

STRUCTURAL PROJECTION OF
FAVOURABLE HOST ROCKS FOR GOLD ORE
WOLFE AND ARGYLE CLAIMS
NELSON MINING DIVISION
SHEEP CREEK, B. C.
NTS 82 F/3 E

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Prepared for
AMORE RESOURCES INC.

ARCTEX ENGINEERING SERVICES
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MAPS AND SECTIONS.....	Pocket in back of report
Matthews (1953) Figures 1, 2, 7, with section lines of this report.	
Figure A - Longitudinal section in footwall of Queen fault.	
Figure B - Section perpendicular to Queen fault.	

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SUMMARY

Interpretation of structural geology from Matthews (1953) indicates that the footwall (western) block of the north-trending, moderately eastern-dipping Queen fault may subcrop, or be present near the bedrock surface on the Wolf and Argyle claims. The footwall block contains Cambrian quartzites within which important gold-bearing vein fractures are hosted in the Queen and Yellowstone Mines of Sheep Creek Mines Ltd. and the Dixie vein of Kootenay Belle Gold Mines Ltd. and Gold Belt Mining Co. Ltd.

A two-phase exploratory drill programme is proposed, wherein the first phase would involve probing with a down-the-hole hammer drill to locate bedrock (and collect cuttings of rock in place) in the valley of Sheep Creek, and the second phase would consist of a fence or fences of diamond drill holes from south to north across the claims to explore for easterly-trending vein fractures in favourable quartzites.

Cost of the programme is estimated to be \$178,600 plus acquisition of certain claims.

INTRODUCTION

The Wolf [L 3856, Record Number 2054(11)] and Argyle [L 10155, Record Number 1411(11)] claims are located in the Sheep Creek mining area of southeastern British Columbia, some 9 road miles south and east of Salmo, B. C. The claims are in the valley bottom of the Sheep Creek drainage. Location maps have been presented in earlier reports.

Three former producing mines abut the claims on the south, east, and northeast. Immediately to the south is the Queen Mine, formerly operated by Sheep Creek Gold Mines Ltd., where ore was produced from at least 12 easterly-trending, southerly-dipping vein fissures. The Queen vein, which produced the bulk of the tonnage (234,500 tons grading 0.400 oz Au/ton; Matthews, 1953, p. 52), is the most northerly productive horizon and is approximately 1000 feet from the south boundary of the Wolf claim.

The Yellowstone Mine, adjoining the Wolf claim on the east, also was eventually acquired and operated by Sheep Creek Gold Mines Ltd., although explored and mined through separate workings. Matthews (1953, p. 52) lists production as 17,000 tons grading 0.329 oz Au/ton. The Yellowstone vein fissure, if projected 400 feet southwesterly from its most westerly exposure, would cross the southeastern extremity of the Wolf claim.

To the northeast of the Argyle claim, the Dixie-6600 vein of Kootenay Belle Gold Mines Ltd. and Gold Belt Mining Co. Ltd. produced 33,500 tons grading 0.350 oz Ag/ton (Matthews, 1953, p. 52). If projected 750 feet southwesterly from the most westerly exposure in the Dixie adit, the vein at 3300 feet elevation would enter the Argyle claim near its northeastern corner.

GEOLOGY

The following synopsis is prepared from published bulletins; company maps and reports which document underground exploration and development of the Queen Mine should be reviewed to refine or refute the exploration

concept before the programme is implemented. These records should now be in the possession of Gold Belt Mines Ltd. or Breakwater Resources Ltd.

Stratigraphy and Structure

For complete stratigraphic and structural information the publications in the References should be reviewed. Figures 1, 2, and 7 of Matthews' publication are reproduced herein for illustrative purposes.

Empirically, the Middle and Upper Nugget and Lower and Upper Nevada Cambrian quartzites are the favourable wallrocks to host ore in the Western anticline, which is the setting of the three mines discussed in the Introduction. Fissure veins may be developed where easterly to east-northeasterly faults or fault zones obliquely cross the quartzites.

The vicinity of the Queen vein is used as the section from which to extrapolate northerly into the area of interest. As seen on the accompanying diagrams, the Western anticline is overturned to the west so that beds dip moderately to steeply easterly. Northerly-trending, easterly-dipping post-ore normal faults have the effect of offsetting orebodies in the hangingwall downward and easterly. Three of these faults occur in the Queen workings, the most important of which is the Queen fault. In the vicinity of the Queen vein the dip-slip is about 350 feet, with the vertical and horizontal components perpendicular to the fault plane each being about 250' (Matthews, 1953, p. 44). Approximately 2000 feet south of the Queen vein at the 81 vein the dip-slip on the Queen fault is comparable, being about 375 feet. It is therefore probable that the Queen fault, at least over moderate strike lengths, does not have an appreciable scissors movement and therefore stratigraphy on opposite sides can be projected both parallel to the plane of the fault and across the fault.

The plunge of the axis of the Western anticline varies from 10 degrees south between the Reno mine and the 8000 vein of the Gold Belt mine, which is about 1000 feet north of the Dixie vein, to 5 degrees north in the Queen mine (Matthews, 1953, p. 37).

Projections

Figure A

The top of the Upper Navada in the footwall of the Queen fault at its intersection with the Queen vein above 3 level at elevation 3440' is taken as a datum point (Matthews, 1953, Fig. 7). The 5 degree plunge to the north is projected at 010° to represent the trace of the top of the horizon, which is also parallel to the Queen fault. The topographic surface is shown in the same plane. The south boundary of the Wolf claim is approximately 1700 feet north of the datum point on this section line.

At the south boundary of the Wolf claim the favourable quartzites can be interpreted to be present at or very near surface, perhaps immediately west of the trace of the Queen fault or below a thin wedge of the hangingwall (east) side of the fault.

Figure B

A section line C-D perpendicular to the Queen fault is drawn on Matthews' Geology Map (1953, Fig. 1, in pocket) and a hypothetical construction presented which is based upon Matthews' Figure 7 (in pocket) and offset. The section crosses the southern portion of the Wolf claim and passes through the Yellowstone adit.

In this view, the Upper Navada quartzites can be inferred to be present in the footwall of the Queen fault at or near surface on the Wolf claim.

CONCLUSIONS

1. The Yellowstone and Dixie vein fractures when projected westerly would cross the claims.
2. Structural considerations suggest that the favourable Navada and Upper and Middle Nugget quartzites are present at shallow depths on the Wolf and Argyle claims, although concealed by overburden and possibly by a thin wedge of the hangingwall block of the Queen fault.

3. Matthews states that "the interval between successive northeasterly-trending vein fractures is rarely more than 500 feet in the more fully explored parts of the camp" (1953, p. 43). When scaled from Matthews' Figure 2 the interval between the Yellowstone and Dixie veins is about 1900'. The valley fill of Sheep Creek masks much of this distance, with the result that exploration in this important sector of the camp has been restricted. It may be that unknown vein structures may be present and may pass through favourable quartzites on the Wolf and Argyle claims.
4. The Yellowstone, Dixie, and perhaps Malwaaz claims, presently owned by Cochrane Oil and Gas, could contain the favourable quartzites in the footwall block of the Queen fault although at greater depths than anticipated on the Wolf and Argyle claims.
5. A drill programme cannot at this time be oriented towards probing a specific vein fracture, but should be designed to locate the quartzites. Fence-drilling from south to north would then be planned to intersect possible veins within the favourable strata.
6. The depth of overburden and stream fill within the valley of Sheep Creek is not known. A series of percussion or down-the-hole hammer drill holes may be advisable to determine the depth of cover above bedrock. This information is of value in determining the feasibility of diamond drilling, which can be prohibitively expensive when deep overburden is present.

RECOMMENDATIONS

1. Maps and reports now in the possession of Gold Belt Mines Ltd. should be examined if possible, to add to the geological knowledge of the north end of the Queen mine and the Dixie vein. Other unnamed fractures may have been mapped and may cross the Wolf and Argyle claims.

2. The claims belonging to Cochrane Oil and Gas should be obtained before any drilling is commenced.
3. Overburden drilling in perhaps two profiles across the Sheep Creek valley should be completed. Perhaps 1000 feet of drilling might be required.
4. Subject to the results of overburden drilling, a fence of diamond drill holes, oriented northerly at -45° to depths of approximately 500 feet in each hole, should be considered to explore the quartzite horizons. A total of 3000 feet of coring might be anticipated in the initial exploratory period.

COST ESTIMATE

Phase 1

- | | | |
|---------------------------------|--|----------|
| 1. Evaluation of Gold Belt data | | \$ 1,000 |
| 2. Property acquisition | | Unknown |

Phase 2

- | | | | |
|--------------------------------|------------------|--|-----------|
| 3. Overburden drilling: | | | |
| 1000' @ \$8.00/ft | \$ 8,000 | | |
| Supervision, engineering | 1,500 | | |
| Room, board, vehicle, supplies | 1,000 | | |
| Analyses | 500 | | |
| Report | 1,000 | | |
| | <u>\$ 12,000</u> | | |
| Contingencies @ 20% | 2,400 | | |
| | <u>\$ 14,400</u> | | \$ 14,400 |

Phase 3

- | | | | |
|--------------------------------|------------------|--|-----------|
| 4. Diamond drilling: | | | |
| 3000' BQ core @ \$35/ft | \$105,000 | | |
| Supervision, engineering | 20,000 | | |
| Room, board, vehicle, supplies | 6,000 | | |
| Analyses | 2,000 | | |
| Report | 3,000 | | |
| | <u>\$136,000</u> | | |
| Contingencies @ 20% | 27,200 | | |
| | <u>\$163,200</u> | | \$163,200 |
| TOTAL, PHASES 1, 2 & 3 | | | \$178,600 |

All of which is respectfully submitted,



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Consulting Geologist

Vancouver, B. C.

November 22, 1982

ENGINEER'S CERTIFICATE
LOCKE B. GOLDSMITH

1. I, Locke B. Goldsmith, am a Registered Professional Engineer in the Province of Ontario and a Registered Professional Geologist in the State of Oregon. My address is 301, 1855 Balsam Street, Vancouver, B.C.
2. I have a B.Sc. (Honours) degree from Michigan Technological University and have done postgraduate study in Geology at Michigan Tech, University of Nevada and the University of British Columbia. I am a graduate of the Haileybury School of Mines and am a Certified Mining Technician. I am a member of the Society of Economic Geologists, the AIME, and the Australasian Institute of Mining and Metallurgy, and a Fellow of the Geological Association of Canada.
3. I have been engaged in mining exploration for the past 24 years.
4. I have authored the report entitled, " Structural Projection of Favourable Host Rocks for Gold Ore, Wolf and Argyle Claims, Nelson Mining Division," dated November 22, 1982. The report is based upon fieldwork and research supervised by the author.
5. I have no ownership in the property, nor in the stocks of Amore Resources Inc.
6. I consent to the use of this report in a prospectus or in a statement of material facts related to the raising of funds.



Respectfully submitted,

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November 22, 1982