

## SUMMARY REPORT

of

# MAPPING & SAMPLING PROGRAMME

of

AJAX MERCURY MINES LTD.

for

BACON AND CROWHURST

August 20, 1968

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## AJAX MERCURY MINES LTD.

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## INTRODUCTION :

During the period of July 16th - August 2nd, 1968, a programme of geological mapping and sampling was undertaken on the silver prospect of Ajax Mercury Ltd. in the Beaverdell area. The work was carried out under the direction of Bacon and Crowhurst and supervised by Western Geological Services Ltd.

Because of recent substantial increases in the price of silver, properties which would previously have been uneconomic have now become productive. The Rambler, Standard and Buster Mines in the Beaverdell area appeared suitable for a new study of their potential under these new conditions.

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An investigation was therefore undertaken to ascertain what ore was available that could be evaluated with a minimum of expense, and also to study the pattern of ore emplacement and its subsequent dislocation by faulting with a view to a long range exploration and development plan.

#### GENERAL GEOLOGY:

In the Beaverdell area on Wallace Mountain most of the ore is in the diorite of the Westkettle batholith which has intruded the overlying Wallace formation. The lenticular veins lie in east-west trending shear zones in the diorite and consist essentially of galena and sphalerite in quartz associated with sericite and the silver bearing minerals tetrahedrite (freibergite), pyrargyrite, and polybasite as well as native silver. On each side of the veins is a zone of highly altered diorite known in the district as ore rock. The diorite has been intruded in the Beaverdell area by the Beaverdell batholith which may have been the source of the mineralizing fluidsand which may also have been involved in the shear zones in which the veins are found and also possibly in the extensive post mineral faulting which has cut the

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ore into many difficult-to-find segments.

#### GEOLOGY OF THE PROPERTIES:

Most of the easily accessible ore on these properties has been mined out so that its character has to be deduced by the study of the remnants around the edges of the stopes and by the examination of the waste dumps. The remnants are either very thin or are a dense quartz with little sulphides. The better ore appears to have been a vuggy quartz with comb structure growing from the edge to the centre of the vein with galena, sphalerite and silver bearing sulpho-salts (tetrahedrite and pyrargyrite). The shear zones in which the veins were deposited appear to have been up to six feet wide filled with altered diorite. The number of veins present is open to question. In several locations where there appeared to be repetition of a single vein no faults could be found between them. A large number of apparent faults can be seen but on many of them no estimate of the amount or direction of movement could be made. Curved slickensided faces were present in some places but these might represent internal adjustment to the faulting rather than a great deal of displacement. The major faults usually were

associated with thick masses of very soft diorite and thick seams of gouge. The major veins tended to strike east-west and dip steeply south and appeared to suffer the most displacement by major faults which tended to strike northeasterly with moderate dips to the northwest. A dyke or dykes were found in several places in the Rambler area. The rock was very fine grain greenish on a fresh surface but black, mottled or a chocolate brown on a weathered surface. This rock was found extending along the south side of the shear zone in the middle Rambler level for over 100' west from station A24, between stations A25 and A25a, in the hanging wall of the upper Rambler shear zone, and on the surface north east of the main shaft.

#### METHOD OF INVESTIGATION:

The program called for cleaning out the old workings, washing down the walls, resurveying the underground workings so that all tunnels could be tied into the same co-ordinates and to lay out a surface grid so that the underground and surface geology could be more easily correlated (see map in pocket). The geology was to be tied into the underground and surface survey

points with emphasis not only on the visible mineralization but also on the faulting and alteration. All accessible mineral occurrences were to be sampled.

## SAMPLING:

Antonio antonio State a patrice antonio The following is a tabulation showing sample numbers, widths and locations :-

Sample No.	Width	Location
Bl	0.81	Horizontal channel across south vein
B2	0.61	Horizontal channel across north vein 15' E of station A3
<b>B</b> 3	3.2'	Horizontal channel 88: S23W of station Y
в4	2.31	Horizontal channel 91' S23°W of station Y
B5	1,41	Horizontal channel 2' above floor of trench 124' SW of station Y
B6	4.s	Curved channel - south side top of tunnel portal A37
B7	1'	Channel - top middle of portal of tunnel A37
B8	1.2'	Channel across rusty portion of roof 8' west of station A22 - Rambler
B9 B10 B11 B12	1.5') 0.8') 1.0') 1.3')	Horizontal channel south to north across roof of Rambler drift A22 + 16

Sample No.	Width	Location
B13	1.9'	Channel in roof of drift south side over winze, A23 + 47, Rambler
B14	1,	Vertical channel north wall of crosscut 8' above floor A23 + 61' L6 Rambler
B15	2.5'	Chip A49 + 39 west, 12' above floor Rambler
B16		Gouge from fault at A26L - Rambler
B17	•51	Vertical channel - in back of stope A49 + 10', R.9 above muck pile - Rambler
B18	.61	Vertical channel - in back of stope A49 + 23', R. 13' up - Rambler
B19	.4.	Channel - edge of stope A50 + 7 - Rambler
B20	1.0'	Channel 5' above floor OSP 201 + 19L - Rambler
B21	0.71	Channel 202d + 20L (toward 202g) 8' above stope floor - Rambler
B22	1.0*	Horizontal channel 202d + 13 (toward 202h) in centre of roof - Rambler
22	1.0'	Channel in manway-stope, between lower levels 25' slope distance above A52
B24	1.	Horizontal channel A56 + 23R 5' above winze - Rambler
B25	4.41	Chip 19'S of A55 - across roof of drift - Rambler
B26	1.5'	Horizontal channel across roof A40 + 14.5 - Standard
B27	3.0'	Chip A42 + 6.2 in roof - Standard
<b>B</b> 28	31	Chip A46a + 4 across roof - Standard

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Sample No.	Width	Location
B29	1,	Channel A42 + 10 R 1.5' above muck pile in stope - Standard
B30	4.	Chip 14' SSW of A63c 2.5' above end of tunnel A63 tunnel
B31	2.5'	Chip, horizontal, across roof Al8 + 2.5 - Buster
B32	3.0'	Chip, horizontal, across roof A20 + 20.8 - Buster
<b>B</b> 33	1.21	Horizontal across end of drift at A21, 2.5' above floor - Buster
B34	1,	Horizontal channel 15' 121° from A4, 1' below ground level
<b>B</b> 35	],	Horizontal 52' bearing 105° from A5
<b>B</b> 36	1.5'	Channel horizontal 53' SSE of A5 in east end of small tunnel
B37	7,	Channel in shaft to stope above middle level 13' 130° from OSP #1
<b>B</b> 38	1.1'	Channel N-S horizontal 166' NE of A2
B39	1'	Horizontal channel across end of cross- cut at 202f - Rambler
B40	1'	Horizontal channel 202c + 17, L4-6 across roof of cross cut - Rambler
B41	1,	Horizontal channel end of stope at Al6a + 16 5' above floor of drift - Rambler
B42	0.9'	Horizontal channel Al6b + 14 end of stope - Rambler
B43	0.3'	Channel across vein A17 + 18R 1.6 above floor (vein less than 0.1 thick)-Rambler

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Sample No.	Width	Location
B44	1'	Vertical channel A61 + 11.5L (toward A61a) 7' above track - Rambler
845	0.4	Horizontal channel A56, R, 3' above floor - Rambler
B46	0.1'	A49a + 2.5L 6' above floor vein lies parallel to wall - Rambler sample consisted of slab of vein
B47	1.0,	Horizontal channel A49b + 3 5' above floor across end of crosscut (vein is C.l thick) - Rambler
B48	2.1'	Channel A23 + 24, R across right slope of roof - Rambler
B49	1.1*	Vertical channel West lower end of stope in each side of main shaft - actual width is approx. 0.9' comprising 0.20R, 0.2 vein 0.5 OR - Rambler
B50	0.7'	Horizontal at B26 N edge of drift - Standard
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## CONCLUSIONS:

1. No estimate of ore reserves can be made at this time.

- 2. Examinations of the ore dumps indicate that some ore of relatively high grade was taken from these mines previously.
- 3. Selected samples taken from the three mines, tunnels and surface trenches, indicate that there are areas which justify further exploration.

4. Because the veins will probably be thin any ore found will have to be of quite high grade to carry the cost of mining the waste.

## **RECOMMENDATIONS:**

- 1. The topographic grid should be completed.
- The walls in the Buster, the Rambler A57 crosscut and all tunnels should be washed when air is available for underground pumping.
- 3. Diamond drilling should be carried out underground to evaluate previous drilling and to test for more ore. This program should be sufficiently flexible so that if indications warrant, additional holes can be fanned out from the same location. The following is a list of holes which should be completed in the initial programme:-

## Rambler Mine:

A	55	plus	221	801	N13°E dip 30°
A	55	plus	.551	70'	N80W dip 450
A	55	plus	14.	851	N33°E dip 35°
A	27		601		S15W plus 45°
A	27		50'		S 70°E plus 45°
A	55	:	150'		N60°E Horizontal
A	491	0	150'		N60°E Horizontal

A47	801	N150W	Dip 150
A46a	70'	N	Plus 45°
A48	1501	S10°E	Horizontal

4. Consideration should be given to carrying out a soil survey before trenching and surface drilling is commenced.

Respectfully submitted,

-Ell Ramsny

Western Geological Services Ltd.

Vancouver, B.C.

August 20, 1968













