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REPORT DATED
JUNE 12, 1983
ON THE
MOSQUITO KING AND BOWLER CREEK GROUPS
ADAMS PLATEAU
BRITISH COLUMBIA
FOR
ORELL RESOURCES LTD.

BY
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INTRODUCTION

Orell has 4 properties on Adams Plateau and on the upper part of the slope down to Scotch Creek.

Mineral occurrences were found here early in the century and claims were located there about 60 years ago. They have been held by many owners and over the years much sampling and trenching has been done and small shipments made. Since World War II diamond drilling, and geological, geophysical and geochemical work has been done. Detailed accounts have been given in many early reports and by the writer in the last 10 years. The old information is not repeated here.

Many of the drill core intersections are of low grade material. Some are of ore grade and on each of the 4 properties potential ore shoots have been found. If additional exploration shows that these shoots are more extensive, especially one high grade one, enough ore may be present to provide feed for a mill.

LOCATION, ACCESS AND GENERAL COMMENTS

Lat. 41° 4' N Long. 119° 30' W are near the centre of an extensive area east of Adams Lake and north of Shuswap Lake. It is accessible by about 20 miles of road from Squilax on the Trans Canada Highway. Many logging roads provide easy access to most parts of the property.

Slopes are mostly gentle. The area, except on top, is timbered and patches of it have been logged.

The claims included in the Mosquito King property are as follows:

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
A1	1	128831	Nov. 13/86
A2	1	128832	Nov. 13/86
Fox	6	490	Aug. 24/86
MK1	20	565	Oct. 18/84
MK2	10	566	Oct. 18/86
MK3	12	567	Oct. 18/84
MK4	4	568	Oct. 18/86
Hiltec 1 & 2	2	114	Oct. 21/86
Silver King	4	2267	Nov. 14/84
Silver King #1	1	2268	Nov. 14/84
Silver King #2	1	2269	Nov. 14/84
Silver King #3	1	2270	Nov. 14/84
Silver King #4	1	2271	Nov. 14/84
Cat #2	2	1548	Nov. 15/85
Cat #1 Fraction	1	2272	Nov. 14/87
Cat #2 Fraction	1	2273	Nov. 14/84
Elk 5 & Elk 8	1	2179	Oct. 19/88
Bee #1	4	2550	Apr. 22/85
Bee #3-#10 Incl.	8	2532-39 Incl.	Apr. 21/85

The claims included in the Bowler Creek property are as follows:

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
Zinc	6	437	Jun. 28/85
BC 1	2	539	Oct. 4/84
BC 2	16	540	Oct. 4/84
BC 3	16	541	Oct. 4/84
BC 4	12	1086	Nov. 10/84

Mineral claim leases are as follows:

Spar #1 and #2 Mineral Claims

Record No. 127210 and 127211

Kamloops Mining Division, British Columbia, Canada

Expiry Date: November 5, 1985

Leased from: Quintaine Resources, Inc.

1103-84th Avenue

Edmonton, Alberta T6G 0V6

Term: 10 years from November 14, 1980, and thereafter as long as mining takes place

Rental: Annual Assessment to keep claims in good standing (\$200.00 per claim per year)

Royalties: 10% of net smelter returns

GEOLOGY

The area is underlain by a sedimentary series that contains variable amounts of volcanic ash. Most of the rocks are argillaceous interbedded with limy and cherty beds and gradations between them. The rocks are now more or less micaceous and phyllite is a term applicable to many of them. Those with an appreciable volcanic content tend to be chlorite schists.

Lower in the series on the B.C. claims volcanic types are more common and include some flows.

This volcano-sedimentary series is intruded by dykes of intermediate and acid composition. These are as much as 20 feet wide and mostly strike northerly and dip steeply. On the east of the property a granitic mass intrudes.

The Spar property is across the Nikaikwaia valley from the rest of the property and is separated by an interval with no outcrops, however similar rocks occur on it.

STRUCTURE

On most of the property the beds appear to strike westward and dip moderately to gently northwards though many variations are noted.

In the west on the Spar claims, the beds strike southwesterly and dip north-

westerly. This is close to a nearly closed syncline * that strikes NNE and dips eastward. The Spar claims are close to the limbs of this closed structure.

Preto's mapping shows that sequences of some formations disappear along strike. This may be accounted for by movement along or nearly along bedding planes. Such movement could also account for the absence of mineral beds in some drill holes. This is an area with few outcrops and bedding plane faults are difficult to find.

A schistosity more or less coincides with the apparent bedding attitude and the possibility exists that the series is closely folded. Some drag folds occur which indicates that the beds could move easily.

MANY MINERAL OCCURRENCES

Mineral occurrences within this bedded series are, generally conformable. These typically comprise pyrrhotite, pyrite and in places magnetite, accompanied by lesser amounts of sphalerite, galena and chalcopyrite plus quartz and calcite and altered country rock. Generally the sulphides and magnetite when present form the core of a bed and outside of this the proportion of country rock is greater.

Some occurrences comprised largely of magnetite, contain minor amounts of sulphides including pyrrhotite and minor chalcophrite. On some stripped surfaces a white oxide develops probably from sphalerite. This looks abundant, however repeated sampling has shown that zinc is present in only very low proportions.

The occurrences range from one such as the Spar which has a high lead-silver content through intermediate ones on the B.C. group which have mostly a zinc-silver content. A small amount of gold is present and the sphalerite contains about 1% of cadmium. The silver content is roughly proportional to the lead.

The mineral beds appear to be stratabound and probably formed before overlying beds were laid down.

GEOCHEMISTRY

The area has many mineral occurrences. They are separated by country rock, some of which contains pyrite and possible minor amounts of other sulphides. The result is that geochem anomalies are not generally distinctive and they have not been much help in exploration.

A survey was made by Craigmont of the Mosquito King and Bowler Creek groups. It discovered minor anomalies of Cu, Pb and Zn. However occurrences are so common that individual occurrences tend to be obscured by near-by ones.

GEOPHYSICS

a) Magnetism

Many of the mineral occurrences contain abundant pyrrhotite and magnetite and

*Preto - Department of Mines.

these cause many anomalies. Most of these are accompanied by a negative anomaly to the north. Generally the anomalies are narrow and long and extend ENE. They are numerous and some other factor has to be used to select those worthy of exploration. This has been drill holes to determine if the anomaly is caused by iron minerals with a significant amount of base metal sulphides.

b) EM

The mineral occurrences contain a substantial proportion of sulphides and/or magnetite which are conductors and cause EM anomalies. They are mostly narrow and oriented much the same as the magnetic ones.

One occurrence in which sphalerite is important, was discovered by surface prospecting, did not cause an EM anomaly. This is probably because sphalerite is not such a good conductor as some of the other sulphides. Likewise mineral occurrences comprised mostly of magnetite, do not cause sharp EM anomalies.

c) I.P.

An I.P. survey in 1967 outlined numerous anomalies. A few of these coincided with known mineralization though their shape is unlike the oblongated EM anomalies. They appear to be caused in part by country rock with much disseminated pyrite.

In recent years some of the I.P. anomalies have been trenched in areas with few outcrops. Some mineralization comprising mixed sulphide has been exposed.

On the Spar claims, the I.P. survey showed 2 major anomalies, one of which nearly coincides with the location of the known showing. An anomaly of similar intensity is shown in the northwest part of the group where there are few outcrops. It appears that this anomaly is worth exploration.

In 1981 a ground I.P. survey was made in the vicinity of the Mosquito King showings and extensive I.P. anomalies outlined. Some of these terminate in a way that suggests that the cause of the anomaly plunges westward. If this is so, it may explain the apparent discontinuity of the mineral bed. The results suggest that the mineral bed may be folded with the fold plunging westwards. These results suggest that this area is worth exploring.

A ground I.P. survey was also made at the Spar showing. Anomalous readings were obtained. However, towards the north the anomalous readings appear to be offset southwards. This suggests that a break offsets the mineral bed and this possibility is worth exploring.

d) CRONE EM

This survey yields anomalies that generally do not correspond to anomalies from other methods or known mineralization. An anomaly on the Bowler Creek property crosses 3 EM anomalies. For this reason it is considered to be less useful than EM.

On the Mosquito King a Crone EM anomaly corroborates a ground I.P. anomaly

which supports the likelihood that the anomalies are caused by a conductor at depth.

DRILL RESULTS

Drill indicated reserves on Ballpark, Mosquito King and Bowler Creek properties are sizable though at present prices are submarginal.

Drilling was done by Cominco in 1947 and Giant Metallics in 1966 and 1967. Generally the intersections of the mineral beds were narrower than nearby surface exposures. Drilling of a highgrade showing on Spar in 1972 appeared to show that the bed narrowed markedly to the southwest and did not extend to the northeast. Craigmont in 1977 and 1978 drilled many holes on the Ballpark, Mosquito King and Bowler Creek showings. Since then Orell has drilled the same properties and 2 holes on the Spar. Indicated tonnages and grades are as follows:

	Tonnage	%Zn	%Pb	Ag oz./ton	Thickness Ft.
Ballpark	37,200	2.09	0.83	0.39	5.38
Mosquito King	5,200	2.6	1.38	0.58	11.2
Bowler Creek	171,500	2.43	0.53	1.45	11.5
Spar	12,300	4.83	10.56	6.03	11
Combined Total and Average	226,200	2.5	1.13	1.5	10.4

The Spar is the thickest bed where exposed at the adit and it may be 20 feet. This thickness was not used in calculations because the bedding there is contorted.

The estimates are based on drill core intersections which are too widely spaced to permit a drill proven estimate to be made. The inclusion of the Spar increases the grade appreciably. If an extension of this occurrence can be found or if the other I.P. anomaly results from a similar grade of mineral they will have a similar effect of raising the average grade. See Figure 1.

POSSIBILITIES

1. SPAR

The known shoot has not been delimited. Judging from the nearly uniform dip 35° the strike of the bed appears to change. Sp 2 does not appear to be deep enough to core the bed and the bed cored in it appears to be one above the main mineral bed. To the north its extension may be disrupted and moved southward as mentioned above.

In addition a similar airborne I.P. anomaly in the NW part of the group merits exploration. It may be caused by a similar shoot.

2. BALLPARK

A low grade shoot occurs within an area outlined by an EM survey. Holes outside the anomalous area did not core a recognized mineral bed. Additional holes have a good possibility of extending the possible tonnage.

3. MOSQUITO KING

Only a short section of what is known to be a lengthy occurrence has been explored. Several more widely spaced holes are possible and they will explore the occurrence where relatively high grade shipments came from. In addition the ground I.P. suggests that folding, together with thickening, is possible and merits exploration.

4. BOWLER CREEK

This occurrence has been cored in 3 holes. It is on a moderately steep slope where possible changes in attitude produce major changes in location of the surface trace. The only shoot found so far may be larger than so far has been established.

CONCLUSIONS

1. Stratiform beds of mixed sulphides have an appreciable content of silver, zinc and lead and minor amounts of gold and cadmium
2. A potential tonnage of over 225,000 tons of grade Ag 1.5 oz./ton zinc 2.5% and lead 1.13% is drill indicated
3. A larger tonnage is necessary to provide mill feed
4. The Spar occurrence is thickest and highest grade and it is considered essential that it be completely explored
5. Northwest of the Spar is an area with an anomaly similar to the one at the main Spar showing
6. A ground I.P. survey suggests that the northern extension of the Spar showing has been offset southwards
7. EM surveys have been useful in outlining the possible extent of ore shoots
8. I.P. surveys appear to be not well suited to outline the extent of these mineral beds. Many of the I.P. anomalies have been caused by disseminated pyrite in country rock. An exception is the I.P. anomaly which corresponds to the showing on the Spar property
9. Ground I.P. on the Mosquito King outlines an extensive anomaly. It is not known if this is caused by a mineral bed at depth
10. Shoot-back anomalies do not correspond to known mineral occurrences and one crosses several EM anomalies
11. Magnetism causes many anomalies because of many massive occurrences of magnetite and pyrrhotite. In an area without outcrops such anomalies need to be drilled to determine if sulphides other than iron are present
12. Few distinctive geochem anomalies have been found. Even so the technique may be applied in an undisturbed and unprospected area in the northwest part of the Spar group to determine if anomalous readings for silver, zinc and lead can be found to corroborate an I.P. anomaly
13. The potential for an increase in indicated tonnage is good

RECOMMENDATIONS

1. Explore for extensions of Spar showing
2. Do geochem survey for Ag, Zn, Pb in vicinity of I.P. anomaly northwest part of the Spar group. If anomalous readings are found drill them
3. Drill other holes in Ballpark EM anomaly
4. Drill ground I.P. anomaly south of Mosquito King showings
5. Drill central & eastern part of Mosquito King showings
6. Make detailed IM survey near zinc showing on Bowler Creek claims and if extensions of known shoot are outlined drill these.

ESTIMATE OF COSTS

After last season's disastrous lack of work, drill companies are trying to get their equipment back to work and are submitting bids that barely cover their costs. After this season prices will probably escalate. The estimates here are based on present low costs.

If the work is done during several years, costs later may be expected to be higher.

SPAR Northwest area in vicinity of ground I.P. anomaly "0"

Grid		\$ 1,000.00
Prospect		1,000.00
Geochem Survey		1,000.00
Assays of Geochem & Rock Samples		1,500.00
Report		1,000.00
Drill Occurences on Geochem Anomaly	3 @ 200' X \$25.00	15,000.00
Main Showing Explore Southward Extension	3 @ 200' X \$25.00	15,000.00
Possible Off-set Bed Locate with	2 @ 250' X \$25.00	12,500.00
If Bed Located Extend With	6 @ 200' X \$25.00	30,000.00
Ballpark Central and Western Part of EM anom.	2 @ 250' X \$25.00	12,500.00

MOSQUITO KING

Explore I.P. anomaly to Determine if it is Caused by Plunging Fold	2 @ 350' X \$25.00	17,500.00
Explore Central and Eastern Part of Main Showing	3 @ 200' X \$25.00	15,000.00

BOWLER CREEK

Detailed EM Survey to Determine if Occurrence Causes Anomaly & Does This Extend Beyond Known Length		1,000.00
Report		500.00
If Amonalies Found Explore with 4 Holes	4 @ 200' X \$25.00	20,000.00
Travel		5,000.00
Geologist		15,000.00
Assays		10,000.00
Reports		10,000.00
Contingencies		15,500.00
		<u>\$200,000.00</u>

C E R T I F I C A T E

I, J.M. Black, of 843 Prospect Avenue, North Vancouver, B.C. do hereby certify that:

1. I am a graduate of U.B.C. in geological engineering with degrees of B.A.Sc. and M.A.Sc., and a graduate of McGill University with a degree of Ph.D. in economy geology and have 40 years of experience in the examination of mineral occurrences.
2. The within report is based on many personal examinations of the property during the last 8 years and I was last on the property on August 16, 1982.
3. I have no beneficial interest in the property described in this report nor do I expect to receive any nor do I have any interest in Orell Resources Ltd. other than my duties as a consultant.



J.M. Black, P.Eng.
Consulting Geologist
June 12, 1983

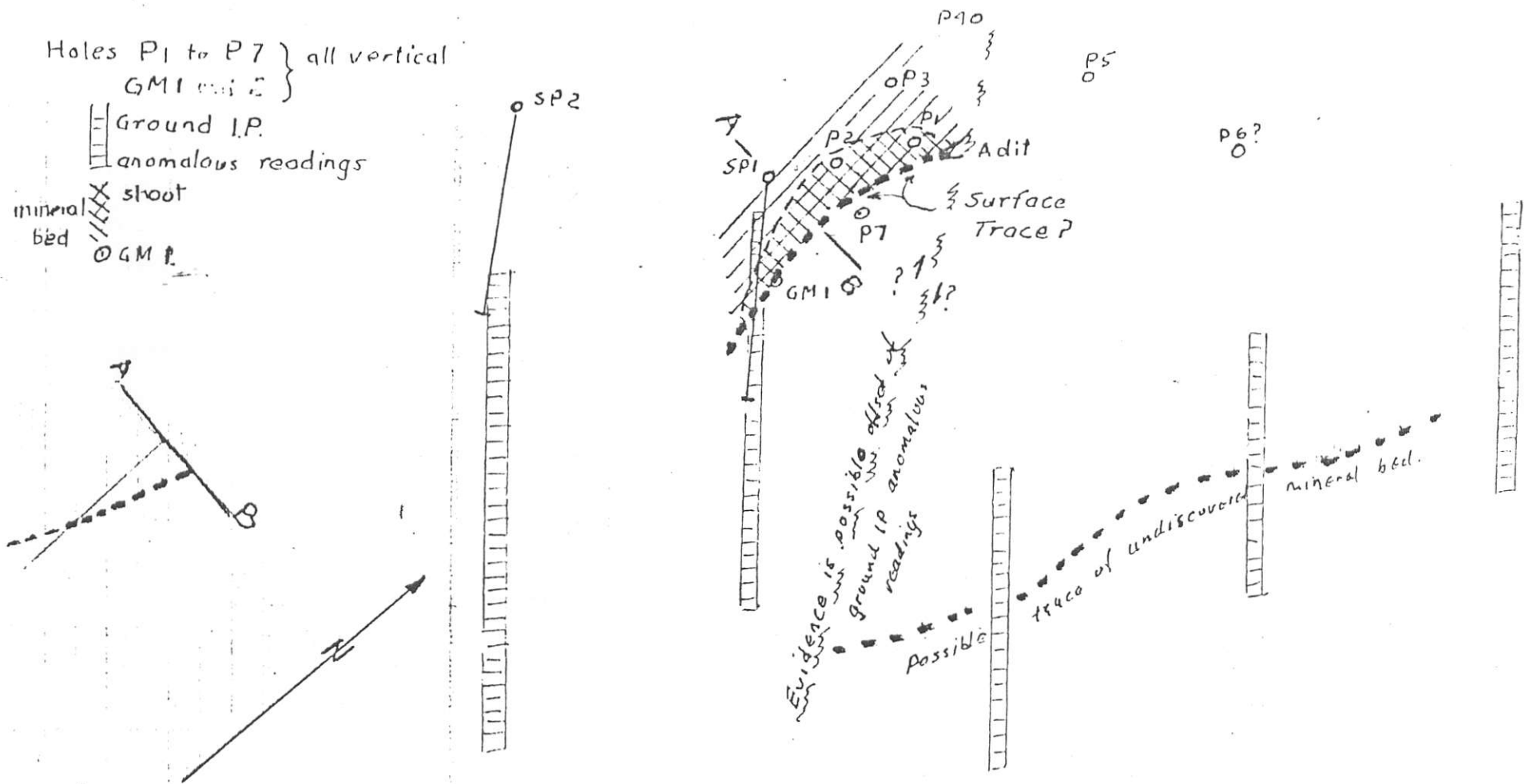


Figure 1

ORELL RESOURCES Ltd - Spar Occurrence
 showing ground I.P. anomalous readings
 drill holes and ore shoot to accompany
 report by J M Black P Eng June 12, 1983

SCALE 0.5M 1.0M 2.5M

