

REPORT

on

THE PROPERTIES of JERICHO MINES LTD. and GAZA MINES LTD. HIGHLAND VALLEY, BRITISH COLUMBIA

for

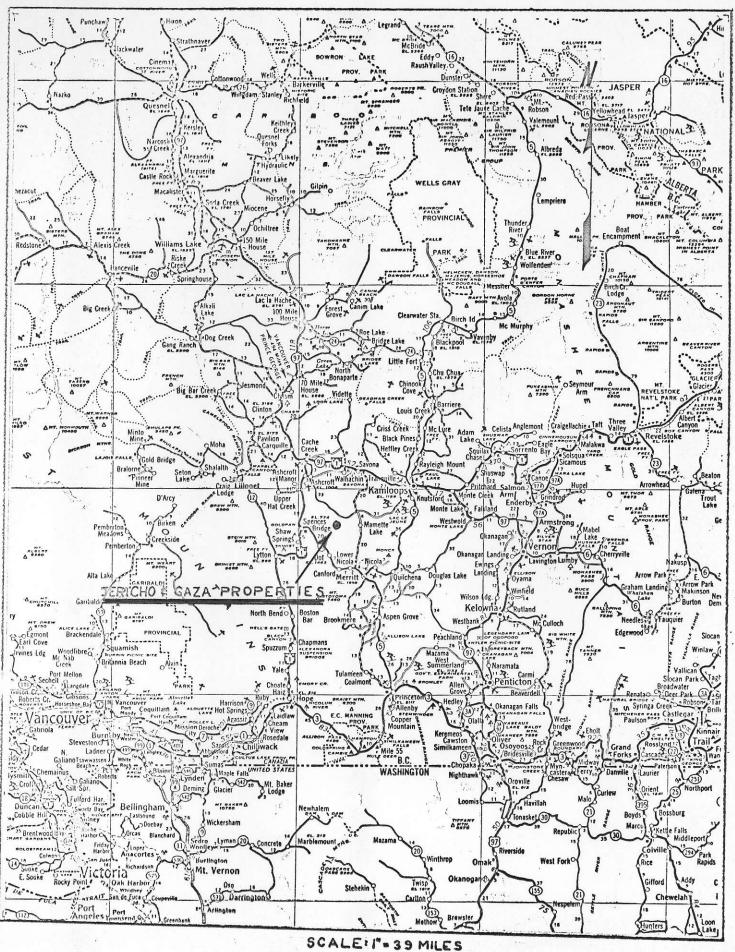
ALWIN MINING COMPANY LTD.

by

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Vancouver, B.C.

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| Fig. | 1  | - | Location Map - $1" = 39$ miles |       |   |         |     |      | Fre | Frontispiece |     |  |                  |
|------|--|---|--------------------------------|-------|---|---------|-----|------|-----|--------------|-----|--|------------------|
|      | 2  |   | Propert:<br>Gaza Min           |       |   |         | lne | IS S | nd  |              |     |  | envelope<br>back |
|      | 3 - Jericho Mines - Composite underground plan $1'' = 40'$ |   |                                |       |   |         |     | 24   |     |              |     |  |                  |
|      | 4  | - | Jericho                        | Mines | - | Section | A   | -    | 111 | 52           | 401 |  | £7               |
|      | 5  | - | 58                             | 88    |   | ¥1      | B   |      |     | **           |     |  | 88               |
|      | 56   | - | ¥ 4                            | **    |   | 8.0     | C   |      |     | 11           |     |  | 11               |
|      | 7  |   | 章章                             | 22    |   | £5      | D   |      |     | 89           |     |  | 22               |
|      | 8  | - | 93                             | 88    |   | 11      | E   |      |     | 88           |     |  | ¥¥               |
|      |  |   |                                |       |   |         |     |      |     |              |     |  |                  |

#### SUMMARY AND CONCLUSIONS

. 1 .

The properties of Jericho Mines Ltd. and Gaza Mines Ltd. are in the east part of the Highland Valley area of south central British Columbia.

The Jericho property has been intermittently under exploration since 1955. This included underground tunnelling in 1964, and underground and surface drilling in 1965. Little work has been done since that time. The Gaza property was first explored in 1964 when an induced polarization survey over the principal showings led to diamond and percussion drilling. Results were inconclusive. Both properties are presently under option to Tremar Minerals Ltd. who carried out induced polarization surveys over selected areas in the summer of 1969.

The area is underlain by granodiorite of the Highland Valley and Witches Brook phases of the Guichon batholith. Prominent fault structures have been recognized on both properties in the areas where most activity has taken place.

Surface diamond drilling results of IP anomalies led to the driving of the upper level on the Jericho property in 1964. Test holing in the wall of the tunnel indicated the presence of a copperbearing mineral zone measuring 280° by 30° and averaging 1.50% Cu. This zone (No. 1) showed continuity to the east and on this basis a lower level, 10° x 10° adit was driven for 2428°. Two previously unknown zones (at 890° and 1725°) were encountered, the second of which was drifted on for 140°. Assays averaged 1.50% Cu across 7.0°. The No. 1 zone appears to plunge to the east and it is probable that the lower level passed beneath the mineral zone. The lower level was reported to have intersected the No. 1 zone where a 30' raise was driven. An examination of Section C (Fig. 6) indicates that the raise was probably driven on Zone 2, a footwall, copperbearing structure that converges with Zone 1 to the east. The mineral trace of Zone 1 is probably indicated by a chalcocite-bearing, sericitized crush zone; improvement can be expected to the east. No assays were available from the development work on the lower level.

Diamond drilling and test hole results provided the writer were used to calculate ore reserves. They are as follows:

177,240 tons @ 1.93% Cu.

Additional surface and underground diamond drilling and underground development could double this tonnage. No dilution was considered at this time; the average width is 11.0<sup>4</sup>.

Other prospects and IP anomalies, including the principal Gaza showing, warrant additional exploration but this should be postponed, giving priority to the confirmation of the ore noted above. Additional footwall, copper-bearing structures exist below the No. 1 zone.

It must be emphasized that ore reserve calculations are based on drill results from 1964-1965. These have not been checked or verified and we cannot ensure that they are reliable. The drill core should be examined and, if possible, re-sampled. Cuttings from the test holes should be handled in the same way but it is doubtful that they are available.

## RECOMMENDATIONS AND COST ESTIMATE

3 .

It is recommended that the Jericho and Gaza ground be optioned, with the intention of confirming the indicated ore reserves.

A 300' footwall drift on the lower level and underground diamond drilling therefrom is warranted. Surface diamond drilling to check for the eastward extension of the mineral zones should be carried out.

Additional work may be advisable if results from the above work are encouraging.

A preliminary examination of drill core, etc., is also required.

## Cost Estimate

| 300° 6° x 7° footwall drift @ \$70/ft.          | \$21,000 |
|---|----------|
| 2000' underground diamond drilling @ \$7.00/ft. | 14,000   |
| 2000' surface diamond drilling @ \$12.00/ft.    | 24,000   |
| Engineering and geology                         | 5,000    |
|   | \$64,000 |
| 10% contingencies                               | 6,400    |
| Total   | \$70,400 |

Respectfully submitted,

BACON & CROWNURST LTD.

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#### INTRODUCTION

At the request of the Alwin Mining Company Ltd., the writer examined the available maps and records of Jericho Mines Ltd. and Gaza Mines Ltd. for the purpose of calculating ore reserves and to appraise the exploration possibilities of both properties.

## LOCATION AND ACCESS

The properties are located 36 miles southeast of Ashcroft in south central British Columbia. They are accessible by road from Ashcroft through Bethlehem and Lornex Mines. The Jericho camp is located on the road which continues eastward to Merritt and Kamloops. Dirt roads provide access to both claim groups. Road distance to the Alwin Mining Company Ltd. property is approximately 15 miles.

#### PROPERTY AND OWNERSHIP

The Jericho property is made up of 137 mineral claims and fractions and the Gaza claim group is composed of 38 mineral claims and fractions. All claims are presently under option to Tremar Minerals Ltd.

The claims cover an area measuring four miles by two miles, the long dimension bearing northeasterly.

#### HISTORY

. 5 .

Some of the claims on the Jericho property were originally staked in 1955 and, up to 1964, prospecting, magnetometer, self potential and induced polarization survey work, plus some diamond drilling were carried out on various parts of the ground.

In 1964 the upper adit was driven 884\* to explore mineralization intersected in surface diamond drilling. This adit was never more than 60 feet below the surface and was driven through the hill, breaking out in the east valley.

Test-holing in the north wall of the upper adit was reported to have encountered mineralization. Surface diamond drilling was carried out to check depth possibilities of this zone (No. 1 zone) and continuity was determined. In November, 1964, the lower adit was collared and driven 2428° by the following summer. Three mineral zones were encountered in the lower level, the 890, the 1725 and the No. 1 zone. Drilling was carried out on these zones and they showed continuity. The 1725 zone was drifted on for 140°. No drifting was carried out on what was believed to be the No. 1 zone but a short raise (30°) is reported to have been driven on the structure.

In 1966 and 1967 Canadian Superior Explorations Ltd. carried out induced polarization, stream silt and soil sampling and geological mapping on the southern two thirds of the claims. This was followed by percussion and diamond drilling and trenching. During 1964 the Gaza claims were located; induced polarization survey work and short hole diamond drilling was carried out. Results were discouraging and little was done until 1969 when personnel of MacDonald Consultants Ltd. carried out geological mapping in the area of the original showings under the direction of Alrae Engineering Ltd. At this time the Jericho and Gaza properties were under option to Tremar Minerals Ltd.

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In 1969 Huntec, a division of Kenting Exploration Services Limited, carried out induced polarization surveys over selected areas on both the Jericho and the Gaza properties. Seven anomalous zones were encountered.

#### GEOLOGY AND MINERALIZATION

The area in which the Gaza and Jericho properties are located is underlain by the Highland Valley phase of Guichon granodiorite, cut by irregular dyke-like bodies and large irregular masses of the Witches Brook phase of the intrusive, which range from granodiorites to granites. The Witches Brook phase is considered to have been associated with mineralization and was responsible for the formation of some copper deposits.

Alteration in the vicinity of the mineral showings consists chiefly of sericite, calcite and chlorite. Mineralization consists of bornite, chalcocite and chalcopyrite and minor molybdenite associated with alteration adjacent to fault zones. Quartz is common as a gangue mineral. Seven distinct mineral zones have been discovered on the Gaza and the Jericho properties. Of these, little is known of the Halfway, Bornite Ridge and Malachite Hill showings. Each has been tested by bulldozer trenching and shorthole diamond drilling, of which no records are available. All are on the Jericho property.

The No. 1 zone is reported to have been explored by test-holing from the upper level on the Jericho property. The mineral zone is indicated to be 280' long, 30' wide and averages about 1.50% Cu. Extensive surface diamond drilling shows the zone to be continuous in depth for 360'; parallel footwall zones are present. All appear to strike east-west and dip 65-70° to the south. (See accompanying sections - Figs. 4-8).

The lower level is reported to have intersected the No. 1 zone but no assays are available. This mineral zone is believed to rake to the east. A 30' raise is reported to have been driven on the mineral zone but no plans or sample results are available. D.H. 513 intersected the No. 1 zone 450' below the lower level (0.39% Cu across 6.5') (See Fig. 3).

The <u>390 zone</u> was intersected in the lower level, 890' in from the portal. No chip sample assays are available but the three flat drill holes intersected the zone as follows:

| D.H. |      | <u>Z Cu</u> | Width | Loc  | ation |    |       |            |       |  |
|------|------|-------------|-------|------|-------|----|-------|------------|-------|--|
| 506  |      | 1.05        | 5.1*  |      |       |    | lower | level      | adit. |  |
| 507  |      | 0.15        | 5.0*  | 75*  | east  | of | 94    | <b>走</b> 来 | 88    |  |
| 508  | -04- | k" bornite  |       | 150" | 33    | 22 | 88    | 95         | 33    |  |

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The <u>1725 zone</u> was intersected 1725' in from the portal of the lower level and drilling showed its horizontal extension to be at least 310'. Intersections are as follows:

| <u>D.H.</u> | <u>% Cu</u> | Width | Loc         | ation |              |       |       |      |  |
|-------------|-------------|-------|-------------|-------|--------------|-------|-------|------|--|
| 501<br>502  | 1.68        | 5.1*  | 80*<br>150* | west  | of           | lower | level | adit |  |
| 504         | 1.50        | 2.5"  | 701         | east  | \$ <b>\$</b> | ¢\$   | \$\$  | 44   |  |
| 503         | 0.60        | 2.51  | 150*        | 有华    | 88           | 89    | 63    | Ŧt   |  |
|             |             |       |             |       |              |       |       |      |  |

Drifting has proceeded for 140' on this vein and chip samples are reported to average 1.6% Cu across 7.0'. Down holes show the vein to project 100' below the lower level (D.H. 511 cut 1.20% Cu across 4.0').

The <u>Gaza</u> prospect shows disseminated malachite in a highly fractured zone of sericitized granodiorite that measures 300' by 25'. Four diamond drill holes explored this zone in 1964 and three gave favourable results as follows:

D.H. 7 - 0.68% Cu/30.0' (sludge samples) D.H. 8 - 1.31% Cu/139.0' " " D.H. 9 - 0.77% Cu/192.0' " "

Core samples showed isolated mineral zones of 1'-5' in width. Percussion drilling 50-100' east of these holes is reported to have been "below commercially acceptable grades". - Rae Jury - 1969.

#### ORE RESERVES

Based solely on 1964 diamond drill log results available to the writer and a map showing test hole results from the Jericho upper level, the following drill-indicated reserves have been calculated:

| <u>Block</u> | Zone     | Section | Width | Tons    | <u>% Cu</u> |
|--------------|----------|---------|-------|---------|-------------|
| 1            | 1        | Α       | 10.0  | 5,400   | 1.76        |
| 2            | 1        | A       | 7.5   | 9,000   | 5.17        |
| 3            | 1        | ٨       | 3.0   | 4,800   | 1.67        |
| 3            | 1        | A       | 3.5   | 5,600   | 3.60        |
| 5            | 1        | B       | 6.2   | 4,340   | 1.88        |
| 6            | 1        | B       | 20.0  | 14,000  | 1.70        |
| 7            | 1        | C       | 34.0  | 40,800  | 1.88        |
| 8            | 1        | С       | 3.0   | 2,700   | 1.65        |
| 9            | 1        | C       | 9.3   | 8,370   | 2.90        |
| 10           | 1        | D       | 32.0  | 42,240  | 1.48        |
| 11           | 1        | D       | 6.0   | 5,760   | 1.15        |
| 12           | 1        | E       | 7.0   | 3,150   | 2.28        |
| 13           | 1        | E       | 24.2  | 9,680   | 1.55        |
| 14           | 1        | E       | 8.2   | 2,950   | 1.40        |
| 15           | 1725     | -       | 4.1   | 18,450  | 1.50        |
| Total,       | averages |         | 11.0  | 177,240 | 1.93        |

## The following rules were applied:

 No dilution factor was considered. This must wait until the nature of the wall rocks can be determined.

2. A factor of 10 cubic feet per ton was used.

Blocks are shown on the accompanying sections (Figs. 4-8) and the composite underground level plan (Fig. 3).

## GEOPHYSICAL

During the 1969 field season 29.27 miles of lines were surveyed and this was followed by an induced polarization survey. Seven anomalous zones were detected (See Fig. 2).

Gaza

Three areas were picked out as being of possible significance. Zone I is associated with the principal Gaza showing and is the most interesting. Zones II and III are weakly anomalous and are both open to the west. They could represent porphyry-type mineralization but more detailed work is required in these areas.

## Jericho

Zone I was picked up on only one line but is open to the north. It is considered to be about 100° wide.

Zone II is considered to be very local and of little significance.

Zone III overlies the No. 1 mineral zone and remains open to the east. Additional work is warranted.

Zone IV comprises only one reading and is open to the north. It is quite weak.

Zones I and II on the Jericho property and Zone I on the Gaza property warrant additional exploration by diamond drilling.

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