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CARDERO RESOURCES LTD.

REPORT AND

AGREEMENT

BETWEEN

CARDERO RESOURCES LTD.

&

JAY-VAL RESOURCES LTD.

FRANK UNDERHILL - President CARDERO RESOURCES LTD. Ste. 314 - 543 Granville St., Vancouver, B.C. Telephone: (604) 684-4145

INTRODUCTION

The Valjay gold property consists of 240 acres composed of six, forty acre sections under lease from the Southern Pacific Company.

This report will outline the development concluded to December 31, 1976 as per the recommendations of the D.W. Pringle report dated June, 1975.

The recommendations per the D.W. Pringle report dated June 1975 were altered so as to forego the diamond drilling and metallurgical testing to a future date.

The development program most recently completed incorporated surface stripping and underground drifting.

The property is located in the TEN MILE MINING DISTRICT, T36N R36E, Section 21, Humboldt County, Nevada.

LOCATION

The property is located in the Krum Hills within the Ten Mile Mining District, ten miles south west of Winnemucca, Humboldt County, Nevada. The Krum Hills are located at the southern extremity of the Santa Rosa Mountain Range.

Access to the property is paved road to five miles of excellent gravel road.

The average elevation of the property is 4,700 feet (Reno is 4,411 feet) and the immediate topography is

rolling hills and the vegetation is predominantely sage brush.

HISTORY

The Krum Hills, in the Ten Mile Mining District was primarily a silver producing area in conjunction with gold, lead, copper and antimony.

County records show the operation of four mines in the area, however only production data of the Pansy Lee Mine is available (Sec. 1, 12 T36N, R36E):

1939-1940 - 1677 tons - \$54,248

1941 - A: 407 tons 157 oz. Au

13,217 ox. Ag

2,929 lbs. Cu

30,894 lbs. Pb

B: 39,598 tons 5,314 oz. Au

453,508 oz. Ag

71,130 lbs. Cu

1,018,842 lbs. Ph

1941 value - \$618,938

Evidence of mining activity is observed in Section 22, T36N R36E (adjoining section to the Valjay property) as there are several shafts and adits, however, published data in regard to the production from Section 22 is not available.

GEOLOGY AND MINERALIZATION

AREA

The area is underlain principally by upper Triassic rocks, which are covered by tertiary basaltic rocks in many areas.

Sedimentary rocks of Tertiary age have been located but are not plentiful.

The Winnemucca Formation of Upper Triassic Age is exposed on Winnemucca Mountain. The next younger unit is an unamed quartzite - mudstone formation in the southern and eastern area of Krum Hills, which is faulted against the Winnemucca formation on the north side of Winnemucca Mountain. The quartzite - mudstone unit is conformably overlain by the Upper Triassic Raspberry formation which crops out in the north part of the Krum Hills and most of the eastern section of Blue Mountain. The Raspberry formation on Blue Mountain has been overridden by a thrust plate of unamed phyllite, slate and quartzite assigned a Triassic and Jurassic Age.

These sedimentary rock are cut by several small intrusive bodies. Two of the bodies - a diorite on the southeast side of Winnemucca Mountain and a gabbro on the south side of Blue Mountain - have been assigned a Jurassic and Cretaceous Age; a smaller body of granodiotite in the northern Krum Hills has been assigned a Cretaceous and Tertiary Age; a dacite body on the west side of Winnemucca Mountain has been assigned a Tertiary Age.

The mesozoic sedimentary rocks are unconformably overlain by the Pansy Lee Conglomerate of Cretaceous and Tertiary Age in the northern Krum Hills; by tuff, tuffacious shale, and pebble conglomerate in the eastern Krum Hills and on the north side of Winnemucca Mountain; and by Tertiary basalt at many places. Vesicular olivine basalt of Tertiary and Quarinary Age is exposed on the east flank of Winnemucca Mountain.

The strike of the Triassic rock ranges from N25E to N90E and averages N60E, dipping to the north west from 20 degrees to 90 degrees with an average dip of 50 degrees.

The northeast strike, the northwest dip and the lack of major repetition of beds are characteristic of the Triassic rocks in southern Humboldt County. The major structural features are the high angle faults which offset the Pansy Lee conglomerate in the Krum Hills, the fault between the Winnemucca formation and the unamed quartzite — mudstone unit on Winnecmucca Mountain; the thrust fault on Blue Mountain and the thrust fault on Winnemucca Mountain. The southeast front of Winnemucca Mountain may be fault controlled, but no movement has occured since the olivine basalt was extruded.

The mineral deposits which have been located in the area between Blue and Winnemucca Mountains "Krum Hills" occur in quartz veins and stringers which occupy sheet zones in the Triassic rocks.

PROPERTY

The country-host rock located throughout the property is the unamed mudstone unit.

There is present a northeast trending shear zone in the mudstone formation extending the length of the property.

The mudstone within the shear zone is intruded , by several exposed dikes of highly silicified altered rock impregnated with quartz stringers.

Quartz veins ranging in width from one to three inches cut the mudstone and dikes within the shear zone.

Quartz also forms stock work in the shear zone in conjunction with narrow discontinuous veins that are parallel to the shear zone.

Calcite veins have been located in the drift and such veins are 1/8" to 1/4" in width cutting across the dikes.

Gold and silver mineralization have been located in the quartz veins, and in the quartz dikes.

The mudstone strata located in the property area of the Krum Hills is believed to be 7,000 feet to 8,000 feet thick (Willden 1964).

PROPERTY DEVELOPMENT

During the period November 1, 1976 through

December 21, 1976, the development program as recommended

in the D.W. Pringle report of June 1975 was concluded.

The original recommended work program was altered to facilitate the driving of an 8 feet by 8 feet by 150 feet decline (cross-cut so as to intersect the dikes at a depth of 75 feets below the surface exposure.

The cross-cut intersected the dike 126 feet distant from the portal. The cross-cut was advanced to 150 feet and is still in the dike zone.

The dike material was sampled by taking four channel samples across each exposed heading face. The cross-cut was driven utilizing six foot steel. Thus a total of four such faces have been sampled over a total length of 26 feet.

Efforts were taken to prevent free visible gold from being in included in the assay samples.

During the excavation of the cross-cut grab samples of mudstone were taken from each new face and assayed.

The underground excavation was concluded utilizing a one-half cubic yeard diesel loader and jackleg drills.

The crew were located in a camp trailer on the property.

The dike material excavated over a length of 26 feet has been stockpiled for future metallurgical testing.

The portal is supported by four sets of timber (8" \times 8") and tagged securely to the back.

The rock through the cross-cut is competent and support was not required. However, extensive exposure in the future may warrant roof bolts and screen to ensure a

safe access.

SURFACE DEVELOPMENT

Surface stripping was concluded to expose the dike over a length of 200 feet. The dike was sampled across the width at five foot intervals and assayed.

The dike continues and is open in length to the east and west. Thus further stripping will be required in the future.

There are three additional dikes exposed on surface which should be stripped at a future date.

The assays obtained from the underground and surface sampling are as listed below.

Assays which resulted in gold content higher than 5 ounces gold per ton are designated "high grade".

Sample, which after being taken revealed visible gold when examined by eye are designated "free visible gold".

SURFACE DIKE EXPOSURE ASSAYS

Sample	Width(in.)	Au (oz/ton)	Ag (oz/ton)
12-4	37	1.74	
12-5	42	HG	8.72
12-6	48	HG	17.41
12-7	44	.943	2.04
12-8	39	2.314	11.27
12-9	42	HG	15.43
12-10	34	HG ⁻	12.70
12-11	30	HG	6.47
12-12	34	3.717	9.82
12-13	30	FVG	3.62
12-14	34	HG	14.77
12-15	36	HG	9.89
12-16	32	FVG	$18.6\overline{3}$
12-17	30	FVG	11.79

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12-18	34	- `	-
12-19	·∗ 36		940
12-20	32	HG	7.51
12-21	36	•••	3.14
12-22	36	-	
12-23	32	4.194	21.71
12-24	34	FVG	17.01
12-25	34	3.182	8.74
12-26	30	J.102	- 0 - 7 4
		1 001	7 04
12-27	32	1.081	7.04
12-28	34		with.
12-29	28		-
12-3-	24	i	****
12-31	20		•
12-32	28	2.910	11.04
12-33	36	4.401	14.07
12-34	36		-
12-35	38		3.04
12-36	38∖	-	2.71
12-37	36 .	.971	mere .
12-38	40	1.708	8.74
12-39	37	FVG	17.43
12-40	34	HG	13.86
12-41	31	3.791	
		3.79I	7.37
12-42	29	-	8.41
12-43	28	-	3.17
12-44	24	2.131	16.39
12-45	20		2.64

Samples were taken across the width of the dike at 5' intervals.

UNDERGROUND SAMPLING

<u>Sample</u>	X-Section	Au (oz/ton)	Ag (oz/ton)
F-1-A F-1-B	8 x 2 '	.792 1.976	3.41 8.09
F-1-C F-1-D	8	FVG .439	11.72 7.68
F-2-A F-2-B F-2-C F-2-D	8 x 1.5' 8 8 8	.047 .098 2.729 .901	- 8.43 2.73
F-3-A F-3-B F-3-C F-3-D	8 x 1' 8 8	FVG - 1.801 1.29	11.04 - 3.71 6.43
F-4-A F-4-B	8 x 1'	-	<u>-</u>

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F-4-C 8 FVG 10.73 F-4-D 8 HG 8.46

CONCLUSIONS

- 1. The dike presently exposed in the face of the decline appears to be dipping at 10 degrees to the north whereas the dike exposed on surface is dipping 80 degrees to the north. The decline should be extended through the dike to determine the structure.
- 2. The samples assays to date indicate the possibility of a high grade, low tonnage mining operation.

However, further development must be concluded to determine a mining grade and ore reserves.

- 3. Upon commencing underground excavation detailed mapping of the surface and underground excavations incorporating the assays should be condluded. Sections at 20' intervals should also be completed.
- 4. The property warrants further development and the dike material excavated should be stock piled prior to trucking to a mill.
- In order to determine a mine grade, I would recommend trucking the dike material to Tomopah, Nevada for milling. Tentative arrangements have been made by Jay-Val Resources Ltd. for the use of the mill located at Tomopah.
- The property payments have been kept current to Mr. K. Bryant, Fallon, Nevada and Souther Pacific Railway by Jay-Val Resources Ltd., thus the property is in good legal standing.

7. The recommended program outlined in the D.W.

Pringle report of June 1975 has been concluded satisfactorily.

RECOMMENDED PROGRAM

The following program is recommended to determine a profitable mining grade of the Valjay gold property.

- 1. The present decline be extended 75' which will determine structure, grade and width.
- 2. Drift east and west on the dike structure to determine grade mining width and ore reserves.
- 3. Raise to surface on the dike to determine grade, height, ore reserves and to provide ventilation.
- 4. Conclude detailed surveying and mapping of both surface and underground excavations in conjunction with section drawings at 20' intervals.

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RECOMMENDED PROGRAM:

STAGE I

1)	Extend X-cut 75'	\$10,000
' 2)	Drift on Dike 200'	\$26,000
3)	Raise on Dike 75'	\$ 7,500
4)	Engineering-Supervision	\$ 5,000
5)	Assays	\$ 2,000
6)	Room-Board	\$ 1,000
7)	Travel	\$ 1,000
8)	Bulldoxer	\$10,000
9)	Contingency	\$10,000
	TOTAL:	\$72,500

STAGE II

1)	Mettaluogical	Testing	\$	5,000
2)	Bulk Sampling		\$	4,000
3)	Milling		\$	7,000
4)	Trucking Ore		\$	7,000
5)	Contingency		\$	4,500
	тот	AL:	\$2	27,500

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RESIDENCE R. R. 2 OLIVER B.C. (604) 498-3656 TOWN HOUSE 310--1720 W. 12 AVENUE VANCOUVER B.C. (604) 731-2651

CERTIFICATE

I, Donald W. Pringle, of the City of Cliver in the Province of British Columbia hereby certify that:

- 1) I am a consulting mining engineer residing at R.R.2, Oliver, British Columbia.
- 2) I am a graduate of the University of Toronto, Mining Engineering 1944.
- 3) I am a member of the Professional Engineers Association Of British Columbia.
- 4) Permission is granted for submission of this report to the Vancouver Stock Exchange.
- 5) I have no interest in the Consolidated Citex property or the securities of Consolidated Citex Resources Inc., or its affiliates nor do I expect any interest.

Dated at Vancouver, British Columbia this 2nd day of January 1977.

Donald M. Pringle. P. Eng.

Cardero Resources Ltd. 314 - 543 Granville Street, Vancouver, B.C.

Dear Sirs,

This will confirm our agreement to grant to you an option to purchase an undivided 50% interest in leases from the Southern Pacific Land Company covering 240-acres in the Ten Mile Mining District, T36N, R36E, Section 21, Humboldt County, Nevada, for the sum of \$15,000.00 payable as follows:

- a. \$2,500.00 on execution of this agreement (receipt of which is thereby acknowledged).
- b. \$12,500.00 on or before 3 April, 1978.

In addition, to maintain the option in good standing you must expend a total of \$200,000.00 on exploration and development of the property as follows:

- a. \$50,000.00 by 31 December, 1979
- b. An additional \$75,000.00 before 31 December, 1980.
- c. An additional \$75,000.00 before 31 December, 1981.

It is understood and agreed that upon exercise of the option you shall be in charge of the work programme on the property, the cost of which shall be shared equally between us, and that if either party does not pay its proportionate share of the cost of the work done, that party shall lose 1% of its interest for each \$10,000.00 not paid, providing that neither party's interest shall be reduced below a 20% carried interest.

It is understood that this agreement is subject to preparation of a formal agreement by your solicitor and subject to approval by the securites regulatory bodies.

Per:

Yours truly,

JAY-VAL RESOURCES LTD.

Approved and accepted by CARDERO RESOURCES LTD.

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