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REPORT

ON

SELF POTENTIAL SURVEY

ON THE CHRISSY GROUP OF CLAIMS

AT RENO MINE

NELSON MINING DIVISION, BRITISH COLUMBIA

NTS 82F/3E

Latitude 49 10' Longitude 117 07'W

for

NUGGET MINES LTD.

GUNSTEEL RESOURCES INC.

Ьу

SUB-RECORDERS. A. ENDERSBY, P. Eng. (B.C.)

SUB-RECORDERs. RECEIVED JAN 1 4 1992 M.R. #...... VANCOUVER, B.C.

Vancouver, B. C.

GEOLOGICAL BRANCH ASSESSMENT REPORT

22.043

January 6, 1992

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INTRODUCTION

Nugget Mines Ltd., Gunsteel Resources Inc., and Goldrich Resources Inc. together hold a 100% interest in the majority of the old Sheep Creek Mining Camp near Salmo in southeastern British Columbia. It is the intent of these three companies to amalgamate and consolidate the holdings into one comprehensive project.

The Sheep Creek camp ranks sixth in the province in terms of gross gold production, having produced 727,000 ounces of gold from 1,744,000 tons of ore. About 80% of this production came from the holdings of the three companies mentioned above.

The Sheep Creek camp is underlain by late Proterozoic to Cambrian argillites, quartzites and limestones that have been folded into two tight northerly trending anticlines with an intervening syncline. Steeply dipping gold-quartz veins with minor sulphides occur in northeasterly trending faults where they intersect certain stratigraphic units near the crest of the western anticline and western limb of the eastern anticline.

We previously tried self potential measurements over several veins in the Sheep Creek camp and found that in some cases where the overburden is shallow and the ground moist there is a clearly observable negative voltage potential over the vein. The work in this report is an attempt to follow up on some of the responses found previously.

RECOMMENDATIONS

It is recommended that further work be done next spring when the ground is still very wet. Previous work seems to indicate that under the right conditions and by following the bedding to keep a more uniform background and keeping a close spacing with the readings that the veins can be picked up where the overburden is light.

LOCATION, ACCESS, PHYSIOGRAPHY

The Sheep Creek property is situated 39 kilometres south of Nelson, 45 kilometres east of Trail and 123 kilometres southeast of Salmo. Access is about an hour by road from Salmo to the part of the property where the self potential work was done.





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GUNSTEEL RESOURCES INCORPERATED

NUGGET MINES PROPERTY

Nelson Mining Division - British Columbia

FIGURE 2



CLAIM DATA

The total Nugget property in the Sheep Creek camp covers about 15,000 acres. The Chrissy group which is associated with this assessment work comprises the following claims.

Claim	Record	Crown Grant	No. of
Name	No.	Lot No.	<u>Units</u>
Clarence	497		1
Buck	1225		1
Gamble	2026		10
Reno 1	2028		12
Buck Fr.	2736		1
Gem	2793		15
Chrissy	5992		20
Bluestone		9054	1
Blackstone		9055	1
Curlew		12681	1
Dandy		12682	1
Latham		12683	1
Reno		12684	1
Rhomberg Fr.		13494	1

HISTORY

The earliest discoveries in the Sheep Creek gold camp were the Yellowstone and Queen veins, staked in 1896. Numerous other veins were discovered and production undertaken during the period 1900 to 1916.

The Motherlode was developed between 1906 and 1910, after which a 100 ton per day cyanide mill was installed (the first of its kind in B.C.). Production continued until 1915. The Nugget Mine was worked continuously until 1919 from 4 upper levels - a stamp mill was used to process the ore. In 1918, the Nugget and Motherlode mines were organized under a new company and some development carried out until 1922. The properties were acquired by Reno Gold Mines in 1932. Work on the Reno was continuous on a small scale from 1912 to 1927. Ore was processed by a 30 ton cyanide mill buit in 1927 near the Reno 5 level. Reno Gold Mines acquired control of the Motherlode and Nugget Mines in 1932, rehabilitated the Motherlode mill and constructed a tramline from the Reno 5 portal to the mill. Production from the Reno Mine was continuous until 1939 and the Motherlode and Nugget until 1941.

GEOLOGY

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The Sheep Creek gold camp lies in the Kootenay Arc, a narrow arcuate belt of folded and faulted miogeoclinal sedimentary rocks

of Late Proterozoic to Early Cambrian age. These sediments are intruded by intrusive rocks of the Nelson Plutonic suite (Middle to Upper Jurassic) and alkalic to acid plutons of the Coryell Intrusions (Eucene).

The Sheep Creek gold deposits occur in quartzites and argillites. Limestone in the area host important lead-zinc deposits H.B., Jersey and Remac Mines) and tungsten deposits (Feeney, Invincible and Dodger Mines of Emerald Tungsten).

Geology of the Sheep Creek area was first described by Walker (1943). Local geology was further described by McGuire (1942) and a detailed study of the camp carried out by Mathews (1953).

The Sheep Creek area is underlain by metamorphosed sedimentary rocks of Eocambrian to Cambrian age. Rock types include argillites, quartzites and schists of the Quartzite Range and Reno Formation, and limestones of the Laib group. The Quartzite Range formation has been subdivided into three readily identifiable units, the Motherlode, Nugget and Navada members. These units are intruded by several stocks of granite, an elongated swarm of quartz porphyry sills, and lamprophyre dikes.

The sedimentary rocks have been folded into a major northerlytrending anticline paralleled on its west by a smaller anticline and intervening tight syncline.

Four well-defined sets of faults are recognized in the camp. Gold mineralization is confined mainly to the northeasterlytrending set. Displacement on the mineralized veins ranges from 3 to 25 metres (right lateral movement) although two veins, the Queen and Yellowstone, have displacements of up to 35 to 70 metres respectively. Where the faults intersect argillaceous or limestone members they are irregular and discontinous, i.e., a considerable amount of movement is distributed across a zone of dragged beds. Where they cut quartzite members, they deflect slightly to the east, movement is concentrated along a single fracture, and veining is more pronounced.

MINERALIZATION

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Gold minerlization in the Sheep Creek camp is concentrated in quartz veins occupying northeasterly trending and steeply dipping faults. They are productive where they cross the axis of two anticlines (the western anticline and western limb of the eastern anticline) particularly where they coincide with quartzitic members (notably the Upper Navada and Upper Nugget Members and locally in the Motherlode member). Although the Reno Formation is dominantly argillacious, it carried ore in the Reno Mine where it is conspicuously metamorphosed. Within quartzites, ore shoots make up varying proportions of the veins. Vein widths range from 0 to about 1 metre or more. The veins in places, can become narrow, inconspicuous, and difficult to recognize.

Branching veins are common in the camp. The Reno and Nugget-Calhoun veins are examples. Both branches may contain ore but those with a more easterly trend tend to carry the best ore. En echelon veins are known in the lower Nugget workings.

The vertical range through which the vein fractures occur exceeds 1400 metres (4,700 feet) and individual veins extend to depths of up to 600 metres (2,000 feet). Although the proportion of ore decreases with depth, the vein fissures are strong and vein widths are reported to be as great as in higher levels. The productive horizon appears to decrease in elevation from north to south for unknown reasons.

SURVEY RESULTS

A total of approximately 1.0 kilometre of line was run and surveyed for self potential. Copper sulfate electrodes were used with a digital readout mullivoltmeter that had a 10 megohm internal resistance. Readings were taken at 10 meter intervals on lines going south from the Reno vein. The results of the survey are shown on Figure 5. The lines were located such that they followed the strike of the underlying sedimentary units so as to give a more uniform background reading. They were also located along the most favourable part of the structure directly south of the Reno vein.

There was a distinct negative response on the easterly line "G" which corresponded with the Reno vein. It was intended to delineate more accurately two negative responses which had been picked up to the south a year earlier, but unfortunately the soil was extremely dry and these locations were not clear enough to try to expose the reason for the anomoly. It is intended to try the procedure again in the spring when the ground is still very wet.

CONCLUSIONS

Previous measurements of self-potential in the area indicated that under the right conditions and careful readings it should be possible to delineate other veins under light overburden closely enough to easily expose them with hand trenching. The extremely dry soil conditions at the time of this survey did not allow very good results, but it is still felt that at this particular location on the property and under the right conditions the procedure should work. It will be tried again when the field conditions are more favourable.





LOCATION OF SELF POTENTIAL SURVEY LINES

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NUGGET PROPERTY - RENO MINE



JANUARY 5, 1992

FIGURE 4



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PLOT OF SELF POTENTIAL READINGS (m. v. d. c.) NUGGET PROPERTY - RENO MINE

JANUARY 5, 1992

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FIGURE 5

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AFFIDAVIT OF EXPENSES

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This will certify that self potential surveying was carried out between September 20 and October 5, 1991 on the Latham and Reno crown granted mineral claims (Lot No.'s 12861 and 12864) in the Salmo area of the Nelson Mining Division to the value of the following:

Mobilization and Fieldwork

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Labour - 4 man days @ \$300/day	\$1200.00
11 man days @ \$200/day	2200.00
Vehicle rental 5 days @ \$35/day	175.00
Mileage - 1950 km. @ 0.20/km.	390.00
Instrument rental	100.00
Meals and Accommodation	285.00
Telephone	25.00
Materials, flagging, et.	50.00
Report preparation	900.00

\$5325.00

January 5, 1991

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Stan A. Endersby, P.Eng.

CERTIFICATE

- I, Stan A. Endersby certify that:
- I am a graduate of the University of British Columbia in Chemical Engineering (B.A.Sc. 1953). Also I have an M.Sc. (1965).

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- 2. I am a member in good standing of the Association of Professional Engineers of B. C.
- 3. This report is based on fieldwork carried out by myself, Mr. D. Llewellyn, Mr. R. Brown and Mr. D. Endersby on the Latham and Reno crown granted mineral claims (Lots 12683 and 12684) between September 20, 1991 and October 5, 1991, and supervised by myself.
- 4. I have an indirect interest in the properties through Nugget Mines Ltd. and Goldrich Resources Inc.

January 6,1992 Vancouver, B. C.

Stan A. Endersby, P.Eng.