5/5

#### ASSESSMENT REPORT

on

### NUGGET MINES BONANZA PROPERTY

(NUGGET JOINT VENTURE) DIP CLAIM

Nelson Mining Division - British Columbia

Lat. 49° 88' N 07.8' Long. 117° 68' W.

N.T.S. 82F/3E

GEOLOGICAL BRANCH ASSESSMENT REPORT

GUNSTEEL RESOURCES INCORPORATED

and

Operator: NUGGET MINES LTD.

FILMED

Owner(s): Nugget Mines Ltd. A.C. Endersby

by

G.M. Allen, P. Eng. (Ont.)

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Appendix II Affidavit of Expenses

Gunsteel Resources Incorporated holds a joint venture exploration agreement with Nugget Mines Ltd. to explore the Bonanza Group of Claims, which consists of 30 units. The claims are located in Sheep Creek Gold Mining Camp, 10 km South East of Salmo, British Columbia.

The Sheep Creek Gold Camp is underlain by late Proterozoic to Cambrian argillite, argillaceous quartzite and limestone that have been folded into two tight Northerly-trending anticlines with an intervening syncline. Gold-quartz veins with minor sulphides occur in Northeasterly-trending faults where they intersect certain stratigraphic units (notably Upper Navada and Upper Nugget quartzites) near the crest of the Western anticline and Western limb of the Eastern anticline.

Previous work, Allen, 1983, indicates that an extension of the Sheep Creek mineable zone is possible below an elevation of about 3000'. Strong vein fissures occur on surface of the Bonanza but surface outcrops and underground workings are apparently above the productive horizon. However, mineable reserves have been outlined from one of the adits.

In 1986, geochemical soil sampling was carried out over the Southern portion of the claims. The results of the soil sampling indicate anomalous gold value associated with the vein extensions.

A further program of geochemical soil sampling, geophysical surveying and geological mapping is warrented. A follow-up deep drilling program is then possible.

#### CONCLUSIONS

Geochemical soil sampling in 1986 confirmed and better defined the anomalous zone partly defined in a previous survey. Further geochemical surveying is recommended.

Potential exists for establishing additional mineable reserves on the Bonanza veins. Three thousand tons of proven and possible ore at a grade of 0.55 oz Au/ton has been outlined by Allen in 1983 on the North Bonanza vein. Results of previous work suggest that there is potential for a productive horizon below 3000 foot elevation, approximately 1000 feet below the ore zone outlined in the adits.

#### RECOMMENDATION

A two phase exploration program is recommended to evaluate the geochemical survey anomalies on surface and to test the projection of the productive horizon to below the 3000 foot elevation. The ore in the North Vein should be tested further. The Phase II will be contingent on favorable results from Phase I.

PHASE I Geological Mapping, Geochemical Surveying and Geophysical Surveys

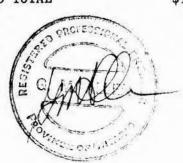
#### Salaries

Geologist	1 month	\$ 6,000
2 Assistants	2 months @ \$3,000 each month	6,000
Room and Board	90 man days @ \$40/day	3,600
Transportation, vehicle	rental	2,000
Geochemical analysis ar	nd assays	5,000

Cat 100 hours - trenching and road	construction @ \$50/hr.		5,000
Geophysical equipment rental			2,000
Report preparation, maps			3,000
	Subtotal	\$	22,600
	Contingencies		2,400
	Total Phase I	\$	25,000
Bulldozer - access road constructi		\$	5,000
		¢	5 000
Diamond drilling 500 m @ \$120/m			60,000
Material and supplies	190		5,000
Engineering, supervision, assays			10,000
	Subtotal	\$	80,000
	Contingencies		20,000
	Total Phase II	\$1	.00,000

GRAND TOTAL

\$125,000



#### INTRODUCTION

Gunsteel Resources Incorporated holds a joint venture exploration agreement with Nugget Mines Ltd. to explore the Bonanza Group of Claims. The Bonanza Group consists of 30 units.

The claim area lies 10 km South East of Salmo on the Southern projection of the Sheep Creek Gold Mining Camp.

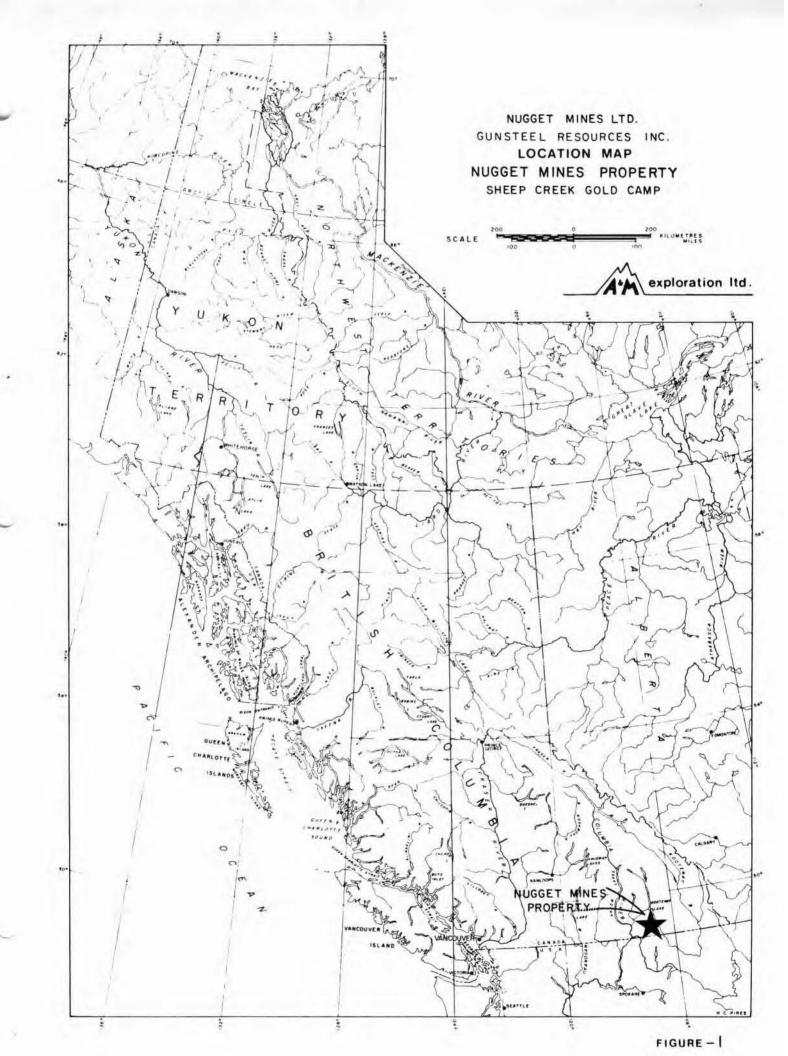
Gold-quartz veins occur in Northeasterly - trending faults where they intersect certain stratigraphic units. Reserves of high grade gold have been outlined by Allen, 1983. Four adits on the Trojan claim have followed the North and South veins.

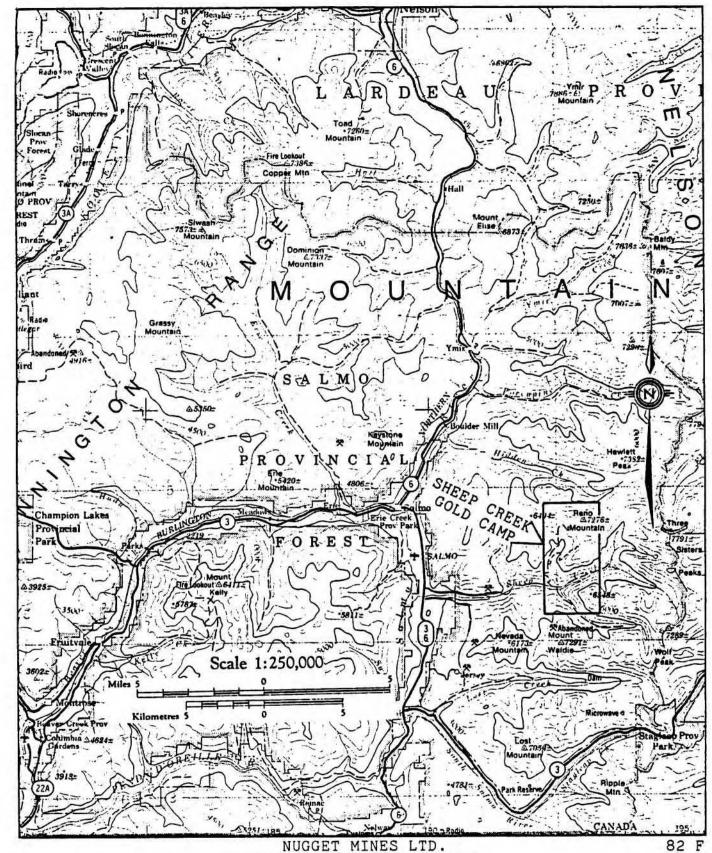
This report summarizes results of a geochemical soil sampling survey carried out by G.M. Allen, D. Endersby and A. Endersby on May 28, 1986.

#### LOCATION, PHYSIOGRAPHY, ACCESS

The Bonanza Claims are located on the South end of the Sheep Creek Gold Mining Camp, approximately 10 km South East of Salmo (Figure 1).

Access to the claims is 6 km South on Highway 3 and 6 past the Salmo Airfield, 9 km East of the Sheep Creek Road and then South on Waldie Creek 2 km (Figures 2 to 4). The claims lie between elevations 3000 and 6000 feet. Slopes are gentle to steep and are covered with balsam, fir, cedar, jack pine and spruce. The claims are accessed on the North end of the claims by two-wheel drive vehicles.





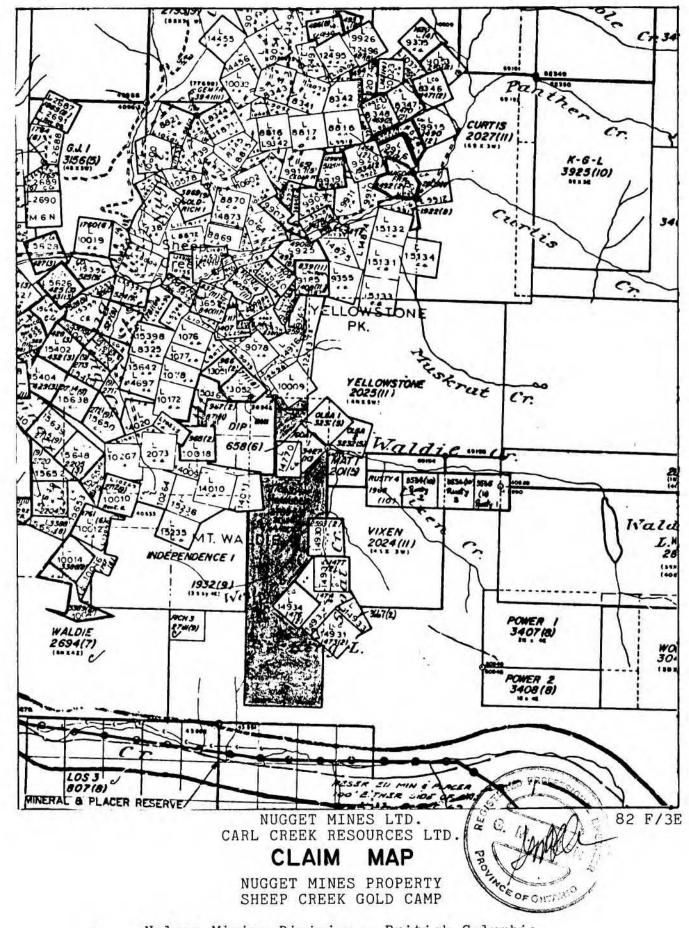
CARL CREEK RESOURCES LTD.

## ACCESS MAP

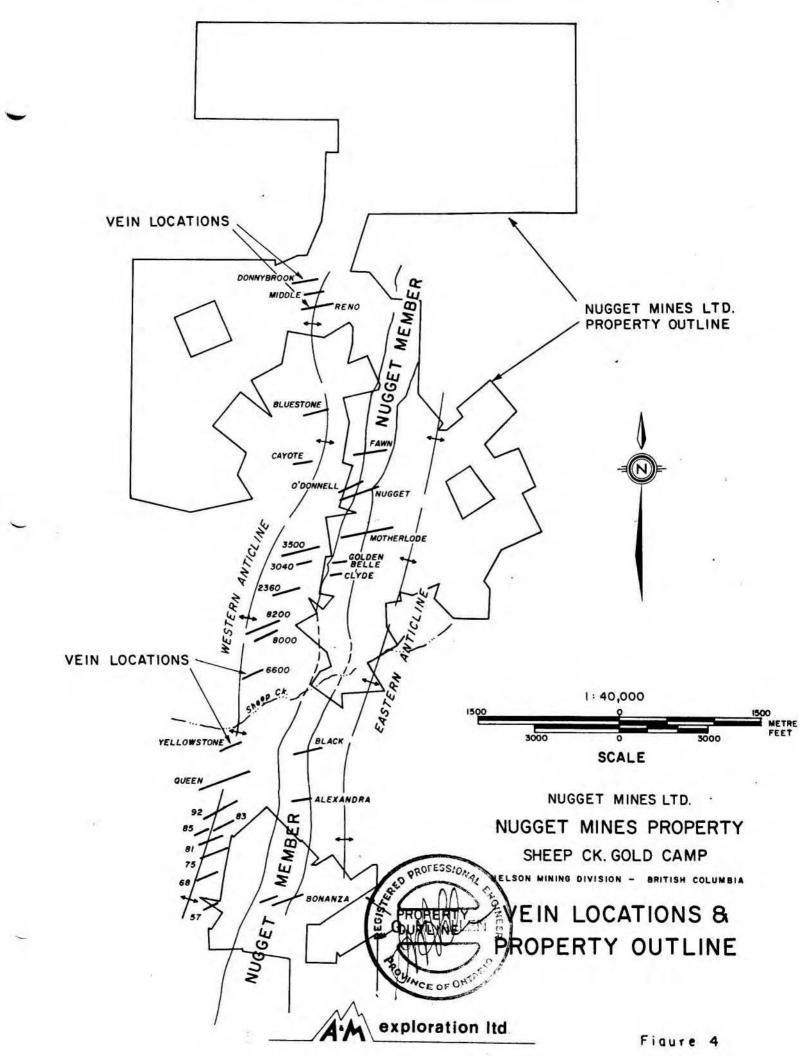
NUGGET MINES PROPERTY SHEEP CREEK GOLD CAMP

Nelson Mining Division - British Columbia





Nelson Mixing Division - British Columbia



### CLAIM DATA

The Bonanza Claim Group, comprising 30 units, are registered in the name of Nugget Mines Ltd. The following is a list of the claim data:

Name	No.of Units	Record No.	Expiry Date
Dip	4	658	5 June 1987
Teapot	1	771	28 August 1988
Snowstorm	1	965	19 February 1988
Dome Fraction	1	966	19 February 1988
Teapot No.2 Fraction	1	967	19 February 1988
Dip Fraction	1	2871	4 November 1987
King	1	4034	13 February 1987
King Fraction	1	4035	13 February 1987
Emporer	1	4036	13 February 1987
President	1	4037	13 February 1987
King No.1	1	4044	20 February 1987
Trojan	16	4100	28 May 1987 *

<sup>\*</sup> Assuming this report is accepted for assessment purposes.

### HISTORY

The earliest discoveries in the Sheep Creek 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 vein was developed between 1906 to 1910, after which a 100 ton cyanide mill was installed (the first of its kind in B.C.). Production continued until 1915. The Nugget Mine was worked continuously until 1910 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 veins was continuous on a small scale from 1912 to 1927. Ore was processed by a 30 ton cyanide mill built 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. A. Endersby leased the Nugget and Motherlode veins in 1938 and purchased these and the Reno Mine in 1941. The Endersby family have held the claims since that time and have carried out mining operations from 1938 to 1958, and exploration, rehabilitation and development work from 1970 to 1973, and 1980 to 1985. They formed Nugget Mines Ltd. in 1973 and work since then has been on its behalf. Part of the work since 1973 was financed by shipping about 5,000 tons of low grade ore and tailings dumps from the dump to the Cominco Smelter.

In 1982, Carl Creek Resources Ltd. funded a work program comprising geological, geochemical and geophysical surveys, diamond drilling and rehabilitation of selected underground workings on the Motherlode, Nugget and Golden Bell veins.

In 1984 and 1985, Nugget Mines Ltd. shipped to Cominco's Smelter at Trail, B.C., about 2,000 tons of low grade material mainly derived from an exploration raise on the Calhoun vein and broken muck from old stopes.

#### GEOLOGY

### Regional Geology

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 (Eocene).

The Sheep Creek gold deposits occur in quartzites and argillites. Limestones 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).

#### Local Geology

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 Formations, and limestones of the Laib group. The Quartzite Range formation has been

subdivided into three readily identifiable units; the Motherlode, Nugget and Navada members (see Table 2). 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 Northerly trending 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 Northeasterly - trending 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 discontinuous, ie., 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

Gold mineralization in the Sheep Creek camp is concentrated in quartz veins occupying Northeasterly - trending 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

## TABLE I SEDIMENTARY UNITS

## Correlation of Sedimentary Rocks

Walker (1934)	McGuire (1942)	Mathews (1950)	Park and Cannon (1943)
Pend d'Orellie series: Lower part.	Pend d'Oreitle series :	Laib Group (1,000 ft.+).*	
Reno formation.	Reno series: Reno argillite.	Reno formation (50 to 900 ft.).* Upper Reno. Lower Reno.	Maitles phyllite.
Quartzite Range formation. <sup>1</sup> (Quartzite 2,600 ft.)	Reno quartzite. Reno argillaceous quartzite.	Quartzite Range formation (2,000 ft.±).* Navada member: Upper Navada. Lower Navada.	
(Argillaceous member 200 ft.) 1	Nugget series; Nugget quartzite. Nugget argillite.	Nugget member (540 to 900 ft.): Upper Nugget. Middle Nugget. Lower Nugget.	Gypsy quartzite.
(Massive white quartzite 1,600 ft.) <sup>1</sup>	Motheriode series: Motheriode quartzite, "Basal" argillites.	Motheriode member (1,000 to 1,100 ft.): Upper Motheriode. Middle Motheriode. Lower Motheriode.	•
Three Sisters formation.		Three Sisters formation (500 ft.+).*	

### Table of Formations

Age		Pormation		Lithology	Thicks	ess in Feet	
***************************************				Argillite.	2001		
			10	Grey limestone.	150ª	1	
				Argillaceous in some localities, else- where dominantly calcareous.	300-5001	1,000+1	
Lower Cambrian		Lafe Group	,	Limestone and argilitie.	190-3001	1	
				Argillaceous beds, biotitic and amphi- bolitic schiets.	100-3001	•	
				Limestone,	0-601		
	Reno	Reno Pormation Lower Reno		impure dark bluish or green(sh quartzits with some grit beds.	1250	50-9001	
	Permation			Argilite, ergilleceous quartzite.	450±°	3-700-	
	Quartrite Range Formation (?)	Navada	Upper Navada	Massive white quartrite.	20-160	120-300	
		ite Member	Lower Navada	Dark, thin-bedded quartrites and ar- gillaceous quartrites.	100-140	120-300	
Precambrian (7)		Formation		Upper Nugget	Massive white quartrite.	135-375	
		Nugget Member	Middle Nugget	White, grey and dark quartities, dark argillaceous quartities, and argillite.	175-300	300 540-900	
			Lower Nugget	Argillite and dark argillaceous quartries.	150-225		
			Upper Motheriode	Massive white quartific.	370-450		
		Motherlode Member	Middle Motheriode	Argillite, grey grit and green schist.	50	1,000-1,100	
			Lower Motherlode	Massive white quartrite.	300-700		
	The	es Sisters For	mation	Grey grit, white quartists and grit and gross schists.		300+1	

Thickness or range in thickness for the northwestern part of the camp,
 Average thickness from measurements near Reno mine.

Thickness in the type locality, 3 miles east of the Sheep Creek camp.
 Thickness or range of thickness in or adjacent to the Sheep Creek mines.

and Upper Nugget members and locally in the Motherlode member). Although
the Reno Formation is dominantly argillaceous, it carries 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, a short distance from a stope, 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 contain ore but those of 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 fracture 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.

Vein material consists dominantly of quartz with minor amounts of pyrrhotite, pyrite, sphalerite, galena, scheelite, chalcopyrite and rare visible gold. The vein quartz is generally milky white, but in places is difficult to distinguish from enclosing quartzite. One wall of the vein is usually well defined by a fault surface and the other commonly gradational.

#### VEIN DESCRIPTION

The Bonanza North and South veins are developed by four adits, three of which are in good condition (Figure 5). Results of preliminary sampling in 1982 confirm those reported in previous government reports and indicate an ore shoot above and below the 2 level on the North vein. Further potential is indicated at depth where the productive horizon is projected to below 3,000 feet elevation.

#### GEOCHEMISTRY

A total of 64 soil geochemical samples were taken on May 28,

1986. Two lines were run perpendicular to the strike of the known

Diff

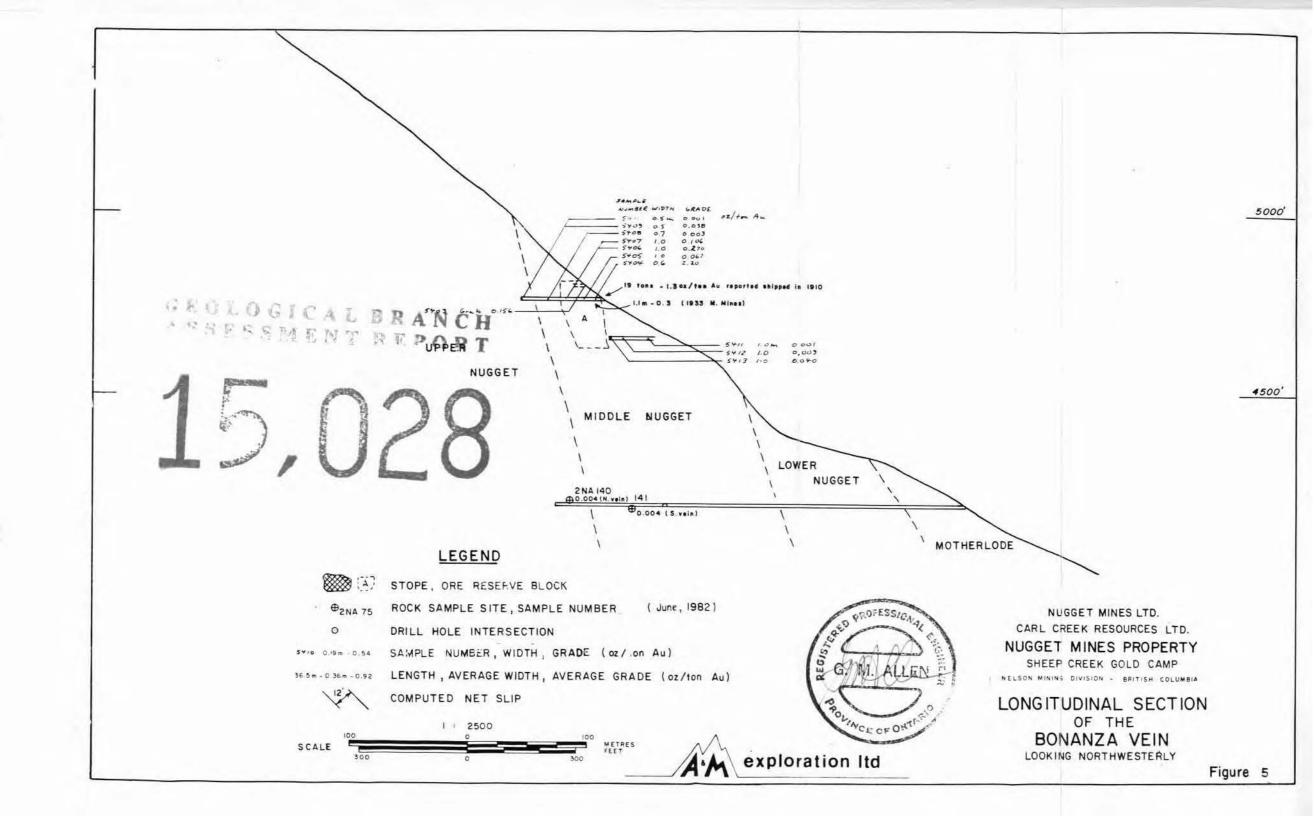
vein systems on the Trojan in an attempt to extensions of ore shoots

on the unexposed sections. Sample sites were 25 m apart.

The soil material sampled consisted mainly of talus fines taken at depths of 10 to 20 centimeters, usually well below the "A" horizon. Soil samples were placed in Kraft paper bags and shipped to Rossbacher Laboratory Ltd. for molybdenum, copper, silver, zinc, lead, and gold analysis by standard atomic absorption techniques. Analytical results are presented in Appendix I. Figure 6 shows the location of the sample sites as well as the results of the previous sampling.

Geochemical sampling confirmed and outlined, in more detail, the anomalous area defined previously.

Anomalous gold values ranged from 10 ppb to 340 ppb.



### REFERENCES

- Allen, D. G. (1983). Exploration Program on the Nugget Mines Property.

  Private Report.
- Allen, D. G. (1982). Geological Report on the Nugget Mines Property. Private Report.
- Mathews, W. H. (1953). Geology of the Sheep Creek Camp. B.C. Dept. Mines Bulletin 31.
- McGuire, R. D. (1942). Sheep Creek Gold Mining Camp in Trans. Can. Inst. Mining and Metallurgy, Vol. 65, p. 169-190.
- O'Grady, R. T. (1927). Reno Gold Mines Ltd. in B.C. Min. Mines Annual Report, 1927.
- O'Grady, R. T. (1933). Bonanza in B.C. Min. Mines Annual Report, 1933.
- Teetzel, W. F. (1910). Nelson Mining District in B.C. Min. Mines Annual Report, 1910.
- Walker, J. F. (1934). Geology and Mineral Deposits of Salmo Map Area, B.C. Geol. Survey of Canada, Memoir 172.

#### CERTIFICATE

### I, Gary M. Allen, certify that:

- I am a Consulting Mining Engineer, with offices at Suite 614, 850 West Hastings Street, Vancouver, British Columbia.
- I am a Graduate of the Haileybury School of Mines, and South Dakota School of Mines and Technology (B.Sc., 1968, M.Sc., 1970).
- 3. I have been practising my profession since 1970 to the present in British Columbia, Ontario, and various parts of the Western United States.
- 4. I am a Member in good standing of the Association of Professional Engineers in Ontario.
- 5. I personally worked on the Bonanza Property on May 28, 1986.
- 6. I have an interest in Gunsteel Resources Incorporated.
- I consent to the use of this report in a Statement of Material Facts.

Gary M. Allen P. Eng. (Ont.)

APPENDIX I

Analytical Results

# COSSBACHER LABORATORY LTD. CERTIFICATE OF ANALYSIS

2225 S. SPRINGER AVENUE BURNABY, B.C. V5B 3N1 TEL: (604) 299 - 6910

TO : A&M EXPLORATION LTD.

614-850 W. HASTINGS, STREET

VANCOUVER B.C.

PROJECT: GUNSTEEL

TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86162

INVOICE#:

6416

DATE ENTERED: 86-06-27

A&M86162

FILE NAME: PAGE # :

PRE FIX	SAMPLE NAME	-40 MESH	PPM Mo	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au	
s	B-1		1	10	0.2	56	8	5	
S	2		1	14	0.4	74	8	5	
5	2		1	20	0.2	90	18	5	
S	4		1	16	0.4	64	10	5	
9	5		1	18	0.2	98	- 8	5	
S	6		1	30	0.4	70	10	5	
S	7		1	32	0.4	92	10	5	
S	8		1.	38	0.2	92	8	5	
S	9		1	22	0.4	86	12	5	
S	B-10		1	22	0.2	96	14	5 5	
S ,	11		1	22	0.4	212	16	5	,
S	12		1	18	0.4	122	12	5	
	13		1.	28	0.4	128	24	20	
~s	14		1	22	0.4	86	14	5	
S	15		1	28	0.2	62	16	80	
<u>s</u> s s s	16		1	24	0.6	90	14	5	
S	17		1	28	0.6	76	24	5	
S	18		1	30	0.4	68	30	5	
S	19		1	30	0.2	80	24	5	
S	B-20		1	22	0.4	96	32	30	
S	21		1	34	0.2	76	18	340	
S	22		1	34	0.4	162	18	5	
S	23		1	26	0.2	64	10	5	
S	24		1	22	0.2	64	1.2	5	
S	25		1	46	0.4	106	36	5	
S	26	AND THE RESERVE	1	32	0.4	78	28	5	W. C. Miller V. C.
S	27		1	34	0.6	82	24	5	
S	28		1	20	0.6	92	12	5	
S	29		1	26	0.4	106	16	5	
S	B-30		1	26	0.2	106	24	40	4
S	31		1	22	0.2	100	16	5	
S	32		1	86	0.2	42	28	5	
S	33		1	14	0.2	52	10	5	
S	34		1	14	0.4	142	10	5	
S	35		1	64	0.2	42	10		
S S	36	Philipping and an	1	10	0.2	20	10	5 5 5 5 5	
S	37		1	8	0.2	24	18	5	
S	38		1	18	0.2	62	16	5	
3	39		1	54	0.4	68	16	5	
S	B-40		1	20	0.2	36	12	5	1

CERTIFIED BY :

Asosbord

## COSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 S. SPRINGER AVENUE BURNABY. B.C. V5B 3N1

TEL: (604) 299 - 6910

TO : A&M EXPLORATION LTD.

614-850 W. HASTINGS STREET

VANCOUVER B.C.

PROJECT: GUNSTEEL

TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86162 6416 INVOICE#:

DATE ENTERED: 86-06-27 FILE NAME: A&M86162

PAGE # :

PPB Au	PPM Pb	PPM Zn	PPM Ag	PPM Cu	PPM Mo	-40 MESH	SAMPLE NAME	PRE FIX
 5	12	38	0.2	14	1		B-41	 S
5	1.6	62	0.2	14	1		42	S
5	10	40	0.2	12	1		43	S
5	14	60	0.4	16	1		44	5
5	10	134	0.4	448	1		B-45	S
 5	18	150	0.4	26	1		BG-1	5
	20	124	0.2	16	1		2	s s
5	36	104	0.2	28	1		2 3	S
5 5 5	14	124	0.2	12	1		4	S
5	16	58	0.2	22	1	X	5	
10	40	62	0.2	84	1	4114 - 144 <b>- 1</b> 411 - 1414 - 1414 - 1414 - 1414	6	<u>S</u> S S
5	16	98	0.4	12	1		7	S
5	32	204	0.2	14	1		8	3
5	34	142	0.2	18	1		9	<b>~</b> S
5	24	82	0.2	24	1		BG-10	S
5	30	128	0.2	44	1		1.1	<u>S</u>
5	10	60	0.2	10	1		12	S
5	14	108	0.2	20	1		13	S
5	16	118	0.2	24	1		14	S
5	16	112	0.4	16	1		15	S
ij	12	58	0.4	12	1		16	<u>S</u>
5	10	48	0.2	8	1.		17	S
30	80	66	0.2	14	1	X	18	S
5	26	62	0.2	10	1	Х	BG-19	S
\ 5	168	200	0.2	\ 32	1		<b>5</b> S-200	
 1 5	14	_9€	0.4	18	1.	X	GV-20 Y	7=
\5	8	78	0.3	35	1	X	GL\202\	
50	10	100	0.2	40	1	1	65- <b>&gt;</b> 03	
50	50	266	0.4	48	1	1	65-204	s\

CERTIFIED BY :

APPENDIX II

Affidavit of Expenses

### AFFIDAVIT OF EXPENSES

This certifies that a geochemical soil sampling survey was carried out on the Bonanza Claims, Salmo Area, Nelson Mining Division, British Columbia, May 28, 1986, to the value of the following:

## Mobilization and Fieldwork

Salaries			
	G.M.	Allen	\$ 400.00
	A.S.	Endersby	250.00
	D.	Endersby	250.00
Room and	board		43.00
Vehicle r			40.00
Mileage		@ 20¢/km	260.00
Fuel			120.00
Telephone			15.00

### Report Preparation

Geochemical analysis

Materials and supplies

Salary G.M. Allen Maps and photocopying Typing, drafting and compilation 400.00 55.00 120.00

596.85

50.00

Total

