

REPORT ON THE  
KS, EL, TS, JUNE AND LEAMINGTON MINERAL CLAIMS  
SIMILKAMEEN RIVER AREA, B.C.  
OSOYOOS MINING DIVISION

---

INTRODUCTION

Location of Area:

The Abrams Oil Management Ltd. property, consisting of 310 mineral claims held by location and purchase agreement, is situated 12 miles south of Keremeos, B.C. in the Osoyoos Mining Division. The Keremeos - Osoyoos (via Richter Pass) highway (B.C.No.3A) passes directly below the property along the Similkameen River. The claims cover the east slopes of Snowy Mountain from the summit at 8500 feet to the Similkameen River at 1300 feet elevation.

Keremeos, the nearest supply centre, is situated on the southern Trans-Provincial Highway 220 miles east of Vancouver. It is serviced by daily truck transport, bus, and rail.

HARVEY H. COHEN, P.ENG.

### Size of Area and Exposures

The Abrams Oil Management Ltd. property consisting of 310 mineral claims is shown on a map prepared by the company and covers approximately 15,000 acres.

The old workings chiefly on the old crown grant consist of four short adits driven to explore the nature of the copper mineralization exposed on surface. To the south, on the TS mineral claims, four adits explore the copper-silver vein system to a minor extent. Other natural exposures consist of rock bluffs and scarps along the base of the hill. The greater part of the property is covered by overburden and timber growth. The relief to the west is moderate but the creek beds and canyons are precipitous particularly along the east slope at the base of the hill.

### History

The old work carried out during the early part of the century succeeded in making small shipments of high

grade taken from the mineralized quartz ven system on the old Leamington property. More recent work on the TS claims appeared to be an endeavor to prepare for high grade shipments of copper-silver ore however, lack of finances prevented the success of the operation by the former owners.

The property lies west of the Horn Silver Mines, which is presently being explored by Utica Mines Limited, and to the south of the old King Edward property - a high grade molybdenite occurrence.



SUMMARY AND CONCLUSIONS

The area in general is noted for lode deposits which are associated with the Okanagan intrusives and earlier formations. The nature of the mineralization observed on the eastern part of the property classes the deposits as vein type deposits confined to quartz veins and shear zones within alkaline intrusives. Small shipments of high grade copper-silver ore have been made from small workings and adits during early exploration phases and these have been selected from the ore bearing structures. Under present economic studies, and with equipment available today to conduct the search for "hidden deposits", the property warrants a program consisting of geophysical survey on a reconnaissance grid to detect and outline the structural features of the area presently observed by overburden. The result would produce and localize certain areas for subsequent phases of work consisting of trenching and diamond drilling. There exists possibilities of extensions of the known ore zones presently exposed by the old workings particularly in the vicinity of the syenite plug intruded by the later granodiorite.

The granodiorite mass north and west of the main workings has possibilities of containing molybdenite - particularly in the Susap Creek area on the north section

HARVEY H. COHEN, P.ENG.

of the property which adjoins the King Edward molybdenite deposit.

Again, the Snowy Mountain area consists of a syenite mass approximately 2 miles by 1 mile in area in contact with granodiorite which in part has invaded the syenite mass presenting a favorable geologic environment for ore deposition. The area has encouraging prospecting possibilities.

RECOMMENDATIONSPhase 1:

1. Conduct a geophysical survey on a grid of 400 feet by 100 feet employing a fluxgate magnetometer. The survey would establish claim boundaries, and succeed in differentiating between the alkaline syenite, and the granodiorite, as well as outlining any anomalous zones.
2. Geological mapping on 200 scale of the outcrops, surface geology of workings.
3. Employ a bulldozer, a D7 or equivalent to trench and strip those anomalous zones of significance resulting from the geophysical survey.
4. Drill and blast fresh cuts in the trenched areas as well as outcrops in the intrusive mass for geologic mapping and sampling.

Phase 2:

1. Diamond drilling to test at depth those anomalous zones exposed by trenching and that show mineralization of geologic or economic importance. Initially, holes to depths of 200 feet would be suggested.

HARVEY H. COHEN, P.ENG.

ESTIMATESPhase 1:

1.	Geophysical survey, base line, grid lines, instrumentation, interpretation and reports. Approximately 300 miles.	\$25,000.00
2.	Trenching, stripping, access roads.	10,000.00
3.	Open cuts, drilling and blasting.	2,000.00
4.	Mapping, supervision and engineering, assays.	8,000.00
5.	Transportation, camp, supplies.	10,000.00
6.	Miscellaneous and contingencies.	<u>8,000.00</u>
	Total Phase 1	<u>\$63,000.00</u>

Phase 2:

The drilling program would depend upon the results of Phase 1, and it would be in order, as a guide to prepare for a minimum drilling program of 3,000 to 5,000 feet. The cost of conducting this work would be to include:

- Preparation of drill sites and access.
- Diamond drilling.

- Engineering and supervision.
- Transportation and accommodation.
- Miscellaneous and contingencies.

Approximately \$60,000.00

The time required to complete the geophysical survey is estimated to be three months. The bulldozer work should complete the trenching in an additional four weeks, and the diamond drilling would require 2 1/2 months to complete.



Extreme cold weather may run 6-10 weeks during the winter with temperatures dropping to 10° below zero. Summer temperatures are moderate and operations in this area are able to continue year round.

#### GEOLOGY

Generally, the area is underlain by an intrusive mass of granodiorite, Jurassic in age. Near the east boundary of the property, a plug of alkaline syenite outcrops approximately 1/2 miles by 1/4 mile. A second outcrop of syenite covers Snowy Mountain Area, and measures approximately 2 miles by 1 mile.

The more recent granodiorite stock intruded into the syenite resulted in replacement of the latter to form a concentric cone of a gradational contact with its accompanying transition phases.

The syenite is medium to coarse grained with abundant pyroxene, while the granodiorite in places exhibits syenite phases. The borders of the syenite and granodiorite show occurrences of copper mineralization as well as silver.

Locally, the No. 1 showing in the Leamington Canyon (east section of property) is at elevation 1,825 at

the head of a steep-walled canyon. The host rock is coarse grained alkaline syenite with abundant pyroxene, hornblende and pink feldspar. The canyon strikes at  $215^{\circ}$ . Mineralization in the form of malachite, pyrite, azurite, was observed on sheared surfaces the most prominent striking at  $10^{\circ}$  and dipping  $48^{\circ}$  easterly. The rock was cut by numerous veinlets of quartz and calcite. Sericite is well developed and accompanies the mineralization. An accessory mineral observed in minor quantities was magnetite. Some chalcopyrite and chalcocite were in evidence.

No. 2 showing, at elevation 1,900 feet, is 300 feet easterly across the canyon from No. 1. An inclined shaft approximately 15 feet in depth follows a 3 foot vein of quartz in the syenite. The surface rocks are highly oxidized and stained with molybdic ochre. The vein can be traced on surface for 150 feet from the shaft and it is reported to outcrop 150 feet ~~from~~ along the strike. The 3 foot vein strikes  $20^{\circ}$  and dips  $43^{\circ}$  easterly.

No. 3 showing at elevation 1850 consists of an adit which follows the three foot wide molybdenite bearing quartz vein for 30 feet. The strike was measured at  $20^{\circ}$  and the dip  $50^{\circ}$  easterly.

No. 4 showing at elevation 1750 feet is situated in a canyon 1500 feet west of the first series of workings.

HARVEY H. COHEN, P.ENG.

The host rocks were fine grained, dense, basalts cut by calcite stringers in an irregular manner. The rocks exhibit strong crushing and shearing with the development of ankerite. A series of eight cuts across an east-west distance of 100 feet exposes a vein of chromite striking north-south and dipping  $70^{\circ}$  to the west. The chromite vein has reported assays of 41%  $\text{Cr}_2\text{O}_3$ . Its occurrence is lensey in character.

The area noted as the "silver showings" is situated on the TS claims (Three Sisters) to the south of the copper workings. A series of four short adits were driven to various lengths to explore shear zones in the syenite intrusive carrying quartz veins mineralized with grey copper, galena, chalcopyrite, sphalerite, molybdenite.

On surface at elevation 1550 feet the near vertical shear striking at  $170^{\circ}$  and dipping  $75^{\circ}$  westerly is intersected by a secondary system striking at  $270^{\circ}$  and dipping vertically. Both systems exhibit abundant malachite stain and pyritization. Veins of massive chalcopyrite cut the breccia zone in a medium grained granodiorite. Felsite dykes and porphyry dykes cut the intrusive stock.

No. 1 adit at the 1450 foot elevation follows a six inch shear for a distance of 25 feet in a coarse grained granodiorite. The strike was found to be  $225^{\circ}$  and



22° northerly.

No. 2 adit at the 1400 foot elevation at the base of a steep scarp follows an altered breccia zone for 15 feet. The strike was 170° and the dip vertical. No. 1 and No. 2 adits are 75 feet apart. No ore was developed in these workings.

No. 3 adit 35 feet to the south of the No. 2 adit is at an elevation of 1500 feet, and was driven for a distance of 10 feet at 155° strike on a narrow shear, no ore intersection was accomplished.

No. 4 adit at 1530 foot elevation, 75 feet from No. 3 was driven at 225° for 65 feet. A high grade vein averaging six inches in width was followed along the strike. The vein carrying high copper-silver values dips at 50° and varies in width along the strike to produce a lensy characteristic to the vein. The structure is continuous to the face where ore grade mineralization is in evidence. The host rock is syenite cut by numerous felsite dykes in an irregular pattern. Most recent work at this location consisted of preparations for mining and shipping of high grade but this was not completed. Small ore dumps are stockpiled at the portal.

The greater part of the property to the west, mapped as a granodiorite stock shows few natural outcrops,

HARVEY H. COHEN, P.ENG.



but lies adjacent to the high grade molybdenite showings on the King Edward property. The large syenite stock - granodiorite contact presents a favorable locus for exploratory work.

Samples taken by the owners are designated as follows:

		<u>Silver</u>	<u>Copper</u>	<u>Molybdenum</u>
1.	TS Mineral claim 20' W of tunnel	46.2	1.53	
2.	No. 2 showing 3' vein		.08	1.985
3.	No. 3 showing 3' vein 30' from No. 2.		.77	.395
	a)			.22
	b)			.32
	c)			2.33
	d)			
4.	TS <sub>2</sub> claim qt <sup>2</sup> vein	143.60		
	a)	135.0		
	b)	96.4		
	c)	157.0	2.74	
	d)	119.8	2.17	
5.	No. 1 showing-surface grab.	2.6	13.2	
		2.2	9.48	
			6.42	
6.	TS claims-vein	71.6	1.51	
	special	196.3		
	vein material	135.0		
	vein material	143.6	3.1	

		<u>Silver</u>	<u>Copper</u>	<u>Molybdenum</u>
7. QT2 and Oxides surface	a)	4.5		
	b)	2.8		

The samples are indicative of the qualitative results of the mineralization - the extent of which remains to be explored.