

TWIN LAKES

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MINDER - 3921

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- 82ESW011 - 07 TWIN LAKES

GEOLOGICAL REPORT  
ON THE  
TWIN LAKES PROPERTY  
of  
CRIPPLE CREEK RESOURCES LTD. (N.P.L.)

OSOYOOS M.D. 82E<sup>5</sup> 4E

October 5, 1973  
Vancouver, B.C.

Laurence Sookochoff, P.Eng.,  
Consulting Geologist

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### ILLUSTRATIONS

LOCATION MAP	1" = 136 miles
CLAIM MAP	1" = 3000 feet
"B" WORKINGS	1" = 30 feet

The Fairview Camp was worked extensively during the 1930's with a production of 2,983 tons of ore valued at \$55,936 in gold from the Morning Star mine in 1935.

The gold is usually associated with lead and zinc blende within quartz veins.

The Twin Lakes property covers an area of schistose granites and diorites containing numerous northerly striking quartz veins containing localized sulphides. The claims cover a number of old workings which were explored for potential mineral-bearing structures.

Ore taken from two comparatively small workings on one zone amounted to \$23,000 averaging \$70 per ton. Assays of up to 4.20 oz/Au per ton are reported from these stopes.

Samples taken by the writer from other workings ranged from trace to .88 oz/Au per ton. Selected samples from dumps assayed up to .72 oz/Au per ton.

#### CONCLUSIONS

Exploration and development on the Twin Lakes property prior to 1932 has disclosed the presence of mineralized quartz veins

containing significant gold values.

The potential of locating additional economic zones of mineralization in addition to possible "ore grade" tonnages from known zones is excellent.


#### RECOMMENDATIONS

It is recommended that the exploration and development programme on the Twin Lakes property of Cripple Creek Resources Ltd. be designed to test known zones and to locate additional potential zones of "ore grade" mineralization.

A programme of rock sampling, soil sampling, and geological mapping would delineate areas of specific interest. Diamond drilling would follow to test the areas of prime interest.

It is also recommended that Cripple Creek Resources Ltd (NPL) allocate the sum of \$17,600 to initiate and execute the recommended exploration and development programme.

Respectfully submitted,

  
Laurence Sookochoff, P.Eng.,  
Consulting Geologist

October 5, 1973

Vancouver, B.C.

## INTRODUCTION

On August 27 and September 22, 1973 the writer undertook a property examination of the Twin Lakes property of Cripple Creek Resources Ltd (NPL). In addition to the information obtained from the field examination, reference was made to government publications on previous work performed on this property and in the general area.

On August 25th an initial soil sampling programme was carried out in order to assess the possibility of tracing the extensions of mineralized veins.

## PROPERTY

The property is comprised of eleven mineral claims in two separate blocks. They are as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
Hill 2-5 (incl.)	29668-29671 (incl.)	September 15, 1974
FDS 1-5 (incl.)	360490M-94M (Tag No. )	September 17, 1974
FDS 6-7 (incl.)	360495M-96M (Tag No. )	October 15, 1974

The claim group shall be referred to hereafter as the Twin

Lakes Property.

#### LOCATION AND ACCESS

The property is located on the northwest slopes and a ridge of Orofino Mountain and at the head of Orofino Creek five to six miles south of the Kaleden-Keremeos highway.

The property may be reached by a good dirt road which branches off to the south from the No. 3 southern Trans-Provincial Highway, approximately eleven miles east of Keremeos or six miles west of the Kaleden junction.

From this point the road is taken past Twin Lakes and to the property.

Numerous roads traverse the property providing access to the old workings on the property.

#### TOPOGRAPHY AND VEGETATION

Elevations on the property range from 4,200 to 4,800 feet above sea level with moderate to gentle slopes. Portions of the property are comprised of open grassy rangeland with the remainder covered by stands of pine.

### WATER AND POWER

The maincourse of the northerly flowing unnamed creek passes within 1,000 feet of the property and would provide a year-round water supply. An easterly branch of this creek passes through the property, however, flows seasonally.

Diesel-electric power would be required in the initial stages of the exploration and development programme.

A commercial power line is located one and a half miles south of the property.

### CLIMATE

The prevailing climate in the area is of relatively warm summers and mild winters. Total precipitation averages 20 inches.

### HISTORY

The Fairview Camp located five to six miles south of the Twin Lakes property is one of the older mining camps in British Columbia. Since the early 1890's, when mineralized

quartz veins were discovered in the area, exploration and production has been sporadic. Most of the production was from the Morning Star property when in 1938, 2,983 tons of ore were shipped with a gross value in gold of \$55,936.

As recently as 1960, Cominco Ltd was shipping quartz from this area to Trail, B.C. to be used as a flux in their smelter operations.

On the Twin Lakes property, all the development work has been done prior to 1935. A limited geochemical survey was carried out in 1973.

The following is an excerpt taken from the Minister of Mines Report of 1932.

"This company, which is a private syndicate with head offices in the Rogers Building, Vancouver, bonded the Summit, Bluebird, Eureka, and other claims, situated on Oro Fino mountain, about 26 miles south-west of Penticton by motor-road, from the B.E. Mining Company of Leavenworth, Wash., and some of the original owners, among whom are Al. Piper et al., of Oliver. Since the Parvenu Company took over these holdings practically all the work has been done on the Summit claim, including two shafts; a sketch of which is attached to this report. The total net returns from ore shipped and gold bullion recovered from the mill, which was taken from these two comparatively small workings, amounted to about \$23,000. The shipping-ore



averaged about \$70 per ton and the mill-heads \$27, according to M.J. St. Clair, the manager. The continuation of the shaft on the dip of the fault is reported to be still in quartz, which points to the possibility of a downward throw of the hanging-wall, but until more work is done the fault-movements cannot satisfactorily be worked out, because the whole section, about 250 feet wide and 600 feet long, lying to the east of the workings, has been subjected to severe stress, and there appears to be a likelihood of several separate and distinct periods of upheaval. The vein to the east of the shafts is broken and distorted and probably will be found in saw-tooth sections or waves, in which a certain amount of enrichment has taken place. Where the vein is exposed in an oxidized condition free gold can generally be panned. Insufficient work has been done to determine the north and south extent or value, but in the old workings the vein tapers in both directions. The ground drops steeply to the north, with a gradual slope to the south towards the camp, where two or three vein-outcrops have been excavated and values in gold up to 0.70 oz per ton have been found, excluding some spectacular pockets of free gold and galena. The relation of these vein-outcrops to those found in the workings, and also to the west, is in doubt, and there may be a series of veins conforming to the strike of the schistose rocks, or one, which has been badly faulted."

The old Summit claim workings are now covered by the Hill # 3 mineral claim.

Approximately 300 feet southeast of the stopes on the Hill # 3 claim, is a small stope (B) on an exposed quartz vein carrying stringers of massive sulphides. The vein dips to the west and appears to be the same vein, or a parallel one, to the one which was stoped on 300 feet northwest.

On the Hill # 5 mineral claim, an old drift (A) approximately 600 feet long was driven on a quartz vein within a shear zone. The vein appeared to be quite irregular in width, dip and strike, and is exposed along intervals of the drift. Other mineralized parallel veins were also intersected.

Additional workings (C) on the FDS 5 mineral claim consist of a short adit on a silicified shear zone and open cuts on a five-foot quartz vein.

On the FDS # 7 mineral claim old workings consist of numerous trenches and open cuts on quartz veins and a drift estimated to be 600-1,000 feet long. The drift requires de-watering for accessibility.

GENERAL GEOLOGY

Within the general area of the property, numerous stocks and plugs of Cretaceous Valhalla and Nelson plutonic rocks intrude a group of Triassic or earlier rocks and the Carboniferous Kobau Group of quartzite, schist and greenstone.

The Valhalla intrusives comprised of granite and granodiorite are younger than the Nelson intrusives of the same age and occur as an associated suite along a six-mile northwesterly band stretching from the Okanagan River on the east to three miles beyond Orofino Mountain.

The ore deposits of the Fairview Camp located to the south of, within, and adjacent to the three to four mile band of intrusives, occur as pyrite, galena, zinc blende and gold within quartz veins which are up to 30 feet wide. The veins are found within the schist conforming to and across the northwesterly strike of the schists as well as within the granitic bodies.

The ore occurs in the form of shoots with the gold appearing to be largely associated with the galena and zinc blende.

The ore shoots may be located in the wider parts of the veins, or within the narrow parts.

The Twin Lakes property covers a portion of the northern fringe of the intrusive band close to the contact with the Shoemaker Formation of Triassic or earlier age. A number of quartz veins carrying varying amounts of sulphides are found on the property.

#### PROPERTY GEOLOGY

The claims cover a basic border phase of the Nelson Plutonics where a granite from the Nelson Plutonics has been contaminated with the host rock. Zones of granitic rock alternate with a more basic phase containing decomposed feldspars, hornblende and chlorite with a little pyroxene.

Strong northern tectonic stresses resulted in various degrees of schistosity and/or shearing in the rock. The shearing appears to be more intense within the dioritic or more basic phase of the intrusion. Fault fissures, shear zones and the schistosity generally strikes northeast to northwest.

Northerly striking quartz veins are found scattered throughout the property. The veins generally occur in three ways: veins conforming to the strike and dip of the schistosity; veins crosscutting the schist; veins in combination of the above.

The veins vary from a few inches to five feet wide and are mineralized over localized sections. The wider and more prominent veins such as have been explored by drifting in the 1930's occur within or are controlled by fault fissures. The adjacent country rock is often heavily pyritized.

#### MINERALIZATION

Mineralization within the quartz veins is of disseminations of pyrite with minor galena and zinc blende, as well as localized narrow bands of these massive sulphides. Disseminated pyrite is also common in the wall rock adjacent to the quartz veins.

Chip samples and selected grab samples taken by the writer assayed as follows:

<u>Description</u>	<u>Location</u>	<u>Oz Au/ton</u>	<u>Oz Ag/ton</u>
Tailings	Hill No. 5	.12	-
Quartz grab sample	open cut on Hill 3	.05	.04
Quartz-grab	open cut on Hill 3	tr.	-
Wall rock - diorite	open cut on Hill 3	.01	-
Chlorite schist pyrite dump		.01	-
6 inch quartz vein	40' in from portal A.	.005	-
1.8 chip quartz vein	315' in from portal A	.02	-
Quartz-grab	open cut of B wkgs	.05	-
Quartz-grab	Dump of B workings	.30	-

<u>Description</u>	<u>Location</u>	<u>Oz Au/ton</u>	<u>Oz Ag/ton</u>
5.0' chip - quartz vein	Open cut of C Wkgs	.09	-
2.5' chip-quartz vein	Stope of B workings	.88	.67

Selected samples taken by Mr. D. Baxter from dumps on the property returned .72 and .21 ounces of gold per ton.

#### EXPLORATION AND DEVELOPMENT PROGRAMME

The exploration and development program should be designed to provide access to the old workings on the property and to carry out a programme of quartz vein sampling. A geochemical survey covering the entire property should be carried out to locate any other potential mineralized structures.

Geological mapping in conjunction with the above would aid in locating significant structures.

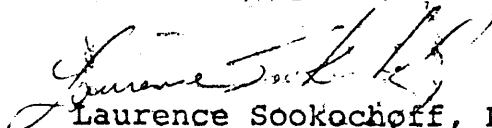
A diamond drill programme would follow to test the zones of interest.

COST OF RECOMMENDED EXPLORATION AND DEVELOPMENT PROGRAMME

Geological Mapping	\$ 1,000.00
Geochemical survey, 100 samples @ \$3.50 per sample	3,500.00
Sampling and assaying	2,000.00
Rehabilitation of old workings	1,000.00
Diamond Drilling, 1,000 feet at \$8/foot	8,000.00
Field expenses	600.00
Contingencies	1,500.00
	<hr/>
	\$17,600.00
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It is estimated that the recommended exploration and development programme would take four weeks to complete.

Respectfully submitted,

  
Laurence Sookchoff, P.Eng.,  
Consulting Geologist

October 5, 1973

Vancouver, B.C.

## REFERENCES

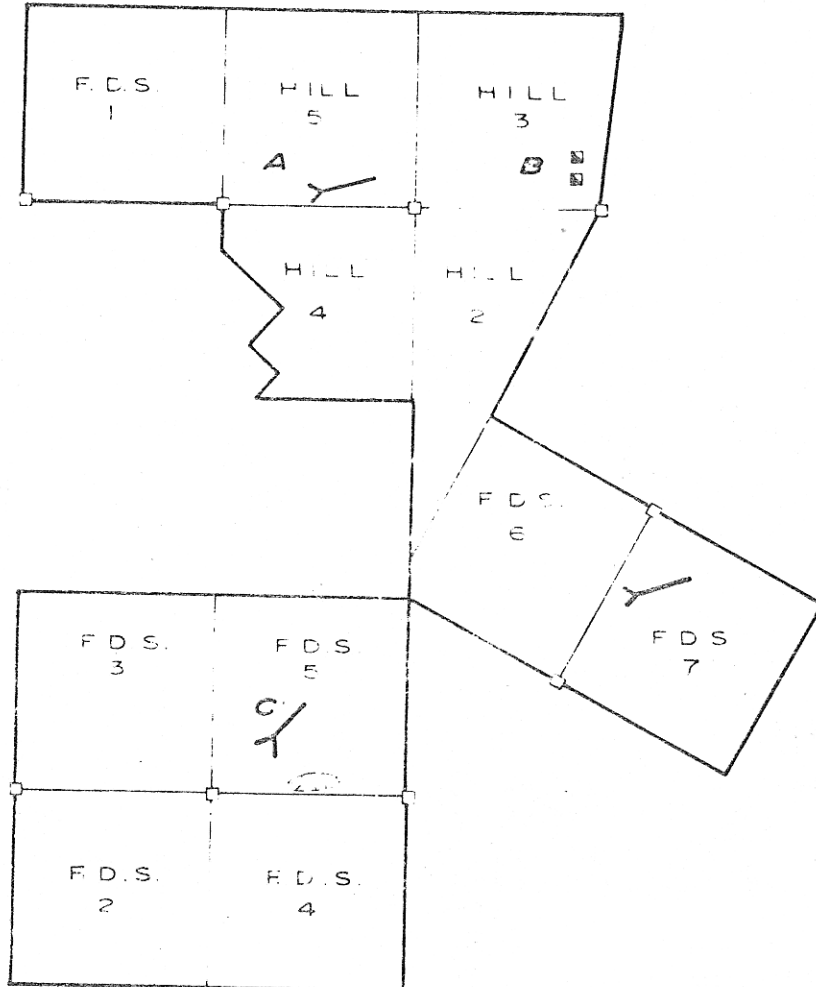
Cockfield, W.E.

Lode Gold Deposits of Fairview Camp, Camp McKinney, and Vidette Lake Area, and the Dividend-Lakeview property near Osoyoos, B.C., Canada Department of Mines, Memoir 179, 1935.




Minister of Mines  
Report

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LEGEND

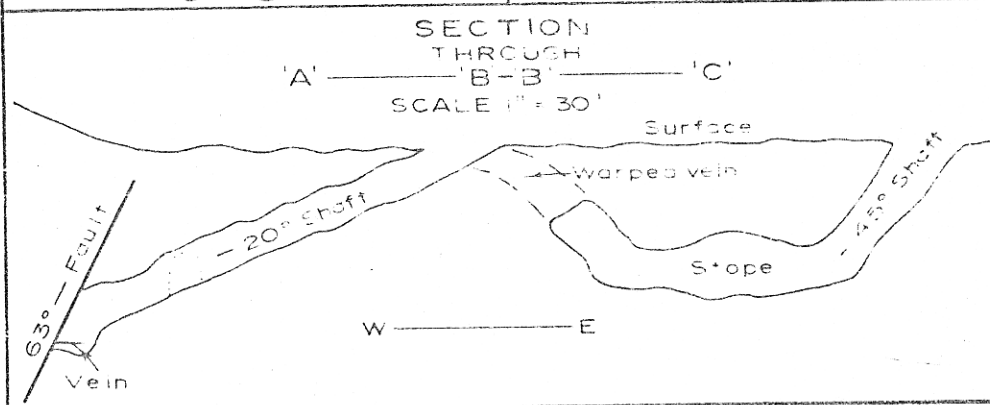
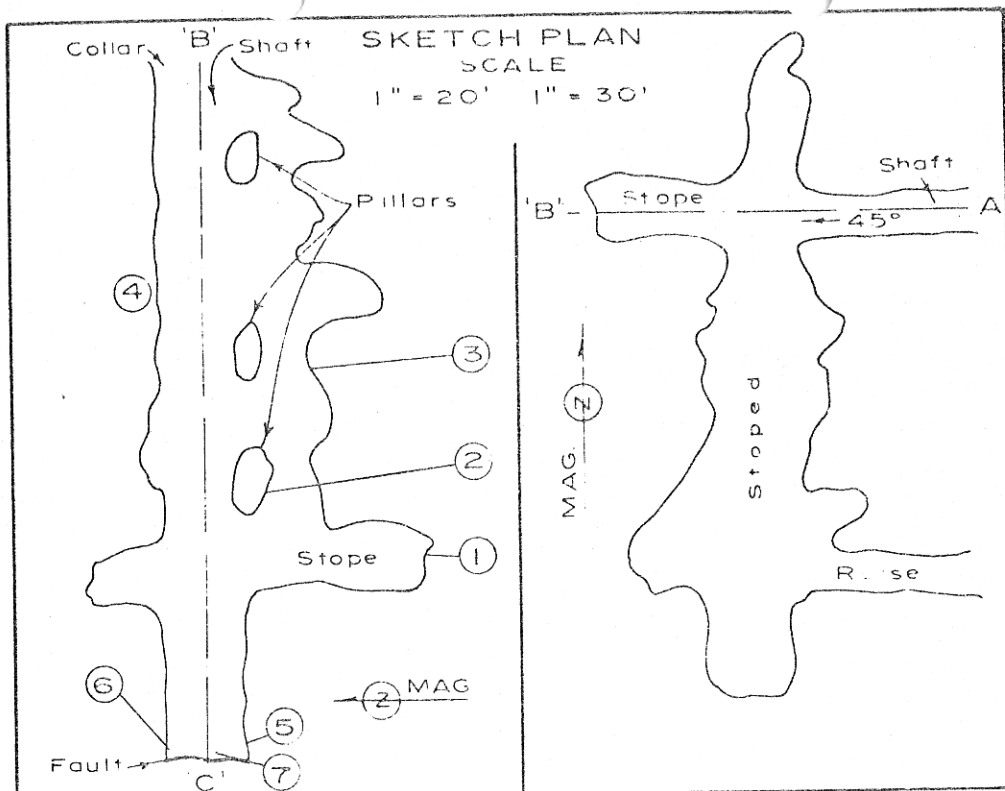
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*Guillermo San Pedro*

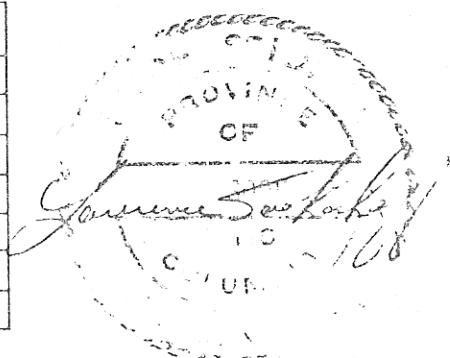
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CRIPPLE CREEK RESOURCES LTD (NPL)  
TWIN LAKES PROPERTY

CLAIM MAP  
SHOWING OLD WORKINGS

SCALE IN FEET



Sample no.	Width	oz Au.	oz Ag
1	3.0'	0.16	0.04
2	5.0	3.70	0.70
3	5.0'	0.78	0.07
4	5.0'	3.00	0.62
5	3.0'	0.90	0.10
6	2.6'	4.20	0.80
7	1.2"	0.10	0.10



T.R. TOUGH & ASSOCIATES LTD  
CRIPPLE CREEK RESOURCES LTD (NPL)  
TWIN LAKES PROPERTY

## UNDERGROUND WORKINGS 'B'

FROM MINISTER OF MINES REPORT 103.  
SCALE AS SHOWN

OCTOBER, 1973