

926/11

SUMMARY

Maggie Mines Ltd. holds the War Eagle (9 units), the Clarke (8 units), and Janette (20 units) and adjacent claims (for a total of 37 units) in the Indian River area, Vancouver M.D., B.C. Pacer Development has conducted 1322 m of diamond drilling and related work on the War Eagle in 1978 and 1979. Pacer Mines is believed to have drilled two holes on the claims previously. Pacer is currently exploring the McVicar prospect immediately north of Maggie Mines' holdings.

MAGGIE MINES LTD.

The exploration targets are volcanogenic massive sulfide deposits of copper, gold, silver, zinc and lead of the Britannia type, but not necessarily transposed in a regional shear zone. Rocks are a variety of volcanic and sedimentary types. Mineralization is present in the above-noted areas. Alteration is still occurring in chlorite, galena and sphalerite. Alteration is still occurring in chlorite and chloritization.

Summary Report on War Eagle, Clarke and Janette Claims, Indian River Headwaters, Vancouver M.D., B.C.

By

Andrew E. Nevin, Ph.D., P.Eng.

Cost has been estimated by the company at \$285,000. We hereby endorse the proposed program and the cost, and recommend its acceptance and execution.

September 18, 1980



Andrew E. Nevin, Ph.D., P.Eng.

September 18, 1980

Report from Vancouver Stock Exchange
Statement of Material Facts
Maggie Mines Ltd.

SUMMARY

Maggie Mines Ltd. holds the War Eagle (9 units), the Clarke (8 units), and Janette (20 units) and adjacent claims (for a total of 84 units) in the Indian River area, Vancouver M.D., B.C.

Placer Development has conducted 1322 m of diamond drilling and related work on the War Eagle in 1978 and 1979. Croyden Mines is believed to have drilled two holes on the claims previously. Texas-gulf is currently exploring the McVicar prospect immediately north of Maggie Mines' holdings.

The exploration targets are volcanogenic massive sulfide deposits of copper, gold, silver, zinc and lead, of the Britannia type, but not necessarily transposed in a regional shear zone.

Rocks are a pendant of tightly folded rhyolite and dacite clastics. Mineralization is present as submarginal grades of the above-noted metals, occurring in chalcopyrite, galena and sphalerite. Alteration is silicification and chloritization.

The company proposes to conduct exploration on two distinct exploration targets: (1) diamond drilling on the south part of the War Eagle claim, where alteration appears to increase southward to a pervasive level; and (2) induced polarization and diamond drilling on the Clarke and Janette claims, where sphalerite-pyrite showings crop out discontinuously through overburden in a belt 1-kilometer long.

Cost has been estimated by the company at \$295,000. We herewith endorse the proposed program and the cost, and recommend its acceptance and execution.

Respectfully submitted,



Andrew E. Nevin, Ph.D., P.Eng.

September 18, 1980

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1.0 INTRODUCTION

1.1 Terms of Reference

Earlier this year Nevin Sadlier-Brown Goodbrand Ltd. were retained by Mr. George F. Archibald, Geologist and Director of Maggie Mines Ltd., to prepare a summary report on two seasons field work on the War Eagle and adjacent claims, and to review and comment on the Company's proposed additional work.

That engagement was completed with my submittal on June 30, 1980 of "Report on 1978 and 1979 Work on the War Eagle and Adjacent Claims, And Recommendations for Continued Work". That report recommended a drilling campaign of 1000 m, and at a cost of \$150,000, on the War Eagle. We are informed that Maggie Mines has raised the necessary funds to carry out the program, but that the program has not yet been started.

Maggie Mines Ltd. engaged us again in September 1980 to comment on an accelerated program designed to concurrently explore the Clarke-Janette and War Eagle claims. Mr. Archibald states that two events have taken place since June which have called his attention to the Clarke-Janette area:

- 1) a new showing was discovered on the Janette claim during incidental road-building; and
- 2) he obtained a copy of a 1978 report on the McVicar property by two Texasgulf geologists.

Therefore in this report we are repeating all of the geologic data contained in our June 30, 1980 report; we have added some information on the Clarke-Janette area; and we comment on the accelerated program.

This report is in respect of a mineral property in the exploratory stages. Nothing is implied as to the commercial viability of a mining venture.

The terms of our engagement are limited to the preparation of this report and we have accepted no responsibility toward overseeing the work program discussed herein, nor the application of any corporate funds.

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1.2 Information Reviewed

The information reviewed in preparation of this report consists of the following:

- 1) R.H. Seraphim Ph.D., P.Eng., August 12, 1977, Report on War Eagle, Falcon, Mar, and Jody Claims for Maggie Mines Ltd: Reproduced in a Prospectus for Maggie Mines Ltd., dated May, 1978, 12 pages.
- 2) R.H. Seraphim, Ph.D., P.Eng., May 4, 1978, Addendum on War Eagle Claim for Maggie Mines Ltd: Reproduced in same Prospectus 2 pages.
- 3) R.H. Seraphim, Ph.D., P.Eng., August 12, 1977, Report on Clarke Claim, Inidan River, Vancouver M.D. for Maggie Mines Ltd: Reproduced in same Prospectus, 10 pages.
- 4) A.D. Clendenan, P.Geol., and W.S. Pentland, March, 1979, Report on the 1978 Exploration Program on the Hopkin's Property Maggie Mines Ltd., Squamish, B.C: Placer Development Ltd., Vol. I, 22 pages plus Appendices, Vol. II, approximately 20 large maps.
- 5) A.D. Clendenan, P.Geol., 1978, Original Drill Logs of Seven Diamond Drill Holes.
- 6) A.D. Clendenan, P.Geol., October 1979, Report on the 1979 Exploration Program on the Hopkin's Property, Maggie Mines Ltd., Squamish, B.C: Placer Development Ltd., 12 pages plus Appendices including drawings and original drill logs.
- 7) Bart Stone and John Payne, 1980, Geology of Britannia Mine, With Comments on the Indian River Belt, Southwestern B.C. (Abstract): Geological Association of Canada, Cordilleran Section, Program of Meeting January 25-26, pp 30-31.
- 8) Peter R. DeLancey, P.Eng., and H.R. Schmitt, October 1978, Geological and Geochemical Report on the McVicar Group, Raffuse Creek Area, Vancouver M.D: B.C. Ministry of Mines Assessment Report 7021, 13 pages, plus maps and Appendices.

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Some representative drill core was examined; however, the property was not examined specifically for the purpose of this report. The writer is sufficiently familiar with the property from previous examinations and exploration activity in the Indian River area during the past five years.

1.3 Location and Access

The claims are located as shown in Drawing 1, at the headwaters of the Indian River. Access is by road southeast from Squamish, B.C.

The terrain away from the valley floor is steep and mountainous.

Overburden is continuous on the valley floor, and on the sidehills is nearly continuous, with only small and scattered natural outcrops generally exposed. Outcrop is especially poor on the Clarke-Janette area, amounting to less than 0.5 percent of the surface area.

1.4 Definition of Property

Information on the claims has been supplied by the Company. We made no examination of the claims nor of claim posts and accordingly do not express an opinion on the mineral title.

It is our understanding, from reliance on reports submitted for assessment work by Placer Development Ltd., and from Company records that the Company claims are as shown in Drawing 2 of this report. For purposes of information the War Eagle claim subtends 9 units, the Clarke 8 units, the Janette 20 units, and with others the total is 84 units.

2.0 WORK COMPLETED

Two drill hole collars on the Janette claim apparently represent work which was done by Croyden Mines in 1969. The outcome of this drilling is not known to us.

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- 4 -

Prior to Dr. Seraphim's examination in 1977 about 30 meters of tunnelling and some trenching had been done on the War Eagle Claim.

He reported after his second visit that Maggie Mines had completed several additional trenches, for a total of about 75 meters, and had extended a drift about 2 meters.

In 1978 Placer Development did the following work:

- 1) Mapped geology at a scale of 1:5 000, collected some 335 rock character specimens and studied 36 of these in thin section.
- 2) Established a grid as shown on Drawing 3 of this report.
- 3) Drilled seven diamond drill holes totalling 899 meters, all inclined, and the deepest being 264 meters.
- 4) Ran geochemical analyses on most of the diamond drill core, on three meter intervals, and analyses performed for lead, zinc, silver, and copper.
- 5) Geochemically sampled about 50 creeks on the property and analyzed for the same elements as in the drill core.
- 6) Conducted a soil geochemical survey on their grid and analyzed for the same elements as in the drill core.
- 7) Recovered records from a Turam Survey performed by another company in 1970, before a nearby B.C. Hydro power line was in use, and reinterpreted the results of that survey.
- 8) Conducted a magnetometer survey on the grid with a Scintrex proton instrument.
- 9) Interpreted the results of all this work.

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In 1979 Placer Development Ltd. continued exploratory work. They expanded the magnetometer survey and drilled four more diamond drill holes. Drilling totalled 423 meters. Assays were performed for the same elements as in the previous year, plus gold, as desired on three meter intervals. It is our understanding that the last hole, 79-4 was drilled at the request of Maggie Mines and for their account.

Subsequent to the 1979 field work Placer returned the property to Maggie. In recent months Mr. George F. Archibald has been on the site relogging and studying drill core and remapping and reinterpreting surface geology.

3.0 GEOLOGY AND MINERALIZATION

3.1 Rock Units

The rock units in the area are metasedimentary and metavolcanic rocks generally known as the Gambier Formation of Jurassic age, and quartz diorites and related rocks of the Cretaceous Coast Range Intrusives. The important units in this case are the metavolcanics. These are generally of rhyolite to dacite composition, and are associated with argillites, cherts, anhydrites, and minor barite units.

They are metamorphosed regionally in the lower greenschists facies and intensely deformed.

3.2 Structure

The regional structure is dominated by transposition of pendants and septa of the older metavolcanics into northwest striking attitudes. These may or may not be accompanied by massive regional shear zones such as the Britannia shear.

On the Maggie Mines property, the identifiable rock units tend to strike northwest and to dip steeply to the south or in some instances to the north.

Despite the amount of work which has been applied to the exploration the details have not been worked out to a degree acceptable by all geologists. Both the structure and stratigraphy are complicated. The structure consists of tight folds and the transposition of rocks into S-tectonites.

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Diorite and quartz diorite occupy the northeastern corner of the Janette claim (Drawing 2 and 5). The nature of the contact (intrusive or fault) with the metavolcanics to the southwest is not known.

3.3 Stratigraphy

The problems of structure and stratigraphy are compounded by the general lack of outcrop on the valley floor and walls.

The northeastern-most metavolcanic unit, which structurally underlies the others, is a series of rhyolite tuffs and flows (Drawing 5). On the Janette claim the rhyolite contains argillite interbeds.

Overlying the rhyolite is a series of light coloured tuffaceous sediments labelled light tuffs and wackes in Drawing 4. Intermediate within this formation is a rhyolite breccia, considered a volcanic vent by Placer Development. It is not known whether this unit conforms with or crosscuts the tuff and wacke unit.

The deeper parts of Placer DDH-6 cut a dark siliceous argillite. The relationship of this unit to others is not known. Along strike, to the northwest of DDH-6, the tuff and wacke unit appears to give way to a breccia of light volcanics, say dacite, in a matrix which includes some mafic material. Placer interprets this unit as interfingering with the tuff and wacke unit; however, not everyone is convinced that this is the case.

Referring again to Drawing 4, the tuff and wacke unit appears to persist to the south, containing some interbeds of argillite. Further to the south (not shown on Drawing 4) rhyolite tuffs and flows crop out.

3.4 Mineralization on War Eagle

Pyrite, pyrrhotite, chalcopyrite, sphalerite and galena are the principal sulfide minerals. The mode of occurrence of silver and gold, which report in minor quantities, is not known.

. . .

The sulfide minerals have several forms of occurrence. Pyrite and pyrrhotite are frequently disseminated in some of the volcanic and volcanoclastic units, although not necessarily together. Observations to date suggest that the principal occurrence of the other sulfides is in company with silicified zones.

The highest grade occurrence of mineralization is in the short tunnel on the War Eagle Claim (see Drawing 3). Values there averaged about 0.50% copper, 0.35% zinc, and 0.20% lead. DDH-1 (see Drawing 3) had a similar intersection in 8 meters toward the bottom of the hole. This assayed 0.11% copper, 0.72% zinc, 0.16% lead, 0.05 ppm gold, and 7.4 ppm silver. (The stratigraphy and structure have not been worked out in sufficient detail to be certain as to whether or not these values represent the same mineralized zone).

Much of the rock cut by the drill holes is mineralized to some extent. The better low grade was measured in DDH-1, -2, -3, -6, and 79-4. Traces were measured in DDH-4, -5, 79-1, 79-2, 79-3. DDH-7 did not penetrate through overburden.

3.5 Rock Alteration on War Eagle

The most promising and potentially significant alteration was cut in the lower part of hole 79-4 (refer to Drawings 3 and 4). The lower 30 meters of that hole averaged about 1000 ppm copper (more than double the median for most of the assayed drill core) with local values up to 2% chalcopyrite. The importance of this is that it is accompanied by very strong black chlorite and siliceous rock alteration. This alteration is pervasive.

Elsewhere in outcrop and in drill holes, alteration consists of scattered quartz and chlorite veins, with or without minor secondary biotite.

3.6 Mineralization on Clarke-Janette

Poor outcrop on Clarke-Janette ground limits knowledge of the showings. What is known is that a rough belt exists, trending southeast for a kilometer from Texasgulf's McVicar prospect (Drawing 5). Types of showings are:

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- 1) occasional siliceous rhyolite boulders (in overburden) of 25 percent sphalerite, with pyrite, as big as 30 x 30 cm
- 2) pervasive 1 percent pyritization of siliceous rhyolite
- 3) 5-10 cm veinlets(?) or lenses(?) of up to 15 percent total sulfides in varying proportions of sphalerite, pyrite, galena and chalcopyrite.

The McVicar prospect is opened up to a greater degree and several types of mineralization are reported by DeLancey and Schmitt. Thicknesses and grades in some better trenches reach as much as 1.3 m of 25 percent combined lead and zinc, plus 3.5 percent copper and 2.8 oz/ton silver. This gives some insight into what might be found on the Clarke-Janette ground.

4.0 CONCLUSIONS

4.1 Interpretation

The regional geology suggests that the appropriate exploration target is a massive sulfide deposit of volcanogenic origin. Such a deposit may be similar in nature to Britannia; however, not necessarily transposed into nor remobilized by a regional shear zone.

The recoverable metals occurring in such a target would probably be copper, gold, silver, zinc and lead.

Both the stratigraphy--the initial configuration of lenses, beds, flows, pipes, and silicified breccias--in the volcanic pile, and the structure--the subsequent tight folding--of the terrain have not been fully worked out nor appreciated.

On the War Eagle claim it appears that pervasive alteration increases to the south and east of the center of previous activity.

On the Clarke-Janette claims a number of showings are aligned southeast in very poorly exposed ground.

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4.2 Proposed Work Program

The Company has asked us to review the following program:

- 1) War Eagle -- step out to the southeast with a continuation of past drilling
- 2) Clarke-Janette -- cover the area of interest (Drawing 6) with about 8-10 km of induced polarization survey and drill for information and discovery.

We have recommended the following elements and rationale be incorporated into their program:

- 1) Since the Clarke-Janette ground is so poorly exposed, drilling should be undertaken for information, regardless of the outcome or findings of the IP survey. The purpose of the IP survey would be to attempt to develop the best possible place to start. If the IP is inconclusive, the first few holes would be spotted based on geologic criteria.
- 2) A cost savings might be effected by planning and running the two drilling programs (War Eagle and Clarke-Janette) as one project, and the Company should study the advantages of consecutive or concurrent operation.
- 3) Ancillary studies should be conducted, as usual, in the interest of good workmanship. These include rock geochemistry and thin sections (especially of drill core), some soil geochemistry, and refinement of geologic mapping.
- 4) Our specifications for an IP survey are given in Drawing 6. We would suggest use of Phoenix IPT-1 transmitter and IPV-1 receiver or equiv-

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alents. The geophysicist should be instructed to detail or "top-out" or run cross-lines on any anomalies, with advice from the geologist in charge.

4.3 Estimated Cost of Program

The Clarke-Janette program has been merged with the previously described War Eagle program and cost-estimated as follows:

Site preparation	\$15,000
Induced polarization and linecutting	25,000
Contract drilling	
- 1800 m @ \$85	153,000
- mob, demob, water, chemicals, supplies	42,000
Geology, supervision, logging	40,000
Geochemistry and assays	10,000
Travel, vehicles, living	4,000
Miscellaneous and contingencies	<u>6,000</u>
Total	\$295,000

Respectfully submitted,

NEVIN SADLIER-BROWN GOODBRAND LTD.





Andrew E. Nevin, Ph.D., P.Eng.


September 18, 1980

APPENDIX 'A' - CERTIFICATE

I, Andrew E. Nevin, hereby certify that:

1. My residence address is 1201 - 1875 Robson Street, Vancouver, B.C., my office address is 4th Floor - 134 Abbott Street, Vancouver, B.C. V6B 2K4; and that I am a Geologist by occupation.
2. I hold a B.Sc. in Geophysics from St. Lawrence University, an M.A. in Geology from University of California, Berkeley, and a Ph.D. in Geology from University of Idaho. I have been practicing my profession since 1961, and I am a member of the Association of Professional Engineers (Geological) of the Province of British Columbia, and a Registered Professional Geologist in the State of Idaho.
3. I hold no direct or indirect beneficial interest in the property nor in the securities of Maggie Mines Ltd.
4. I am familiar with the property described in this report and have reviewed the data thereon personally.


Andrew E. Nevin, Ph.D., P.Eng.



September 18, 1980



Andrew E. Nevin, Ph.D., P.Eng.

September 18, 1980



DRAWING I
 MAGGIE MINES LIMITED
 LOCATION MAP
 MAGGIE MINES' PROPERTIES

PLACER DEVELOPMENT LIMITED
 MAGGIE MINES LIMITED
 VANCOUVER MINING DIVISION
 CLAIMS MAP
 3000
 5000
 1000
 500
 METRES
 NOV 1978 V-189 W.P.(U.L.)
 FILE NO 78-1-V-159-138-0028

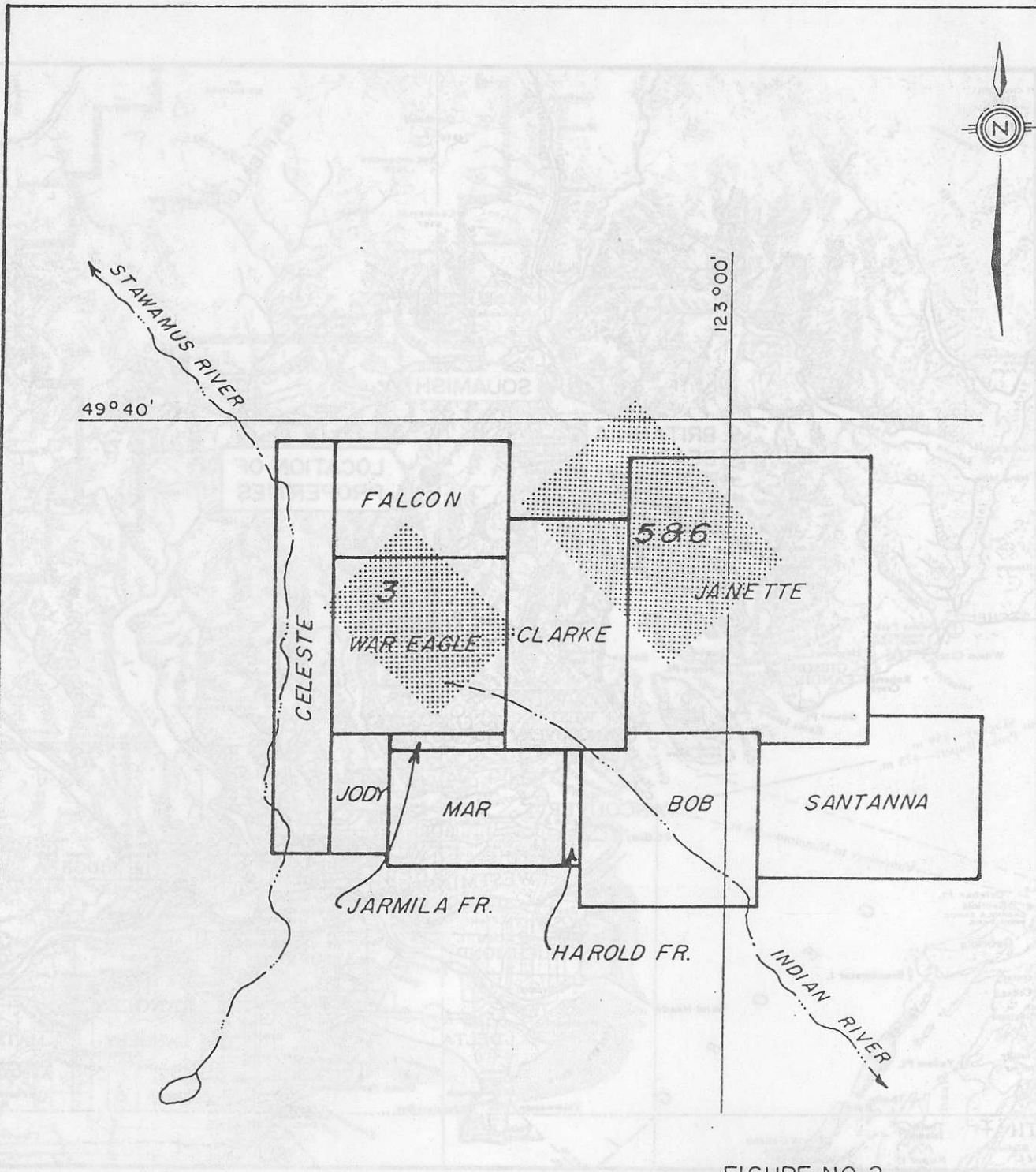
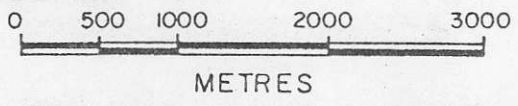


FIGURE NO. 2

PLACER DEVELOPMENT LIMITED
 MAGGIE MINES LIMITED
 VANCOUVER MINING DIVISION

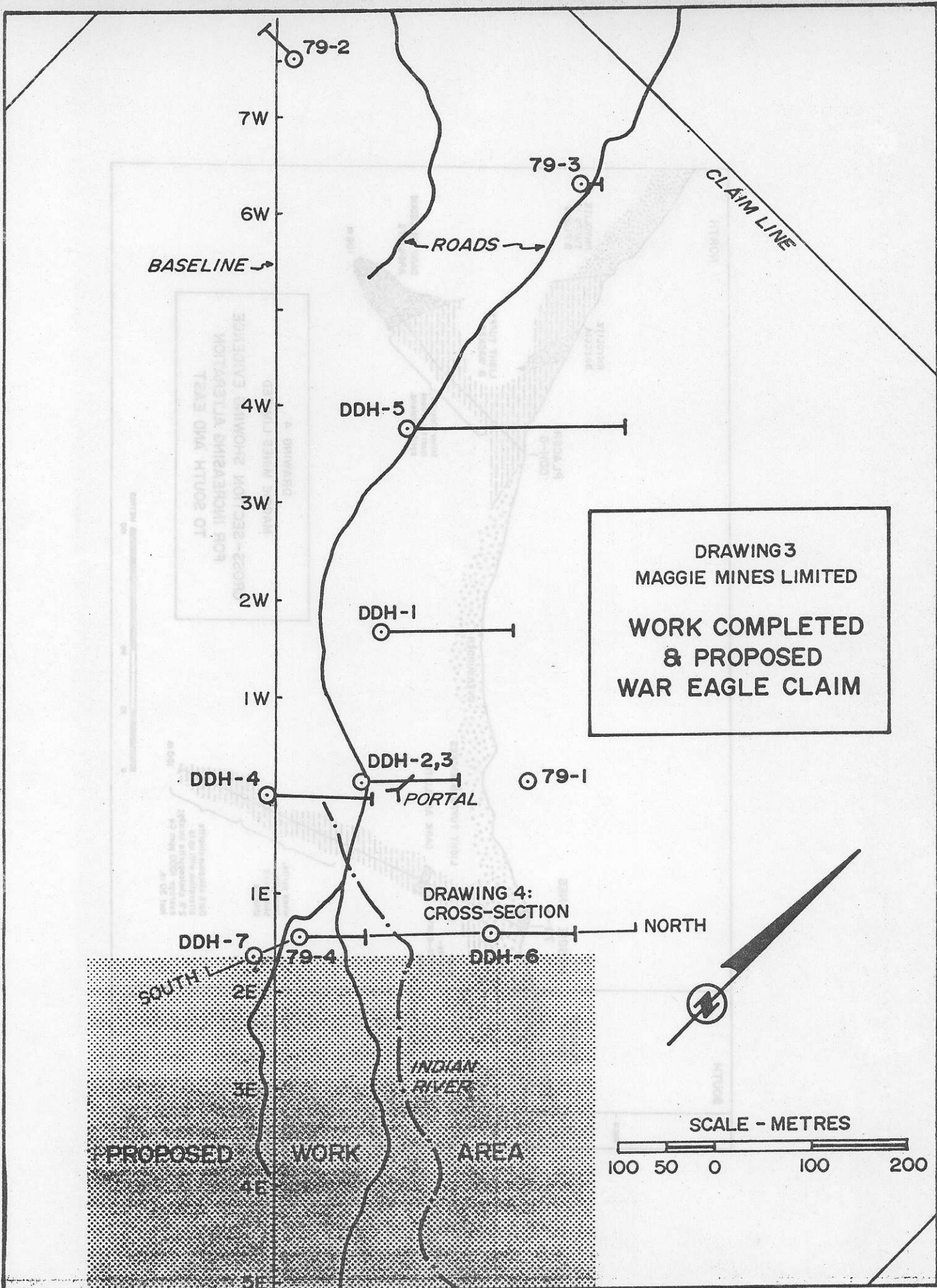
CLAIMS MAP



NOV., 1978. V-159 W.P. (J.L.)
 FILE NO. 78-II-V-159-13B-0028

DRAWING 2

Reproduced directly from
 PLACER DEVELOPMENT LTD.,
 with the addition of shaded area,
 which shows the location of
 Drawings 3, 5 and 6.

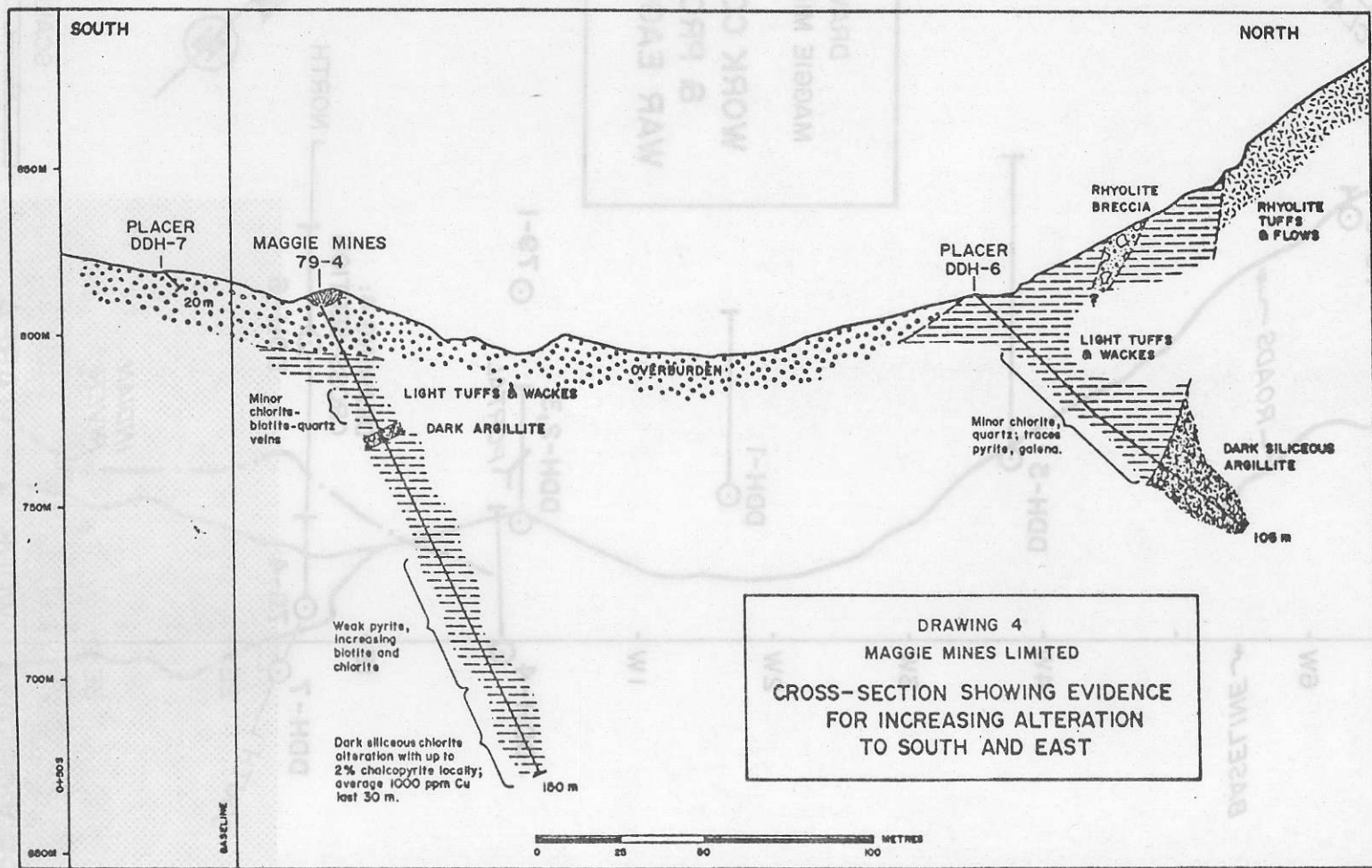


DRAWING 3
MAGGIE MINES LIMITED
WORK COMPLETED
& PROPOSED
WAR EAGLE CLAIM

DRAWING 4:
CROSS-SECTION

PROPOSED WORK AREA
INDIAN RIVER

SCALE - METRES
 100 50 0 100 200



TEXAS GULF
McVICAR
PROPERTY

CLARKE

JANETTE

NEW ROAD

ROAD

X MINERAL SHOWINGS,
GENERALLY SPHALERITE
AND PYRITE, SOME
WITH GALENA AND
COPPER SULPHIDES.

Diorite and
Quartz Diorite

Rhyolite
Tuffs and Flows

Argillite

CROYDEN 1969(?)
DRILL HOLES; RESULTS
NOT KNOWN.

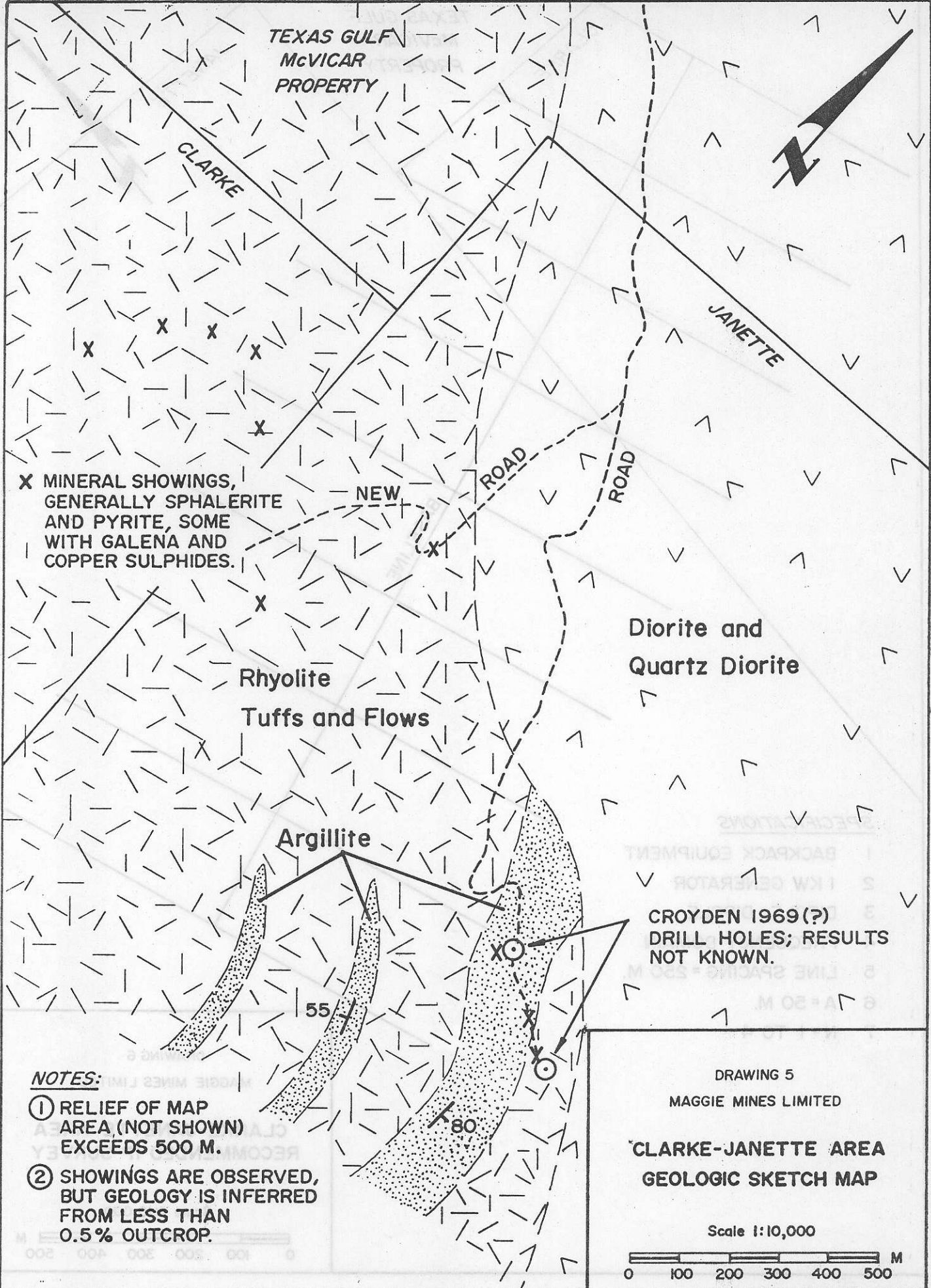
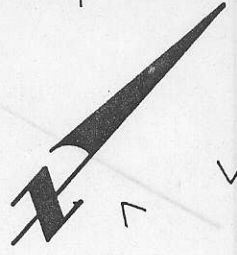
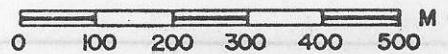
NOTES:

- ① RELIEF OF MAP AREA (NOT SHOWN) EXCEEDS 500 M.
- ② SHOWINGS ARE OBSERVED, BUT GEOLOGY IS INFERRED FROM LESS THAN 0.5% OUTCROP.

DRAWING 5
MAGGIE MINES LIMITED

**CLARKE-JANETTE AREA
GEOLOGIC SKETCH MAP**

Scale 1:10,000



TEXAS GULF
McVICAR
PROPERTY

CLARKE

JANETTE

BASELINE

SPECIFICATIONS

- 1 BACKPACK EQUIPMENT
- 2 1 KW GENERATOR
- 3 DIPOLE - DIPOLE
- 4 FREQUENCY DOMAIN
- 5 LINE SPACING = 250 M.
- 6 A = 50 M.
- 7 N = 1 TO 4

DRAWING 6

MAGGIE MINES LIMITED

**CLARKE-JANETTE AREA
RECOMMENDED IP SURVEY**

Scale 1:10,000

