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PROGRESS REPORT

ON

MUTUAL RESOURCES LIMITED

BONANZA PROPERTY

1981 PROGRAM

LILLOOET M.D.

N.T.S. 92-O-2W

DECEMBER 1981

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CONTENTS

FOREWORD

Following programs of road construction, trenching, rock sampling and mapping during the autumn of 1979 and summer of 1980 with disappointing results, the 1981 program was intended more as a follow up to this activity rather than as an initiation of any new overall plan of investigation. Activity and results of such work comprise the body of this progress report. Some new areas were trenched to contribute additional exposures for sampling; but geology as reported in the previous year by Messrs. Scott and Gibson remained essentially unchanged. In frequently-highly-weathered outcroppings field determination of rocks can be difficult i.e. distinguishing between leucogranite and highly weathered quartz diorite, diorite from quartz diorite, or sediment from volcanics. Discrepancies affect mapping accuracy and possibly ultimate interpretation.

Pressure by ecological and other groups on the Department of Mines during the season resulted in temporary cessation of activity following instruction from the reclamation department in Victoria. Commencement of backfilling of some of the more visible (alpine) trenching has served to ease sech pressure. The Ministry of Forests on June 30, 1981, issued its Spruce Lake Integrated Resource Management Plan which contains guidelines for resource and service industry over the longer term. The area covered by the plan, which includes the Bonanza claims, lies north and west of Goldbridge and measures some 20 miles (36 km.) north to south and somewhat greater east to west.

CLAIM STATUS

No additions or deletions have been made to the 45 converted crown grants claims leased from Chevron Oil or the 8 metric units and 3 fractional units subsequently staked (Troll claims) other than the acquiring of Eva 7 fraction (Pan Ocean Oil to Silver Standard to Mutual Resources - Bills of Sale October 21, 1980, November 6, 1980). Thus total converted crowns, metric units, and fractions remains at 57. Additional work applied in 1981 renders all claims good until record dates in 1988.

PROGRAMS AND RESULTS

A. Aero Survey (EM and mag.), March, 1981 - Separate Report.

On March 13, 1981 Western Geophysical Acro Data Ltd. conducted air magnetic and VLF-EM surveys comprising 65 km. of flight line utilizing a Hughes 500 D helicoper over the property. Flight lines were oriented north-west perpendicular to known veining and rock limeation.

Steep terrain, resulting in undesireable oscillation of the towed bird, rendered much of the EM data uninterpretable. Possibly a contour flight pattern would have provided more useful data; and may still by worth consideration in any future program.

Quoting directly from Western Geophysical's report - "The magnetic responses appear to distinguish between the two major lithologic units mapped in the area; a Cretaccous quartz diorite, granodiorite unit and a Triassic argillite," and also, "No VLF-EM trends were observed which could assist in any geological interpretation however one narrow, weak response,

...2

observed on the southern ends on lines 15 and 14 indicates a possible, small near-surface conductive unit in the area."

A 500-gamma magnetic high on headwater east fork of Nea Creek within the area of magnetically higher response attributed to intrusives was checked in the field. A nearby outcrop of fresh appearing quartz diorite, attributable to the high, supports the report statement that, "the Cretaceous quartz diorite and granodiorite rocks to the south generate more variable and higher magnetic values."

A weak VLF-EM anomalous response just east of the Robson portals indicates that the Robson vein was detected on one flight line only. The anomalous, "narrow weak response...on lines 15 and 14," was not checked. It plots at ridge crest (or just east of ridge crest) in the order of 8,000 feet elevation near the south property boundary at the extreme head of Manson Creek basin.

B. Rock Geochemical Sampling Near Old South Robson Portal, South Side of Hughes Creek

The existing stub road of the previous 1979 program was cleaned out by cat and re-examined with a view to relate rock geochemistry to known showings. Slide snow in Hughes Creek covered the portal hence rock chips taken at intervals from outcrops along the road above the portal were submitted for analysis. Results were disappointing. Other than a possible weak buildup in arsenic close to the portal there was no response from gold and mercury while copper proved weakly erratic. A finger of intrusive biotite (quartz ?) diorite in the host sediments added support to Robson's known near-contact environment.

C. Trenching and Rock Sampling to Investigate a Prominent Arsenic-in-Soil Anomaly (C Trench Area) Chevron 1975-76

A prominent 1,000-ppm arsenic-in-soil anomaly mapped by Chevron in 1975 (6) and which had subsequently escaped follow-up work was trenched by extending an existing road stub subsequently designated 'C'. Rocks exposed along the newly-cut section were generally pyritized and frequently heavily pyritized. There is an abrupt change from relatively fresh biotite diorite on the south west flank of the anomaly to weathered leucogranite within the anomaly. Some exposures of what appear to be dark-grey sediments possibly volcanic also occur within the anomaly. Northeast of the anomaly, which has a width in the order of 175 metres or more, highly pyritized quarzt diorite appears dominant. Minor chalcopyrite erratically disseminated was noted in sample sites 10861-65 and C15-16 together with a little quartz or increase in silicification. The intrusive rock at sites 10863-65 and C15-16 is quartz feldspar porphyry suggestive of a porphyry copper environment. Rock and rock geochemistry returns from the porphyry zones are listed here for convenience: -

Sample No.	Type	Au	oz./T. Ag	ppm. As	ppb. Hg	Cu
C7	Rock Geochem.	73 ppb.	-	73	60	335 ppm.
10861	Assay	0.003 oz./T.	0.20	-	-	0.09%
C11	Rock Geochem.	160 ppb.	-	107	40	205 ppm.
10862	Assay	<0.003 oz./T.	0.01	-	-	0.03%
C16	Rock Geochem.	150 ppb.	-	20	30	47 ppm.
10863	Assay	<0.003 oz./T.	0.03	-	-	<0.01%

...3

Sample No.	Type	Au	oz./T. Ag	ppm. As	ppb. Hg	Cu
10864	Assay	0.003 oz./T.	0.01	-	-	<0.01%
C15	Rock Geochem.	10 ppb.	-	12	30	77 ppm.
10865	Assay	<0.003 oz./T.	0.08	-	-	<0.01%

The rock geochemistry of the 4 elements Au, As, Hg, and Cu; and the rock assays for Au and Ag indicate the following:

Au - Gold in rock is anomalous within the arsenic soil anomaly and in the porphyry and intrusive diorite to its northeast. Values range from 10 to 150 ppb.

Ag - Unfortunately with only a few assays for comparison, it would appear silver is erratically anomalous within the same limits as gold but without direct correlation.

As - Arsenic is not anomalous in the rock despite the high values (order of 1,000 ppm) in covering soil. Source of arsenic is suspected farther up slope possibly from a Robson-type vein.

Hg - Mercury in rock appears strongly anomalous at the southwest flank of the soil anomaly in intrusive quartz diorite near contact with leucogranite. It does not appear to show direct correlation with Au, As, or Cu.

Cu - As seen in the accompanying table copper in rock is apparently related to host (porphyry) and may or may not correlate with the other elements. There is no correlation with mercury, very weak correlation with arsenic, and possibly erratically with gold and silver. Silicification and pyritization may have more importance with respect to distribution of elements.

D. Trenching and Rock Sampling at Headwater Forks of Nea Creek Formerly Ground Sluiced by Cooper Drabble in 1933

Because of the very considerable (all not shown on Work Program map) ground sluicing done by Drabble at the headwater forks of Nea Creek it was decided to re-examine his work site by additional bulldozer trenching. Efforts to get the cat by shortest route (aborted roads A, D, Z) to the site were frustrated by soft ground. An approach from the southeast was ultimately successful resulting in 5 trenches being excavated.

Because bedrock surface drops down to the east it was found that only the westerly ends of the trenches encountered rock (bedrock is continuously exposed along the west fork and in the northerly part of centre fork).

Rock geochemical samples were taken of exposures in the trenches and from selected places in the west fork. Outcroppings in the west and central forks are invariably rusty or rust coated presenting an attractive prospecting target. Pyrite is ubiquitous, often occurring as heavy disseminations, to probably contribute to weathering and alteration of host rock.

Rocks consist of sandy, silty, or argillaceous sediments, in part tuffaceous, striking northeasterly and dipping moderately to steeply southeast. At least two belts or fingers of leucogranite apparently with strike similar to the sediments were recognized. In addition, narrow (1-3M) fingers of diorite were noted on the east bank of west fork and a similar thicker occurrence (not mapped) in centre fork.

...4

Alteration varies on surface from moderate to intense. Leucogranite weathers dark brown to 10 cm. depth while the sediments in places particularly near the forks are completely broken down to white or pale grey clay similar to fault gouge.

Sampling failed to turn up anything of economic interest. Although elements checked proved locally anomalous correlation of same was conspicuously absent. For comparison rock geochemical values are listed as follows:

No.	Au (ppb)	As (ppm)	Hg (ppb)	Cu (ppm)	Ag (ppm)
C23	280	20	130	76	-
24	<10	39	50	86	-
25	<10	7	1,200	45	-
26	50	20	110	63	-
27	<10	7	40	50	-
10867	20	10	60	-	35
68	10	6	40	-	12.2
69	10	16	680	-	5.8
70	100	9	460	-	5.8
4-1	<10	77	590	-	-
4-2	<10	11	190	-	-
4-3	<10	12	120	-	-
4-4	10	9	350	-	-
4-5	<10	3	290	-	-
4-6	<10	11	90	-	-
4-7	<10	35	60	-	-
5-1	<10	17	560	-	-

The pronounced rustiness (high pyrite) is attributed to the proximity of cover rocks (sedimentary, volcanic, leucogranite) to underlying intrusive quartz? diorite. Such condition can be seen elsewhere on the property, typically in the Robson portals vicinity.

E. Backhoe Trenching and Panning, Alpine Meadow South of End of Trench 4 and Downslope from Trench 2

A number of streamlets, emanating from springs and snow melt, flow westerly in slope wash from the east rim of Nea basin toward Nea Creek. Southwest of the south end of Trench 4 (T4) a little fine free gold was panned by company prospector A. Potter in the strongest of these runoff streams. At the same point a piece of a larger boulder veined by chert, when submitted for assay, returned values of 0.25 oz/T. gold and 0.95 oz/T. silver. A thin-section report by Vancouver Petrographics on the same rock showed it to consist of bleached kaolinized quartz diorite irregularly veined with dark grey chert carrying fine disseminated pyrite and arsenopyrite. A repeat assay on petrographic slices, however, returned only 0.004 oz/T. Au and 0.01 oz/T. Ag.

An old ditch still in its original condition crosses the streamlet just above the panning site. Probably hand dug by Drabble's crew, it was apparently constructed to collect water from basin streams for purposes of ground sluicing the steep bank leading down to the headwater east fork of Nea Creek. No bedrock was noted throughout its length. The steep portion is now choked with boulders.

To check bedrock some 175 metres upslope from the panning site, five

...5

backhoe trenches were dug with analytical results as follows:

Hole No.	Depth (M)	Material	Method	ppb Au	ppm Ag	ppm As	ppb Hg
BH 1	1.5	Slope wash	Soil geochem.	<10	0.1		
	1.8	Decomp. qtz. dior.	Rock geochem.	10	-	150	120
BH 2	1.5	Slope wash	Soil "	<10	0.1		
	2.4	" "	Soil "	40	0.1		
	2.4	Rusty decomp. leucogran.	Rock "	10	-	90	450
BH 3	1.5	Slope wash	Soil "	20	0.4		
	3.0	" "	Soil "	40	0.1		
BH 4	1.5	" "	Soil "	40	0.1		
	2.4	" "	Soil "	40	0.2		
	2.4	Partly decomp. qtz. dior.	Rock "	<10	-	200	490
BH 5	1.5	Slope wash	Soil "	320	0.6		
	2.3	" "	Soil "	<10	0.1		
	2.3	Decomp. rusty qtz. dior.	Rock "	<10	-	7	50

F. Backhoe and Cat Trenching to Re-sample Selected Portions of Trenches T2, T3, T5, T6, T7

As a followup to 10 metre-interval sampling of the previous years trenching, some cat work or backhoe excavation was done on a few intervals that had provided some encouragement from fire-assay returns. Described separately, results were as follows:

T2 - Back filling was commenced (190 metres at south extremity) but not completed (1,200 metres remaining). Rusty and altered intervals particularly from 250 M to 700 M had attracted attention the previous year as evidenced by uncollected bags of samples over a portion. The 250-700 metre interval was carefully re-prospected and the selected portion 654 to 714 metres was backhoed (see sketch). Prospecting notes : Station 450 - small silicified interval, rusty, fine dissem. pyrite and arsenopyrite. Station 540 - soft rusty zone, fault?. Station 550 - rusty, little quartz. Station 560 - rusty zone, silicified, little pyrite and arsenopyrite (mostly leached) some dissem. in alaskite host. Station 582 - little bleaching. Station 595 - small 2 inch quartz vein with minor pyrite and pyrrhotite? Station 604 - appreciable leached quartz on road and slope above. Station 614 - little quartz in alaskite. No samples were taken from the tranched interval since visually it appeared less attractive following better exposure.

T3 - The interval 290-300 M had previously returned an assay of 0.220 oz/T. Au and tr. Ag. This section was cleaned out by cat and a soft portion was deepened to 3.3 M to permafrost. See sketch. Samples Nos. 10873-78 taken from selected portions of the trench returned a maximum value of only 0.04 oz/T. Au and 0.02 oz/T. Ag. The discrepancy, if not due to error, might be attributed to surface enrichment. The soft portion of the excavation appears to mark a fault; but not proven as such.

...6

T5 - A short interval of this trench at a point downslope from the interval 290-300 M in T3 was cleaned out to expose a soft rusty section which may mark the postulated fault crossing T3. No mineralization was seen and no sample was taken.

T7 - A short (87 M) length of new trench was bulldozed along contour just above the sampled site in T3 (290-300 M). A similar soft rusty depression carrying red gougy sub parallel streaks was exposed (see sketch). The red streaks were combined in a single sample which returned 0.022 oz/T. Au and 0.22 oz/T. Ag.

T6 - Previous sampling along this trench at 10-metre intervals returned the following:

40-50 metres	.019 oz/T. Au	0.15 oz/T. Ag
50-60 "	.051 " "	0.19 " "
60-70 "	.017 " "	0.05 " "

Accordingly, after scraping with the cat blade, the surface was excavated by backhoe from 45 to 60 metres (see sketch) including a soft interval similar to those mentioned under T3, T5, and T7. Rock chip samples nos. 10879-83 returned one value of interest (0.072 oz/T. Au, 0.32 oz/T. Ag) across the southerly 1/3 of a northwest (305^{o}?) trending moderately mineralized (arsenopyrite) quartz and gouge vein. With an estimated true thickness of about 1 metre for the overall vein and an average gold value of 0.03 oz/T., the showing offers little incentive for further work. It was not backfilled.

G. Reclamation Work, Backfilling of Trenches.

As mentioned in Foreword, reclamation work was commenced on the property particularly where backfilling of excavations served to lessen the more visible impact from an esthetic aspect i.e. backfilling of roads and trenches at or above timberline.

Since further work of this nature will likely arise in the future, some comments are pertinent. Normally it would be desireable to backfill roads and trenches employing a cat; but this is not feasible on steep side hills where spoil is pushed to the downslope side. Similarly a backhoe can not be employed on sloping terrain since it can only operate on a flat to moderately-inclined ground. Suggestions by ecologists that backhoes be used in place of cats is in most cases not possible since the hoe will generally require a cat-built road to get to its working site because it cannot negotiate sloping ground, wooded ground, swamps and gullys.

During the backfilling program at Bonanza it was soon realized that the machine must be of a size such that it could negotiate the existing cat trench. Larger machines may have single-operator-in-cab capability in which hoeing and machine advance can be done without the operator having to change seats every 2 metres of so. Despite such refinement, it is against regulations for an operator to work alone remote from assistance in the event of accident. Backhoeing thus requires two people for a single machine; and for small machines the operators will be completely exposed to the elements.

Cat trenching rate (side hill) is in the order of 1/4 mile to 1/2 mile per 10-hour shift depending on conditions. Backhoeing employing a John Deere track-mounted model JD 555 on open 30-degree slopes involving two men was found to advance at a rate of about 30 metres per hour to effect around 90% replacement of spoil. Assuming that a cat can side hill trench at the

...7

rate of 0.5 miles in 10 hours (this is probably low for open terrain i.e. 80 metres/hour) and that backhoeing can advance an average of 30 metres/hour, the progress ratio becomes 2 2/3:1. Expressed simply, 1 day of side hill trenching requires 3 days of backfilling. Backfilling of forested slopes was not attempted, and probably is not practicable.

Cost of a backhoe in 1981 was $3,600 per month plus lowbed, operaters, support truck, fuel, supervision etc. Cat support is desireable where access roads are steep.

The following were backfilled in 1981:
T2 - 199 metres at south end
T4 - 613 metres, all
T6 - 405 metres, all but northerly 70 metres.
Robson - 310 metres, unnamed road NE and above Robson campsite
Backhoe trenching south end of T4 - 150, also 5 test holes
TOTAL - 1,677 metres

CONCLUSIONS

1. Geochemical Work in 1981 has failed to show correlation between gold and the elements arsenic, mercury and copper for purposes of rock geochemical exploration. Insufficient data is available for confirmation; but evidence points to erratic distribution of these elements within the Bonanza intrusive complex. Possibly their distribution is related to phases of intrusion with associated movement of hydrothermal solutions. Alternately arsenopyrite is invariably found in veins (Robson) or veinlets wherever gold values occur; but the geochemical halo in rock appears quite limited. Evidence also points to downslope migration of arsenic in soil as described under heading 3-D.

2. Veining within the intrusive complex appears to be widely spaced; narrow; mineralized with quartz, chalcedony, arsenopyrite, pyrite; and frequently associated with faults (proximity to rusty, earthy or gougy zones). Mineralization may occur in small quartz lenses or horses within such soft zones. Veining in sediments or volcanics at or just beyond the intrusive contact is indicated to be stronger i.e. Robson, Northern Lights, Lucky Strike. Probably others originating from the contact zone have been eroded.

3. Evidence of stockworks, large mineralized dykes, fracture zones, low-grade disseminations has not been found, however there is still considerable ground under overburden not investigated. Discreet veins hopefully larger and more persistent than Robson conceivably may occur in surrounding sedimentary-volcanic rocks outside of contact.

4. Quartz-feldspar-porphyry fingers exposed in trench C host low-grade copper mineralization. Conceivably a larger mass may occur at depth or outside of the trench area. Such rock may have influenced deposition of gold veining in fractures at some distance from contact boundaries.

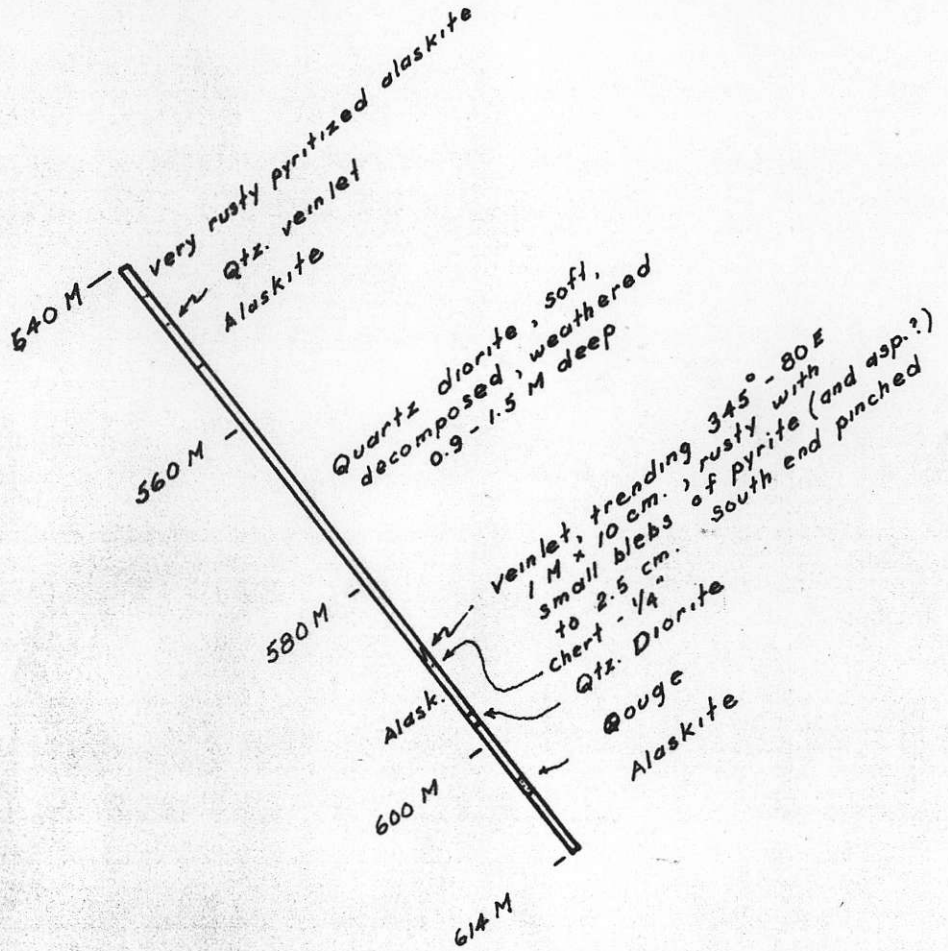
RECOMMENDATIONS

Because work thus far undertaken on the Bonanza property has as yet failed to disclose any new find with enconomic potential, the following is proposed.

...8

1. From air photos taken after snow melt, produce a topographic map of scale suitable to show existing work (roads and trenching) and to permit plotting of geologic detail.

2. Utilizing the new control map, geologically re-map the claims in greater detail than previously undertaken. The completed map should provide a better understanding of the geology and known mineralization; and thus provide a basis for further exploratory investigation of this property.



PLAN

No samples taken

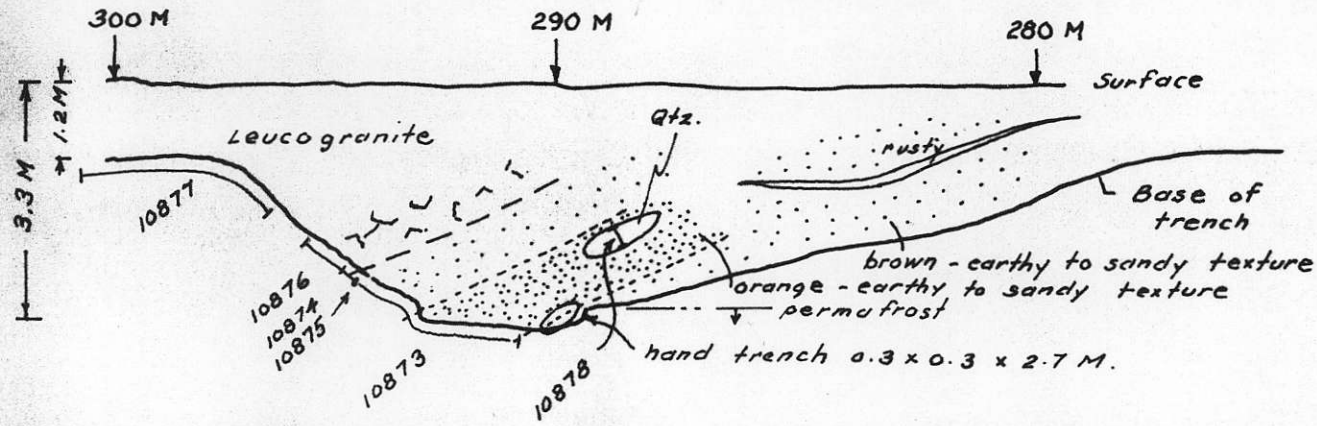
T2

Scale 1 cm = 7.5 M.
(1 : 750)

Backhoe trench along previous road cut from 540 M to 614 M.

0.9 M (w) x 0.75 M (av D.) x 74 M (L)

R.H.B. Jan. 7/82



Section thought to be a leached partly-mineralized fault at leucogranite contact. Earthy material is partly decomposed bedrock. Probably some slope creep but apparent dip is northerly 25°-30°. Strike 95° ??.

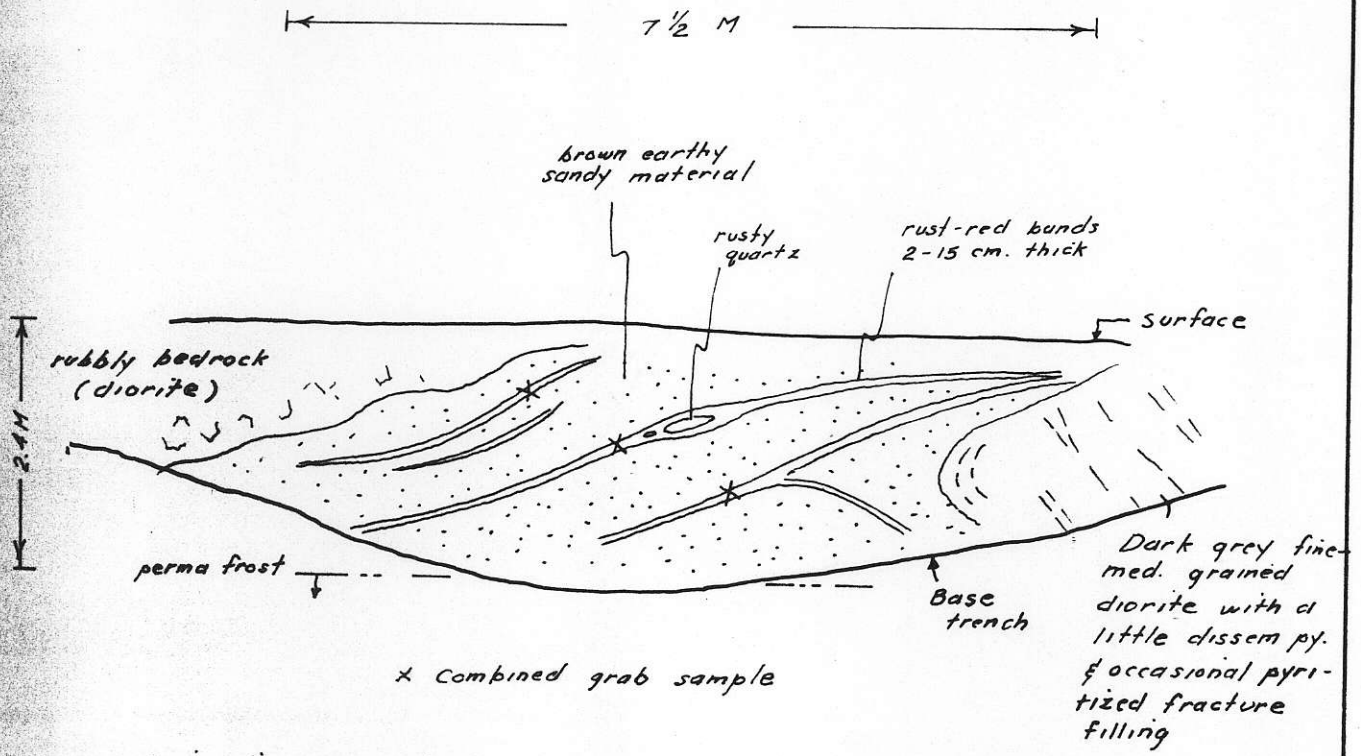
The mineralized horse consists of milky, sugary, chalcedonic, glassy and crystalline quartz (brecciated & healed). Minerals occur as blebs and fine disseminations of arsenopyrite, soft grey mineral (stibnite?) and dust-fine pervasive dark-grey mineral as streaks and mottles, possibly pyrite.

Sample No	Description	Width (M)	Au (oz/T)	Ag (oz/T)
10873	Rusty soil	3.0	0.010	0.01
10874	Chalcedonic qtz. in qtz.-eye rhyolite (leucogranite) pyrite in fine fractures	0.6	0.005	0.01
10875	Chalcedonic qtz.	GRAB	<0.003	0.01
10876	Leucogranite. Local pyrite in fine fractures. Some chalcedonic veining	1.5	0.005	0.01
10877	Leucogranite - occasional veinlet chalcedonic quartz.	7.0	0.022	0.01
10878	Mineralized quartz	0.3	0.040	0.02

T3

Profile of trench wall looking easterly at stn. 290M (sketch - not to scale)

R.H.B. Jan 7, 1982



Section is thought to be a leached weakly-mineralized fault cutting diorite. Earthy material is probably decomposed ground bedrock. Slope creep may have complicated the attitude but apparent dip is 32° northerly

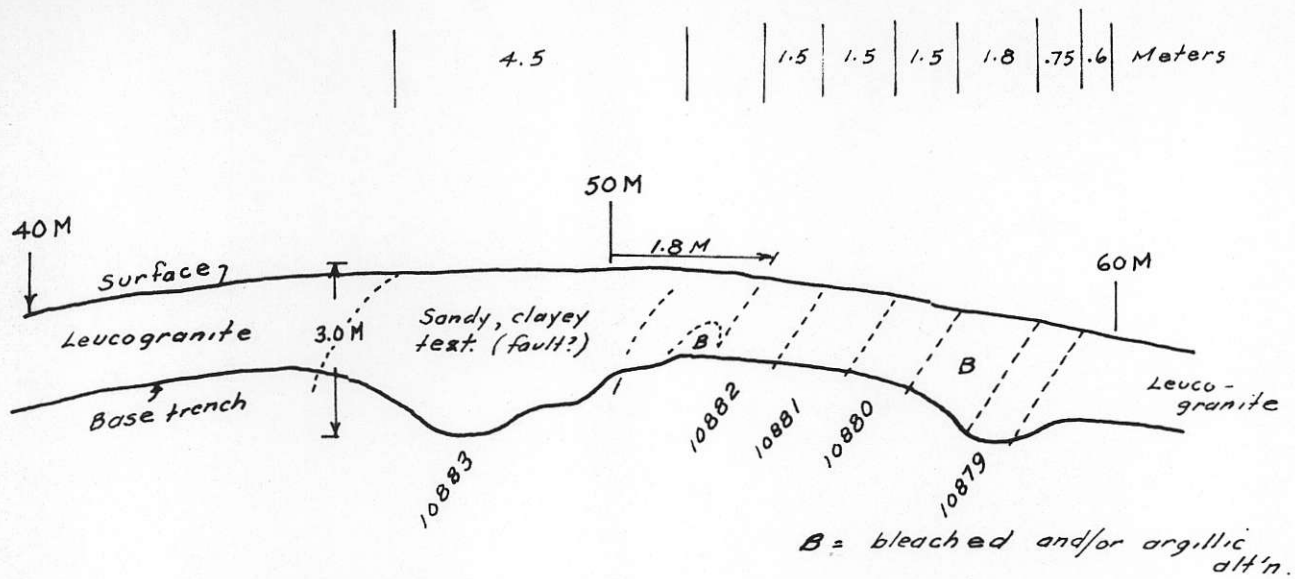
Sample No	Description	width	Au oz/t	Ag oz/t
10872	Rust red gougy streaks (sub parallel) in orange-brown sandy soil	Grabs	0.022	0.22

T7

Profile of trench wall looking easterly at stn. 74 M

(sketch – not to scale)

R.H.B. Jan 7/82



B = bleached and/or argillic alt'n.

Section probably crosses a fault-influenced weakly-mineralized silic zone at an acute angle i.e. road trends approx. 315°-320°, Vein trends ± 305°, dipping moderately NE. Widths shown are therefore about 4.5 times true. Host rock is white, deep-brown weathered leucogranite with numerous hair chalcedonic veinlets. Mineralization consists of small massive veinlets and pods of arsenopyrite, some pyrite, and stibnite(?).

Sample No	Description	Measured Width(M)	True Width(M)	Au oz/T	Ag oz/T
10879	weath. silic. scattered asp.	0.75	0.17	0.040	0.01
10880	Much leached & weath. well min. with asp.	1.5	0.33	0.072	0.32
10881	Much gouge, rusty (prob. sheared leucog.). No min. noted	1.5	0.33	0.010	0.05
10882	Sim. to 10880	1.5	0.33	0.012	0.05
10883	Soft sandy rusty gouge.	4.8	1.06	0.040	0.01

Average 10880-82 across 1 Meter true width
0.031 oz/T Au, 0.14 oz/T Ag

T6
Profile of trench wall looking northeasterly at stn. 50M.
(sketch - not to scale)

R.N.B. Jan. 7, 1982