

# **Geological Report**

on the

# **LITTLE GEM** (Northern Gem) **COBALT-GOLD** **PROPERTY**

**Gold Bridge/Bralorne Area**  
**South-Central British Columbia**

NTS 92J15W  
50° 53'47"N, 122° 57'12" W

**R.H. McMillan Ph.D., P.Ge.**  
15 January 2007

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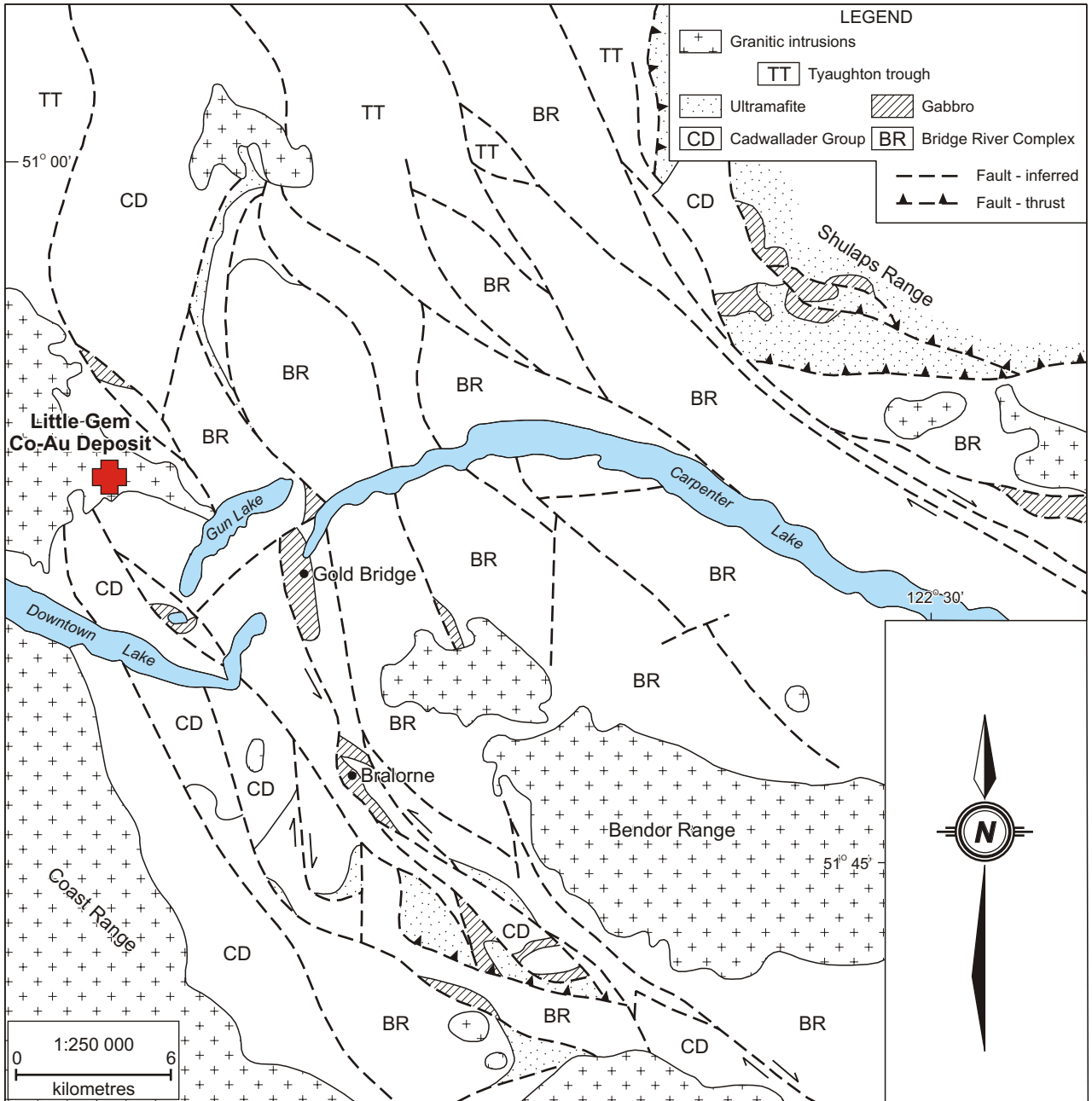


Figure 1 - Location map and generalized geology - Little Gem Property (after Church, 1995)

## **1 Introduction -- Synopsis**

A potentially economic deposit of cobalt-gold mineralization with minor associated uranium is partially developed by three adits in the Gold Bridge area - the vein-type mineralization is hosted in granitic rocks of the Coast Range Igneous Complex and is part of the Bridge River gold mining district (Church, 1995). Mineralization - “massive sulpharsenide ore, containing the cobalt and associated gold, is a mixture of the cobalt-bearing variety of arsenopyrite (*danaite*) and loellingite-safflorite” (Stevenson, 1948). A previous operator reported a high-grade resource of “9425 tons (8570 tonnes) grading 0.67 oz./ton (23 g/t Au), 2.97% Co and 0.25% U” (Allen, 1956), after the 1956 underground program. The 1956 estimate was based on surface and underground channel sampling and diamond drilling within an area approximately 40 metres in length and 20 metres vertical extent. The mineralized pod remained open for expansion along strike and to depth. A later figure quoted in the Canadian Mines Handbook (1960, p.185), and presumably based on additional work, estimated “20,000 tons (18,000 tonnes) averaging 0.65 oz/ton (22.3 g/t), 3.0% Co and 0.25% U<sub>3</sub>O<sub>8</sub>”. It must be emphasized however that the two aforementioned “*Historical Resource Estimates*” do not comply with current NI43-101 criteria and should not be relied upon.

The mineralized structure has been traced for a length of 300 metres and over a vertical extent of 160 metres and most of this structure has not been tested. There are two possibilities for improvement on these “*Historical Resources*”. Firstly, there is potential to discover additional high-grade pods and/or to extend the known deposit. Secondly, the “*Historical Resource*” calculations have only considered the high-grade massive to semi-massive sulphide mineralization – there has been no testing as yet for an orebody composed of “disseminated mineralization” of moderate grade and tonnage.

The author undertook a one-day visit to the property on 23 September 2006. The object of the visit was to undertake a geological examination of the property as well as to assess potential drill sites on the ridge at the eastern strike extension of the mineralized corridor.

Follow-up work is clearly warranted on the property - the following report documents the work completed on the property and recommends a follow-up geological mapping and diamond drill program.

## **2 Location and Access**

The Little Gem prospect is located within the Dickson Range near the head of Roxey Creek, 8 kilometres northwest of Gold Bridge. The mine workings are at the 1900 metre elevation, 2.3 kilometres northeast of Dickson Peak, 2.5 kilometres north of Mount Penrose and 5 kilometres northwest of Gun Lake. The town of Bralorne is located 17 kilometres southeast of the property.

Access to the property from Gold Bridge is via Gun Lake and thence on the Slim Creek logging road. At km. 12.9 on the Slim Creek road, a mountain road leads up Roxey Creek to the mine workings, a distance of 3 km. as the crow flies. The access road is

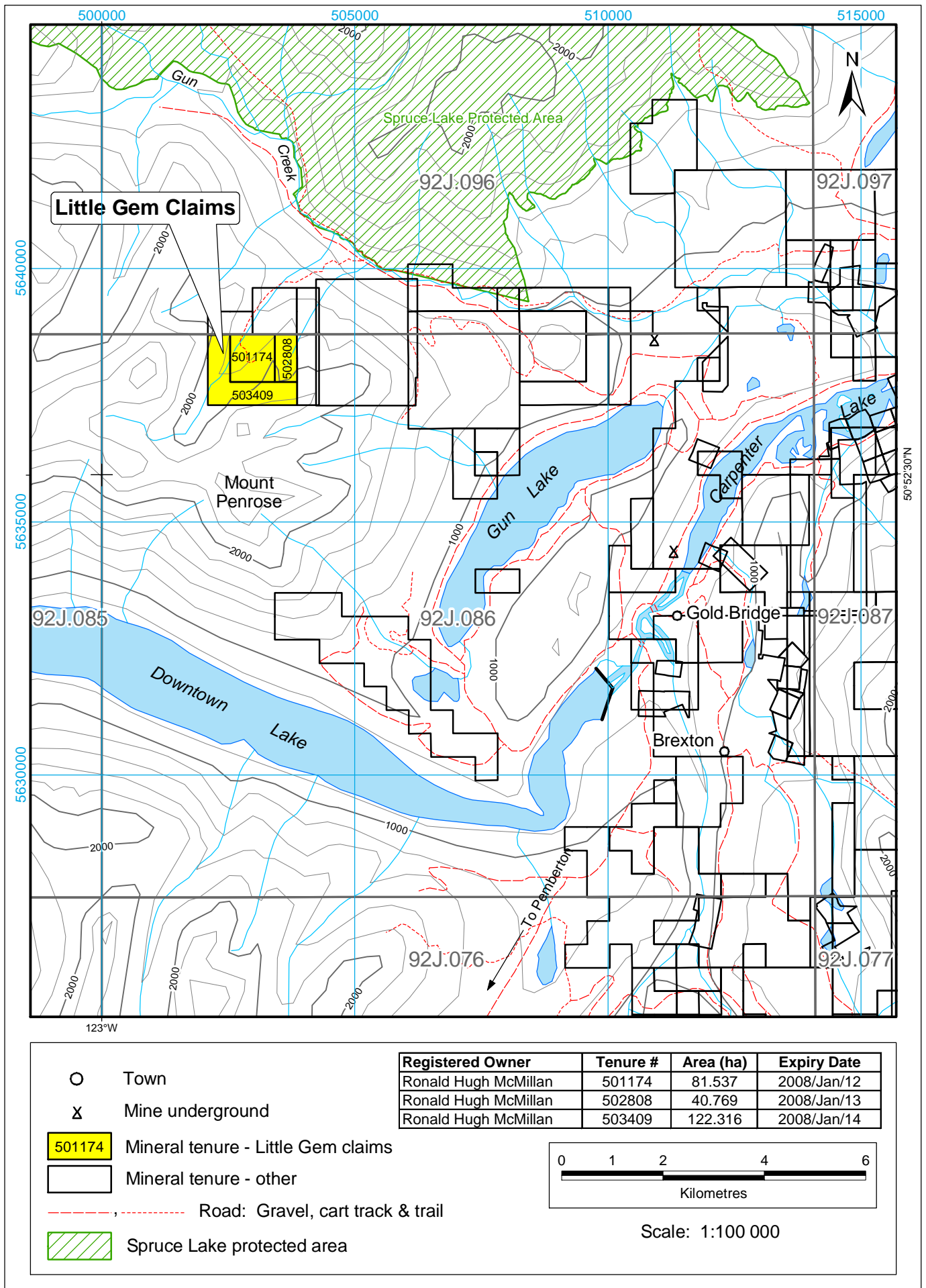
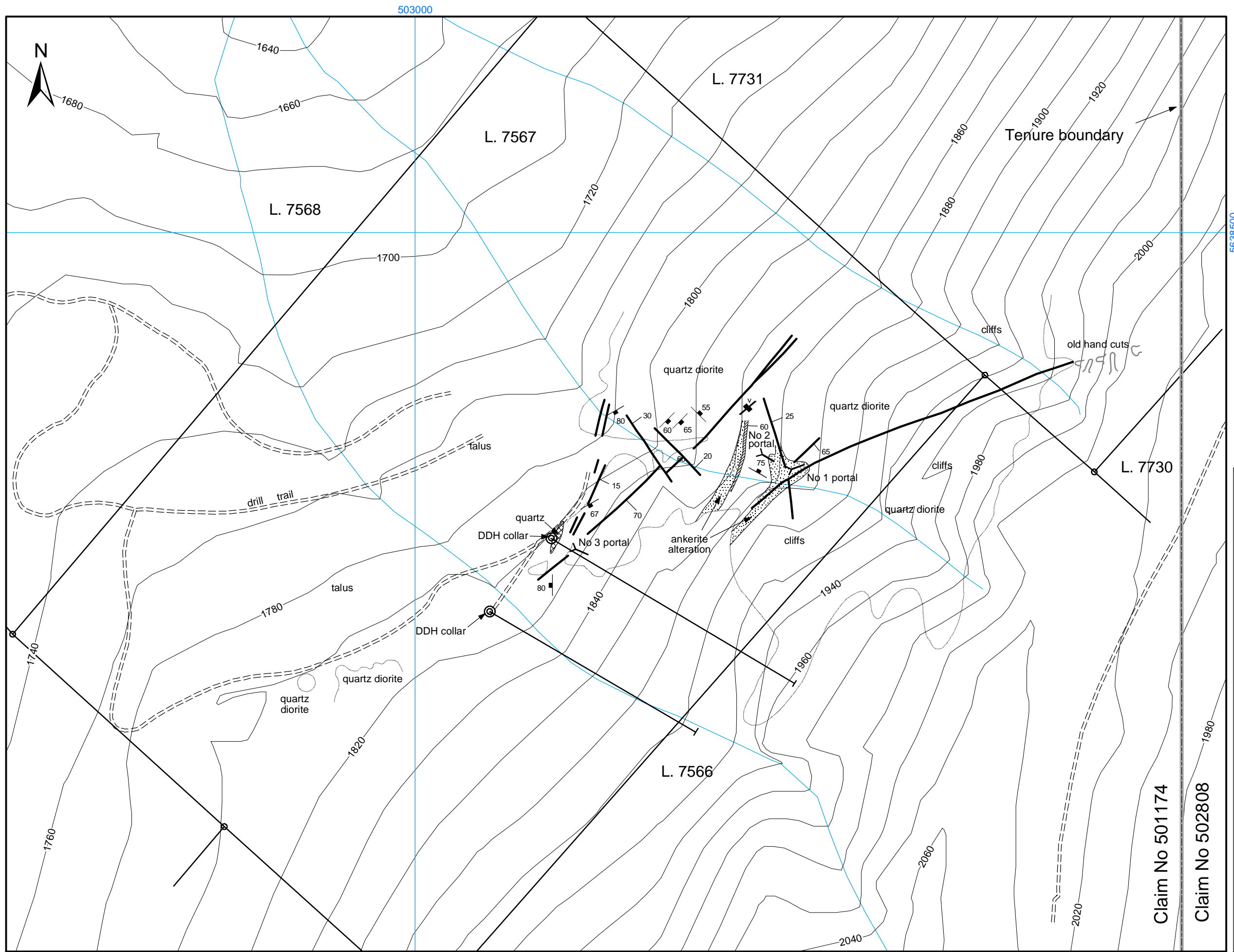


Figure 2 - Little Gem claims location



**Figure 3 - Surface Plan  
Little Gem Property**

Projection: UTM NAD 83

0 25 50 100  
Metres

- Jointing with dip
- Geological contact
- Fault with dip
- Outcrop outline
- Diamond Drill Hole collar
- Road, drill trail
- Ankerite
- Lamprohyre
- Quartz

(after Lammler, 1986)

partially overgrown by alders and willows at the lower end and some cutting will be necessary to allow four-wheel drive vehicle access.

### 3 Claim Status

The Little Gem Property comprises 244.6 ha in three mineral claims. (Figure 2, previous page). The claims are held in the names of Ronald Hugh McMillan (FMC # 132841) and listed in the table 1 (previous page). The three claims are owned jointly by Dr. Barry Neil Church (FMC # 141786) and the author, Mr. R.H. McMillan.

### 4 Physiography and Vegetation

The Co-Au showings are exposed on a steep hillside in the Dickson Range, part of the eastern Coast Mountain Ranges. Steep peaks are separated by wooded valleys and slopes. The timber line is between 1700 metres to 2100 metres in the area. The property is located on a west-facing timbered slope between the elevations of 1800 and 2100 metres. The area is timbered with douglas fir, spruce and pine with light undergrowth.

### 5 Past Exploration Work

Pink cobalt-bloom on weathered mineralization led to discovery of the Little Gem showings by prospectors W.H. Ball and William Haylmore in 1934 (MINFILE; Allen (1955)). The prospectors sold their interests to J.M. and R.R. Taylor in 1937. The property was then optioned to the **United States Vanadium Corporation** between 1938 and 1939, and during that time the upper (#1) adit and most of the lower (#2) adit were driven. United States Vanadium Corp. subsequently suspended operations in Canada.

In 1940, the property was optioned by **Bralorne Mines**. The #2 adit and two short raises were completed. Due to the war, the Bralorne option was dropped.

In 1952, **Estella Mines** optioned the property and completed a switchback road from the Gun Creek bridge to the Little Gem camp and completed twelve (12) short A-X diamond drill holes totalling 667 feet (203.4 metres) from the #2 adit. Allen (1956) reported incomplete results from seven of the drill holes as follows:

Hole# / length	Location	Angle	Dip	Core Length	Au Oz/ton	Co%
1 / 30 ft.	SW drift	S82E	0	2.5'	0.20	1.28
				20.0'	Disseminated sulphides and lost core	
				10.9'	0.36	1.39
				3.5'	disseminated sulphides	
2 / 24 ft.	SW drift	S88E	0	1.7'	0.28	0.93
				1.3'	massive sulphides and lost core	
3 / 28 ft.	SW drift	S12E	0	1.5'	0.28	2.34
				1.5'	massive sulphides and lost core	
				9.5'	0.35	0.90
4 / 28 ft.	SW drift	S17W	0	6.5'	massive sulphides and lost core	
5 / ?	SW drift	S52E	-25 <sup>0</sup>	3.3'	lost core and heavy sulphides	
				4.7'	massive to disseminated sulphides	
6 / 97 ft.	SW drift	S88E	-25 <sup>0</sup>	9.0'	lost core and massive sulphides	
				2.2'	lost core, massive to disseminated sulphides	
7 / 68 ft.	SW drift	N43W	-25	16.0'	lost core, massive to disseminated sulphides	
				4.0'	lost core, massive to disseminated sulphides	

*\*Measurements are all imperial.*

Estella Mines ran out of money and the property was obtained by **Northern Gem Mining Corporation** in December of 1955 – this company completed road work, camp improvements and some work on the mineral showings in 1956. The work included four AX-sized diamond drill holes totalling 697 feet (212.5 metres) from the #2 adit. Allen (1956) reported some of the results as follows:

Hole# / length	Location	Angle	Di p	From	To	Au oz/ton	Co%	U <sub>3</sub> O <sub>8</sub> %
1-56 / 167'	50 ft. in	S55E	-30	133.5	135.0	0.22	0.21	-
				138.0	139.0	0.54	0.54	nil
				139.0	145.0	3.26	2.42	Nil
				145.0	146.5	2.40	0.25	Nil
				146.5	151.5	Lost core		
2-56 / 225'	50 ft. in	S55E	-40	151.5	152.5	1.52	0.20	nil
				177.0	185.5	0.04	0.13	-
3-56 / 125 ft.	100 ft. in	S72E	-30	185.5	192.0	0.02	0.01	-
				83.0	88.5	0.04	0.08	-
4-56 / 180 ft.	100 ft. in	S72E	-40	88.5	97.0	0.04	0.11	-
				186.0	192.0	massive sulphides, not yet sampled		

*\*Drill hole locations are all measured from the portal of the lower adit.*

*\*Measurements are all imperial.*

In 1957, Northern Gem Mining Corp. completed 363 ft. (119 m.) of drifting and 50 ft. (16.4 m.) of crosscutting at the #1 adit. They also collared the #3 adit, completing 435 ft. (142.7 m.) of drifting and 70 ft. (23 m.) of crosscutting. They also completed 2,600 ft. (853 m.) of diamond drilling. As yet, the author has not been able to obtain any records of the results of this work – however Church (personal communication, 2007) possesses sketches of level plans showing portions of the drifting and crosscutting completed in the 1957 program. This plan shows part of the eastern portion of the #3 adit as being mineralized starting at about 10 metres from the portal.

**Major Resources Ltd.** held the property in 1979, and completed an airborne magnetic, VLF-EM and radiometric survey.

**Anvil Resources Ltd.** was the most recent company to hold the property, completing two surface diamond drill holes totalling 373.8 metres in 1986 (Lammle, 1986)

## **6 Geology**

Geologically, the Little Gem Mine workings and showings are underlain by granitic rocks of the Cretaceous to Tertiary Penrose Stock, a lobe of the Coast Plutonic Complex that projects east from Dickson Peak across Roxey Creek to Gun Lake (Church, 1995). Penrose Stock granitic rocks consist mainly of biotite hornblende granodiorite and some granitic phases that intrude Late Paleozoic to Mesozoic Ferguson Series cherts, argillites and limestones on the southwest. On the northeast the stock intrudes Late Paleozoic to Mesozoic Noel Formation black argillite, calcareous rocks and tuffs and serpentized peridotites of probable Jurassic age (Church, 1995). Lammle (1986) believes that the area of the mine workings was close to the upper contact of the Penrose granitic intrusive body which has been shallowly unroofed – his mapping documented



*“abundant xenoliths of recrystallized volcanic(?) rock that in all probability represents blocks that were incorporated into the quartz diorite during intrusion”.*

Stevenson (1948) noted the presence of three steeply-dipping feldspar porphyry dykes ranging from 25 centimetres to 16 metres in thickness associated with the showings – these dykes are of varying and different orientations from the altered and mineralized zones and were not considered genetically related to the mineralization. Lammler (1986) observed some lamprophyre dykes in the area of the showings.

### **7 Mineralization, Alteration and Veining**

The Little Gem mineralization consists of structurally-controlled lenses of semi-massive and disseminated mineralization associated with pegmatitic intergrowths of iron-cobalt sulpharsenides, allanite (Ce, Di, La and Y group bearing epidote), apatite, K-feldspar, quartz, chlorite, sericite, calcite, molybdenite and uraninite (Stevenson, 1948). Uraninite is associated with the non-metallic gangue minerals within the pegmatite lenses (Stevenson, 1948). According to Stevenson (1949), the *“massive sulpharsenide ore, containing the cobalt and associated gold, is a mixture of the cobalt-bearing variety of arsenopyrite (danaite) and loellingite-safflorite”*. Church (1995) also reports the presence of minor scheelite. The mineralized lenses range in width from several centimetres to a maximum width of 7 feet (2.1 metres) and occur in a steeply south-dipping east-trending zone (080°) of bleaching and sericitized granodiorite approximately 12 metres (40 feet) wide which has been traced for a length of approximately 40 metres (130 feet) in adit #1. Stevenson (1948) states that on surface and in the underground adits two subparallel zones of mineralization and two other possible sub-zones have been exposed. The mineralization is also exposed in adit #2, 58 feet (18 metres) lower in elevation. Stevenson (1948) also describes mineralization exposed in two *“open cuts and strippings further up the mountain-side, just below the top of the ridge at a point 450 feet (140 metres) above and 600 feet (180 metres) easterly from the upper adit”* (adit #1). The altered bleached granodioritic wallrocks consists of sericite and residual quartz with scattered needles of small diamond-shaped crystals of arsenopyrite. Allen (1956) obtained an assay of 0.27% Co across 30 feet (9.2 metres) on a zone of *“disseminated sulphides”* in bleached granodiorite in an outcrop below the trail, 45 metres southwest of the #2 adit portal. Stevenson’s maps and sampling results have been reproduced in Figure 5 and Table 2. Church (1995) notes *“a number of tan-coloured ankeritic carbonate zones associated with shears”* being *“conspicuous near the showings”*.

According to Stevenson (1948), *“gold is moderately widespread within the pegmatite lenses”*. Sampling by Stevenson (1948, Table 2) returned several results with assays between 1 and 2 ounces of gold per ton, with two specimens (samples #48 and #50) of selected material from the open-cuts near the top of the ridge assaying 23.34 and 45.92 oz/ton Au. In polished section, Stevenson observed gold intergrown with sulpharsenide minerals, between metallic and non-metallic minerals and some wholly within the non-metallic minerals. Uraninite on the other and is moderately fine grained

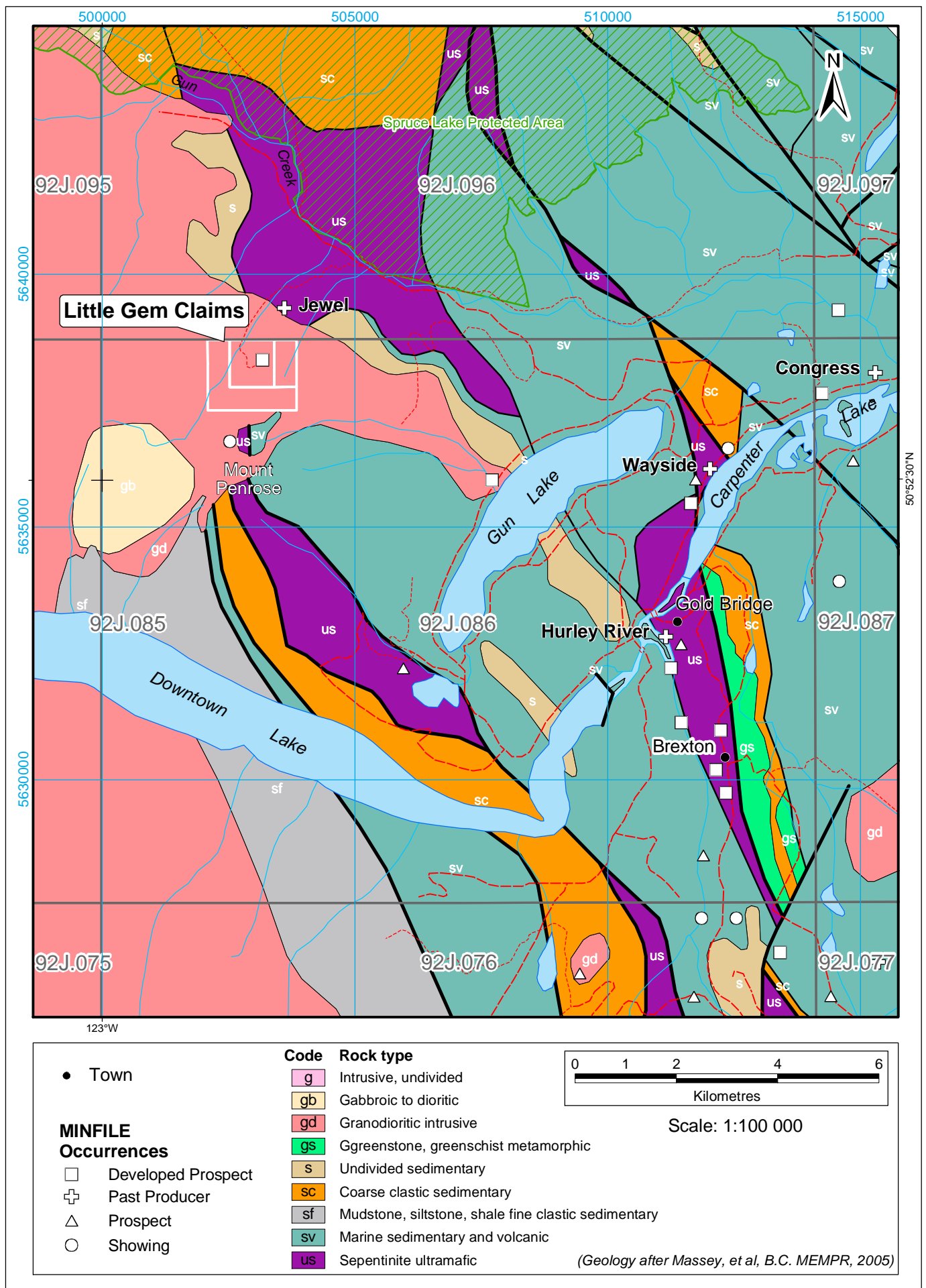
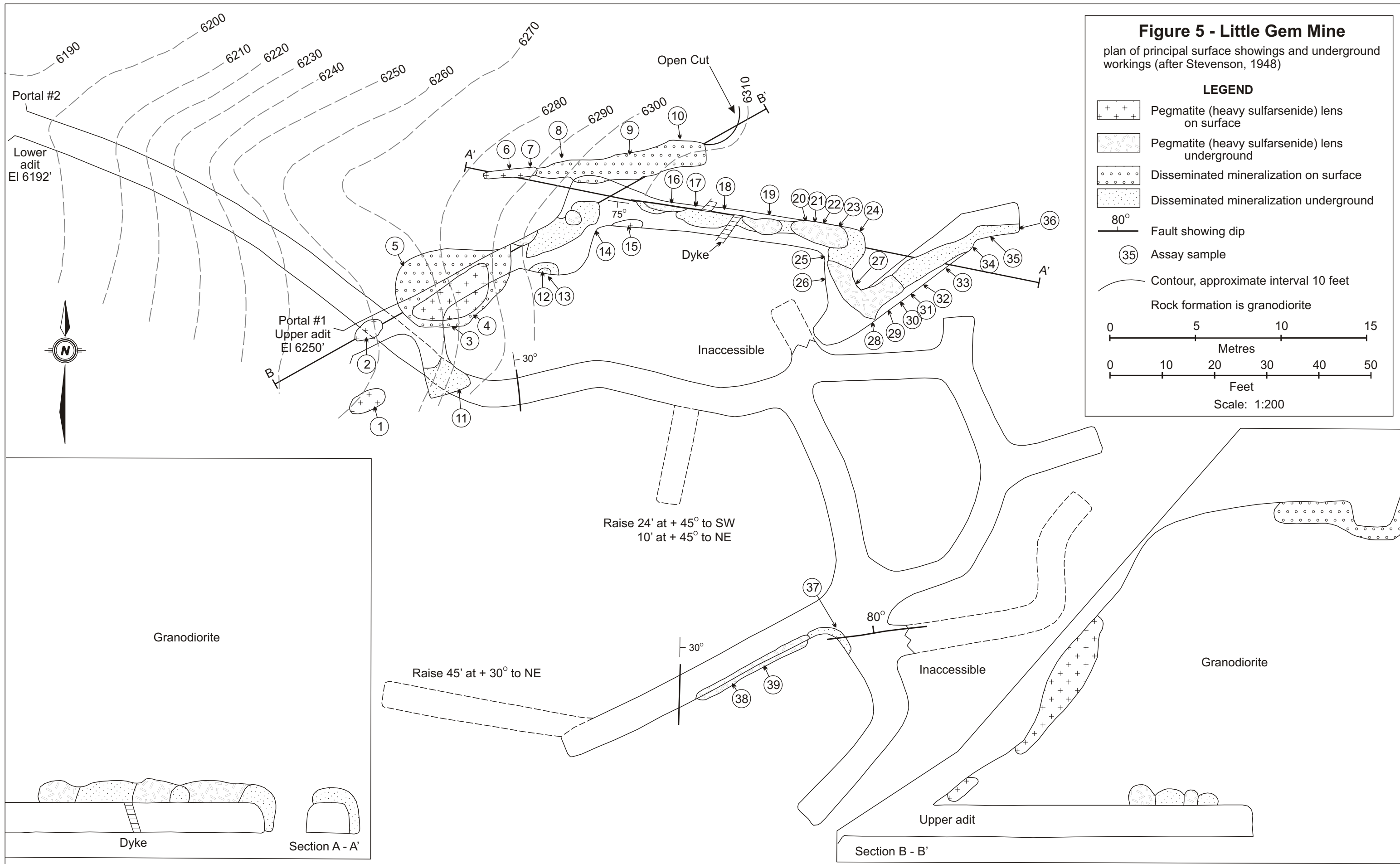


Figure 4 - Geology and MINFILE



## Assays, Little Gem Mine.

## CHANNEL SAMPLES.

Sample No.	Width.	Gold.	Silver.	Uranium-Oxide Equivalent.	Cobalt.	Iron.	Arsenic.	Sulphur.	Silica.
	Inches.	Oz. per Ton.	Oz. per Ton.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1.....	24	1.04	Nil	0.0055	3.6	.....	.....	.....	.....
2.....	30	0.41	Nil	0.0300	1.3	28.7	42.6	14.5	6.3
3.....	72	0.52	Nil	0.0220	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	0.0200	0.3	.....	.....	.....	.....
6.....	25	0.27	Trace	0.0035	4.4	.....	.....	.....	.....
7.....	24	0.35	Nil	0.0200	3.9	.....	.....	.....	.....
8.....	18	1.60	Nil	0.0070	4.3	25.2	42.2	14.2	2.7
9.....	60	0.27	Nil	0.0100	0.9	.....	.....	.....	.....
10.....	96	0.87	Nil	0.0030	0.8	.....	.....	.....	.....
11.....	60	0.22	Nil	0.0100	0.3	.....	.....	.....	.....
12.....	24	0.02	Trace	0.0140	0.5	.....	.....	.....	.....
13.....	13	1.24	0.1	0.0080	6.0	.....	.....	.....	.....
14.....	36	0.53	Nil	0.0380	3.5	.....	.....	.....	.....
15.....	12	0.61	Trace	0.0050	5.7	.....	.....	.....	.....
16.....	33	0.62	0.1	0.0220	4.1	.....	.....	.....	.....
17.....	36	0.51	Nil	0.0320	2.5	.....	.....	.....	.....
18.....	39	0.15	Trace	0.2100	1.5	.....	.....	.....	.....
19.....	36	1.09	0.1	0.0260	6.6	.....	.....	.....	.....
20.....	36	0.23	Trace	1.0100	1.3	.....	.....	.....	.....
21.....	38	0.48	0.3	1.5400	2.9	15.4	12.8	4.9	23.2
22.....	40	0.38	0.1	0.2400	3.0	.....	.....	.....	.....
23.....	53	0.84	0.3	0.5700	4.0	20.1	27.2	9.8	9.8
24.....	49	0.01	Nil	0.2300	0.7	.....	.....	.....	.....
25.....	52	0.51	0.4	0.2100	3.5	.....	.....	.....	.....
26.....	34	1.21	0.1	1.0400	5.3	21.7	36.8	13.0	9.5
27.....	23	1.78	Trace	0.5300	7.2	18.4	32.8	11.6	14.4
28.....	60	0.76	Nil	1.8900	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	0.0100	1.3	.....	.....	.....	.....
31.....	38	0.58	Trace	0.0030	0.6	.....	.....	.....	.....
32.....	24	0.83	0.1	0.0030	0.5	.....	.....	.....	.....
33.....	48	1.00	Nil	0.0030	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	0.0020	0.4	.....	.....	.....	.....
37.....	60	0.12	Trace	0.0040	2.0	.....	.....	.....	.....
38.....	80	2.21	Trace	0.8700	3.1	.....	.....	.....	.....
39.....	72	2.14	Nil	0.0180.	4.4	19.8	45.4	3.1	7.6

## MISCELLANEOUS SELECTED SAMPLES.

Sample No.	Description.	Gold.	Silver.	Uranium-Oxide Equivalent.	Cobalt.
		Oz. per Ton.	Oz. per Ton.	Per Cent.	Per Cent.
40	Upper adit, near Sample No. 27, sulpharsenide and non-metallics.....	0.66	Nil	0.130	2.4
41	Upper adit, near Sample No. 27, massive sulpharsenide.....	1.46	Nil	0.003	3.6
42	Upper adit, dump; mixed sulpharsenide and non-metallics.....	0.01	Nil	3.200	0.2
43	Upper adit, dump; principally non-metallics.....	0.06	0.1	0.350	0.91
44	Lower adit, near Sample No. 38, mixed sulpharsenide and non-metallics.....	1.66	Nil	0.210	4.4
45	Surface, near Sample No. 7; selected sulpharsenide crystals; also assaying (per cent.) Fe, 10.3; As, 60.7; SiO <sub>2</sub> , 2.7.....	0.28	0.1	0.005	6.2
46	Similar to Sample No. 45.....	0.33	Nil	0.002	6.5
47	Highest showings, higher of two open-cuts; across 3-inch rib of sulpharsenide and non-metallics.....	4.56	0.5	0.270	2.8
48	Location, ditto; check sample across same material as No. 47.....	23.34	0.6	0.375	4.6
49	Location, ditto; typical mineralization from ore-pile.....	7.04	Trace	0.750	4.5
50	Highest showings, lower of two open-cuts; across 15-inch wide lens of mixed sulpharsenide and non-metallics.....	45.92	1.8	2.800	5.7
51	Location, ditto; across a 2-inch rib of molybdenite in the sulpharsenide lens; Mo, 24.2 per cent.....	1.19	0.2	2.240	0.5
52	Location, ditto; typical mineralization from ore-pile.....	2.10	0.1	2.600	1.6

Table 2 - Assays - Little Gem Mine Property (after Stevenson, 1948)

(generally < 0.03 mm.) and occurs as widely scattered cubic or octahedral grains generally scattered throughout the non-metallic minerals (Stevenson, 1948).

Mapping by Lammler (1986) showed that, in general, the granitic hostrock is “*relatively unaltered. At the showings, however, it appears to contain a younger more felsic intrusion, and an occasional lamprophyre dyke, and is much faulted and fractured. Some of the stronger faults have acted as a plumbing system along which hydrothermal fluids migrated. and these have ankeritic alteration along them, and at the workings heavy to massive sulphide mineralization. The principal controlling fault system mapped trends east-southeasterly and dips at a steep angle into the mountain to the south: it is mineralized at the workings and near the divide between Roxey and Jewel Creeks, and is covered by overburden in the cirque basin of Roxey Creek*”. He further states that “*the projections along strike of this fault system have exploration potential both to the west and east, but complicating later faults of both steep and flat dips could offset the projections*”.

## **8 Mineral Resources**

No modern calculation of mineral resources for the Little Gem property has been undertaken and the available data is not of sufficient quality to calculate an estimate to current technical standards. Estimates however have been made in the past based on underground and surface channel sampling by Stevenson (1948) and the drilling by Estella Mines and Northern Gem Mining Corporation. These are included in this section as “*Historical Resource Estimates*”.

Allen (1956) calculated a resource of “*9425 tons (8570 tonnes) grading 0.67 oz./ton (23 g/t) Au, 2.97% Co and 0.25% U*”. This 1956 estimate was based on surface and underground channel sampling and diamond drilling within an area approximately 40 metres in length and 20 metres vertical extent. Apparently the mineralized pod remained open for expansion along strike and to depth. A later figure quoted in the Canadian Mines Handbook (1960, p.185), and presumably based on additional work, estimated “*20,000 tons (18,000 tonnes) averaging 0.65 oz/ton (22.3 g/t), 3.0% Co and 0.25% U<sub>3</sub>O<sub>8</sub>*”.

The author emphasizes that these “*Historical Resource Estimates*” do not comply with current NI43-101 criteria and should not be relied upon.

## **9 Metallurgy**

According to Allen (1956) “*extensive work by the University of British Columbia and British Columbia Research Council resulted in the development in the 1940’s of a flow sheet involving medium-to-high temperature and pressure leaching which would result in an indicated recovery of 90% cobalt and 98% gold. Results of recently completed research by Sherritt Gordon Mines and others have, however, so improved these methods that the Northern Gem Mining Corporation has been advised that treatment by leaching at normal pressure and temperature sufficiently low that no external heating is required, is applicable to the ore and recoveries as good or better than previously anticipated are assured.*”

CANMET (Jenkins, 1959) conducted some preliminary small-scale amalgamation, cyanidation, gravity and floatation concentration tests, in addition to mineralogical work (Hughson, 1958). Lammle (1986) references roast tests on mineral concentrates by a French company (Taramazzo, 1986) – unfortunately this and other information which were in the Anvil Resources Ltd. files are not currently available.

### **10 Present Work**

This report results from a one-day visit to the property, undertaken to assess the property in order to enable the author to recommend a program of follow-up work. Access to the property was by Cariboo Chilcotin helicopter piloted by Mr. Dick Wood. Potential drill site locations were examined and located with a portable GPS (global positioning system) unit. The GPS locations are tabulated below in Table 3:

***Table 3 - GPS Locations (NAD 83 )***

WP	NORTHING	EASTING	DATE	LOCATION
11 8	5640141.57	505318.1 4	23/09/2006	Spruce Lake Trailhead, Jewel Creek, km. 12.6 Slim Creek Road
11 9	5640431.92	504520.6 5	23/09/2006	Roxey Creek Bridge, km. 13.4 Slim Creek Road.
12 0	5640275.47	504997.0 8	23/09/2006	Little Gem Trailhead, km. 12.9 Slim Creek Road.
12 1	5638322.88	503350.7 3	23/09/2006	Ridge above Little Gem, Rusty Fe and Mn oxides on granite
12 2	5638236.94	503284.7 7	23/09/2006	Ridge above Little Gem.
12 3	5638029.31	503219.6 3	23/09/2006	Ridge above Little Gem, Helicopter pick-up spot.

### **11 Conclusions and Discussion**

1) The Little Gem (Northern Gem) claims cover significant showings of high-grade cobalt-gold mineralization with associated modest uranium values. These values are well documented by channel sampling and mapping by a Dr. John S. Stevenson (1948), a highly-reputable government geologist employed by the British Columbia Department of Mines.

2) Underground exploration and development and underground diamond drilling by several mining companies between the 1930's and 1957 outlined a "Historical Resource" of high-grade mineralization which at current prices could be valued at between US\$1500 and US\$1800 per ton. Unfortunately, the available data from these programs appears to have been misplaced after Anvil Mining terminated their interest in mining – as a consequence, the records may have been lost. Therefore the data presented in this report (*Section 5 – Past Exploration Work*) is incomplete and inconsistent and cannot be relied upon. A program of underground re-habilitation is clearly warranted to document the historical data.

- 3) The full extent of the high-grade mineralized “pod” has not been delimited – more drilling is warranted to fully explore the extent of the known mineralization.
- 4) There appears to be considerable exploration potential for more “pods” of high-grade mineralization along a corridor extending from the lower adit portal to the high-grade trenches at the ridge top, 300 metres east of and 180 metres vertically above the #3 adit. This could be explored from the # 2 and #3 adits, and from extensions of these adits.
- 5) The potential for a moderate-tonnage deposit of moderate grade “disseminated mineralization” has not been considered to date – Allen (1956) obtained assays of 0.27% Co across 30 feet (9 metres) from a zone of “disseminated sulphides” located 150 feet (45 metres) southwest of the #2 adit.
- 6) A further corollary or deduction from the presence of “disseminated sulphides” 45 metres southwest of the #2 adit is that the two Anvil Resources drill holes may have been collared in the hangingwall of the Little Gem structure – these holes therefore missed the mineralized structure. This suggests that the mineralized corridor remains open to the west and at depth from the #2 adit. Alternatively, there could be a fault offset and the two holes were drilled into the footwall and beneath the structure.
- 7) Documentation regarding past metallurgical test work is not currently available. However, recent work on ores with similar mineralogy has developed flow sheets that can recover the metals in the Little Gem ore. Should a small high-grade deposit of economic dimensions be defined, one option would be to direct-ship hand-sorted material to AREVA’s mill in Saskatchewan – the Midwest Lake Mine is scheduled to open shortly and will process ore of similar mineralogy to Little Gem (Hendry et al, 2005). Other possibilities are to ship the high-grade ore to Formation Capital’s Sunshine facility in Idaho, or possibility to ship it to smelters in Asia – possibly China or Korea.

If however, a sufficient tonnage of moderate-grade ore can be proven at Little Gem, a stand-alone milling operation will likely be feasible.

## **12 Recommendations**

- 1) An initial mapping project should be undertaken to confirm or negate the suggestions outlined in the above section (*Section 11 - Conclusions and Discussion*). A budget of \$25,000 should be adequate for a crew of two senior geologists to spend 4 to 6 days mapping the showings in detail, with an additional day to clear the access road. They could stay in Gold Bridge and would require a truck and quads (ATVs) for access. Digital TRIM maps could be used for basemaps.
- 2) An initial diamond drill program of four holes totalling 600 to 800 metres could be undertaken to test extensions on the mineralized corridor at the east and west ends. Two holes (350 metres) could be drilled from the ridgetop 300 metres east of the #3 adit. These holes would test the area under the high-grade trenches (Stevenson’s samples 47 to 52). The other two holes could be drilled from the area of the #3 adit – possibly directed

north-north-westward from the road southwest of the lower adit or possibly south-south-eastward from the bulldozer trenches approximately 100 metres north-northwest from the adit portal. The specific locations of the proposed holes would be determined following the mapping program.

3) The adits should be re-habilitated and initially an underground drill program completed from adit #2 to document the attitude of the high-grade lens. Drilling at 10 metre centres, a total of 18 drill holes totalling approximately 1000 metres should be adequate to complete the program, after which it should be possible to initiate data compilation for a NI43-101 compliant mineral resource.

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**Appendix 1 - Statement of Expenditures**

Charter Helicopter	Cariboo Chilcotin Helicopters, 23-09-2006	\$ 1,417.00
	1.3 hours @ \$1,090.00	
Report writing	R. McMillan 4 days @ \$ 600.00	\$ 2,400.00
Field Geologist	R. McMillan 2 days @ \$ 600.00	\$ 1,200.00
Travel costs		\$ 319.71
Reports and Maps		\$ 237.00
Drafting		\$ 1,500.00
	Total	<b><u>\$ 7,073.71</u></b>

## **Appendix 2 - Certificate**

I, RONALD HUGH McMILLAN, of 6606 Mark Lane, Victoria,  
British Columbia (V9E 2A1), do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1992, and with the Association of Professional Engineers of Ontario since 1981.
2. I am a graduate of the University of British Columbia with B.Sc. (Hon. Geology, 1962), and the University of Western Ontario with M.Sc. and Ph.D. (1969 and 1972) in Mineral Deposits Geology.
3. I have practiced my profession throughout Canada, as well as in other areas of the world continuously since 1962.
4. The foregoing report on the Little Gem Property is based on a review of published and unpublished information regarding the geological setting, styles of mineralization and results of previous exploration programs within the subject property. A one-day visit was made to the property on September 23, 2006.
5. I have a 50% interest in the mineral claims which constitute the Little Gem Property. Dr. Neil Church holds a 50% interest in the property.

R. H. McMillan Ph.D. P.Geo.

Victoria, B. C.  
15 January 2007