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GEOLOGIC REPORT

ON THE

NORTHERN GEM PROPERTY

LILLOOET MINING DIVISION

BRITISH COLUMBIA

FOR

MAJOR RESOURCES LTD.

March 19, 1979
Vancouver, B. C.

THOMAS R. TOUGH, P.Eng.
Consulting Geologist

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PART "A"

Summary

The Northern Gem property consists of eight contiguous Crown-Granted mineral claims situated some 100 miles north of Vancouver and six air miles north of Gold Bridge in the Bridge River District, Lillooet Mining Division in southwestern British Columbia. The claims are held under option from R. R. Taylor and the Taylor Estate of Vancouver, B. C.

The property is accessible by dirt roads passable by 4 wheel-drive vehicles.

The basic logistics involved with exploration, development and production are good except for the steepness of the terrain and snowslides along Roxey Creek valley.

The property was discovered prior to 1937 when the Taylor interests acquired it. There has not been any work done on the property since 1957.

The property is underlain by a "tongue" of quartz diorite and granodiorite of the Coast Range Intrusives.

The mineral deposit occurs along a zone of sheared, bleached granodiorite, which strikes easterly, dips steeply to the south and has been exposed on surface for 700 feet.

Mineralogical investigations by government agencies have identified the minerals present in the deposit as arsenopyrite, safflorite, danaite, loellingite, and gold, with minor amounts of molybdenite, silver, bismuth and uraninite.

The zone has been traced on surface by pits and trenches and three levels have been established underground. Some 4,004 feet of underground diamond drilling and extensive sampling on the three levels was done.

The sulphide mineralization occurs as massive pods and lenses with a halo of disseminated sulphides around them.

Dr. A. C. Skerl, P.Eng. in 1957 estimated probable ore reserves of 11,000 tons between the No. 1 and No. 2 levels grading 0.634 oz. gold/ton and 2.045% cobalt. He projected a potential of 20,000 tons between all three levels and used a mining width of five feet.

Diamond drilling in 1957 increased the probable reserves as calculated by A. R. Allen, P.Eng. He calculated a total of some 30,540 tons between the surface and 50 feet below the No. 3 Level.

Metallurgical problems have hampered previous production plans. The initial investigation of the metallurgy was done in 1939 by the University of British Columbia and the British Columbia Research Council. Recently, the U. S. Bureau of Mines, Reno, Nevada have developed a low temperature, low pressure, ferrous chloride leaching process. The Bureau has had flotation

and gravity concentrates from the Northern Gem property on which they have been carrying out tests to determine the extractibility of the metals present. Preliminary results have shown excellent recoveries of gold and cobalt are possible. The testing is continuing and the findings are anticipated on the completion of the project.

The process is environmentally compatible.

Conclusions

1. Previous ore reserve estimates by Dr. A. C. Skerl, P.Eng. in 1957 were 11,000 tons of probable ore grading 0.634 oz. gold/ton and 2.045% cobalt between the No. 1 and No. 2 Levels. He projected a total of some 20,000 tons above the No. 3 Level to the surface.

2. Ore reserve estimated by A. R. Allen, P.Eng. in 1957 after extensive diamond drilling and sampling were calculated at some 30,540 tons of probable ore between the surface and 50 feet below the No. 3 Level.

3. Metallurgical problems relating to the complex mineralization appear to have been solved.

4. Other mineral occurrences located on surface have not been thoroughly assessed.

5. The potential for developing mineable tonnages of gold-cobalt-uranium mineralization appears to be good along the shear zone and to depth.

6. Continued systematic exploration and development will be required to further delineate mineable tonnages of gold-cobalt-uranium mineralization.

7. With the advent of substantial increases in the prices of gold, cobalt and uranium, the property definitely warrants an exploration programme to re-assess the potential of the property.

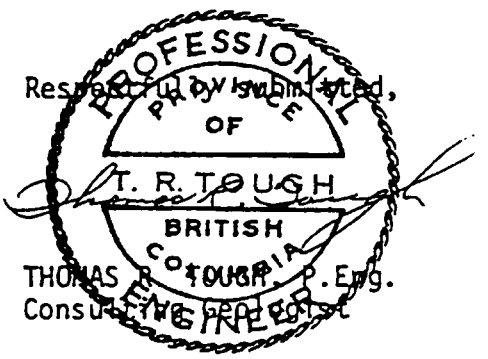
8. Major Resources Ltd. holds some 80 Crown-Granted claims and claim units adjacent to the Northern Gem property.

Recommendations

It is recommended that a programme of surface and underground exploration be carried out over both the Major Resources Ltd. and the Northern Gem properties to fully assess their potential.

The programme should consist of air borne and ground geophysical surveys, diamond drilling on surface and underground, and sampling of surface and underground occurrences.

It is further recommended that Major Resources Ltd. allocate the sum of $200,000.00 to implement and execute the recommended exploration programme.



Respectfully submitted,

THOMAS R. TOUGH, P.Eng.
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GEOLOGICAL REPORT

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PART "B"

Introduction

The following report is based upon information obtained by the writer during a personal examination of the property on September 8, 1978, and from a study of all available government, public and private reports. The purpose of the examination was to examine the underground workings and to assess the potential of the property.

Property

The property consists of eight contiguous Crown-Granted mineral claims. They are as follows:

Claim Name	Lot Number	Acreage
Little Gem 2	7566	34.90
" " 4	7567	34.49
" " 6	7568	46.99
" " 11	7729	51.00
" " 15	7727	49.87
" " 16	7728	49.57
" " 17	7730	51.63
" " 18	7731	49.14

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Claim Map	1" = 1000'
Composite of Levels - Assay Plan	Bar
Plan of No. 1 Level	1' = 10'
Plan of No. 2 Level	1" = 10'
Plan of No. 3 Level	1" = 10'
Surface Plan	1" = 100'
Composite of Levels - Mineralized Zones	1" = 100'
Composite of Levels - Diamond Drilling	1" = 20'
No. 1 Level Plan - Diamond Drilling	1" = 10'
No. 2 Level Plan - Diamond Drilling	1" = 10'
No. 3 Level Plan - Diamond Drilling	1" = 10'

Ownership

The claims are held under options from R. R. Taylor and the Taylor Estate of Vancouver, B. C.

Location (50°54'N, 122°57'W)

The claims are located some 100 miles north of Vancouver in the Bridge River District, Lillooet Mining Division of British Columbia and is some six air miles northwest of Gold Bridge.

Access

The porperty is accessible by gravelled and dirt roads; nine miles of which follows Gem Creek (Tyaughton Lake-Gem Creek road) and another three miles of steep mine access road up Roxey Creek. The roads are passable by 4 wheel-drive vehicles.

Topography

The topography is rugged and precipitous. The campsite is at an elevation of 5,580 feet above sea-level and the upper level is at 6,250 feet. The ridge above the workings attains an altitude of 7,000 feet above sea-level. The relief on the property is some 1,500 feet.

Steep talus slopes and bluffs and heavy snowfall all add to snowslide conditions in the vicinity of the workings and along the Roxey Creek valley.

Water and Timber

There is sufficent water available in Roxey Creek for all phases of exploration, development, production and domestic use. There is very little water available in the underground workings.

The workings on the property are all above tree level but there are good stands of balsam and fir lower down. Finished lumber would be available from local saw mills.

Climate

The area experiences warm summers and cold winters with moderate precipitation. With proper preparation exploration, development and production may be carried out on a year-round basis.

Power

Diesel electric power will be required for all phases of exploration, development and production.

Transportation and Supplies

Rail facilities are available at Shalath and Lillooet. The B.C. Railway services the area.

There is a truck service between Lillooet and Gold Bridge and good daily bus and truck service from major centres in B. C. to Lillooet.

Locally unobtainable supplies could be acquired from Vancouver or Kamloops with relative ease.

Equipment

There is an Eimeo 12B mucking machine and ore car in the third level. There are two tugger hoists and a large air receiver near the portals of the first and second levels.

Accommodation

There is a small cabin located on the property but it is in a state of disrepair.

Tent and frames will be required to house men on the property during exploration stages.

Motel accommodation is available in Gold Bridge and if the road were upgraded crews could possible commute to the site.

History

The property was originally discovered by Messrs. W. H. Ball and William Haylmore who sold their interests to Messrs. J. M. and R. R. Taylor in 1937.

During 1938 and 1939 United States Vanadium Corporation optioned the property and drove the uppermost drift some 140 feet.

Messrs. Taylor drove the middle level during 1940 and Bralorne Mines optioned the property in the fall of that year. Bralorne drove two short raises from the second level.

In 1952 Estella Mines Ltd. optioned the property, completed the road to

the campsite, and carried out a limited programme of underground drilling. The company relinquished the option in late 1953.

In December 1955 Northern Gem Mining Corporation Ltd. was formed for the purpose of acquiring and developing the property. The work consisted of road building, camp establishment, and some development of the showings. Early snows caused curtailment of the programme.

During 1957 a new level, the No. 3 Level, was collared and driven for a length of 435 feet with a 70-foot crosscut to the south at the end. A total of 640 tons were slashed from the Level. The new level was 100 feet lower than Level No. 2.

A total of 2600 feet of underground diamond drilling was carried out in conjunction with a total of 798 feet of drifting, 120 feet of crosscutting and 1,040 tons of slashing.

The No. 1 Level was extended an additional 363 feet and drill stations were established at 50-foot intervals on alternate sides of the drift. Fifty feet of crosscut and 400 tons of slashing were also done on the No. 1 Level.

There has not been any work carried out on the property since 1957.

General Geology

The area is underlain on the west by a major intrusive which forms the Dickson and Leckie Mountains. The intrusive consists of medium-grained massive to foliated hornblende-biotite quartz diorite and granodiorite with minor diorite and gabbro and forms part of the Coast Range Batholith. The Batholith intrudes sedimentary and volcanic rocks of the Fergusson, Noel,

Pioneer and Hurley formation which are from Permian to Triassic in age.

Older serpentine and carbonitized alteration products are also intruded.

Table of Formations

Era	Period	Formation	Lithology
Cenozoic	Modern		Recent: stream deposits; volcanic ash; slide debris; soil
			Pleistoncene: fluvioglacial, glacial, and stream deposits
Cenozoic and (?) Mesozoic	Post Lower Cretaceous		Kersantite and basaltic dykes
		Bendor intrusives	Hornblende-biotite-quartz diorite (mainly); granite; granodiorite; diorite; (batholith and related stocks and dykes)
			Feldspar and hornblende porphyrite dykes and related, dioritic stocks; felsitic to aphanitic dykes; (may be post-Bendor)
Mesozoic	Jurassic(?)		Quartz albitite, albitite, and related, less sodic, dykes; greenstone dykes
		President intrusives	Peridotite (mainly); dunite, pyroxenite; (may be partly serpentinized)
			Serpentine (mainly
		Summer gabbro	Diallage-olivine gabbro
		Bralorne intrusives, may be in part younger than the President intrusives	Soda granite (albite feldspar)
			Gabbros, augite diorite and quartz diorite; metadiorite (mainly sodic plagioclase)

Table of Formations (Cont'd)

Era	Period	Formation	Lithology
	Triassic and (or) Jurassic	Hurley formation	Banded, argillaceous and tuffaceous sediments with abundant limy types; fossiliferous limestone; conglomeratic and agglomeratic beds; cherty halleflinta and trachytic flows; intercalated andesitic (greenstone) flows
		Pioneer formation	Green, massive, amygdular to finely crystalline andesites and metaandesites; andesitic tuffs and breccias; associated, intrusive, dioritic phases
		Noel formation	Banded, argillaceous and tuffaceous sediments; thinly banded chert and argillite associated with greenstone; conglomerate, tuffs, and breccias
Palaeozoic	Permian(?)	Fergusson series	Mainly green, but in part reddish massive to highly schistose, amygdaloidal, and in part ellipsoidal, andesitic to basaltic lavas; tuffs and breccias; associated limestone pods
			Mainly thinly inter-bedded chert and dark grey to black or reddish, slaty to schistose, graphitic argillite; massive chert; some crystalline limestone

Local Geology

The Northern Gem property lies within a "tongue" of quartz diorite and granodiorite which varies from 1/2 to one mile in width and extends some three miles southeasterly to Gun Lake. Feldspar porphyry dykes up to 25 feet wide cut the granodiorite.

The mineral deposit occurs in a zone of sheared, bleached granodiorite striking easterly and is exposed for a length of some 700 feet through a vertical range of 350 feet. The zone narrows to the east where it is covered with overburden. To the west widths reach up to 40 feet wide and the zone is covered by talus and overburden in Roxey Creek valley. The deposit consists of irregular lenses of massive and disseminated sulphides consisting of auriferous arsenical sulphides with significant amounts of cobalt. Uraninite occurs sporatically within the gangue.

The sheared zone strikes at 080°, dips from 60° to 80° southerly, and is cut by numerous brown-weathering carbonate shears. The most prominent carbonate shears strike a few degrees east of north and dip 30° to the east and occaisonally displace the main shear.

There are parallel to sub-parallel shears occuring at intervals of about 100 feet.

Mineralogy

The mineralization present is comprised of arsenopyrite, danaite, loellingite, safflorite, gold, with minor molybdenite, silver, bismuth and uraninite in a gangue of allanite, apatite, orthoclase feldspar, quartz, chlorite, sericite and calcite. Erythrite, a cobalt alteration product, occurs on sulphides exposed in outcrops.

Danaite, loellingite and safflorite are arsenical sulphides which contain varying amounts of cobalt.

An additional mineralographic study has recently been completed by the U. S. Bureau of Mines. The results have not yet been received.

In 1958 the Department of Mines and Technical Surveys of Canada carried out a mineralogical investigation of specimens from a 500 pound bulk sample. The sample was comprised of a composite of high-grade, medium-grade and disseminated mineralized rock from the three levels. The Mines Branch was also requested to undertake metallurgical tests for the extraction of cobalt, gold and uranium.

A head sample assayed as follows:

Au	0.98 oz/ton
Ag	0.08 oz/ton
Co	2.57%
Ni	0.119%
Cu	0.03%
Mo	0.015%
Pb	< .002%
As	24.1%
U_3O_8	0.07%
ThO_2	< 0.01%
S (total)	4.37%
CO_2 (evolution)	4.39%
P_2O_5	0.16%
Fe	15.55%

Arsenopyrite and safflorite were identified and other minerals such as glaucodot and loellingite were suspected of being present.

Native gold occurs in arsenide-sulpharsenide intergrowth up to 17 microns in size.

Uraninite occurs as subhedral grains associated with allanite and sulpharsendies. The grains vary from 1/10 mm to 1/4 mm in diameter.

Mineralization

The mineralized shear has been traced on surface for some 700 feet by three levels underground and by pits and trenches on the surface.

(a) Underground

(i) No. 1 Level (6250')

The No. 1 Level was driven below high-grade surface exposures of gold-cobalt bearing sulpharsenides. The zone was encountered for a length of 120 feet and an average width of some three feet. A total of 530 feet of drifting and cross-cutting was done on the level.

Sampling

C. C. Starr (1940)

Weighted average grade for eight samples:- 0.81-oz. Au/ton and 2.77% Co across 3.3 feet. The sampling represented a 75 foot length.

Dr. J. C. Stevenson (1948)

No. of Samples	Length	Width	Gold (oz/T.)	U_3O_8(%)	Cobalt(%)
20	120'	3.0'	0.765	0.388	3.068

C. W. Ball (1959)

Lens 1 - 1.28 oz. Au/T; 0.30 oz. Ag/T; 4.20% Co; 33.83% As, 0.005% U_3O_8 across 1.8 feet.

Lens 2 - 1.04 oz. Au/T; 0.2 oz. Ag/T; 1.10% Co; 16.39% As, 0.01% U_3O_8 across 4.9 feet.

A. C. Skerl (1957)

Dr. Skerl calculated 5500 tons of probable ore on No. 1 Level grading 0.507 oz. Au/T and 2.19% Co across a mining width of 5 feet.

C. Rutherford (1952)

Mr. Rutherford estimated an ore reserve for the level of a minimum of 4200 tons of ore in sight grading 0.672 oz. Au/Ton; 2.974% Co and 0.2499% U_3O_8.

He did not consider material encountered in a crosscut near the portal which assayed 0.22 oz. Au/Ton, 0.30% Co and 9.01% U_3O_8 across 5 feet.

(ii) No. 2 Level (6187')

The No. 2 Level did not intersect the downward projection of the zones encountered in the No. 1 Level but two other lenses were encountered. Obviously the projections of these zones between the No. 1 and No. 2 Levels are complicated by the presence of faulting.

Sampling

C. C. Starr (1940)

Mr. Starr cut two samples on the No. 2 Level. One assayed 0.88 oz. Au/T and 3.69% Co across 3.8 feet and the other ran 3.14 oz. Au/T and 3.69% Co across 4.4 feet.

C. Rutherford (1952)

Mr. Rutherford reports three samples that averaged 1.60 oz. Au/T; 3.23% Co and 0.355% U_3O_8.

A. C. Skerl (1957)

Dr. Skerl calculated 5500 tons of probable ore averaging 0.76 oz. Au/T and 1.9% Co across 5.0 feet.

C. W. Ball (1959)

Assays cut by Mr. Ball gave a weighted average grade of 1.56 oz Au/T; 0.34 oz. Ag/T; 3.09% Co; 31.07% As and 0.049% U_3O_8 across an average width of 3.08 feet.

T. R. Tough (1978)

The writer cut four samples across the zone which gave a weighted average grade of 1.69 oz. Au/T; 2.17% Co and 0.065% U_3O_8 across 6.5 feet.

(iii) No. 3 Level (6085')

Sampling

A. R. Allen (1957)

Limited sampling averaged 0.50 oz. Au/T; 0.63% Co and 0.10% U_3O_8 across 5.58 feet.

C. W. Ball (1959)

Two consecutive samples cut along 11 feet of the zone exposed in the left wall near the face of the drift assayed 0.22 oz. Au/T; 0.10 oz. Ag/T; 0.30% Co; 3.95% As and 0.005% U_3O_8.

150 feet in from the portal minor veinlets containing pyrite, chalcopyrite and magnetite were encountered with some radioactivity.

(b) Surface Sampling

Outcrop above No. 1 Level portal assayed 0.68 oz. Au/Ton; 0.2 oz. Ag/Ton; 5.31% Co; 45.94% As; and 0.065% U_3O_8 across a width of 6.0 feet. (C. W. Ball, 1959)

Same area as above but eight samples averaged 0.5136 oz. Au/Ton; 2.837% Co. and 0.01% U_3O_8 across 4.25 feet. (C. Rutherford, 1952)

Selected samples taken from the shear zone 600 feet along strike and east of the No. 1 Level portal. (C. Rutherford, 1952)

Width	Gold oz/T.	Cobalt %	U_3O_8 %
3"	4.56	2.80	0.27
Picked	23.34	4.60	0.375
Picked	7.04	4.50	0.75
15"	45.92	5.70	2.80

Diamond Drilling

During 1952 and 1953 Estalla Mines drilled 12 holes on the No. 2 Level for a total of 737 feet.

The core was logged by A. R. Allen, P.Eng. and split and assayed. The results are as follows:

No. Length	Location	Direction	Angle	Length of Core Feet	Au Oz/T	Co %
1	Lower Tunnel	S 82 E	0	2.5	0.20	1.28
30 ft	Southwest Drift			20.0	Disseminated sulphides and lost core	
				10.9	0.36	1.39
				3.5	Disseminated sulphides	
2.	Lower Tunnel	S 88 E	0	1.7	0.28	0.93
24 ft	Southwest Drift			1.3	Lost core and massive sulphides	
3	Lower Tunnel					
28 ft	Southwest Drift	S 12 E	0	1.5	0.28	2.34
				1.5	Lost core and massive sulphides	
				9.5	0.35	0.90
4	Lower Tunnel	S 17 W	0	6.5	Lost core and massive sulphides	
28 ft	Southwest Drift					
5	do.	S 52 E	-25	3.3	Lost core and heavy sulphides	
				4.7	Massive to disseminated sulphides	
6	do.	S 88 E	-25	9	Lost core and massive sulphides	
97 ft				22	Lost core and massive to disseminated sulphides	
7	do.	N 43 W	-25	16	Lost core and massive to disseminated sulphides	
				4	Lost core and disseminated sulphides	

The 12 holes drilled totaled 737 feet in length.

In 1956 Northern Gem Mining Corporation diamond drilled four holes for a total footage of 667 feet. The drill data is as follows:

No. Length	Location	Direction	Angle			Au Oz/T	Ag Oz/T	Co %	U_3O_8 %
1-56	50 ft. in	S 55 E	-30	133-1/2	135	0.22	-	0.21	-
167 ft	Lower Tunnel			138	139	0.54	-	0.54	NIL
				139	145	3.26	0.40	2.42	"
				145	146-1/2	2.40	0.20	0.25	"
				146-1/2	151-1/2	Lost Core			
				151-1/2	152-1/2	1.52	-	0.20	"
2-56	50 ft. in								
225 ft	Lower Tunnel	S 55 E	-40	177	185-1/2	0.04	-	0.13	-
				185-1/2	192	0.02	-	0.01	-
3-56	100 ft. in	S 72 E	-30	83	88-1/2	0.04	-	0.08	-
125 ft	Lower Tunnel			88-1/2	97	0.04	-	0.11	-
4-56	100 ft. in	S 72 E	-40	186	192	Massive Sulphides			
180 ft	Lower Tunnel					Not yet sampled			

During 1957 a total of 2600 feet of underground diamond drilling was completed in 58 holes; 48 on the No. 1 Level and 10 on the No. 3 Level.

No. 1 Level

DDH No.	Dip	From - To	Feet	Au oz/T	Co %	U_3O_8 %
13	0°	3.8'- 6.3'	2.5'	2.92	5.08	N.A.
14	0°	2.0'- 8.0'	6.0'	0.53	5.01	0.10
15	0°	7.0'-10.0'	3.0'	0.65	1.53	N.A.
22	0°	0'- 2.0'	2.0'	0.10	0.35	N.A.
		7.0'-12.5'	5.5'	2.44	1.19	N.A.
34	-40°	57.0'-58.5'	1.5'	0.10	1.94	0.32
35	0°	6.0'-10.0'	4.0'	0.452	2.74	N.A.
36	0°	0'- 4.0'	4.0'	0.01	0.35	N.A.
		4.0'-10.0'	6.0'	0.205	2.20	N.A.
37	0°	7.0'-10.0'	3.0'	0.221	2.74	N.A.
		25.3'-30.0'	4.7'	0.705	2.51	N.A.
38	0°	6.0'-11.0'	5.0'	0.560	2.76	0.18
		18.0'-21.5'	3.5'	0.680	4.59	N.A.
39	-22°	10.0'-25.0'	15.0'	0.272	1.94	0.035
40	-45°	13.0'-21.0'	8.0'	0.662	1.68	0.358
43	-30°	20.0'-20.5'	0.5'	0.130	0.20	N.A.
44	-20°	10.5'-40.0'	29.5'	0.667	1.00	N.A.
46	-43°	35.0'-39.0'	4.0'	0.228	1.35	N.A.
47	-45°	41.5'-48.0'	6.5'	0.177	1.49	N.A.
		41.5'-52.0'	10.5'	0.139	1.15	N.A.
50	+36°	0'- 4.0'	4.0'	0.60	N.A.	N.A.
		12.3'-14.0'	1.7'	0.41	N.A.	N.A.
52	+36°	0'- 1.17'	1.17'	0.64	N.A.	N.A.
		8.17'-12.0'	3.83'	0.52	N.A.	N.A.
54	+35°	5.0'- 9.5'	4.5	0.82	0.69	N.A.
59	-38°	3.0'-13.0'	10.0'	1.048	5.80	0.093
		18.0'-21.0'	3.0'	0.88	2.45	N.A.
		29.0'-33.0'	4.0'	0.72	4.59	N.A.
60	-40°	0'-20'	20.0'	Same zone as DDH #40		
		41.0'-42.5'	1.6'	2.30	0.80	N.A.
		48.0'-50.0'	2.0'	0.30	0.26	N.A.
		56.0'-60.0'	4.0'	0.50	1.58	N.A.

N.A. = Not Assayed

No. 3 Level

DDH No.	Dip	From - To	Feet	Au oz/T	Co %	U_3O_8 %
64	0°	0 - 3.0'	3.0'	0.42	0.53	N.A.
65	0°	0 - 6.0'	6.0'	0.12	0.40	N.A.
		12.0'-18.0'	6.0'	0.18	0.44	N.A.
68	-30°	1.0'- 5.0'	4.0'	0.14	0.16	N.A.
		26.0'-28.0'	2.0'	3.85	1.36	N.A.
71	-35°	11.0'-21.5'	10.5'	0.20	0.55	N.A.
		23.0'-29.0'	6.0'	0.18	0.31	N.A.
		11.0'-29.0'	18.0'	0.177	0.42	N.A.

The actual drill logs and cross-sections of the drill holes were not available to the writer.

Early drilling by Estella Mines experienced poor core recovery.

There has not been any diamond drilling done on the surface of the property.

Ore Reserve Estimates

(i) C. C. Starr, P.Eng., 1940

No. 1 Level: Length 75 feet, width 3.7 feet, grade 0.81 oz. Au/Ton, 2.77% Cobalt

Tonnage: 40 Tons per vertical foot.

C. Rutherford, P.Eng., 1952

No. 1 Level: 4200 tons in sight grading 0.672 oz. gold/ton; 2.974% Cobalt and 0.2499% U_3O_8.

A. R. Allen, P.Eng., 1955

No. 1 Level: Length 135 feet; height 85 feet; width 40 inches.

Indicated Tonnage: 3825 tons.

No. 2 Level: Length 70 feet; height 40 feet; width 5.0 feet.

Indicated Tonnage: 1400 tons.

A. R. Allen, P.Eng., 1956

Tonnage indicated by 1956 diamond drilling from No. 2 Level 4200 tons. Total tons indicated 1955-1956 is 9425 tons. (A.R. Allen).

A. C. Skerl, P.Eng., 1957

No. 1 Level: 5500 tons probable ore grading 0.507 oz. gold/ton and 2.19% Cobalt across 5.0 feet.

No. 2 Level: 5500 tons probable ore grading 0.76 oz. gold/ton and 1.9% Cobalt across 5.0 feet.

With continuity established between the levels and the lateral extent of the zone on the No. 3 Level the same as on the upper levels. Dr. Skerl projected some 20,000 tons available above the No. 3 Level.

Alfred R. Allen, P.Eng., 1957

Probable Ore

No. 1 Level to surface:	4,250 tons
Between No. 1 and No. 2 Levels:	8,990 tons
Between No. 2 and No. 3 Levels:	13,500 tons
50 feet below No. 3 Level:	3,800 tons
Total Probable Ore	30,540 tons

Mr. Allen did not apply actual grades for the calculated tonnage blocks but gave grades as follows:

Surface

Samples	Width	Gold oz/Ton	Cobalt %	U_3O_8 %
8	51 inches	0.5136	2.836	0.01
No. 1 Level				
20	36 inches	0.765	3.068	0.338
6 Drill Holes	126 inches	0.53	1.48	0.023
No. 2 Level				
3	71 inches	1.60	3.23	0.335
No. 3 Level				
?	67 inches	0.50	0.63	0.10

C. W. Ball, 1959

Surface showing No. 1 Level Portal. (20' x 5' x 20')

250 tons at 0.5 oz. gold/ton; 0.2 oz. silver/ton; 3.0% Cobalt; 30% Arsenic and 0.05% U_3O_8.

No. 1 Level

(a) 202 tons at 1.00 oz. gold/ton; o.3 oz. silver/ton; 3.0% Cobalt; 25% arsenic and 0.005% U_3O_8. (30' x 1.8' x 30')

(b) 918 tons at 1.00 oz gold/ton; 0.2 oz. silver/ton, 1.00% Cobalt; 15% arsenic and 0.01% U_3O_8. (50' x 4.9' x 30').

No. 2 Level (12' x 2' x 12')

36 tons at 1.4 oz gold/ton; 0.3 oz. silver/ton; 2.5% Cobalt, 25% arsenic and 0.04% U_3O_8.

No. 3 Level

No estimate made.

TOTAL ORE RESERVES (C. W. Ball) 1500 tons at 0.9 oz. gold/ton; 0.2 oz. silver/ton; 1.6% Cobalt; 19% arsenic and 0.016% U_3O_8.

Although Mr. Ball has not defined his ore reserves it is assumed that the reserves calculated by him are those of a proven ore category. It also appears from his report that he did not have all the available diamond drill results. He only made mention of some 740 feet of underground drilling done in 1956 and apparently did not incorporate any drilling results in his calculations.

Preliminary ore reserve estimates calculated by the writer are appended hereto.

ORE RESERVES

The data used for calculating tonnages and weighted average grades were taken from sampling done on surface, on the three levels underground, and from underground diamond drilling above and below the levels.

The reserves have been categorized as reasonably assured and are as follows:

Block	Location	Tonnage	Au oz/ton	Co%	U_3O_8%
A	From Surface to 30 feet below No. 1 Level	6,230	0.587	2.706	0.0567
B	30 feet above No. 2 Level to 50 feet below No. 2 Level	6,720	0.759	1.525	0.1148
C	Same as Block B, parallel zone	5,333	0.355	1.162	N/A
D	50 feet above No. 3 Level to 50 Feet below No. 3 Level	5,000	0.640	0.55	N/A

Total Tonnage (Reasonably Assured) = 23,283 tons

Weighted Average Grade = 0.5949 oz. Au/Ton.; 1.55% Co; 0.0483% U_3O_8

There are other mineralized and parallel zones that have been encountered on the No. 1 and No. 3 Levels for which there is insufficient data available to determine tonnages and grade. It is estimated that approximately 5,000 tons of material would fall into this category.

POTENTIAL ORE RESERVES

Additional reserves are indicated along strike and to depth, but it will require further detailed exploration and development to locate and delineate such reserves.

Metallurgy

Extensive work on the metallurgical complications was carried out by the University of British Columbia and the British Columbia Research Council in 1939. The investigation resulted in a flow-sheet being developed which involved medium to high temperature and pressure leaching. Tests indicated that 90% of the cobalt and 98% of the gold could be recovered.

Recently the U.S. Bureau of Mines, Reno, Nevada developed a technique using a ferrous chloride-oxygen leaching procedure to extract metal values from concentrates containing as high as 45% arsenic along with copper, cobalt, and silver. 97% of the cobalt and 99% of the silver was recovered.

The process involves slurrying the concentrate with ferrous chloride solution and injecting oxygen at 50 psig. pressure while maintaining a temperature of 110° to 115°C. The leaching is completed in about 4 hours.

The Bureau has been working on cencentrates from material from the Northern Gem property for the past few months. Preliminary tests showed that excellent gold and cobalt recoveries could be expected.

The leach system is environmentally compatible as deleterious arsenic and iron constituents of the concentrates are rejected to the process tails as stable oxides. Sulphur is converted to the elemental form and reports to the tails.

Exploration Programme

Major Resources Ltd. holds a total of 80 Crown-Granted and located units adjoining the eight Crown-Granted claims held by Northern Gem Mining Corporation. An airborne geophysical survey should be carried out over the entire area covered by all the claims as a means of delineating the main zone on the Gem property and its possible extension into the adjoining ground held by Major Resources Ltd. The survey would also locate other hitherto unknown zones which may occur within the confines of all of the claims.

Underground diamond dirlling should be undertaken to recheck the previous drilling results.

More detailed sampling of the zones encountered in the three levels should be done to obtain a more accurate average grade.

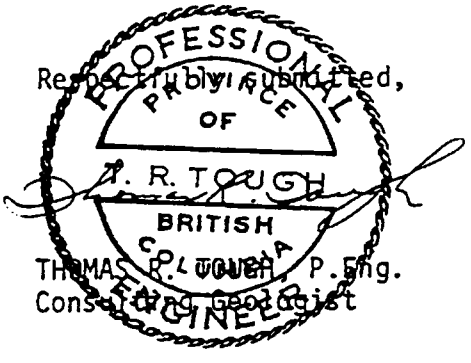
An attempt should be made to drill holes from surface to intersect the downward extension of the zone encountered in the No. 3 Level and if possible to drill known showings located on surface above and along strike from the underground workings.

A ground follow-up geophysical survey should be done to accurately locate and define any airborne anomalies.

Estimate of Costs of Exploration Programme

Airborne Geophysical Survey - Combined EM - Magnetometer Total Field Scintillometer	$ 10,000
Ground E.M. and Scintillometer Survey - 20 miles @ $250/mile	5,000
Road Rehabilitation	15,000
Underground Diamond Drilling - 2000 feet @ $20/ft.	40,000
Surface Diamond Drilling - 3000 feet @ $25/ft.	75,000
Sampling and Assaying	10,000
Engineering and Supervision	10,000
Travel and Accommodation	5,000
Contingencies	30,000
	$200,000

It is estimated that the recommended exploration programme should take approximately six months to complete.



Respectfully submitted,

THOMAS R. TOUGH, P.Eng.
Consulting Geologist

March 19, 1979

Vancouver, B. C.

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Discussions with R. R. Taylor, R. E. Linstrom and B. J. Scheiner and technical staff at the U. S. Bureau of Mines, Reno, Nevada.

CERTIFICATE

I, THOMAS R. TOUGH, of the City of Richmond, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist and a principal in T. R. Tough & Associates Ltd., with offices located at 708 - 850 West Hastings Street, Vancouver, British Columbia.

I further certify that:

1. I am a graduate of the University of British Columbia (1965) and hold a B.Sc. degree in Geology.

2. I have been practising my profession for the past thirteen years.

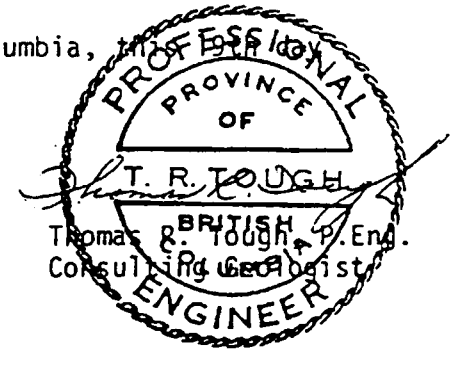
3. I am registered with the Association of Professional Engineers of British Columbia.

4. The information for this report was obtained from a personal examination of the property on September 8, 1978 and from published, private and government publications.

5. I have no direct or indirect interest whatsoever in the property described herein, nor in the securities of Major Resources Ltd. and do not expect to receive any interest therein.

6. I have resigned as a Director of Northern Gem Mining corporation as of March 5, 1979.

Dated at Vancouver, British Columbia, this 5th day of March, 1979.



Thomas R. Tough, P.Eng.
Consulting Geologist

APPENDIX

SAMPLING AND ASSAYS

The most complete and conservative sampling of the property has been done by Stevenson,[2] and his results are as follows:

B.C. Department of Mines, September, 1948.

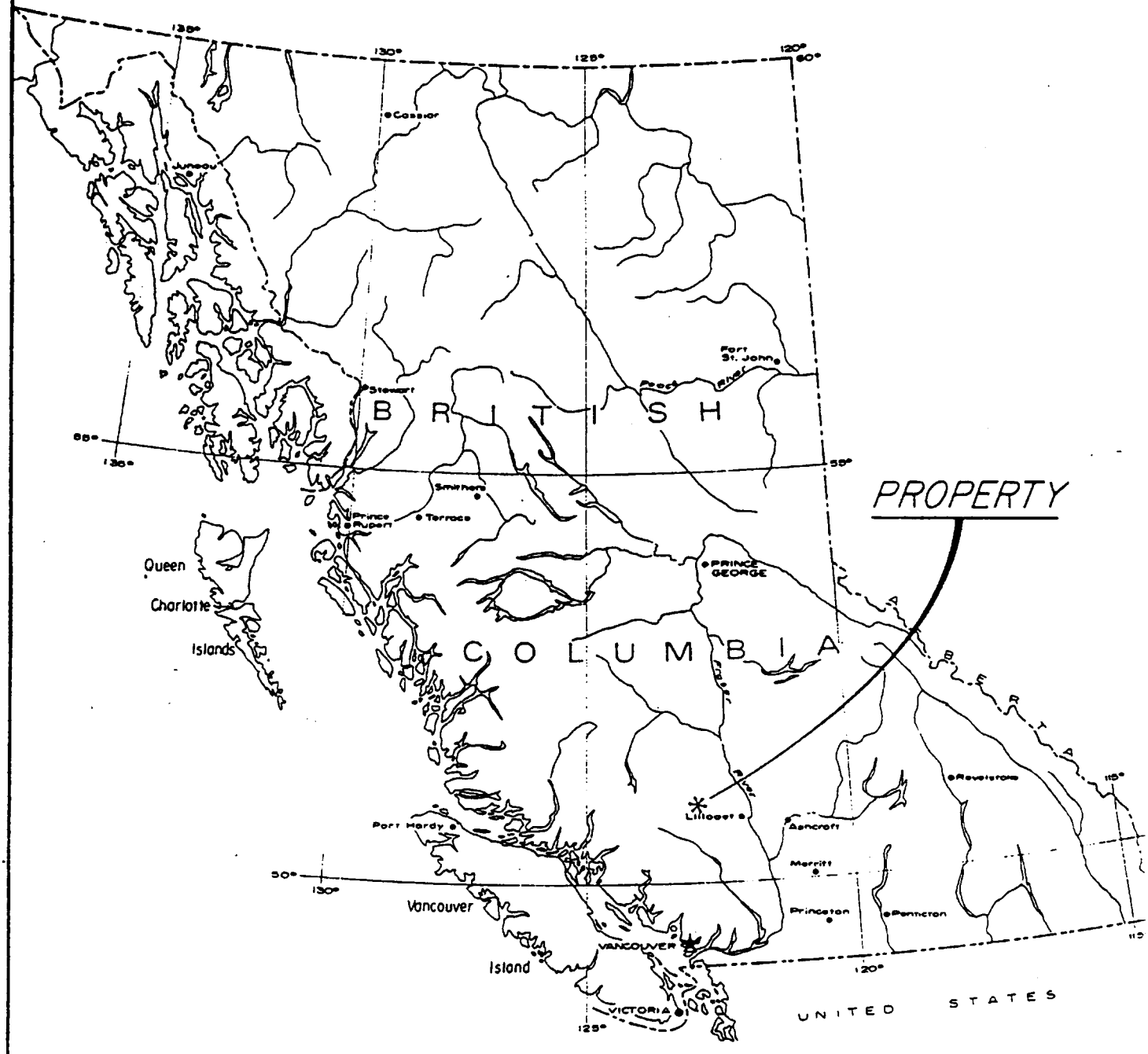
ASSAYS, LITTLE GEM MINE
(Nos. 1-39: channel samples)

Sample No.	Width Inches	Gold oz./ton	Silver oz./ton	Equivalent Per Cent Uranium Oxide	Cobalt Per Cent.	Iron Per Cent.	Arsenic Per Cent.	Sulphur Per Cent.	Silica Per Cent.
1	24	1.04	nil	0.0055	3.6				
2	30	0.41	nil	0.030	1.3	28.7	42.6	14.5	6.3
3	72	0.52	nil	0.022	5.1	20.3	48.2	3.7	5.9
4	84	0.32	nil	0.0025	5.1	20.0	61.2	1.6	3.7
5	24	0.24	1.1	0.02	0.3				
6	25	0.27	trace	0.0035	4.4				
7	24	0.35	nil	0.02	3.9				
8	18	1.60	nil	0.007	4.3	25.2	42.2	14.2	2.7
9	60	0.27	nil	0.010	0.9				
10	96	0.87	nil	0.003	0.8				
11	60	0.22	nil	0.01	0.3				
12	24	0.02	trace	0.014	0.5				
13	13	1.24	0.1	0.008	6.0				
14	36	0.53	nil	0.038	3.5				
15	12	0.61	trace	0.005	5.7				
16	33	0.62	0.1	0.022	4.1				
17	36	0.51	nil	0.032	2.5				
18	39	0.15	trace	0.21	1.5				
19	36	1.09	0.1	0.026	6.6				
20	36	0.23	trace	1.01	1.3				
21	38	0.48	0.3	1.54	2.9	15.4	12.8	4.9	23.2
22	40	0.38	0.1	0.24	3.0				
23	53	0.84	0.3	0.57	4.0	20.1	27.2	9.8	9.8
24	49	0.01	nil	0.23	0.7				
25	52	0.51	0.4	0.21	3.5				
26	34	1.21	0.1	1.04	5.3	21.7	36.8	13.0	9.5
27	23	1.78	trace	0.53	7.2	18.4	32.8	11.6	14.4
28	60	0.76	nil	1.89	5.4				
29	39	1.58	0.1	0.0095	3.8	21.5	31.5	11.3	12.5
30	39	1.82	nil	0.010	1.3				
31	38	0.58	trace	0.003	0.6				
32	24	0.83	0.1	0.003	0.5				
33	48	1.00	nil	0.003	1.4				
34	33	1.26	nil	0.0025	1.1				
35	26	1.40	trace	0.0015	1.2				
36	12	0.34	nil	0.002	0.4				
37	60	0.12	trace	0.004	2.0				
38	80	2.21	trace	0.87	3.1				
39	72	2.14	nil	0.018	4.4	19.8	45.4	3.1	7.6

2. Stevenson, J.L. B.C. Minister of Mines Report 1948 pp. A112-119

(Nos. 40-52: Miscellaneous Selected Samples)

	Gold oz./ton	Silver oz./ton	Equivalent Per Cent Uranium Oxide	Cobalt Per Cent	
40	0.66	nil	0.13	2.4	Upper adit, near Sample No. 27, sulpha-seenide and non-metallics.
41	1.46	nil	0.003	3.6	Upper adit, near Sample 27, massive sulpharseenide.
42	0.01	nil	3.20	0.20	Upper adit, dump: mixed sulpharseenide and non-metallics.
43	0.06	0.1	0.35	0.91	Upper adit, dump: principally non-metallics
44	1.66	nil	0.21	4.4	Lower adit, near Sample No. 38, mixed sulpharseenide and non-metallics.
45	0.28	0.1	0.005	6.2	Surface near Sample 7; selected sulpharseenide crystals; also assaying (per cent): Fe, 10.3; As, 60.7; SiO_2, 2.7
46	0.33	nil	0.002	6.5	Similar to Sample No. 45.
47	4.56	0.5	0.27	2.8	Highest showings, higher of 2 open-cuts; across 3-inch rib of sulpharseenide and non-metallics.
48	23.34	0.6	0.375	4.6	Location, ditto; check sample across same material as No. 47.
49	7.04	trace	0.75	4.5	Location, ditto; typical mineralization from ore-pile.
50	45.92	1.8	2.80	5.7	Highest showings, lower of 2 open-cuts; across 15-inch wide lens of mixed sulphar-seenide and non metallics.
51	1.19	0.2	2.24	0.5	Location, ditto; across a 2-inch rib of molybdenite in the sulpharseenide lens, No. 24.2 per cent.
52	2.10	0.1	2.60	1.6	Location, ditto; typical mineralization from ore-pile.



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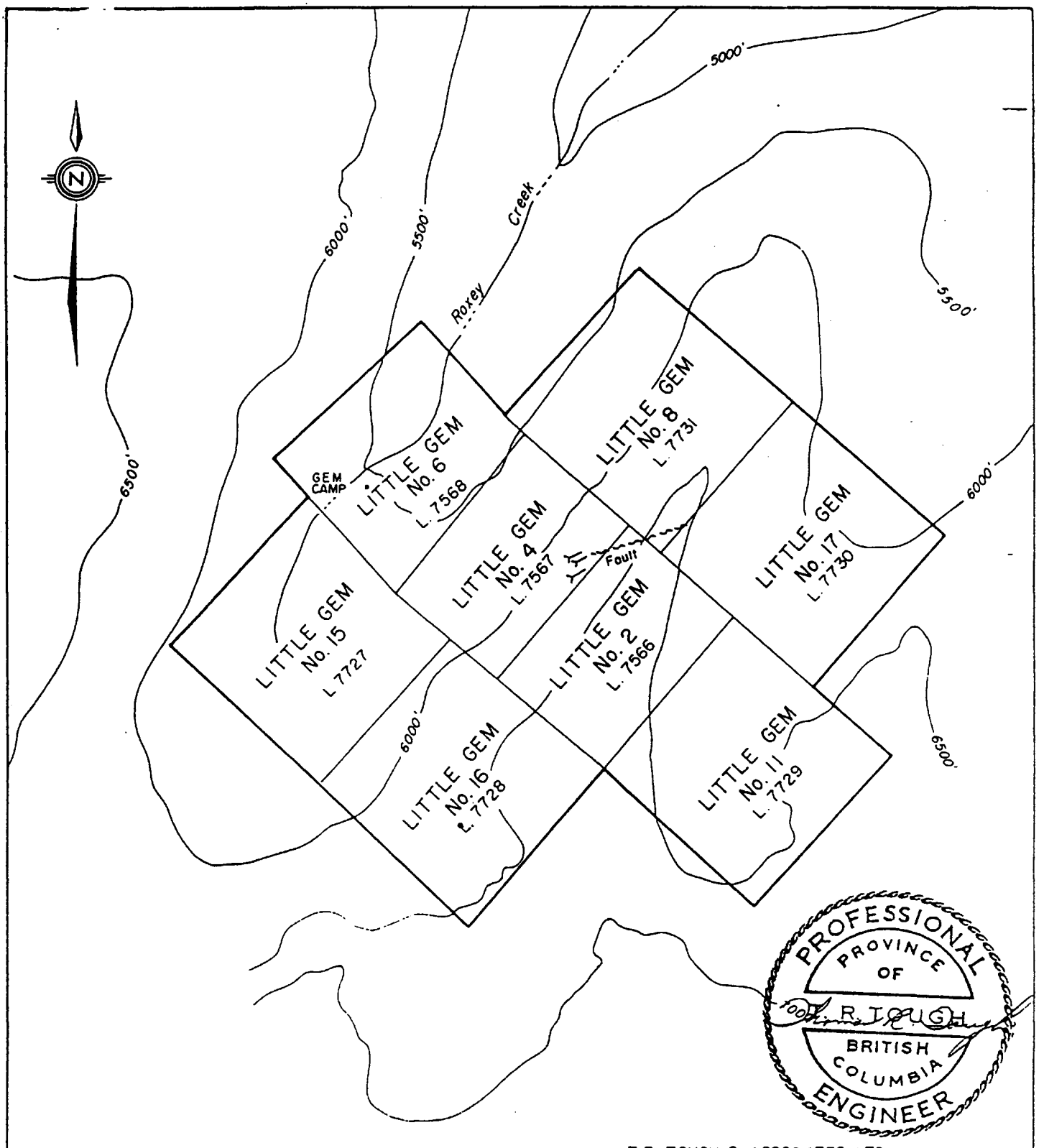
NORTHERN GEM PROPERTY

LILLOOET M.D.

LOCATION MAP

SCALE

Miles 100 50 0 100 200 Miles



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CLAIM MAP

SCALE IN FEET

0 1000 2000