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Sheep Creek

SUMMARY REPORT

on the

NUGGET MINES PROPERTY

(NUGGET JOINT VENTURE)

Nelson Mining Division - British Columbia

Lat. 49° 10' N. Long. 117° 07' W.

N.T.S. 82 F/3

for

GUNSTEEL RESOURCES INCORPORATED

and

NUGGET MINES LTD.

by

D. G. Allen, P. Eng. (B.C.)

February 1987 Vancouver, B.C.

SUMMARY

Gunsteel Resources Incorporated holds a joint venture exploration agreement with Nugget Mines Ltd., owners of a gold property in the Sheep Creek mining camp of southeastern British Columbia. The Sheep Creek camp ranks sixth in the province in terms of gross gold production - 727,000 ounces from 1,744,000 tons of ore.

At least 20 veins are known on the Nugget Mines property. Most production has come from three veins (The Reno, Nugget and Motherlode Mines) which up to 1941 had produced 427,000 tons of ore containing 230,590 ounces of gold. This is 32% of the recorded gold production of the Sheep Creek camp.

The Nugget Mines property is situated 39 kilometres south of Nelson, 45 kilometres east of Trail and 12 kilometres southeast of Salmo. Access is by road, about an hour's drive from Salmo to the principal workings. The property is conveniently situated near the David Mineral's custom mill on Sheep Creek, and Cominco's smelter in Trail.

The Sheep Creek 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 quartzite) near the crest of the western anticline and western limb of the eastern anticline.

In 1982, a program of underground rehabilitation and sampling, 1,278 feet of surface diamond drilling in two holes, road construction and preliminary geochemical sampling was carried out by Carl Creek Resources Ltd. on the Nugget Mines property. Results of drilling on the O'Donnell vein were negative but did not eliminate the possibility of it being a productive vein. Underground sampling was carried out on the Nugget, Calhoun, Golden Belle and Bonanza veins. Ore reserves on the

Nugget-Calhoun system alone are 17,000 tons grading 0.35 oz/ton Au proven and probable and 20,000 tons grading 0.33 oz/ton Au possible (mining width of one metre). Extensive sections of the vein systems remain untested. In addition, modest reserves have been outlined on the Reno, Motherlode, Golden Belle, and Bonanza veins.

CONCLUSION

Exploration potential is considered excellent for establishing a desired objective of 75,000 to 100,000 tons of ore on the Nugget Mines property. Results of the 1986 program indicate that much of this potential reserve can be established on the Nugget-Calhoun vein system. Underground drifting and drilling on the vein system is increasing reserves substantially.

Veins in the Motherlode, Nugget and Reno mines locally split into branches (Nugget-Calhoun split) and appear as parallel or echelon veins (as in the lower Nugget veins). Such parallel veins may be important but in the past have been neglected as exploration targets. Drilling from the main workings should be carried out routinely, especially in lower levels where the main vein appears to weaken, to check adjacent wall rocks.

Potential exists for establishing mineable reserves on the Golden Belle vein (below the No. 2 level) and the Upper Bonanza veins. Other veins with good exploration potential include the O'Donnell vein (a strong fissure but apparently not mineralized where intersected in 1982 drilling) and the lower Bonanza veins (strong vein fissures but surface outcrops and underground workings are apparently above the productive horizon).

Favourable ore bearing rock units on the eastern and western anticlines are covered by Nugget Mines claims for strike lengths of 7.8 and 3.4 kilometres respectively. These units are covered by overburden on the Bonanza group claims, on the lower slopes of Sheep Creek, and on

the slopes north and southeast of Reno Mountain. Productive veins on the western anticline of Goldbelt property such as the Bluestone, 57, 64, 68, 8000, and 8200 veins can be projected onto Nugget's ground covering the eastern anticline. Further geochemical and geophysical surveys coupled with geological mapping and float prospecting are warranted in these areas.

Geological mapping should be carried out throughout the entire length of the property to define such structures as the Crescent, Lake, Clarence, 1500, etc. veins and any northeast structures that may be found.

The property is favourably situated in terms of access and proximity to a labour force and conveniences. A custom mill is situated on Lower Sheep Creek valley. The Cominco smelter is located about 60 kilometres away, by road, at Trail and its smelter schedule gives a favourable smelting rate for the high silica Nugget ore.

1986 PROGRAM

The exploration program on this property commenced in July 1986 with the completion of the initial financing to provide the funds. A total of $325,000 of flow-through monies were spent on the property during the year.

Work was mostly concentrated on the old Nugget mine workings which are located on the central part of the property. Considerable underground rehabilitation work was undertaken to obtain access to a number of prime targets which had been delineated by previous work and studies of the old mine records. Surface facilities, track, air lines, etc. were installed and other necessary work was completed so that work could be carried on continuously through the winter season.

An exploration tunnel was driven east on the No. 4 level of the Calhoun vein and an ore zone was encountered which averaged 0.56 ounces of gold per ton over an average width of 2.7 feet. A diamond drill hole which intersected the vein about 100 feet lower showed similar grade material. Preparations were being made to start another tunnel along the vein at an elevation 400 feet lower to check the downward extension of the ore zone.

A second exploration tunnel was driven west on the 100 sub-level of the Nugget vein. This is 100 feet below the No. 4 level. Samples taken along 86 feet of the tunnel averaged 1.14 ounces of gold per ton across an average width of 2.84 feet. This ore would average about $600 Canadian per ton at a gold price of $400 U.S. ($530 Cdn.) per ounce. The mining cost would be about $75 per ton.

The 1986 program was very successful in outlining further ore which compared very favourably in its gold content with ore that was mined in the past.

PROPOSED 1987 PROGRAM

1.) Continuation of the underground exploration program on the Nugget and Calhoun veins with the immediate objective of outlining a minimum of 100,000 tons of ore reserves sufficient to justify a production decision.

On the Calhoun vein this will include the continuation of the 400 sub-level tunnel eastward to check the downward extension of the ore zone which was exposed on the No. 4 level 400 feet above. Further diamond drilling and exploration drifting is then planned at elevations of 625 feet and 1250 feet below the No. 4 level as soon as rehabilitation work provides access from the adjacent workings. These workings can be reached from two other portals at lower elevations.

On the Nugget vein, the 100 sub-level tunnel which is being advanced in high grade ore will be continued westward. Also, further exploration will be done at lower levels and also the vein will be checked further east from the various levels.

2.) Completion of rehabilitation work on the No. 5 Motherlode level and portal, which will provide access to the Motherlode, North Motherlode, Ridge, Nugget, Calhoun, O'Donnell and 4 Fawn veins at an elevation 625 feet below the No. 4 level of the Nugget which is presently being used for access.

Diamond drilling will be done from the No. 5 Motherlode level to intersect a number of prime targets on the aformentioned veins and where positive results are encountered tunnels will be driven on the veins to expose ore zones which are found.

3.) Rehabilitation of the No. 10 Motherlode (4900) level and portal, which will provide access to the same veins as the No. 5 level but 1250 feet below the No. 4 level of the Nugget, and in addition will provide access for exploration of the Clyde and Golden Belle veins. Diamond drilling will be done from this level in the same manner as for the No. 5 level, and likewise it would be followed up by tunneling along the veins where the diamond drill results warranted.

4.) On the Fawn No. 1 vein, which is 1200 feet north of the Nugget vein, two diamond drill holes have now intersected ore about 100 feet below an ore zone which is exposed on the No. 5 level, which is the lowest existing working on this vein. Further diamond drilling is planned to check the downward extension of this ore zone. If the diamond drill results continue to be positive, a lower level tunnel would be driven northward about 1000 feet from the existing No. 5 level of the Nugget workings which are about 550 feet deeper in elevation. Such a tunnel would also provide access to four other veins besides the one now being drilled. A raise may also be driven from the No. 5 level to check the upward extension of the ore zone.

5.) It is planned to rehabilitate the lower portal of the old Reno mine to obtain access for drilling and underground exploration of the Middle, Donnybrook and Lake veins, and to check some lower grade ore remaining on the Reno vein. This latter vein produced a total of 261,500 tons of ore which averaged 0.56 ounces of gold per ton. The other three veins mentioned above lie to the north of the Reno vein and were not extensively explored when the mine was operating.

6.) An extensive surface exploration program is planned for the summer on other parts of the property to search for new veins in overburden covered areas and any undiscovered ore zones on the 20 known veins.

INTRODUCTION

Gunsteel Resources Incorporated holds an option on the Nugget Mines Ltd. property in the Sheep Creek gold camp. Carl Creek Resources formerly held an option on the property and in 1982 financed an exploration program consisting of diamond drilling, underground rehabilitation and sampling, road construction, preliminary geochemical surveys, and further claim acquisitions. Work was supervised by D. G. Allen of A & M Exploration Ltd. and Nugget Mines Ltd.

This report is a summary of a more comprehensive report covering the results of the 1982 exploration program and an update on the 1986 program. Selected illustrations accompany this report. The report is based on fieldwork carried out by A & M Exploration Ltd. and Nugget Mines Ltd. and on records of Reno Gold Mines Ltd., and data from B.C. Department of Mines Bulletin 30 (Mathews, 1953).

The Sheep Creek gold camp has a recorded production of 727,000 ounces of gold from 1,744,000 tons of ore from 32 veins which at current gold prices ($540 Can. per ounce) would have a value of $392,580,000. A such the camp ranks sixth among gold producers in British Columbia.

A total of 427,000 tons with an average recovered grade of 0.54 ounces per ton gold has been mined from the Nugget Mines property. Most production has come from the Reno Mine (261,500 tons), Motherlode Mine (108,000 tons) and the Nugget Mine (57,500 tons). Gold produced from these mines represents 32% of the total production of the camp.

Nugget Mines Ltd., Goldrich Resources Inc. and Amore Resources Ltd. control most of the former producers in the Sheep Creek camp. Proven ore reserves of 40,000 tons grading 0.5 oz/ton Au are reported on the Goldbelt property (1981 Annual Report, Goldbelt Mines Inc.).

LOCATION AND ACCESS

The Nugget Mines property is situated in southeastern British Columbia 12 kilometres southeast of Salmo, 39 kilometres south of Nelson, and 45 kilometres east of Trail (Figure 1). The Nugget claim group lies on the north side of Sheep Creek between elevations 3,700 and 7,276 feet. The Bonanza claim group lies between elevations 3,000 and 6,000 feet on the southeast side of Waldie Creek, a tributary of Sheep Creek. Access is by Highways 3 and 6 to Lower Sheep Creek and thence by good gravel road up Sheep Creek to Nugget (Fawn) Creek (Figure 2). The Nugget 4 level, Motherlode 5 level, and Reno 5 level mine workings are accessible by 2 or 4 wheel drive vehicles from the Sheep Creek road.

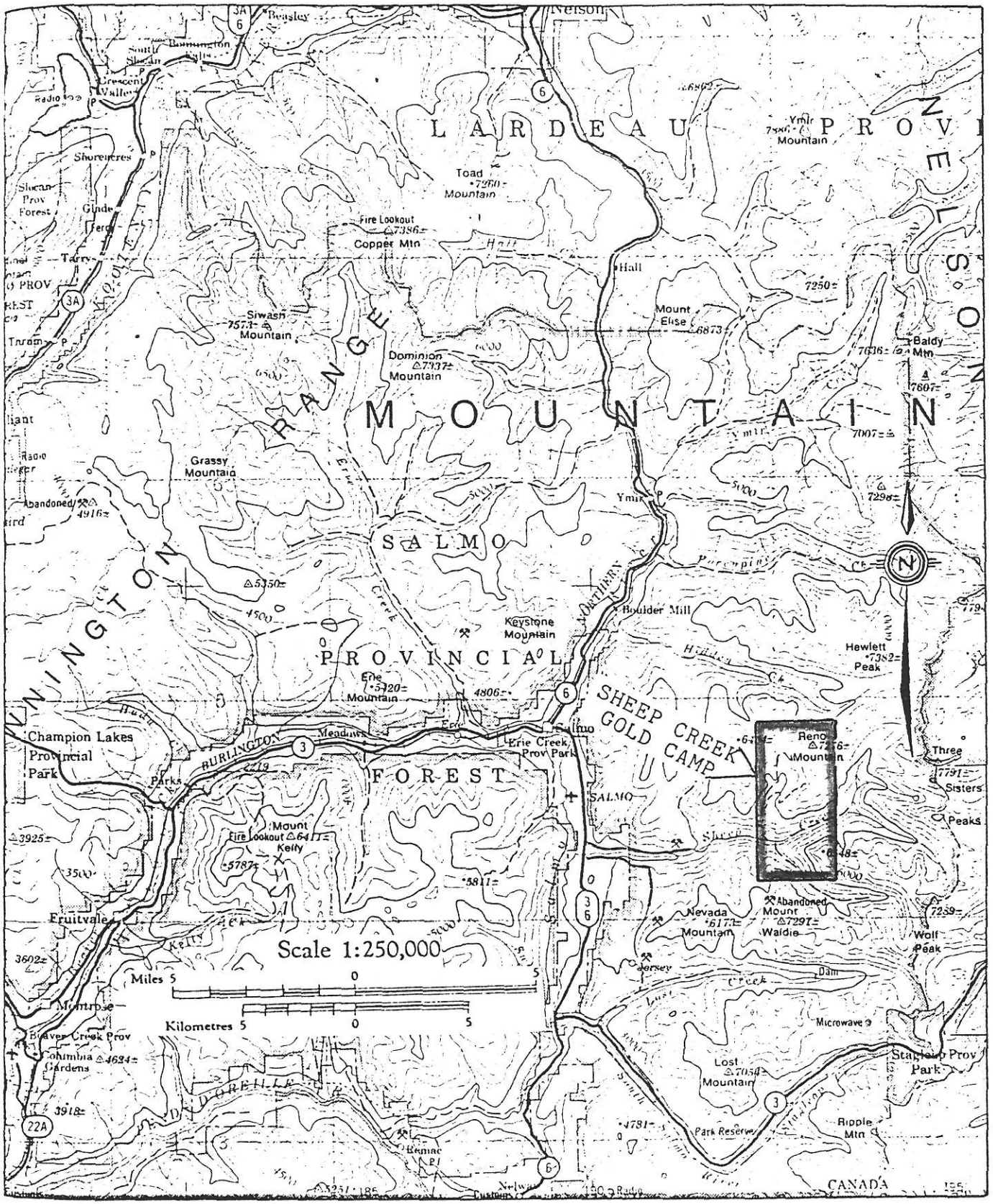
PROPERTY OWNERSHIP

The Nugget Mines property comprises 119 claims and claim units, the details of which are tabulated on Table I and shown on Figure 3. The claims are held by Nugget Mines Ltd. and by the Endersby family in trust for Nugget Mines.

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



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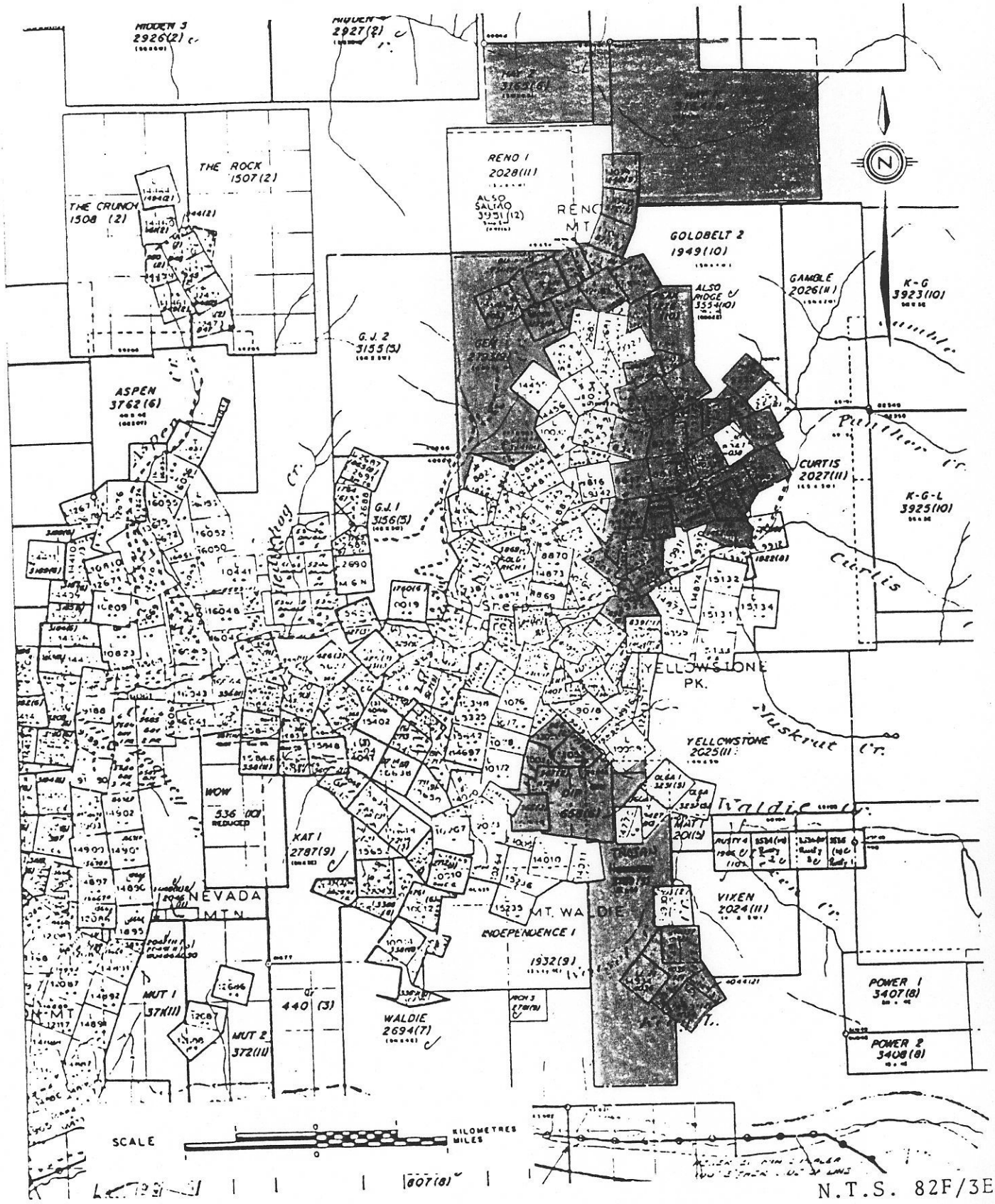
GUNSTEEL RESOURCES INCORPERATED

ACCESS MAP

NUGGET MINES PROPERTY

Nelson Mining Division - British Columbia



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GUNSTEEL RESOURCES INCORPORATED

CLAIM MAP

NUGGET MINES PROPERTY

Nelson Mining Division - British Columbia

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Figure 3

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 the 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 Belle 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.

In 1986 Nugget Mines Ltd. entered into a joint venture agreement with Gunsteel Resources Incorporated whereby Gunsteel can earn up to a 50% interest in the Nugget Mines property. Gunsteel is funding the present underground rehabilitation and exploration program.

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 and Figure 4). 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

TABLE 2 SEDIMENTARY UNITS

Correlation of Sedimentary Rocks

Walker (1934)	McGuire (1942)	Mathews (1950)	Park and Cannon (1943)
Pend d'Oreille series: Lower part.	Pend d'Oreille series:	Laib Group (1,000 ft.+).[2]	
Reno formation.	Reno series: Reno argillite.	Reno formation (50 to 900 ft.).[2] Upper Reno. Lower Reno.	Maitlen phyllite.
Quartzite Range formation.[1] (Quartzite 2,600 ft.)	Reno quartzite. Reno argillaceous quartzite.	Quartzite Range formation (2,000 ft.±).[2] 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.)[1]	Motherlode series: Motherlode quartzite. "Basal" argillites.	Motherlode member (1,000 to 1,100 ft.): Upper Motherlode. Middle Motherlode. Lower Motherlode.	
Three Sisters formation.		Three Sisters formation (500 ft.+).[2]	

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

Table of Formations

Age	Formation			Lithology	Thickness in Feet	
Lower Cambrian	Laib Group			Argillite.	200[1]	1,000+[1]
				Grey limestone.	150[1]	
				Argillaceous in some localities, elsewhere dominantly calcareous.	300–500[1]	
				Limestone and argillite.	150–300[1]	
				Argillaceous beds, biotitic and amphibolitic schists.	100–300[1]	
				Limestone.	0–60[1]	
Precambrian (?)	Reno Formation	Upper Reno		Impure dark bluish or greenish quartzite with some grit beds.	125[2]	50–900[1]
		Lower Reno		Argillite, argillaceous quartzite.	450±[2]	
	Quartzite Range Formation	Navada Member	Upper Navada	Massive white quartzite.	20–160	120–300
			Lower Navada	Dark, thin-bedded quartzites and argillaceous quartzites.	100–140	
		Nugget Member	Upper Nugget	Massive white quartzite.	135–375	540–900
			Middle Nugget	White, grey and dark quartzites, dark argillaceous quartzites, and argillite.	175–300	
			Lower Nugget	Argillite and dark argillaceous quartzite.	150–225	
		Motherlode Member	Upper Motherlode	Massive white quartzite.	370–450	1,000–1,100
			Middle Motherlode	Argillite, grey grit and green schist.	50	
			Lower Motherlode	Massive white quartzite.	500–700	
	Three Sisters Formation			Grey grit, white quartzite and grit and green schists.		500+[1]

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

After Mathews (1953)

discontinuous, 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.

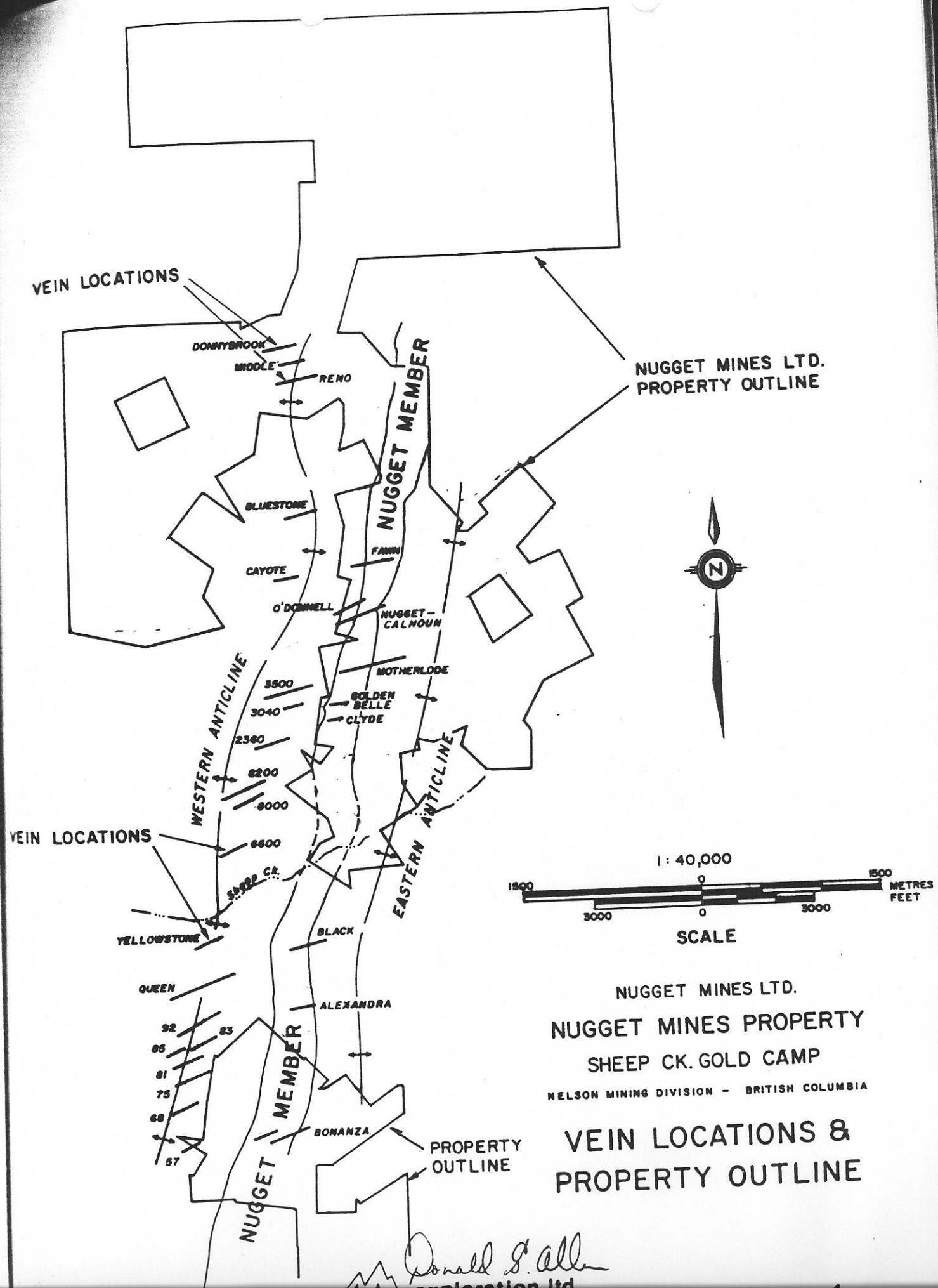
MINERALIZATION

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 - see Figure 4) 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 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 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.



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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 DESCRIPTIONS

A total of 20 veins are known on the Nugget Mines property. The Lake, Donnybrook, Middle, Reno, Crescent and Clarence veins occur in the Western anticline and the remainder in the Eastern anticline.

Information from underground plans and sections and weekly to monthly progress reports of Reno Gold Mines Ltd., where relevant to outlining potential reserves, has been summarized and presented on vertical sections of the veins (Figures 7a to 7k). Also plotted are sample sites and results from this study, and outlined ore blocks.

A brief description and note on exploration potential for each vein follows.

Bonanza Veins

The Bonanza north and south veins are developed by four adits, three of which are in good condition (Figure 7a). 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.

Clyde Vein

The Clyde vein is accessible by two adits. Results of preliminary sampling are negative but additional sampling is warranted to check the 1910 B.C. Minister of Mines Annual Report mention of gold in payable quantities across 24 inches of this vein.

Golden Belle Vein

The Golden Belle vein is developed by 3 adits. The upper two adits were rehabilitated in 1982 and sampled. Results confirmed the

presence of an ore shoot near the junction of two vein structures. A limited tonnage in the probable and possible catagories can be outlined. Diamond drilling is recommended to test the downward projection of this ore shoot. Further sampling is warranted to check results from the 1 level reported in Minister of Mines Annual Report.

Motherlode Vein

The Motherlode vein (figure 7d) is accessible from adits on the 4, 5, and 10 levels. A modest tonnage of ore in various categories is present. Should mining be undertaken on the Nugget-Calhoun vein system, then it may be possible to exploit them. A surface sample taken east of the open stopes (2NA 139 - 0.36 oz/ton Au over 0.3 m) on surface indicates exploration should be extended to cover the Motherlode member.

Ridge Vein

The Ridge vein is partly exposed in a trench on the surface between the Motherlode and Nugget veins. The trenches are filled with rubble, however, vein material lying in and around the trench was sampled and found to grade 0.56 oz/ton Au (2Na 72). Reno Gold Mines records indicate a 6 to 8 inch vein in this area. Trenching and three to four diamond drill holes are recommended in the favorable horizons to test this vein.

Nugget Vein

The Nugget vein is accessible from the 4 and 5 levels. Sampling was carried out on the 2 level and 200 and 400 sublevels (figure 7e). Results confirmed the presence of an ore shoot on the 200 sublevel (although slightly to the east relative to that indicated by Reno Gold Mines). Previous data on the 400 sublevel was not entirely confirmed. more detailed sampling will be required to substantiate the 12 metre interval indicated by Reno Gold Mines. For the purpose of this report, the old data is assummed to be reliable. Calculated reserves are 7,270 tons grading 0.45 oz/ton Au and 16,450 tons grading 0.35 oz/ton Au in the proven-probable and possible categories respectively.

The Calhoun vein is the north split of the Nugget vein - the trace of their junction is plotted on figure 7f. The lower levels of the Nugget vein are developed on two veins, one of which may be an en

echelon vein or the most northerly may actually be the Calhoun vein. Drifting to the west on 100 and 200 sublevels is recommended to substantiate the presence of the block A ore shoot.

Calhoun Vein

Results of sampling, combined with new interpretations, indicate considerable potential for developing additional ore reserves on the Calhoun vein (figure 7f). Results of sampling on the 2 and 3 levels indicate substantial reserves (Table III). Submarginal grades are found on the 100 and 200 sublevels but underground development has been limited and the vein to the east is entirely unexplored.

A sample grading 0.39 oz/ton Au (5497) from the 400 sublevel was taken on the Calhoun near its junction with the Nugget. The latter vein has been stoped below this level but development has not been carried out on the former. Drifting to the east should be carried out on all levels of this vein.

The caved stope on the 5 level (east of sample site 139, figure 7e) should be rehabilitated to provide access for sampling and locating the position of the Nugget-Calhoun split. Part of the eastern 5 level on the Nugget section may actually be on the Calhoun vein.

O'Donnell Vein

The O'Donnell vein is accessible from the Nugget 4 level crosscut. The drift on the O'Donnell vein did not reach the favorable quartzite of the Upper Nugget Member. The strong fissure observed in the drift and low gold values obtained suggested that good ore potential should exist where the fissure intersects quartzite of the Nugget Member. However, two drill hole intersections yielded negative results. Additional drilling is warranted from Nugget workings in the south to further test the vein.

Fawn Veins

The Fawn veins have been explored by 6 adits. A small tonnage of high grade material (75 tons containing 130 oz Au) was reported to have been produced, presumably from the upper levels. Because assay records are incomplete, the lower workings should be opened up and mapping and sampling carried out.

Reno Vein

Except for scattered blocks of low grade ore (block A) and relatively inaccessible ore (blocks B to G, figure 7i), the Reno vein would appear to be essentially mined out. A total of 6380 tons of material grading 0.14 oz/ton (block A) probably exists between 4 and 5 level. The grades reported from the stope above this block (above 4 level) were erratic but locally high grade. Ths zone could be tested and sampled by driving a raise. The 5 level should be rehabilitated (at least 2 caved areas are known) to provide access to block A and to the crosscut to the Donnybrook and Middle veins.

Middle Vein

The Middle vein was encountered by Reno Mines while driving a crosscut from the Reno 5 level to the Donnybrook vein. Drifting on the vein over a length of 350 metres indicated erratic grades and narrow vein widths. However, no testing has been undertaken at lower elevations.

Donnybrook Vein

The Donnybrook vein was explored from the surface, by drilling and by drifts and a raise from the 5 level of the Reno Mine. Grades are interesting although the vein, where intersected, is narrow (0.3 m or less). However, work to date has tested only a small portion of the vein in favorable host rocks.

Other Veins

The Crescent vein is reported by O'Grady (1927) to lie 400 feet to the south of the Reno vein. Stripping and trenching is reported to have revealed similar vein filling and mineralization. O'Grady reports the presence of "rich float" over a considerable area south of the Crescent vein, indicating the presence of another vein or veins.

In addition, references to the Lake, Clarence, 1500 vein and Golden West vein are found in Reno Gold Mines and B.C. Minister of Mines reports but no data is available.

ORE POTENTIAL

Past production from the Nugget property has come mainly from three veins, the Reno, Nugget and Motherlode veins as follows:

Vein	Tonnage	Grade
Motherlode	108,000	0.48 oz/ton Au
Nugget	57,500	0.56 oz/ton Au
Reno	261,500	0.56 oz/ton Au

Results of sampling in 1982 and a study of records of Reno Gold Mines Ltd. indicate that at least five veins on the property contain mineable or potentially mineable reserves. The best potential for quickly developing readily mineable reserves is on the Nugget-Galhoun vein system because 1) it was not completely mined out and 2) underground development is already in place and workings have been rehabilitated to the point where further development can be carried out.

Vein sections for the known potentially mineable veins are presented in Figures 7a to 7i, and reserves summarized in the following table. For a summary of ore reserves by block, see Allen, 1983.

TABLE 3 SUMMARY OF RESERVES

VEIN	PROVEN - PROBABLE Readily mineable		POSSIBLE Readily Mineable		PROVEN - PROBABLE Access Difficult		POSSIBLE Access Difficult	
	Tons	Grade oz/ton Au	Tons	Grade oz/ton Au	Tons	Grade oz/ton Au	Tons	oz/ton Au
BONANZA	1,090	0.55	1,880	0.55				
GOLDEN BELLE					1,190	0.32	890	0.32
MOTHERLODE	2,320	0.33	1,110	0.42	970	0.41		
NUGGET	7,270	0.45	16,450	0.35				
CALHOUN	9,800	0.28	4,070	0.3				
RENO					9,780	0.29		
TOTAL	21,400	0.37	23,510	0.36	11,940	0.30	890	0.30
RENO (low grade)	6,380	0.14						

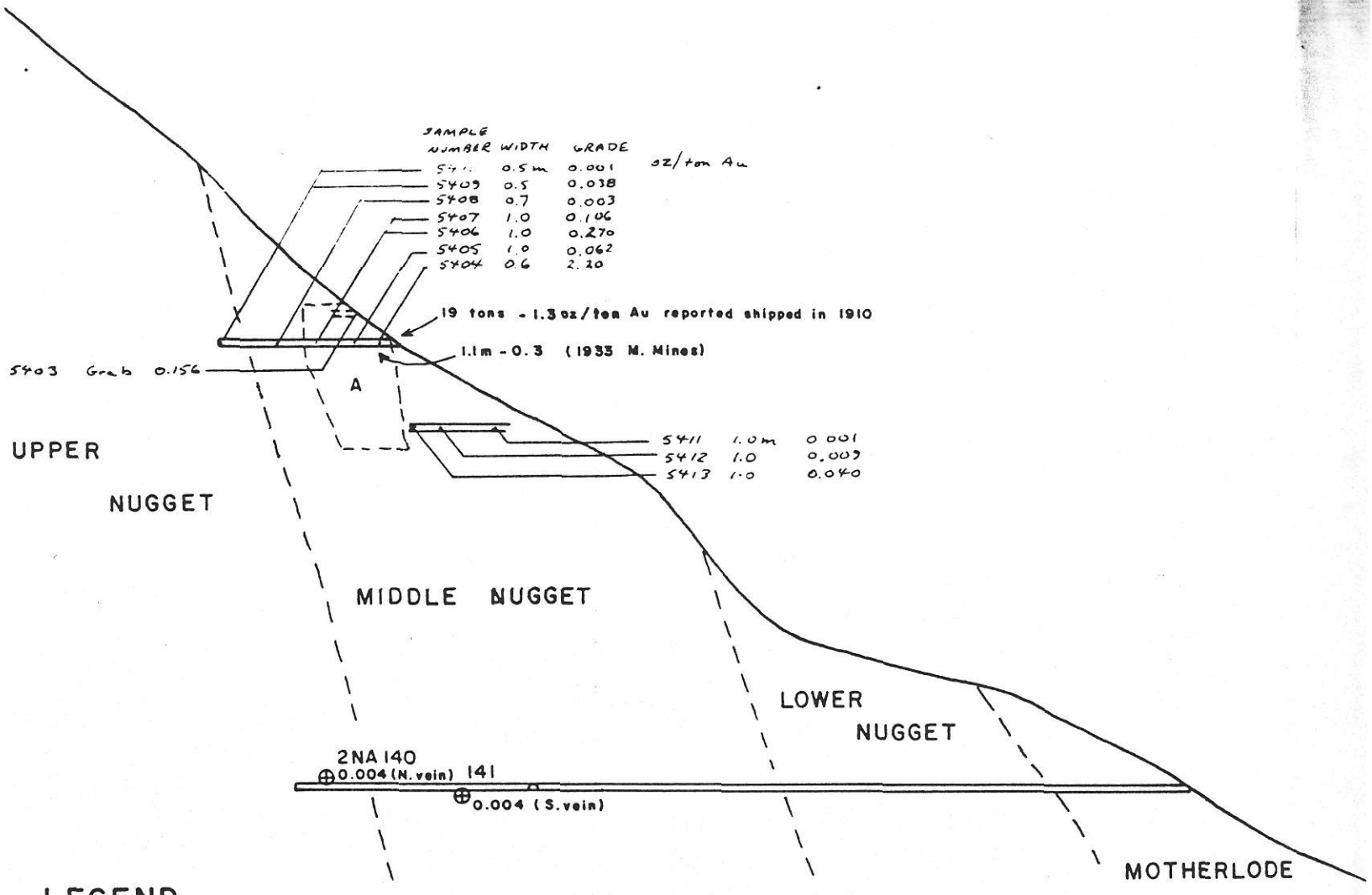
Calculations are based on a mining width of one metre. Three classes of ore reserve calculations are used:

1) Proven-probable reserves - tonnage is calculated from dimensions revealed in underground workings and partly from projections over a reasonable distance;
2) Possible reserves - tonnage is calculated on the basis of a geological projection and a few samples or measurements.
3) Reserves of difficult accessibility - as above but not mineable at present mainly because of access difficulties.

With more detailed sampling, reserves presently classed as proven--probable can be included solely in the proven category.

Surface exploration for new veins, expecially in areas covered by extensive overburden, was initiated in 1982. This work consisted mainly of soil sampling on the Bonanza and the southern Nugget groups of claims. Scattered geochemical anomalies (lead > 30 ppm, zinc > 200 ppm and gold > 20 ppb) were obtained (see Allen, 1983). Follow-up detailed sampling, geophysical surveys and trenching or diamond drilling are recommended. In addition, the soil survey grid should be extended to cover all favourable host rocks.

Donald F. Allen



LEGEND

E, ORE RESERVE BLOCK

. SAMPLE SITE, SAMPLE NUMBER. (June, 1982)

- HOLE INTERSECTION

'LE NUMBER, WIDTH, GRADE (oz/ton Au)

TH, AVERAGE WIDTH, AVERAGE GRADE (oz/ton Au)

'UTED NET SLIP

1 : 2500

0 100 METRES

0 300 FEET

A&M exploration ltd

CARL

NUGGE

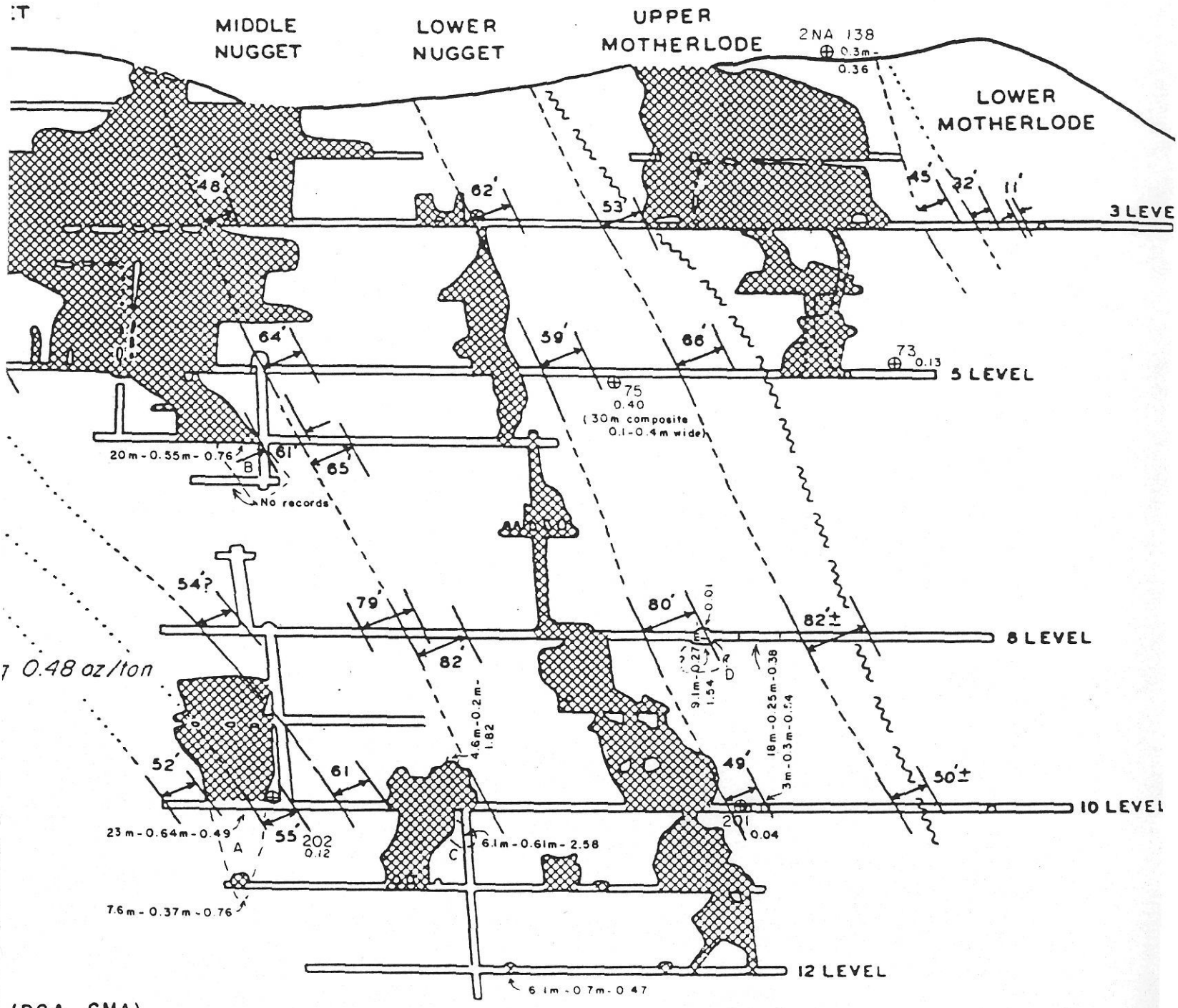
SHE

NELSON MI

LONG

B

LOO



(DGA, GMA)

RADE (oz/ton Au)

NUGGET MINES LTD.
CARL CREEK RESOURCES LTD.

NUGGET MINES PROPERTY

SHEEP CREEK GOLD CAMP

NELSON MINING DIVISION - BRITISH COLUMBIA

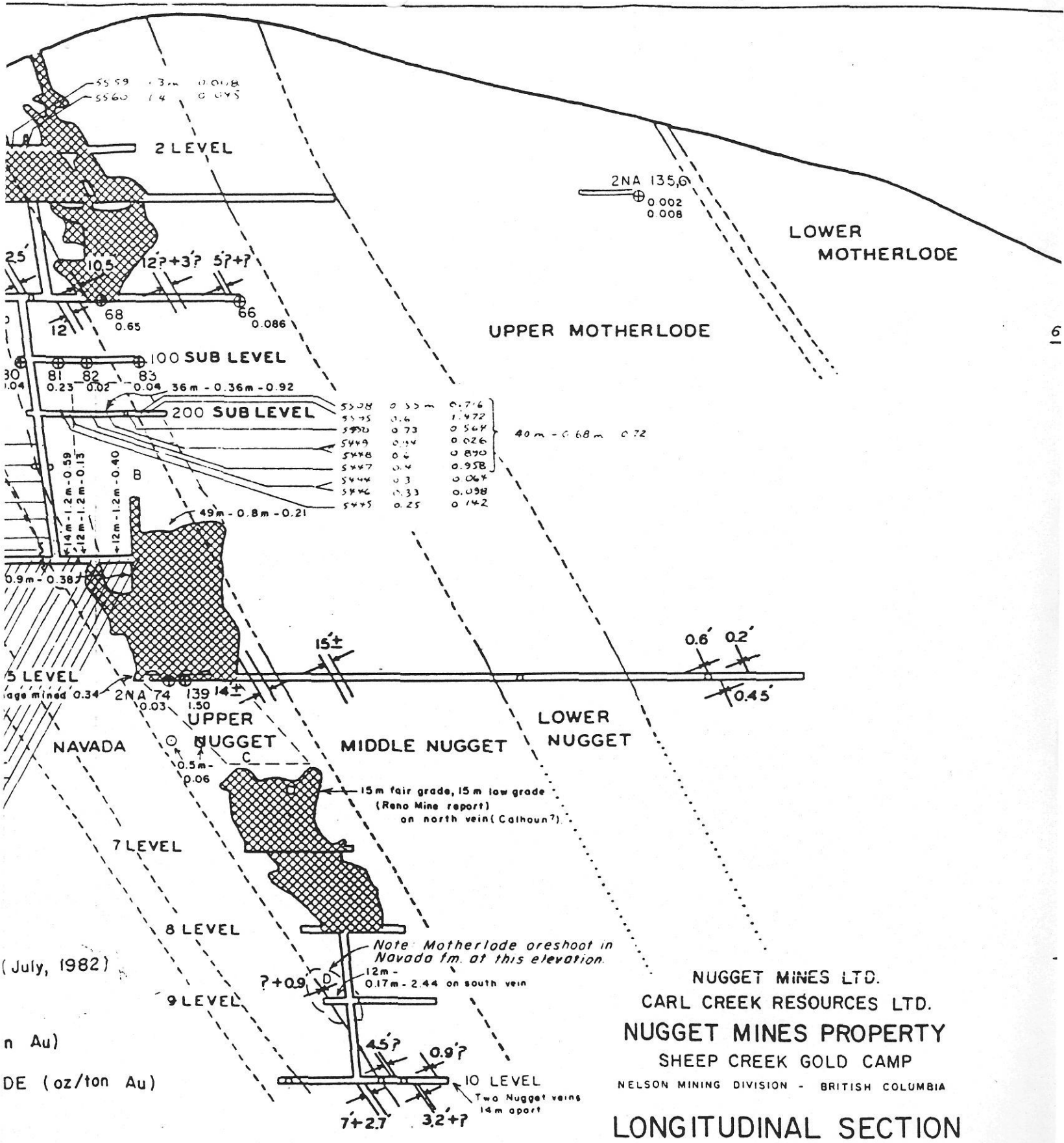
LONGITUDINAL SECTION OF THE MOTHERLODE VEIN

LOOKING NORTHWESTERLY

Donald G. Allen

A&M exploration ltd

Figure



(July, 1982)

n Au)

DE (oz/ton Au)

NUGGET MINES LTD.

CARL CREEK RESOURCES LTD.

NUGGET MINES PROPERTY

SHEEP CREEK GOLD CAMP

NELSON MINING DIVISION - BRITISH COLUMBIA

LONGITUDINAL SECTION OF THE NUGGET VEIN

LOOKING NORTHWESTERLY

A·M exploration ltd.

Figure 7

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