1980	P. Brown						

HOLE NO. J-80-2

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			45	N		348 - 42°

Location	8+00E 4+00S						
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
		J-80-2						
0	16	Casing		161.5	164.0			
16	35.9	Carbonated sheared sediment? Crushed? dissem cpy, py some hematite. Slips 45°/50° to C/A. Narrow qtz/cb stringers. Less than 1/2% sulphides. NON-MAGNETIC	3021			2.5	TR	
			3022	164	169	5	.005	
			3023	169	174	5	.005	
35.9	54	Strongly sheared 65 to 75° to C/A euhedral py 40.8 cb veining 55° to C/A some cpy	3024	174	179	5	TR	
			3025	179	184	5	.01	
			3026	184	189	5	.005	
54	117	Sheared Granodiorite porphyritic 1/2 to 1% euhedral pyrite. Shearing 40° to C/A. Core badly broken until 118.5.	3027	189	194	5	.005	
			3028	194	199	5	.035	
		114-15 pink.	3029	199	204	5	.07	
		Begins to get magnetic at 107'	3030	204	229	5	.11	
117		Conglomerate/magnetic shearing 45° to C/A 128.5 pink 1/2" qtz cb vein 30° to C/A. 135.5 open vuggy calcite veins. Magnetic to 176'. 161.5 becoming sheared 70% to C/A and pale in colour. Graphitic seams.	3031	209	213	4	.08	
			3032	213	217.5	4.5	.075	
			3033	230	233	3	.005	
			3034	244	246	2	.025	
		175 - 175.8 at 173 py and some graphite.	3035	303	306	3	.415	
			3036	246	251	5	TR	
		Strong pale shearing starts at 161.5. Some mariposite (green) small quartzite stringers at all angles.	3037	251	256	5	TR	
			3038	256	261	5	TR	
188	232.5	Pale gray crushed granodiorite at 197.8. Green mariposite 70° to C/A crushed brecciated gray quartz sections and bluish coloured sections.	3039	261	266	5	TR	
			3040	266	271	5	TR	
			3041	271	276	5	TR	

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
at	209.9	Rusty fracture 50° to C/A.						
232.5	233.5	Weakly magnetic pink section. Magnetic still gray but paler sections in places at 250' qtz vein plus tourmaline at shallow angle to core. 3/4 to 1" wide. Minor white cb a little cpy.	3042	276	281	5	TR	
			3043	281	286	5	.02	
			3044	286	291	5	TR	
			3045	291	296	5	.005	
255.7	270	paler section.	3046	296	301	5	TR	
271.7	273.2	Pink section with qtz/cb and tourmaline stringers. Numerous gray qtz. and qtz/cb stringers at all angles to C/A. At 286 higher py content BUT MAINLY VERY LOW.	3047	301	303	3.0	.005	
				(303	306	0.41	5 oz/ton)	
			3048	306	309	3	TR	
			3049	309	312	3	TR	
304.5	305	Bluish gray qtz.	3050	312	316	4	TR	
310		2" Qtz tourmaline + cpy vein 35° to C/A. Pink from 309 - 315.5. Some magnetite crystals.	3051	316	319	3	TR	
			3052	319	322	3	TR	
335		Quartz tourmaline + cpy vein 15° to C/A at 342 some magnetite.	3053	322	326	4	TR	
			3054	326	329	3	TR	
348		END OF HOLE	3055	329	334	5	.01	
			3056	334	339	5	TR	
			3057	339	344	5	TR	

HOLE NO. J-80-3.

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			45	S		354 - 42°

Location	2E 5 + 50N						
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
0	11							
11	89	Grey and pink conglomerate - 1/4 to 1" fragments. At 21-22 Q.v's 40° to C/A + py, cpy, spec. 16 - 33 pink. Fine conglom less than 1/8". 47.5-84 pink non magnetic. Rusty seam at 56'. 60° to C/A. 66-68 rusty and broken.						
89	117	Porphry (Jerome porphyry?) 1/8" qtz clasts. Py cpy in fine xtals and on slips. Non magnetic. Badly fractured and broken.						
117	164	Pink conglomerate, occasional py. seams. 1/2 to 1% py. in places. Magnetic inclusions? 127-128 sample. 153-156 - 1% py.						
164	183	Badly broken and fine Py 1% porphry						
183	232	Pinkish conglomerate.						
213	215	Lamprophyric intrusion water lost in vuggy hole.						
216.5	217	Qtz vein + cpy.						
232	260	Greenish colour.						
at	243	QV + tourmaline.						
260	269	Pinkish						
269	270	Greenish + numerous qtz vein 45° to C/A.						

HOLE NO. J-80-3

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
288	354	Greenish + numerous qtz vein.						
306	308	Qtz cb stringers 45° to C/A.						
354		END OF HOLE						
No sampling to date.								

HOLE NO. J-80-4

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway		196	45	N		196' - 40-1/2°

Location	7+50E 1+30N						
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
		Casing driven 8'	3058	16.5	20	3.5	TR	
0	5 or		3059	20	25.5	5.5	TR	
0	6	Rusty seams - broken ground.	3060	25.5	30.5	5.0	TR	
5		Med to dark grey non-magnetic sheared grano-diorite r to solid rock. Py content low. Some milky bluish quartz/cb stringers 1/8" 20'-30 paler grey larger quartz/cb veining 30° to 55° to C/A 21-22 - 80% qtz/cb 24'-25 1" qtz cb vein 20° to C/A. 27-29 Rusty fractures and blue qtz. Fault - 15° to C/A.	3061	30.5	35.5	5.0	TR	
			3062	35.5	40.5	5.0	TR	
			3063	40.5	45.5	5.0	TR	
			3064	45.5	50.5	5.0	TR	
			3065	50.5	57	6.5	.005	
			3066	57	63	6.0	.055	
41	42	Pale grey 1/4" bluish qtz 60° to C/A.	3067	63	66	3.0	TR	
				(2' core only. at 65' 12" broken vug ground 12" lost!!)				
52	54	Heavy qtz cb material.						
57		Main blue qtz and cb zone begins. Numerous qtz/cb veins and stringers greater than 1/8" at all angles to C/A.	3068	66	71	5.0	.025	
			3069	71	76	5.0	.05	
			3070	76	81	5.0	.175	
72	88	Much blue material strongly sheared and carbonated	3071	81	86	5.0	.235	
		82.5 heavy blue grey. 84.5 heavy blue grey.	3072	86	90	4.0	.05	
			3073	90	95	5.0	TR	
91	104	Reddish colouration. 96.2 graphite? + py. 97.5 rusty fracture.	3074	95	97	2.0	.025	
			3075	97	102	5.0	.005	
109	129.3	Heavy blue grey and carb - ore zone! #2.	3076	102	108.5	6.5	.005	
		112.5 0.7' grey blue.						

HOLE NO. J-80-4

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
129.3		Darker grey and more py. Many small stringers. 30° to 60° to C/A. Most 45° to C/A.	3077	108.5	110.5	2.0	.145	
			3078	110.5	114	3.5	.36	
		141- tourmaline, in qtz/cb.	3079	114	115	1.0	.045	
165.5		3" qtz vein + tourmaline 60° to C/A.	3080	115	120	5.0	.025	
		184-5 tourmaline in qtz cb vein.	3081	120	125	5.0	.035	
			3082	125	129	4.0	.07	
		191-196 pink colouration.						
	196	END OF HOLE	3083	129	131.5	2.5	.005	
			3084	131.5	136.5	5.0	TR.	

HOLE NO. J-80-5

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			70	N		307 - 70°

Location	1+30N 7+50E						
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
0	1.5	Casing	3085	4.3	5.3	1.0	TR	
1.5	29.6	Dark grey grano-diorite weakly magnetic.	3086	20	25	5.0	TR	
		2.7 1/2" qtz cb vein 40° to C/A.	3087	25	29.6	4.6	TR	
		3.3 1/4" qtz cb vein 80°	3088	29.6	32.2	2.6	.025	
		4.6-5.2 qtz rich section						
		6.3 1/4" qtz cb vein 30° to C/A	3089	32.2	37.0	4.8	TR	
		6.8, 6.9, 7.1 qtz cb stringers 1/8" 60° to C/A	3090	37	42	5.0	.005	
		12.5 1/4" qtz cb + tourmaline 60° to C/A	3091	42	47	5.0	.005	
		12.8 1/2" rusty qtz vein 50° to C/A	3092	47	52	5.0	TR	
		Paler grey 11.5-18. at 14" 1" intrusion	3093	52	57	5.0	TR	
		19.5-20.5 broken & rusty fault.	3094	57	67	10.0	.005	
29.6	32.2	Qtz cb vein & bluish Qtz fault breccia.	3095	67	77	10.0	.005	
32.2	35	As 1.5 to 29.6 30° top 20° to C/A bottom. Rusty top contact.	3096	77	78	11.0	.005	
			3097	78	88	10.0	TR	
35	45	Numerous small stringers all through core. Non magnetic 45' onward.	3098	88	98	10.0	TR	
35	117.8	Grey weakly magnetic grano-diorite, many fine stringers.	3099	98	108	10.0	TR	
		38.5-39 rusty fractures.	3100	108	117.8	9.8	TR	
		43.6-44 Qtz cb + tourmaline 60° to C/A.	7053	117.8	122	4.2	TR	
		39.5 & 45 qtz cb veining qtz cb vein at - 63-63.2, 64.3-4, 66.0, 72.0, 76.0, 75.5, 77.8, 20° to C/A and 70° to C/A.	7054	122	133	11.0	TR	
			7055	133	143	10.0	TR	
			7056	143	153	10.0	.005	
117.8	120	Brecciated zone begins. Contact 55° to C/A 124-5 rusty & qtz vein.	7057	153	156	3.0	TR	
			7058	156	157.5	1.5	.005	

HOLE NO. J-80-5

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
120	163.8	Greyish + qtz cb veins many pinkish colour 128-130, 139.5-144.0 at 137 weak magnetic. 156.5-157 bluish qtz in qtz cb veining.	7059	157.5	164.3	7.2	TR	
			7060	164.3	166.3	2.0	.005	
			7061	166.3	170.6	4.3	.12	
164.3	181.3	Sheared zone + blue cb/qtz c/b Contact 50° to C/A.	7062	170.6	173.0	2.4	.02	
			7063	173	178.3	5.3	0.09	
at	173	Good sulphides with blue qtz.	7064	178·3	181·3	3·0	.10	
			7065	181.3	185.5	4.2	.10	
181	181.3	Bluish qtz 30° to C/A.	7066	185.5	195.5	10.0	.035	
181.2	197	Heavy narrow stringers in altered zone.	7067	195.5	205.5	10.0	.005	
197	207	Few stringers.	7068	205.5	215.5	10.0	.005	
207	223	Heavy stringers at all angles to C/A 40°, 45°, 60°. 220-221 tourmaline in stringers.	7069	215.5	224.5	9.0	.005	
			7070	224.5	229.5	5.0	.135	
			7071	229.5	232.0	2.5	.19	
223	251.5	Bluish qtz. & cb veins brecciated.	7072	232	237	5.0	.015	
			7073	237	242	5.0	.12	
237	250	Angular blue qtz in carb matrix. More white carb than bluish qtz.	7074	242	247	5.0	.135	
251.5		Contact zone - contorted.	7075	247	251.5	4.5	.025	
251.5		Dark grey grano-diorite + 1 to 2% py. Some narrow qtz/cb veins. Weakly magnetic in places. May be low grade zone?	7076	251.5	256.5	5.5	TR	
			7077	256.5	261.5	5.0	TR	
	307	END OF HOLE						

HOLE NO. J-80-6

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			45	N		

Location	10+50E 1+30N				
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
2	6	(Casing run to 10').	10201	36	37	1.0	TR	
6	10	Pink grano-diorite + tourmaline.	10202	52.5	53.5	1.0	TR	
			10203	64.9	66.0	1.1	.045	
10	31	Greyish green. A few cpy specks and some py. with narrow qtz/cb stringers 40 & 45° to C/A also 60° and 70°. Weakly magnetic.	10204	66	72.5	6.5	.005	
			10205	72.5	73.5	1.0	.015	
		16.4-5 qtz cb vein 70° to C/A + tourmaline.	10206	73.5	79	5.5	.005	
		17.2-3 pale yellow carb in tension fraction 10° to C/A.	10207	79	81	2.0	.005	
		22.1 1/2" qtz vein 50° to C/A.	10208	81	83.5	2.5	.005	
		28.1 1/2" qtz vein 50° to C/A + tourmaline + rusty fracture.	10209	83.5	85	1.5	.06	
31	44.5	Pinkish colour fine py greater than 1/2%. Some narrow qtz veins, bluish, e.g. at 36.2 1/4" qtz + tourmaline 70° to C/A.	10210	85	91	6.0	.005	
			10211	91	95	4.0	.02	
			10212	95	105	10.0	.005	
44.5	56.2	Grey colour at 58 appears bedded like fine conglom.	10213	105	108	3.0	.23	
			10214	108	113	5.0	.01	
56.2	56	Pink colour cpy in tension fractures 5 to 10° to C/A also disseminated cpy.	10215	113	117.5	4.5	.01	
			10216	117.5	122	4.5	.01	
56	66	Greyish colour.	10217	No sample this Number				
65.2	66	Blue qtz cb vein 40° to C/A blue qtz brecciated.	10218	122	127	5.0	.005	
66	95	Pink colour. Specularite in seams 30° to C/A. Few specks cpy dissem throughout. Brecciated seams.	10219	127	130.5	3.5	.12	
			10220	130.5	134.5	4.0	.045	
		78.3-5 brecciated blue qtz in cb vein 40° to C/A + 1% py in heavy patches.	10221	134.5	136	1.5	.11	
			10222	136	139	3.0	.005	

HOLE NO. J-80-6

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
		79.6-80.5 brecciated blue qtz and heavy py 35° to C/A at 82	10223	139	145	6.0	.005	
		open vug + py + cb 35° to C/A.	10224	145	149	4.0	.005	
		83.7-85 brecciated blue qtz 50° to C/A.	10225	149	155	6.0	.005	
		89-89.4 qtz tourmaline vein + cpy 40° to C/A.	10226	155	161.5	6.5	TR	
		94-9 brecciated blue qtz and heavy py.	10227	161.5	167.5	6.0	.005	
107	107.6	Brecciated blue qtz 56° to C/A. Also 1" solid blue 1%	10228	167.5	173.5	6.0	TR	
		sulphide.	10229	173.5	177	3.5	.005	
		Between heavy sections narrow veins at all angles. Mainly 45°.	10230	177	180	2.0	TR	
			10231	216	223	7.0	TR	
117.5	118.5	Brecciated blue qtz + cb.						
128	129	Brecciated blue qtz.						
134	135	Heavy solid vein material. Brecciated and recemented.						
139.2		Green mariaposite spot.						
134.5	177	Solid "vein" material at 176 40° to C/A.						
177		Pink highly siliceous with small qtz tourmaline veins + cpy, also magnetic spots qtz veins 35 to 60° to C/A.						
203	228	Jerome porphyry?+ heavy py + magnetic patches.						
229.5	240	Greenish grano-diorite?						
240	247	Pink grano-diorite and black magnetic patches.						
247		END OF HOLE						

HOLE NO. J-80-7

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			70	N		317 - 74°

Location	10+50E 1+30N						
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
0	4.5	Casing	10232	74.5	75.5	1.0	TR	
4.5	16.6	Pink magnetic grano-diorite (qtzite?) Magnetite Xtals, finely disseminated py.	10233	95.5	96.5	1.0	.015	
			10234	119	120	1.0	TR	
16.6	20.6	Fractured and infilled by greenish material (lamprophyric).	10235	141.5	143.5	2.0	TR	
			10236	205	207	2.0	.005	
		Numerous qtz veins 1/8 to 1/4" 65° to C/A mainly. A few at 35°.	10237	207	214	7.0	TR	
			10238	214	216.5	2.5	.005	
32	33	Grey section + qtz veins.	10239	216.5	221.5	5.0	.045	
42	52	Grey section + qtz stringers 30° to C/A.	10240	221.5	223	1.5	.01	
59	63	Inclusions in grano-diorite. Dissem cpy, py magnetite throughout.	10241	223	229.5	6.5	.115	
			10242	229.5	231	1.5	.01	
74.5	75.5	Qtz cb + sulphides.	10243	231	239	8.0	.09	
95	96	2% Py + cpy QV's 30° 70° 45°.	10244	239	247	8.0	.005	
95.5	96.5	1 to 1% py, cpy also an inclusion into heavy py.	10245	247	252	5.0	.015	
			10246	252	260	8.0	.055	
119	120	fine stringers of brecciated blue qtz some py in cb matrix.	10247	260	267	7.0	.01	
141.5	143.5	Qtz cb seams + py, cpy.	10248	267	271	4.0	.03	
142	151	Grey section.	10249	271	273	2.0	.01	
166	178.5	Greenish grey section. Magnetic to 204.	10250	273	278	5.0	.01	
			10251	278	283	5.0	.005	
206	207	Fault zone open & vuggy + cb + py + graphite.	10252	283	288	5.0	.005	

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
207		Greyish + qtz cb + brecciated blue qtz.	10253	288	293	5.0	.015	
			10254	293	298	5.0	.02	
215	216	Heavy blue qtz.	10255	298	202	4.0	.005	
222	3	Heavy blue qtz.	10256	303	308	5.0	TR	
230	31	Heavy blue qtz.	10257	308	312	4.0	TR	
At 247	297.9	Vein zone with brecciated blue qtz MoS_2 + py.	10258	312	313	1.0	TR	
252	260	2% + py.	10259	313	316	3.0	TR	
297.9	312	Grey grano-diorite qtz veins at steep angles 70-80° to C/A. Non magnetic - may assey.						
312	313	Some brecciated blue qtz.						
317		END OF HOLE						

HOLE NO. J-80-8

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			45	N		437'44-1/2°

Location	6+30E 0+80S				
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description
0	51	Overburden (Casing to 52')
51	58.4	Pink grano-diorite.
62	65	Qtz tourmaline vein in side of core & 30° to C/A also cpy at 63.
58.4		at 63 Finely dissem py + cpy throughout greater than 1%.
58	58.5	Qtz cb + fine py.
73	74	Cpy in qtz vein 45° to C/A.
69	83	Numerous qtz (bluish) veining + carb veins 45 & 60° to C/A.
83	91 *	Qtz cb veining - blue qtz fine sulphide.
116	120.5 *	Blue qtz breccia in C/A. Rock has greenish colour where altered.
132	135	Greenish + blue qtz & carb.
140	144.5	Greenish + blue qtz & carb. some green mariposite & fine py.
151	152	Blue qtz breccia in carb.
154.5	156	Qtz vein + tourmaline. Grey - qtz veins 1/4" every 3 or 4". 50° to C/A W 80°. Qtz veins 10% + of total 1/2% Py.

No.	From	To	Ft	Au	Average
10260	69	77	8.0 (cpy seam)	TR	
10261	77	82	5.0	TR	
10262	82	87	5.0	.005	
10263	87	91.5	4.5	.005	
10264	116	121	5.0	.005	
10265	126	127	1.0	TR	
10266	132	137	5.0	TR	
10267	137	140	3.0	TR	
10268	140	145	5.0	.005	
10269	150.5	152	1.5	.005	
10270	154	156	2.0	.005	
10271	156	162	6.0	.01	
10272	205.5	208	2.5	.005	
10273	211	212.5	1.5	.005	
10274	242.5	251.5	9.0	.005	
10275	251.5	257	5.5	.005	
10276	257	258.5	1.5	.005	
10277	267	268.5	1.5	.01	
10278	268.5	274	5.5	.01	
10279	277	287	11.0	.005	
10280	287	297	10.0	.005	
10281	297	307	10.0	.005	

BRIDGEVIEW RESOURCES INC.

From	To	Description
196	186	Weakly magnetic. Pyritic sections in greenish coloured core with qtz veins, e.g. 205.5-208, 211-212.5, 243-260.
243	260	Veining 45° to C/A and 65° to C/A.
267	309	Veining 45° to C/A and 65° to C/A.
309		Pinkish and qtz veins have cpy & tourmaline. Magnetic section.
321		Greenish + qtz veins.
356	418.0	Heavy 'vein' material. Blue qtz breccia zone. Zone approx 45° to C/A to 60°.
360		VG in black section.
381	286	VG specks 1/8" max in black sections.
416	418	VG in black sections.
418.0	437	Progressively less qtz veining.
437		END OF HOLE

No	From	To	Ft	Au	Average
10282	351.5	356	4.5	0.005	
10283	356	360.*	4	0.09	
10284	360	368	8	0.02	
10285	368	373.5	5.5	0.01	
10286	373.5	381	7.5	0.30	
10287	381	382.*	1.0	4.41	
10288	382	384.5*	2.5	0.565	
10289	384.5	390	5.5	0.26	
10290	390	395	5.0	0.11	
10291	395	402.5	7.5	0.07	
10292	402.5	405	2.5	0.045	
10293	405	413	8	0.11	
10294	413	416.5	3.5	0.055	
10295	416.5	418	1.5	0.65	

HOLE NO. J-80-9

BRIDGEVIEW RESOURCES INC.

Township	Claim	Length	Dip	AZ	Elevation	Tests
Osway			45	N		257-43@

Location	23+00E 0+30S						
Started		Completed		Core		Contractor	Barrons

Logged by P. Brown

From	To	Description	No.	From	To	Ft	Au	Average
0	7	OV Casing to 12'.	10296	12	15.5	3.5	.025	
7	30	Conglomerate magnetic - magnetite + pyrite seams 5 to 10% at 14'-15'. Qtz cb vein + 2% cpy + py. Specular hematite on slip faces, banding 45° to C/A & 50° to C/A near fault	10297	15.5	22	6.5	TR	
			10298	22	27	5.0	TR	
			10299	27	30	3.0	TR	
		23-24 1/2" magnetite vein 5° to C/A.	10300	30	32	2.0	TR	
			10301	32	35	3.0	TR	
30	63.4	Sheared grano-diorite grey with py blue qtz & qtz cb veining banded 50° to C/A.	10302	35	39	4.0	.005	
			10303	39	46.5	7.5	TR	
		51-53 Rusty slips & rusty carb.	10304	46.5	53	6.5	.005	
		55-62 tourmaline + py in seams. Py seams 35° & 60° to C/A. Some green mariposite.	10305	53	58	5.0	TR	
63.4	74.4	Pinkish grano-diorite magnetic.	10306	58	63.5	5.5	TR	
		68-71.0 carb/grey section.	10307	82.5	88	5.5	TR	
		71-2 Qtz tourmaline stringer down core + cpy.	10308	88	90.6	2.6	.005	
74.4	90.7	Grey carbonated grano-diorite + py less than 1% also qtz cb stringers 50° to C/A. Light grey sheared + py + blue qtz & green mariposite.	10309	102.5	107	4.5	TR	
			10310	114	115	1.0	.005	
			10311	118.5	120.5	2.0	.005	
	90.7	Contact 40° to C/A. Magnetic (weak) pinkish grano-diorite qtz tourmline + cpy vein grey samples.	10312	133	134	2.0	.005	
			10313	156	162	6.0	TR	
			10314	162	167	5.0	TR	
101	102	2" qtz tourmaline vein 35° to C/A.	10315	174	175	1.0	TR	
120	120.3	Qtz breccia + py, cpy tetrahedrite.	10316	175	179	4.0	.005	
133	4	Qtz breccia + cpy tetrahedrite.						

BRIDGEVIEW RESOURCES INC.

From	To	Description	No	From	To	Ft	Au	Average
152		Rock becomes pinkish. Much fine sulphides.	10317	182.5	183.5	1.01	0.01	
			10318	206	216	10.0	TR	
Sediments								
175	80	Greyish section + brecciated blue qtz. Moderate blue qtz + py zones.						
at	196	Rusty fault zone.						
201	205	Strong fault zone + specular hematite in slips.						
205		Magnetic pink, specularite in slips dissem cpy, py.						
		Milky blue q.v's 30° to C/A.						
257		END OF HOLE						
		Dip Test 50° to C/A.						

BRIDGEVIEW RESOURCES INC.

ASSAYS OF EDDY HOLES

Eddy #6

From	To		No.	oz/ton Au.
353.7	358.7		10319	.01
358.7	363.8		10320	.035
369.6	375.5		10321	.015
375.5	379.7		10322	.005
379.7	383		10323	.005
383	389		10324	.005
389	393		10325	TR

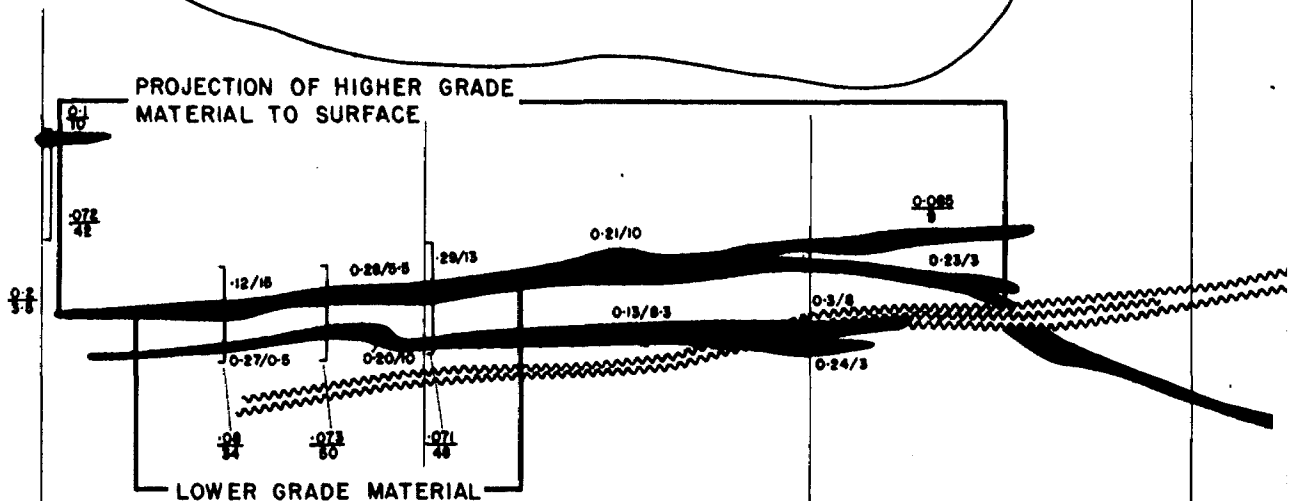
Eddy #14

804	807	** blue qtz	10326	.005
807	812	qtz cb	10327	.01
812	817	qtz cb	10328	.01

OM88-PE83-P-81

LAKE

4N



BASE LINE

L.2E

L.6E

L.8E

L.10E

L.12E

OPEN PIT PROJECTION

HIGHER GRADE: 14,500 TONS at 0.21 oz. Au (3,000 oz.)

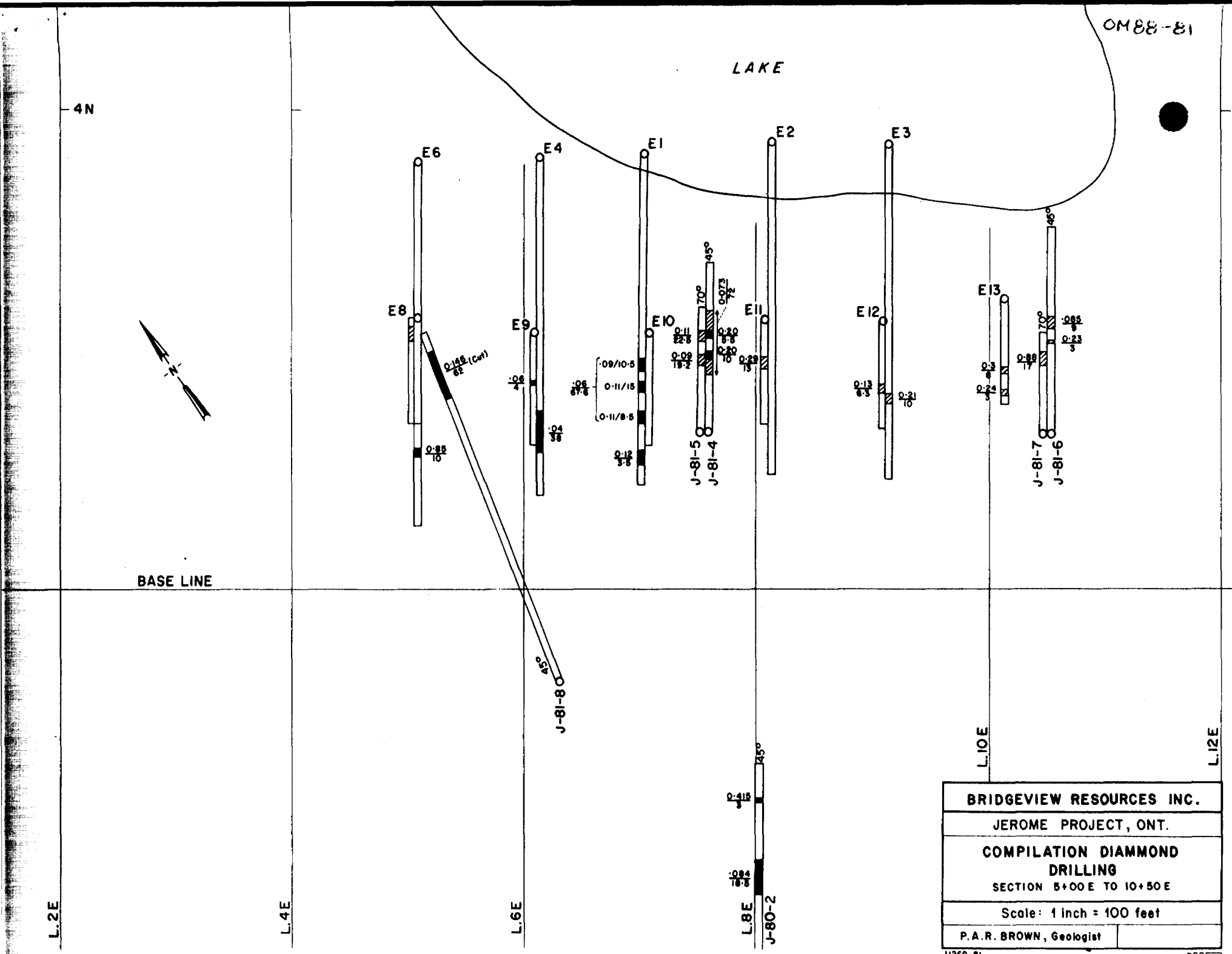
LOWER GRADE: 35,000 TONS at 0.074 oz. Au (2,590 oz.)

ASSAYS: oz/ft

BRIDGEVIEW RESOURCES INC.
JEROME PROJECT, ONT.
OPEN PIT PROJECTION SECTION 6+00E TO 11+00E
Scale: 1 inch = 100 feet
P.A.R. BROWN, Geologist

J1269-81

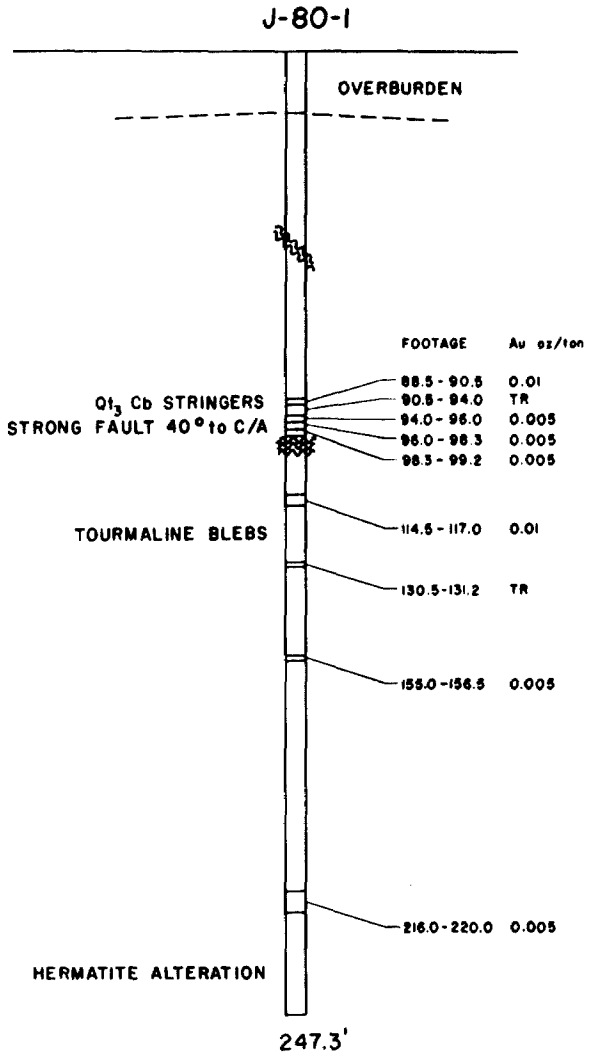
OM88-81



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
COMPILATION DIAMMOND DRILLING SECTION 5+00E TO 10+50E	
Scale: 1 inch = 100 feet	
P.A.R. BROWN, Geologist	

J1269-81

OM88-PE83-P-81



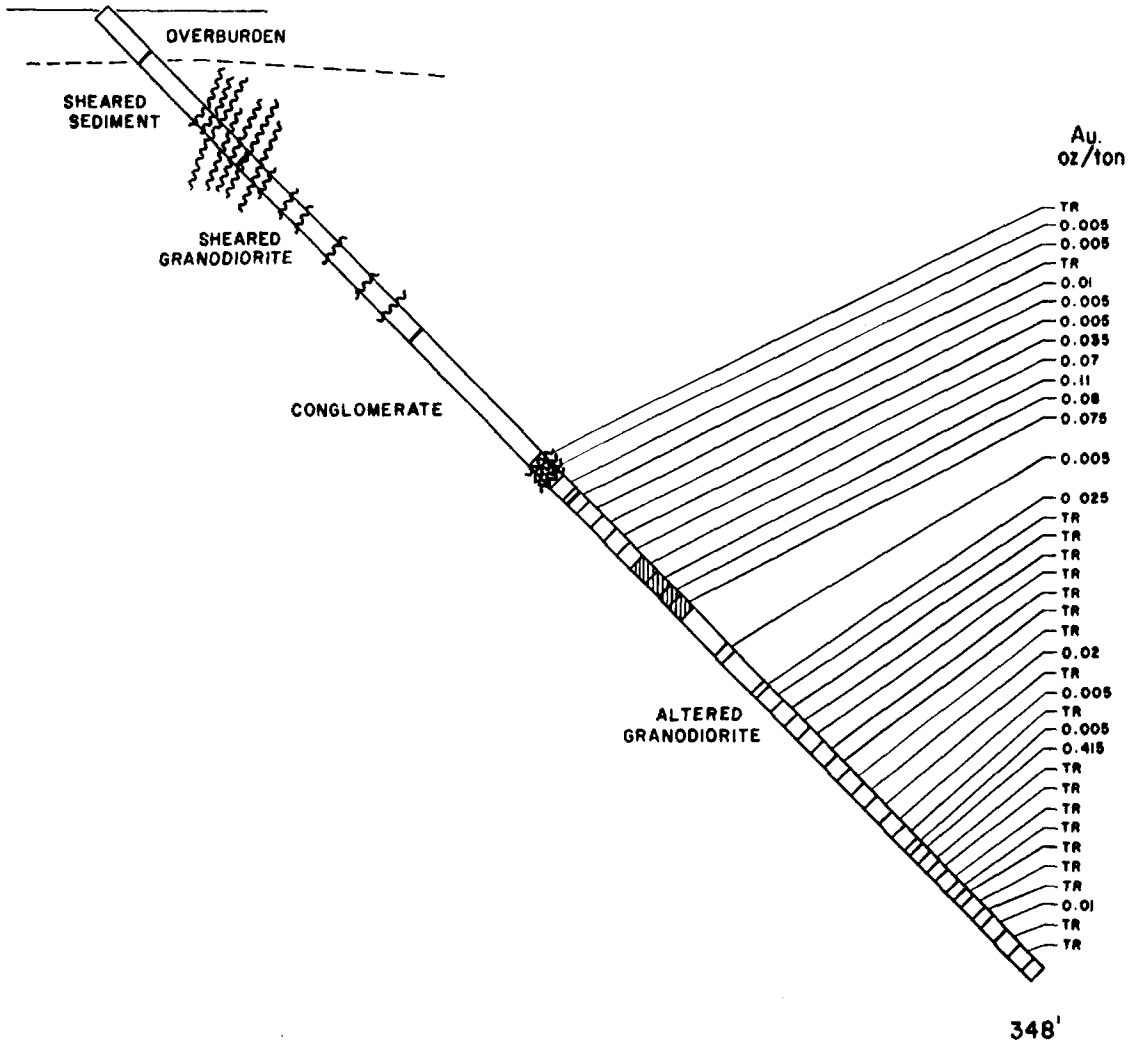
COMPLETE HOLE IN CONGLOMERATE
USUALLY <1% py BUT NARROW
SECTIONS >3% SULPHIDE.

BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-1 LOCATION LINE 24+00E, 1+25S DIP 90°	
Scale: 1 inch = 50 feet	
P. A. R. BROWN, Geologist	

J1284-81

OM85-81

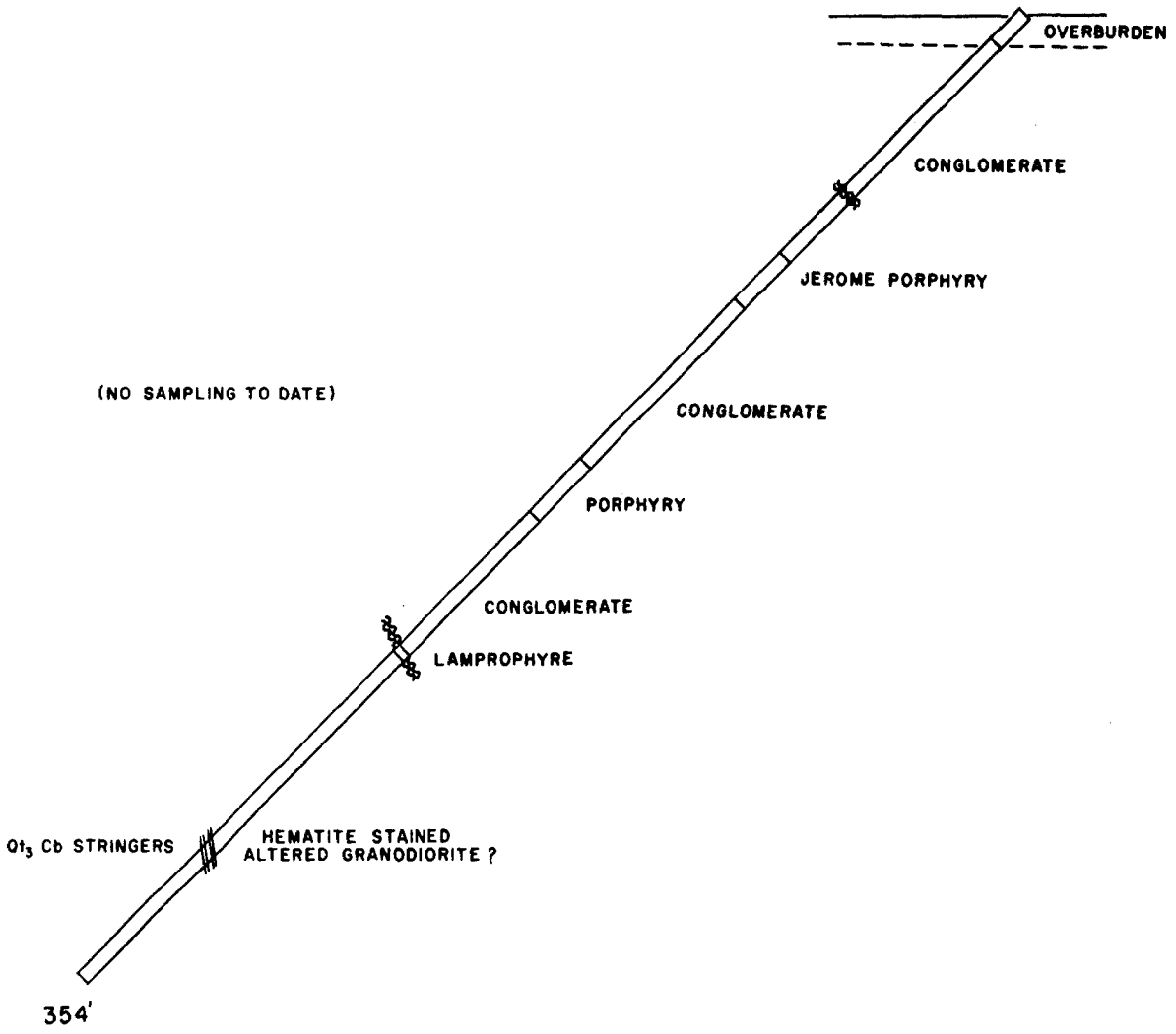
J-80-2



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-2 LOCATION 8+00E, 4+00S DIP 45°N, 42° at 348'(LOOKING WEST)	
Scale: 1 inch = 50 feet	
P. A. R. BROWN, Geologist	

J1294-81

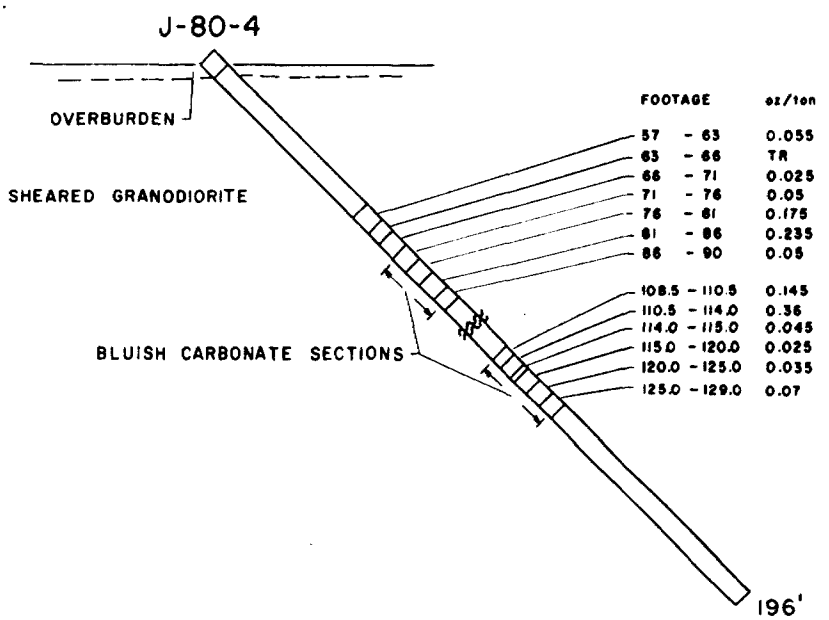
OM88-81



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-3 LOCATION 2+00E, 5+50N DIP -45°S, 42° at 354'(LOOKING WEST)	
Scale: 1 inch = 50 feet	
P. A. R. BROWN, Geologist	

J1284-81

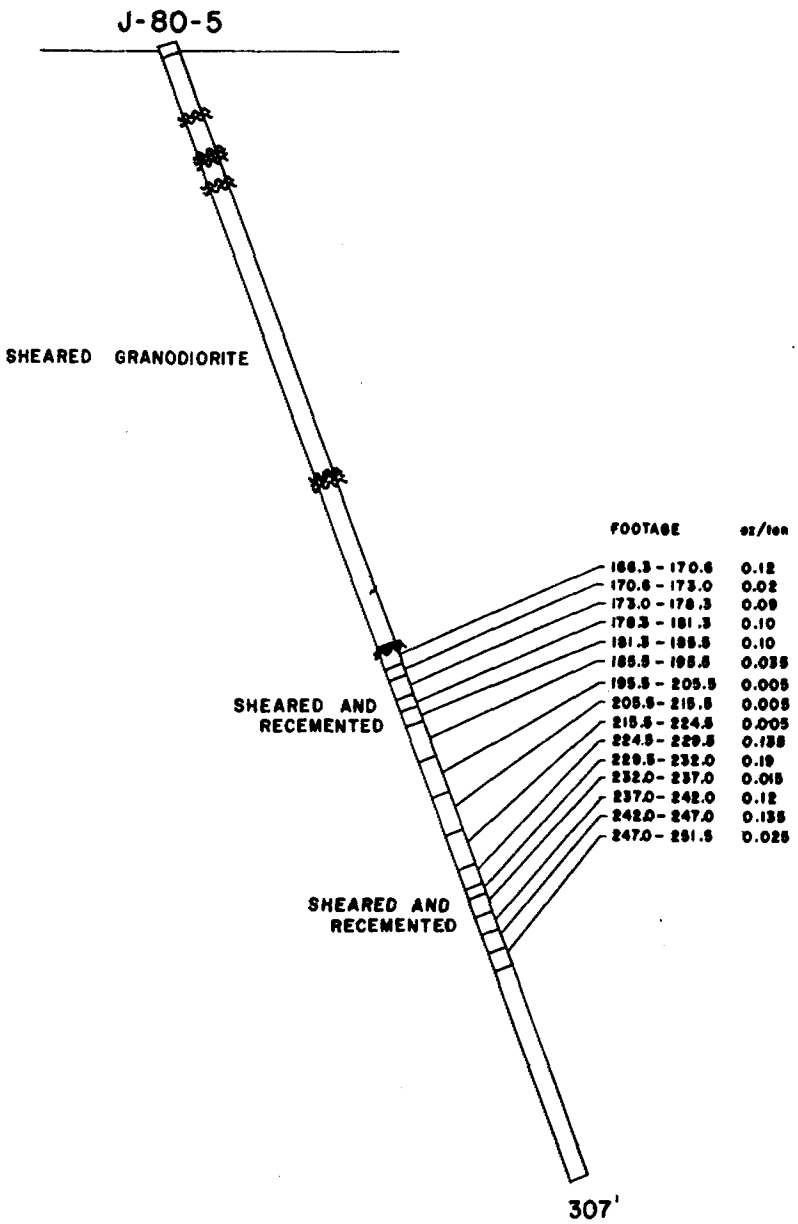
OM88-81



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-4 LOCATION 7+50E, 1+30N DIP 45°N	
Scale: 1 inch = 50 feet	
P.A.R. BROWN, Geologist	

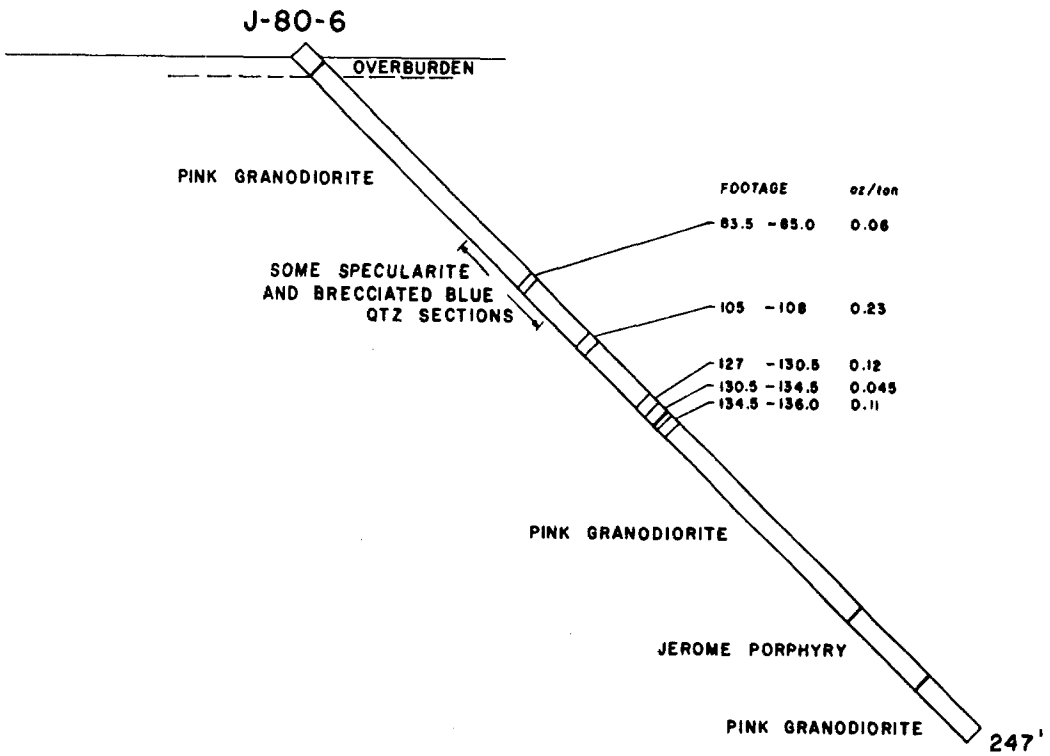
J1294-81

OM 88-81



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-5 LOCATION 7+50E, 1+30N DIP 70°N, at 307, 70°	
Scale: 1 inch = 50 feet	
P.A.R. BROWN, Geologist	

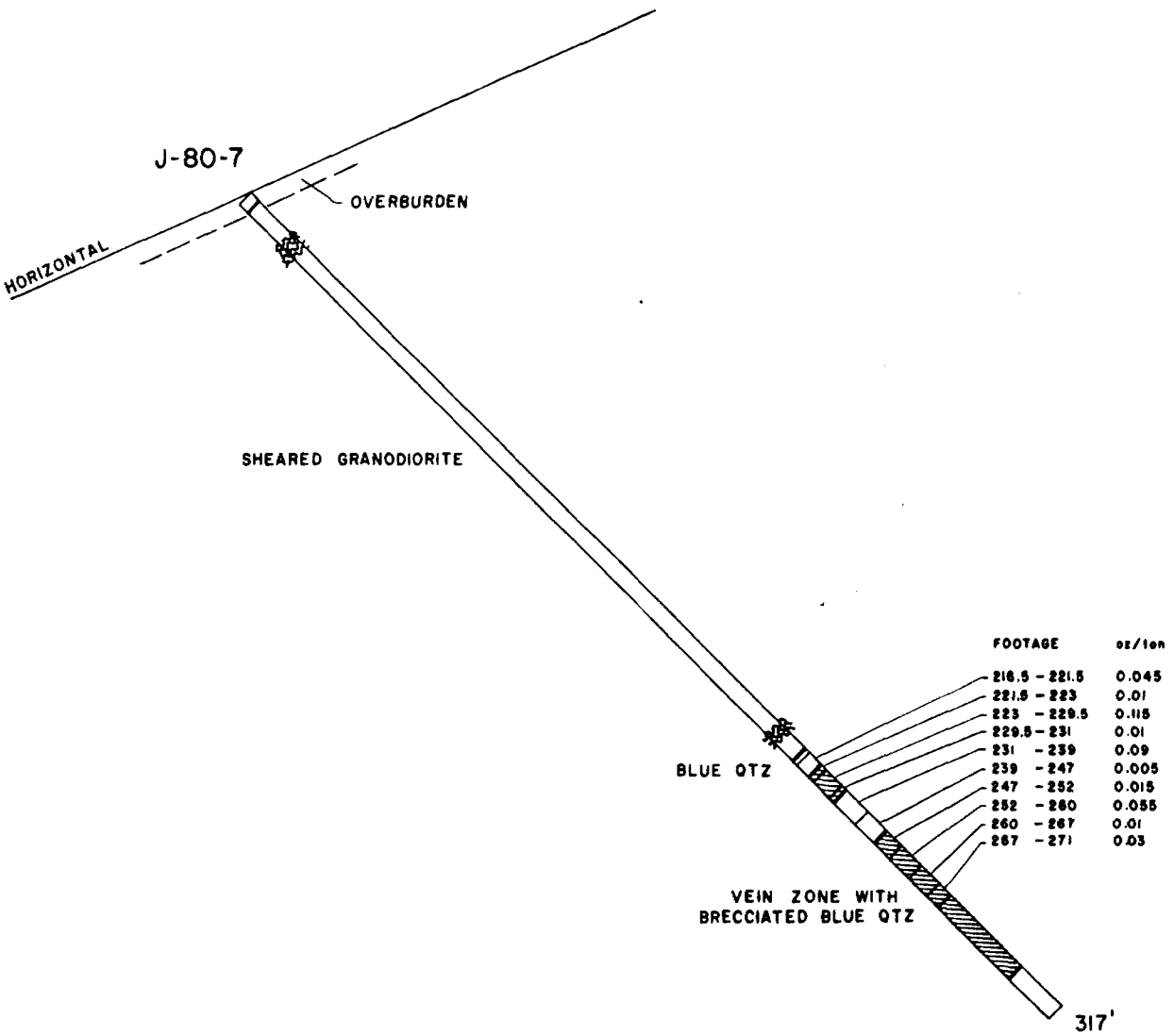
OM88-81



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-6 LOCATION 10+50E, 1+30N DIP 45°N	
Scale: 1 inch = 50 feet	
P.A.R. BROWN, Geologist	

J1284-81

OM88-81

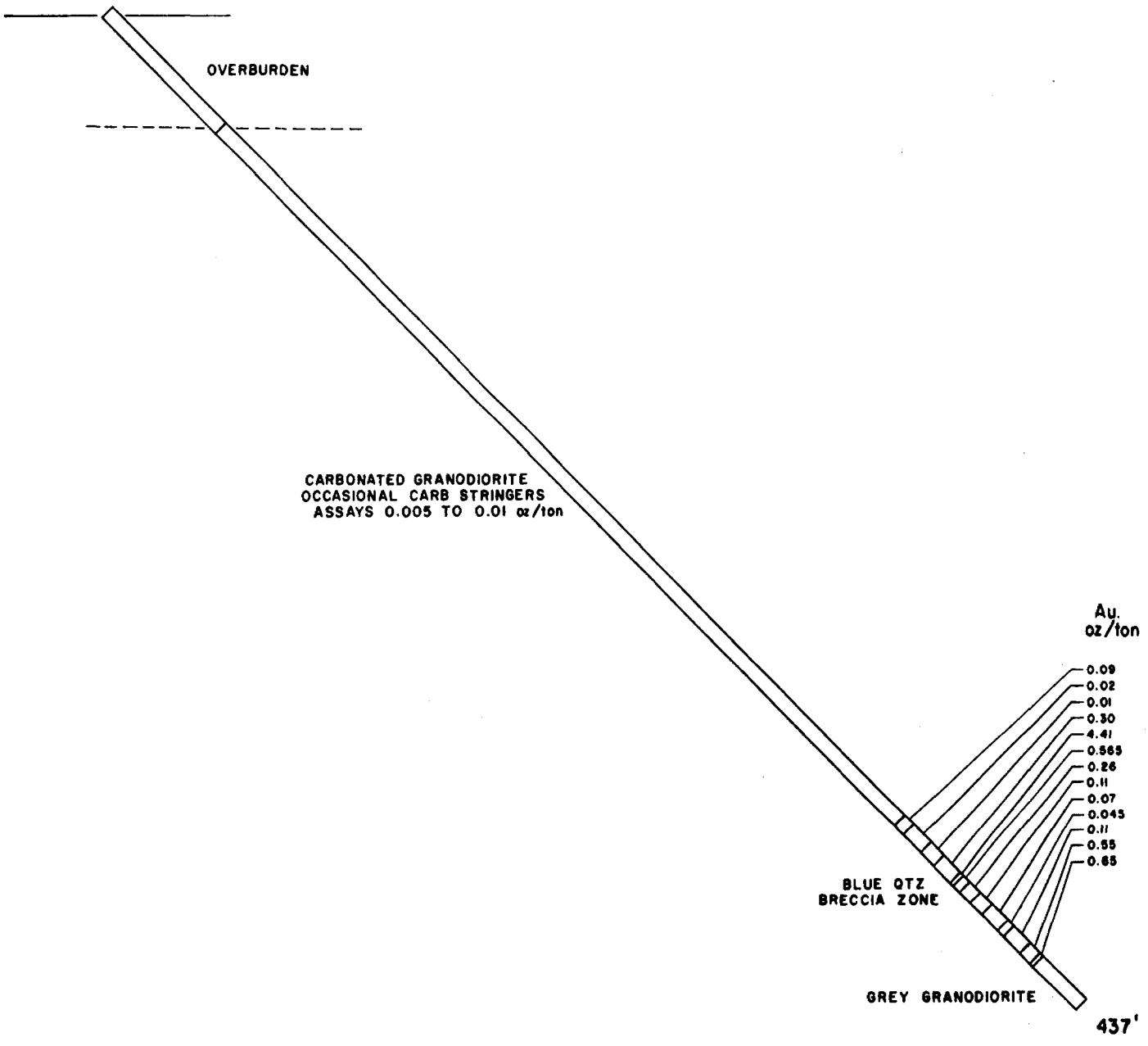


BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-7 LOCATION 10+50E, 1+30N DIP 70°N, at 317,74°	
Scale: 1 inch = 50 feet	
P.A.R. BROWN, Geologist	

J1294-81

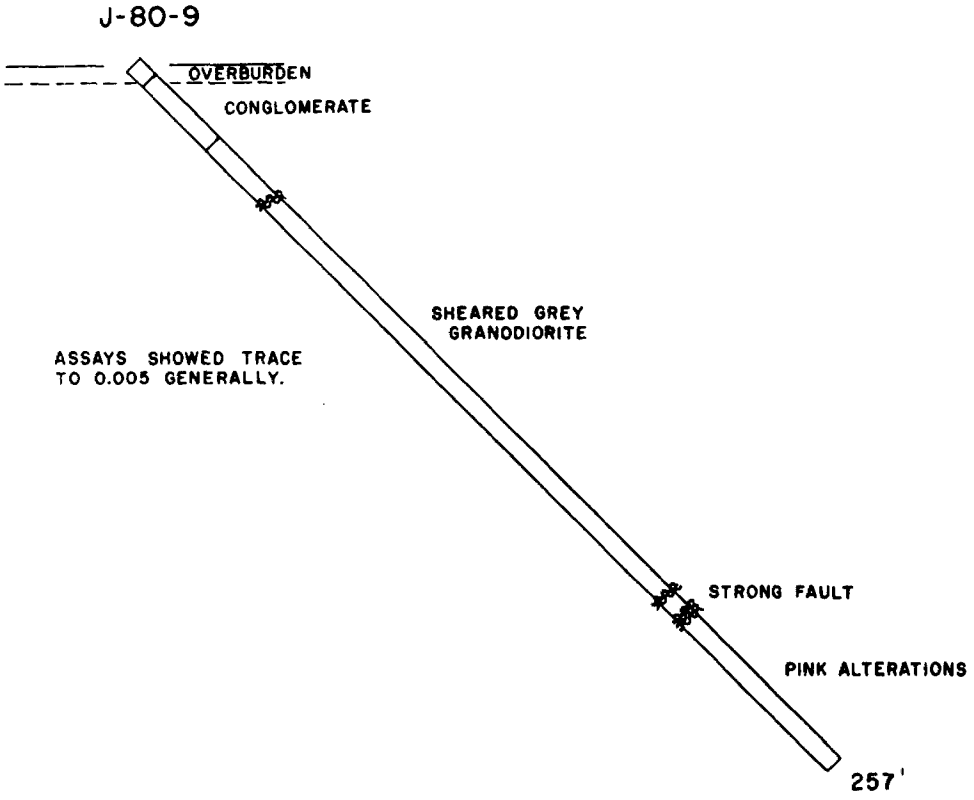
OMBB-81

J-80-8



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-8 LOCATION 6+30E, 0+80S DIP 45°N, 44.5° at 437'(LOOKING WEST)	
Scale: 1 inch = 50 feet	
P. A. R. BROWN, Geologist	

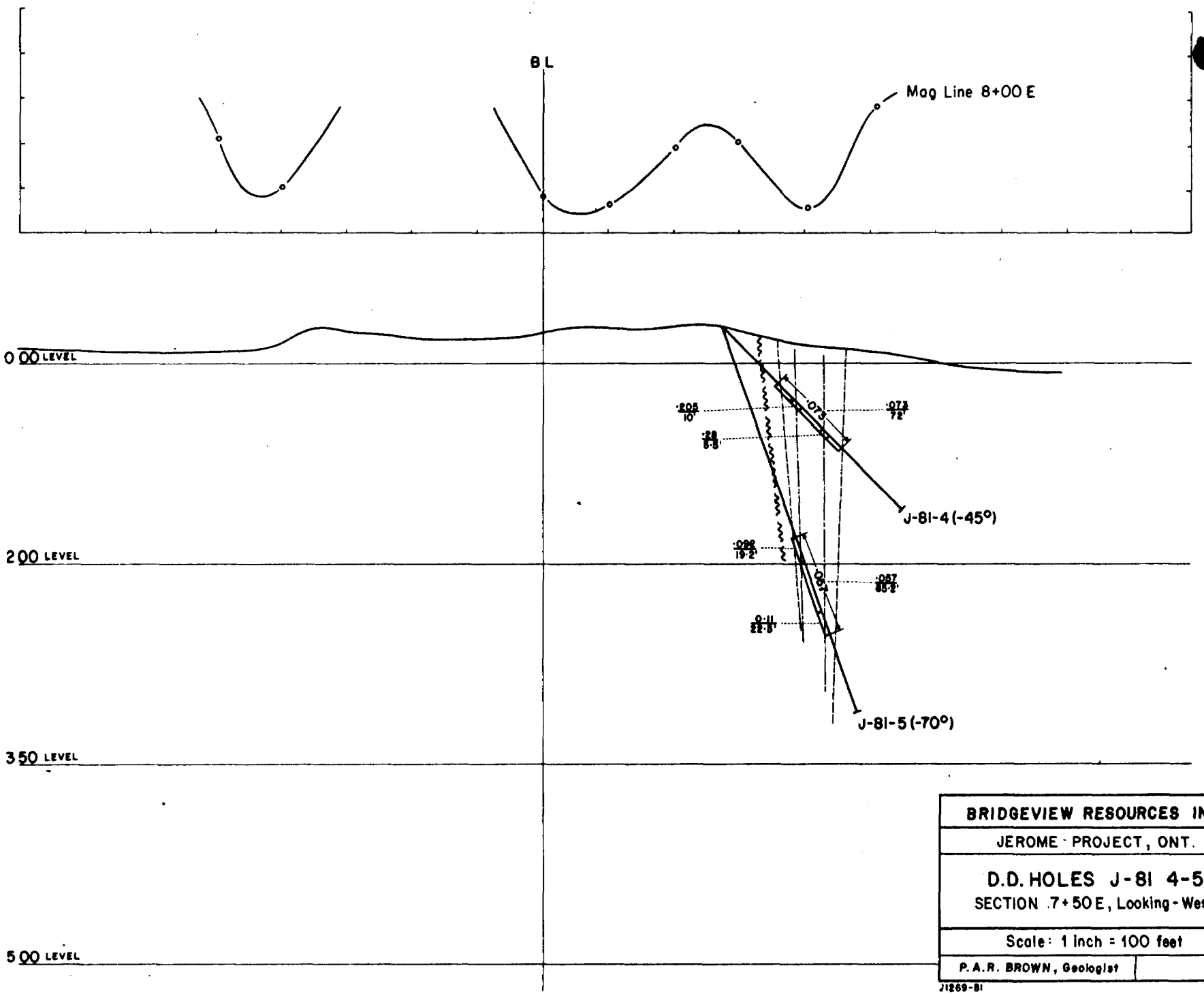
OM88-81



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
J-80-9 LOCATION 23+00E, 0+30S DIP 45°N, 43° at 257'(LOOKING WEST)	
Scale: 1 inch = 50 feet	
P.A.R. BROWN, Geologist	

J1294-81

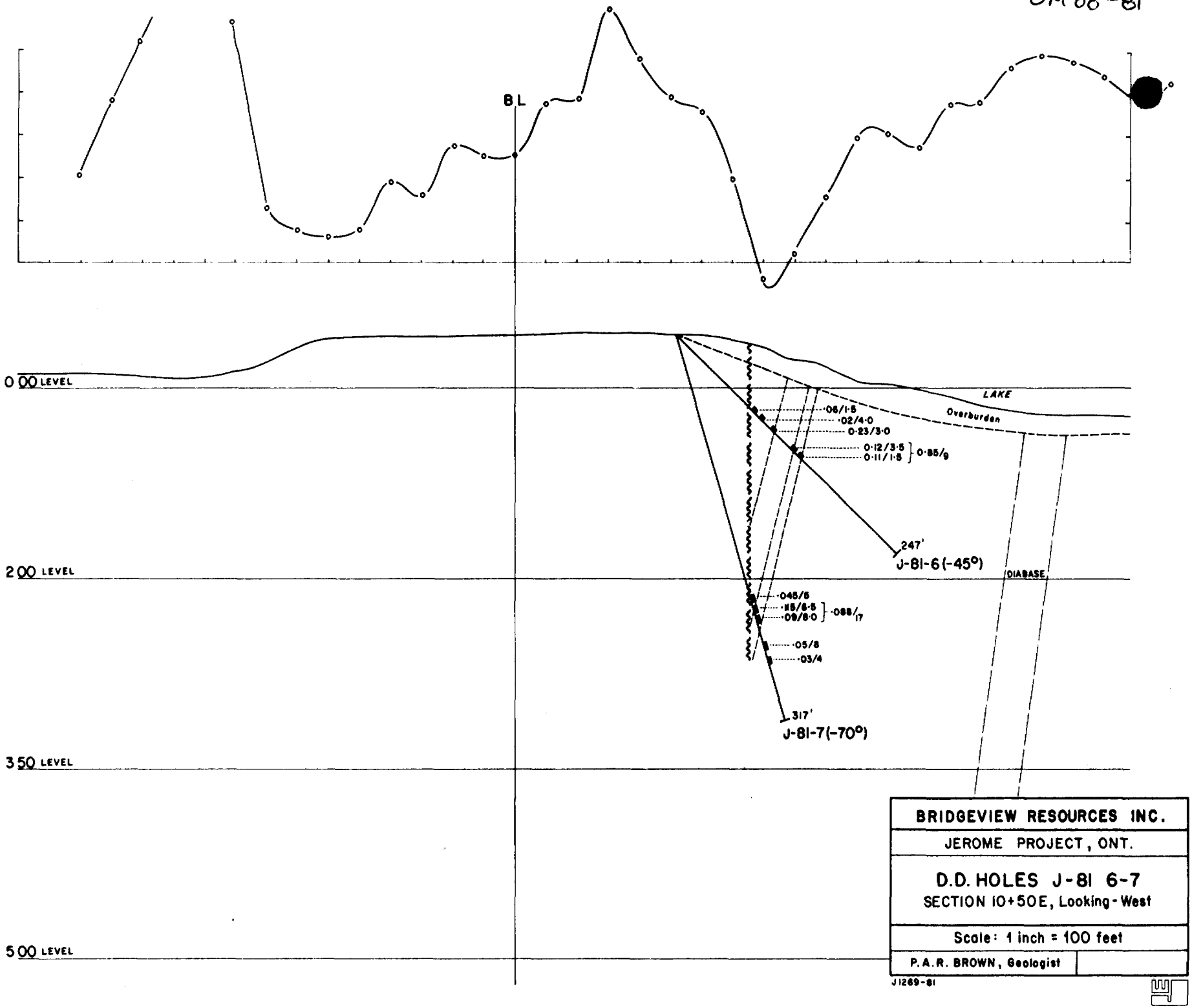
OM 88-81



BRIDGEVIEW RESOURCES INC.
JEROME - PROJECT, ONT.
D.D. HOLES J-81 4-5 SECTION 7+50 E, Looking - West
Scale: 1 inch = 100 feet
P. A. R. BROWN, Geologist

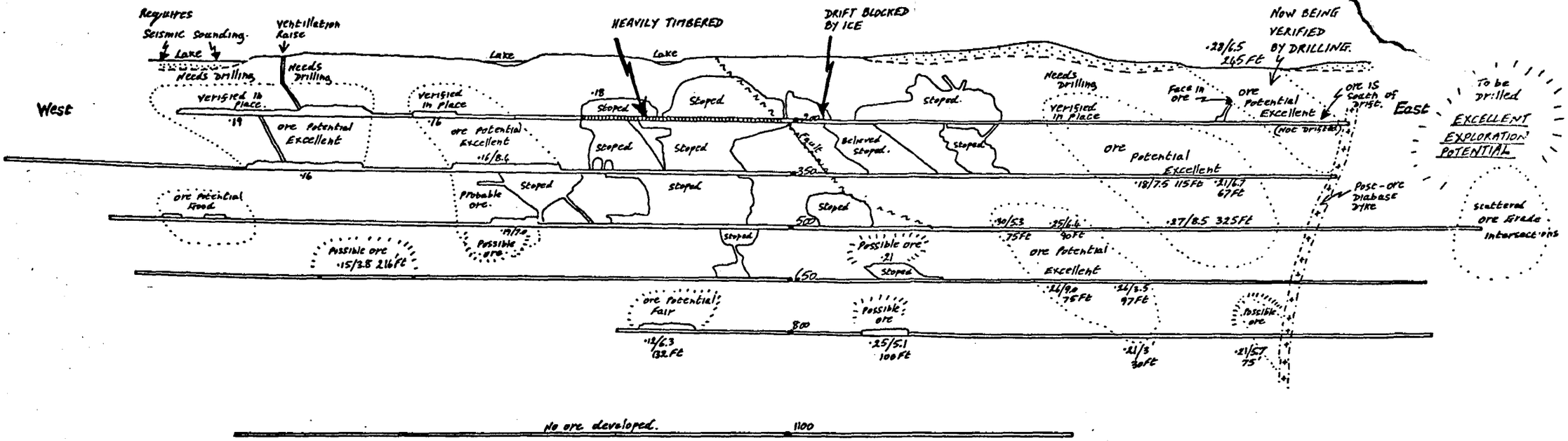
J1269-81

OM 88-81



BRIDGEVIEW RESOURCES INC.	
JEROME PROJECT, ONT.	
D.D. HOLES J-81 6-7 SECTION 10+50E, Looking - West	
Scale: 1 inch = 100 feet	
P.A.R. BROWN, Geologist	

J1269-81



JEROME MINE

Longitudinal Ore Section

AZIMUTH 124°

SCALE

0 100 200 300

FEET

R.J. Graham
Jan 10 81

REGISTERED PROFESSIONAL ENGINEER
MINING
R. J. GRAHAM
PROVINCE OF ONTARIO

OM 29-PE25-P-80

030

PATERSON, GRANT & WATSON LIMITED/CONSULTING GEOPHYSICISTS
Suite 1214, 111 Richmond Street West, Toronto, Canada M5H 2G4
Telephone: (416) 868-0888 Telex: 06-22633

April 7, 1981

Bridgeview Resources Inc.
10 Adelaide St. E.
Suite 20
Toronto, Ontario
M5C 1J3

Attn: Mr. Brian McDonough

Re: Geophysical Surveys, Jerome Mine

Dear Sirs,

This letter refers to ground geophysical surveys carried out on the Jerome Mine Property, Osway Township, Ontario, for Bridgeview Resources Inc. during the latter part of 1980. Specifically, the following surveys were performed:

1. IP/Resistivity Survey; Drawing No. P-427-1.

2. VLF-EM Survey; Drawing No. P-427-2.

3. Ground Magnetometer Survey; Drawing No. P-427-4.

The first two surveys were performed by the firm of Mertens & MacNeill; the magnetometer survey was carried out by Mr. P.A.R. Brown. Compilation and interpretation of the surveys was undertaken by Paterson, Grant & Watson Limited in December 1980, with the assistance of geological material provided by Bridgeview Resources and after discussions with Messrs. George F. Ross, P.A.R. Brown, Robert J. Graham, W.R.L. Torrance and G.W. Goettler (Prospection Ltd.). The results of this interpretation are shown in Drawing No. P-427-3.

In general, neither the IP/Resistivity nor the VLF-EM results showed any direct correlation with the known mineralized veins. Instead, they appear to reflect, for the most part, zones of shearing near the contact of the syenite porphyry and the Ridout Series metasediments. Several of these zones are outlined in Drawing No. P-427-3. Zones R-1, R-2 and C-3 are given high priority as potential gold-bearing structures. Three diamond drill holes were recommended to investigate these features, as follows:

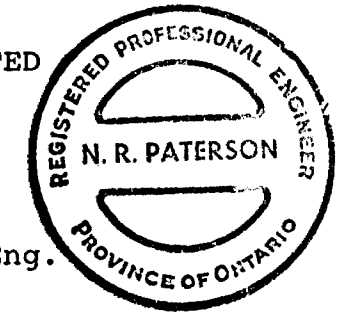
...2

DDH-1, Line 24E, 1+20S (vertical)
DDH-2, Line 8E, 4+00S (inclined 45°N)
DDH-3, Line 2E, 6+50N (inclined 45°S)

These holes were drilled in January-February 1981 and it is understood that sulphide mineralization, with some gold values, was encountered in each hole.

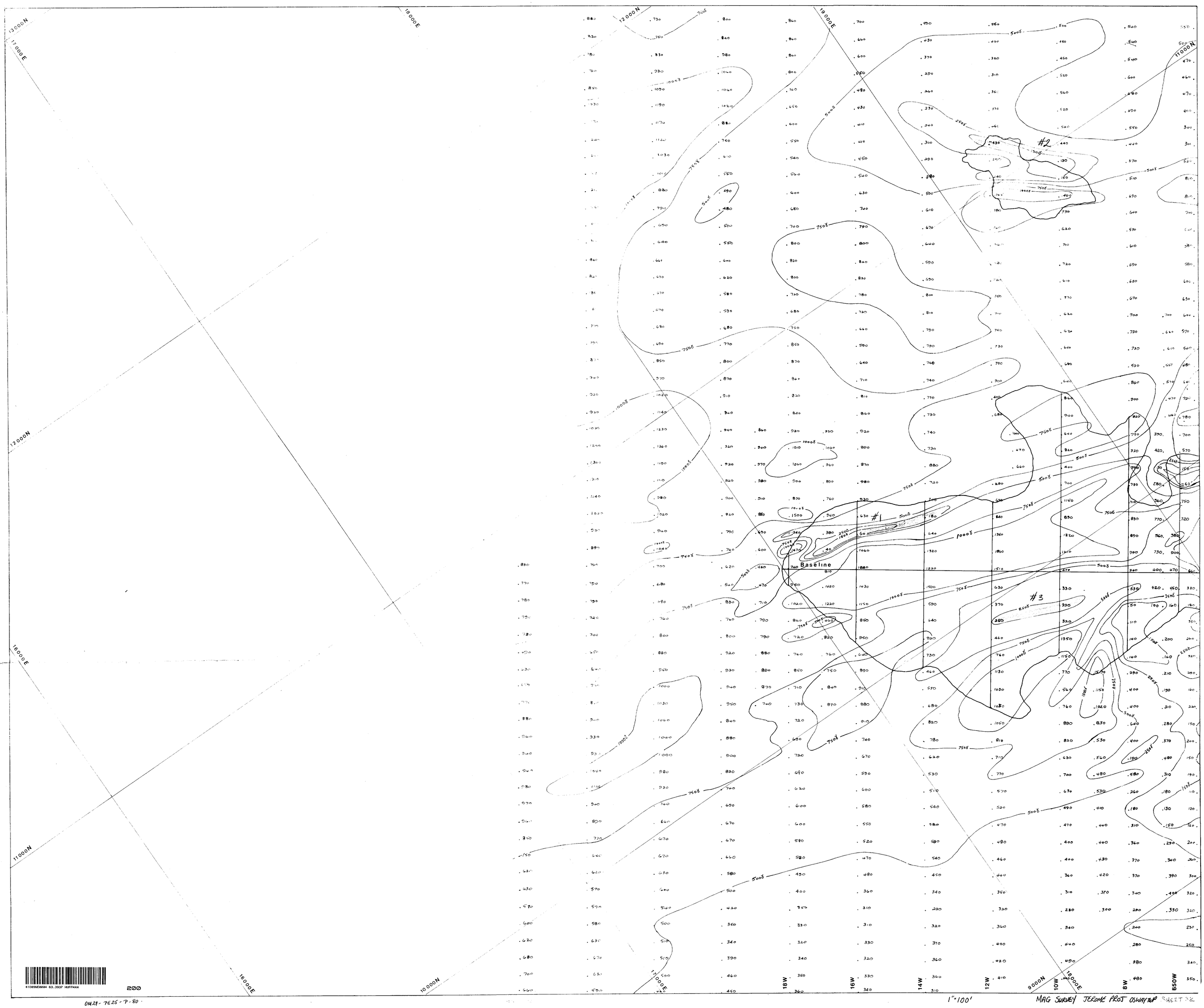
Although the gold-bearing veins in the syenite porphyry failed to produce an electrical response, probably because of heavy silicification, a correlation with zones of low magnetic intensity is apparent. A combination of magnetic and electrical surveys would be of considerable value in future exploration in this area.

Yours very truly,
PATERSON, GRANT & WATSON LIMITED



Norman R. Paterson, Ph.D., P.Eng.
Consulting Geophysicist

NRP/yh



200

1"=100'

MAG SURVEY JEROME PROJ OSWAYNUP SHEET 2E

OM21-7E25-P-80

Opeepeesway Lake

Baseline

shaft

#4 #5 #6 #7 #8 #9 #10 #11 #12 #13

20000E 21000E 10000N 9000N 22000E 19000E 18000E 8000N

0 2E 4E 6E 8E 10E 12E 14E 16E 18E 20E 22E 24E 26E 28E

BRIDGEVIEW RESOURCES

JEROME PROJECT
Osway twp Ont.

MAGNETOMETER SURVEY

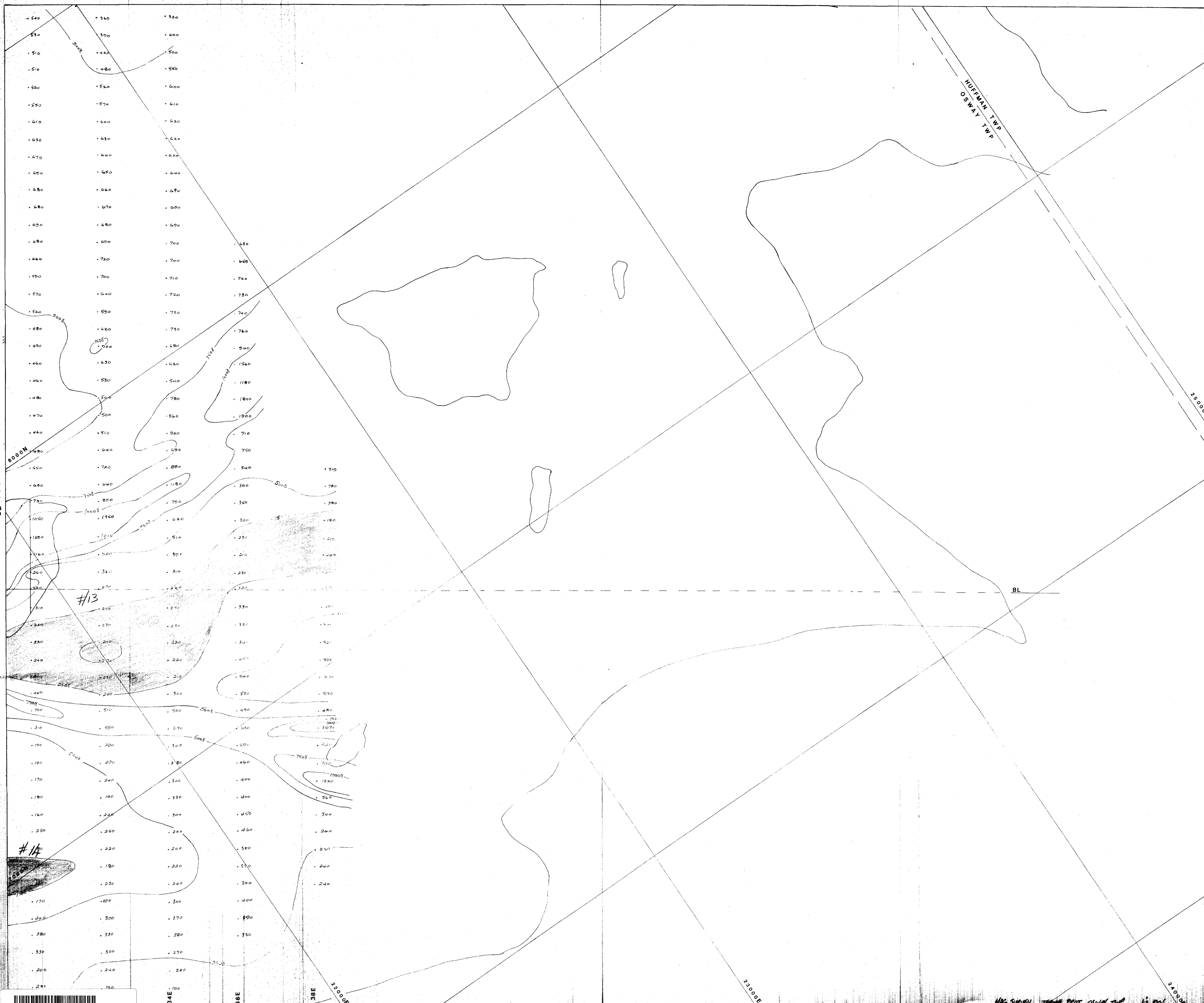
INSTRUMENT USED UNIMAG G-836 Operator
59,000 total field is the zero value for plotting purposes

Scale 1 in. to 100 ft

Drawn by

OM24 - PE25 - P - 80

SHEET 33



L-18W L-16W L-14W L-12W L-10W L-8W L-6W L-4W L-2W

L-0 L-2E L-4E L-6E L-8E L-10E L-12E L-14E L-16E L-18E L-20E L-22E L-24E L-26E L-28E L-30E

12+00N 10+00N 8+00N 6+00N 4+00N 2+00N 0+00 2+00S 4+00S 6+00S 8+00S 10+00S 12+00S 14+00S 16+00S 18+00S

C-1 C-2 C-3 C-4 C-5 R-1 R-2 R-3

INTERPRETATION LEGEND

CHARGEABILITY (F.E.) — RESISTIVITY

High — Low

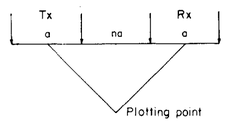
Moderate — Moderately low

Weak — Indistinct

C Cultural

S Shallow

Boundary of anomalous zone



Frequency domain survey at 0.3 Hz and 5.0 Hz by Mertens & MacNeil.

Dipole-dipole configuration; a = 50 feet

Contours of Apparent Chargeability (Frequency Effect) at n = 2.

63.3937

BRIDGEVIEW RESOURCES LIMITED

JEROME MINE AREA, OSWAY TOWNSHIP, ONTARIO

IP/RESISTIVITY SURVEY

CONTOURS OF CHARGEABILITY (F.E.)

AND INTERPRETATION

N. R. PATERSON

N.T.S. No: 41-O/3	SCALE: 1 inch equals 200 feet
DRAWN BY: S.G.	DRAWING No: P 427-1
APPROVED:	DATE: December 1980

PATERSON GRANT & WATSON LIMITED

CONSULTING GEOPHYSICISTS, TORONTO, CANADA

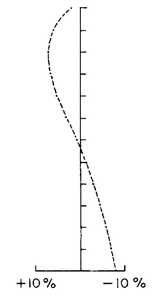
NAA Field Dir.

NSS Field Dir.

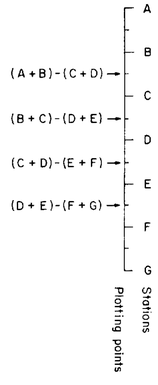
L-18 W | L-16 W | L-14 W | L-12 W | L-10 W | L-8 W | L-6+50 W | L-6 W | L-4 W | L-2 W | L-0 | L-2E | L-4E | L-6E | L-8E | L-10E | L-12E | L-14E | L-16E | L-18E | L-20E | L-22E | L-24E | L-26E | L-28E | L-30E

12+00 N
10+00 N
8+00 N
6+00 N
4+00 N
2+00 N
0+00
2+00 S
4+00 S
6+00 S
8+00 S
10+00 S
12+00 S
14+00 S
16+00 S
18+00 S

QUADRATURE PROFILE
(Operator Facing North)



FILTER PARAMETERS
(In-Phase)



Contours, interval of 10 units

Survey with Geonics EM-16 by Mertens & MacNeil

Transmitter NSS, Annapolis, Md. (Lines 22E and 24E NAA, Cutler, Me.)

63.3937

BRIDGEVIEW RESOURCES LIMITED

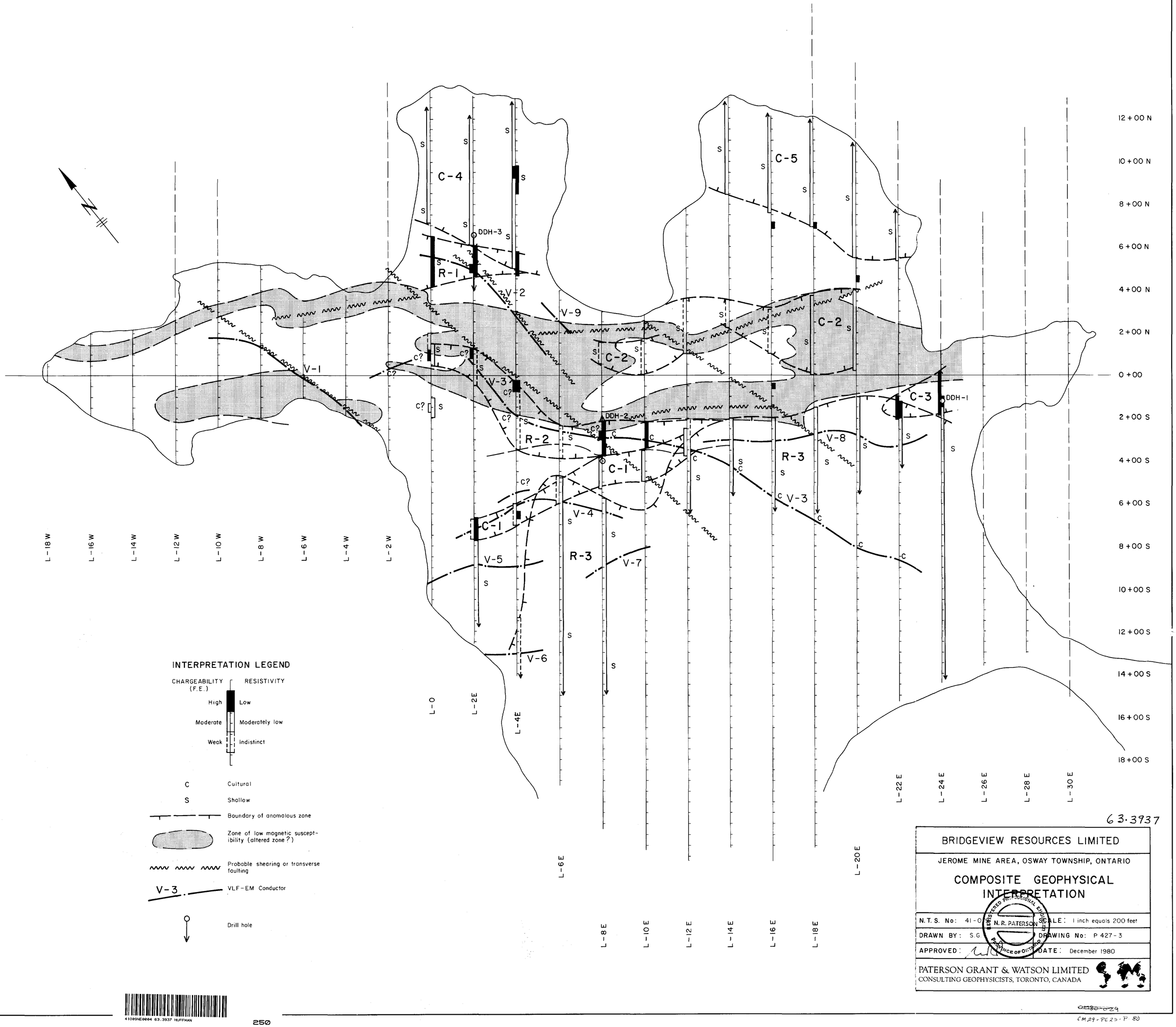
JEROME MINE AREA, OSWAY TOWNSHIP, ONTARIO

VLF-EM SURVEY

CONTOURS OF FILTERED IN-PHASE COMPONENT
PROFILES OF QUADRATURE COMPONENT

N.T.S. No: 41-0/9	SCALE: 1 inch equals 200 feet
DRAWN BY: S.G. & S.L.M. R. PATERSON	DRAWING No: P 427-2
APPROVED:	DATE: December 1980

PATERSON GRANT & WATSON LIMITED
CONSULTING GEOPHYSICISTS, TORONTO, CANADA



INTERPRETATION LEGEND

CHARGEABILITY (F.E.)	RESISTIVITY
High	Low
Moderate	Moderately low
Weak	Indistinct

- C — Cultural
- S — Shallow
- Boundary of anomalous zone
- Zone of low magnetic susceptibility (altered zone?)
- Probable shearing or transverse faulting
- V-3 — VLF-EM Conductor
- Drill hole

63.3937

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JEROME MINE AREA, OSWAY TOWNSHIP, ONTARIO

COMPOSITE GEOPHYSICAL INTERPRETATION

N.T.S. No: 41-O	N.R. PATERSON SCALE: 1 inch equals 200 feet
DRAWN BY: S.G.	DRAWING No: P 427-3
APPROVED:	DATE: December 1980

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO

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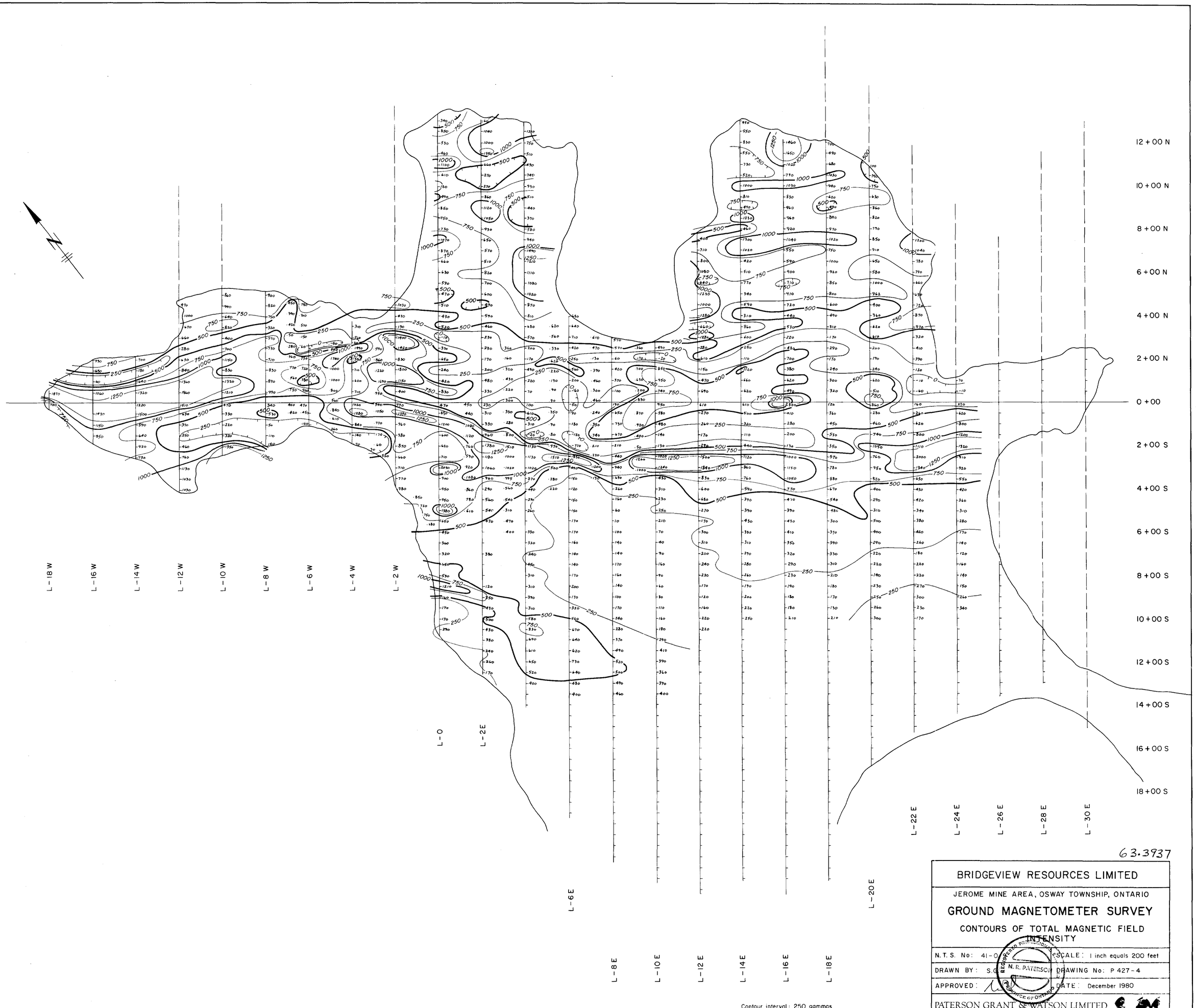

Contour interval: 250 gammas

63.3937

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JEROME MINE AREA, OSWAY TOWNSHIP, ONTARIO

GROUND MAGNETOMETER SURVEY

CONTOURS OF TOTAL MAGNETIC FIELD INTENSITY

N.T.S. No: 41-O	SCALE: 1 inch equals 200 feet
DRAWN BY: S.G.	DRAWING No: P 427-4
APPROVED: N.R. PATERSON	DATE: December 1980

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REGISTERED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO

CM30-029

CM-24-7625-V-80