

**Mutual Resources Limited**

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September 18, 1980

TO: Alex Ritchie, Bill Dunn

FROM: Gordon Gibson

SUBJECT: BONANZA project - Bulldozer trenching and sampling programme  
- August 22 - 30, 1980

Nine days were spent on the Bonanza Basin property in the Lillooet Mining Division. The purpose of the visit was threefold:

1. To investigate and explain the source of anomalous Au in chip samples taken during the July 1980 trenching programme. (See report by G. H. Scott.) To further outline and assess anomalous zones by additional trenching and sampling.
2. To up-date the geological mapping coverage by tie-in of trench and surface exposures.
3. To consolidate the company's ground position along the south and west property boundaries by staking two fractions to cover areas formerly held by crown grant Lots 7581 and 7609.

The following work was completed:

1. TRENCHING - 1900 meters in 5 1/2 days - Komatsu 65 bulldozer of Walt Baker (Goldbridge).
2. SAMPLING - 164 assay samples of which approximately 150 are 3kg. chip samples taken over 10m intervals. Samples were delivered to Kamloops Research and Assay Lab on September 3, 1980. Results are pending.
3. GEOLOGICAL MAPPING - as above.
4. CLAIM STAKING - as above.

Results of the work are presented on the attached trenching plan and revised geological map - Drawing 1, scale 1:5000.

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## GEOLOGY

The geology of the areas trenched in 1980 has already been described by G. H. Scott in a previous report. Mapping done as part of the present investigation does not change the overall interpretation, but allows for a more detailed reassessment of Unit 4, which in the opinion of the writer, holds the most potential for hosting low grade gold mineralization on the property.

Unit 4 is a felsic intrusive, labelled leucogranite or alaskite for field mapping purposes. It consists of quartz with white and grey feldspars, lacks mafic minerals, and varies texturally from medium grained equigranular to aphanitic. A distinctive blue-grey colour characterizes the rock when fresh but surface weathering of the alaskite eventually leads to its physical disintegration into red angular talus, or felsenmeer, characteristic of many west-facing slopes in the trenched area.

Fine disseminations of pyrite with subordinate arsenopyrite, molybdenite and chalcopyrite are present throughout much of the unit and may locally constitute up to 2% of the rock total. Important and well developed zones of pervasive chalcedony/sulfide veining have been recognized within the alaskite and will be discussed under MINERALIZATION.

Unit 4 forms a large elongate intrusive mass trending NE/SW across the trenched area, extending from southwest of Nea Creek to the cirque at the headwaters of Hughes Creek. It is bounded on the southeast by competent biotite diorite of Unit 2 and on the northwest by biotite quartz diorite of Unit 3. (See Drawing 1.) Blocks of Units 2 and 3, incorporated in the main alaskite body, are themselves elongate along the axis of the pluton. The eastern contact zone of Unit 4 with Unit 2 in the area exposed by trenches 3 and 5, is marked by numerous offshoot dikes of alaskite into diorite. Along its northward extension, in the area of upper Hughes Creek, the alaskite body is truncated and offset by major northwest trending faults.

Unit 4 can probably best be described as a sheeted dike complex or dike swarm emplaced at high structural levels along pre-existing fractures in the diorite and quartz diorite.

## MINERALIZATION

Anomalous Au values returned from the July 1980 trench sampling coincide well with zones within Unit 4 that contain a higher than average abundance of chalcedony/sulfide veinlets. (See Drawing 1.) Such zones are not sharply bounded, but grade imperceptibly from alaskite containing only very rare chalcedony to a rock in which chalcedony veinlets and stockworks make up as much as 80% of the rock volume.

The strongest zones contain discrete chalcedony veins ranging up to 20 cm. in width and to over 20 m. in length. (Pit 3A - Drawing 1) In detail these veins consist of colloform-banded yellow, brown and grey chalcedony containing coarse disseminations of arsenopyrite, pyrite and sphalerite. Vugs, comb structures, breccia and discordant stringers of massive white quartz are also common to the widest and most persistent of the veins. Black (pyrolusite?) and red (limonite) crusts develop in soil over sulfide rich material. At least ten veins of this type, located on the ridge summit above trench 3, had been tested in early times by several small hand pits. Six of the pits were enlarged with the bulldozer to allow for detailed

mapping and sampling.

The majority of trenching in the present programme was directed at exposing favourable chalcidonic zones within Unit 4. One hundred and forty-three 3kg. chip samples were collected at 10m intervals along trenches 3, 5 and 6. In addition, 14 samples were taken from vein material and wallrock exposed in Pits 3A to 3F, and 7 samples were taken from siliceous outcrops between trenches 3 and 5 and west of trench 5. All tag numbers are keyed to their respective trench positions in the accompanying table.

#### RECOMMENDATIONS

1. Should sampling results warrant it, a continuation of the trenching programme into the areas labelled A, B and C on Drawing 1 is highly recommended.
2. A probable correlation exists between chalcedony/arsenopyrite zones of Unit 4 and Chevron As soil anomalies. (See Drawing 2, scale 1:5000) Trenching into prominent untested arsenic anomalies should also accompany the next phase of the exploration on the property.

Respectfully submitted,

Gordon Gibson  
Geologist

BONANZA SAMPLING

August 1980

<u>Trench</u>	<u>Interval</u>	<u>Tag No.</u>	<u>Au</u>	<u>Ag</u>
T3	260 - 270 m	20728	0.001	0.03
	270 - 280	20727	0.003	.04
	280 - 290	20726	0.005	.03
	290 - 300	20725	0.220	tr
	300 - 310	20724	0.007	tr
	310 - 320	20723	0.004	0.14
	320 - 330	20722	0.017	0.12
	330 - 340	20721	0.002	0.02
	340 - 350	20720	0.002	0.04
	350 - 360	20719	0.004	0.07
	360 - 370	20718	0.004	tr
	370 - 380	20717	0.013	0.08
	380 - 390	20716	0.013	tr
	390 - 400	20715	0.002	tr
	400 - 410	20714	0.001	1.04
	410 - 420	20713	0.001	0.12
	420 - 430	20712	0.001	0.06
	430 - 440	20711	0.001	0.10
	440 - 450	20710	0.001	0.05
	450 - 460	20709	0.001	0.03
	460 - 470	20708	0.003	tr
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T3	470 - 480	20828	0.003	0.07
	480 - 490	20829	0.001	tr
	490 - 500	20830	0.004	0.06
	500 - 510	20831	0.001	tr
	510 - 520	20832	0.001	tr
	520 - 530	20833	0.003	tr
	530 - 540	20834	0.005	0.04

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Bonanza Sampling, Cont.

<u>Trench</u>	<u>Interval</u>	<u>Tag No.</u>	<u>Au</u>	<u>Ag</u>
T3	540 - 550 m	20835	0.004	0.06
	550 - 560	20836	0.001	tr
	560 - 570	20837	0.001	tr
	570 - 580	20838	0.002	1.70
	580 - 590	20839	0.048	tr
	590 - 600	20840	0.010	tr
	600 - 610	20841	0.014	tr
	610 - 620	20842	0.002	0.05
	620 - 630	20843	0.001	0.03
	630 - 640	20844	0.001	tr
	640 - 650	20845	tr	0.05
	650 - 660	20846	0.001	0.03
	660 - 670	20847	0.001	0.04
	670 - 680	20848	0.003	tr
	680 - 690	20849	0.023	tr
	690 - 700	20850	0.001	0.03
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T3	700 - 710 m	21520	0.013	0.12
	710 - 720	21521	0.001	0.08
	720 - 730	21522	0.015	0.12
	730 - 740	21523	0.003	tr
	740 - 750	21524	0.001	tr
	750 - 760	21525	0.001	tr
	760 - 770	21526	0.006	tr
	770 - 780	21527	0.001	tr
	780 - 790	21528	0.001	tr

End of Trench 3

Bonanza Sampling, Cont.

<u>Trench</u>	<u>Interval</u>	<u>Tag No.</u>	<u>Au</u>	<u>Ag</u>
T5	10 - 20 m	21518	0.003	tr
	20 - 30	21517	0.002	tr
	30 - 40	21516	0.002	0.12
	40 - 50	21515	0.002	0.03
	50 - 60	21514	0.006	tr
	60 - 70	21513	0.001	0.02
	70 - 80	21512	0.002	tr
	80 - 90	21511	0.002	0.14
	90 - 100	21510	0.004	0.04
	100 - 110	21509	0.007	0.11
	110 - 120	21508	0.019	0.17
	120 - 130	21507	0.001	0.03
	130 - 140	21506	0.003	0.05
	140 - 150	21505	0.005	0.09
	150 - 160	21504	0.007	0.12
	160 - 170	21503	0.017	0.08
	170 - 180	21502	0.006	0.06
	180 - 190	21501	0.006	0.11
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T5	190 - 200 m	20750	0.006	0.03
	200 - 210	20749	0.005	0.06
	210 - 220	20748	0.009	0.12
	220 - 230	20747	0.018	0.07
	230 - 240	20746	0.006	0.14
	240 - 250	20745	0.014	0.07
	250 - 260	20744	0.002	0.04
	260 - 270	20743	0.001	0.03
	270 - 280	20742	0.003	tr
	280 - 290	20741	0.002	tr
	290 - 300	20740	0.002	0.04

Bonanza Sampling, Cont.

<u>Trench</u>	<u>Interval</u>	<u>Tag No.</u>	<u>Au</u>	<u>Ag</u>
T5	300 - 310 m	20739	0.002	0.01
	310 - 320	20738	0.002	0.08
	320 - 330	20737	0.002	tr
	330 - 340	20736	0.001	tr
	340 - 350	20735	0.001	0.88
	350 - 360	20734	0.001	0.07
	360 - 370	20733	0.003	tr
	370 - 380	20732	0.002	0.03
	380 - 390	20731	0.003	0.01
	390 - 400	20730	0.001	1.48
	400 - 410	20729	0.001	tr

End of Trench 5

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T6	0 - 10 m	21601	0.001	0.05
	10 - 20	21602	0.001	0.03
	20 - 30	21603	0.002	tr
	30 - 40	21604	0.001	tr
	40 - 50	21605	0.019	0.15
	50 - 60	21606	0.051	0.19
	60 - 70	21607	0.017	0.05
	70 - 80	21608	0.001	0.02
	80 - 90	21609	0.005	0.03
	90 - 100	21610	0.005	0.06
	100 - 110	21611	0.005	0.06
	110 - 120	21612	0.003	0.07
	120 - 130	21613	0.005	0.06
	130 - 140	21614	0.003	0.06
	140 - 150	21615	0.004	0.08
	150 - 160	21616	0.002	0.02

Bonanza Sampling, Cont.

<u>Trench</u>	<u>Interval</u>	<u>Tag No.</u>	<u>Au</u>	<u>Ag</u>
T6	160 - 170 m	21617	0.003	0.02
	170 - 180	21618	0.003	0.01
	180 - 190	21619	0.008	tr
	190 - 200	21620	0.005	0.22
	200 - 210	21621	0.004	0.04
	210 - 220	21622	0.001	tr
	220 - 230	21623	0.004	0.05
	230 - 240	21624	0.004	tr
	240 - 250	21625	0.005	tr
	250 - 260	21626	0.003	0.05
	260 - 270	21627	0.005	0.06
	270 - 280	21628	0.003	0.04
	280 - 290	21629	0.004	tr
	290 - 300	21630	0.003	0.10
	300 - 310	21631	0.004	tr
	310 - 320	21632	0.012	0.03
	320 - 330	21633	0.001	0.05
	330 - 340	21634	0.003	tr
	340 - 350	21635	0.003	0.03
	350 - 360	21636	0.005	tr
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T6	360 - 370	21550	0.010	0.05
	370 - 380	21549	0.002	0.05
	380 - 390	21648	0.002	0.06
	390 - 400	21547	0.003	0.04
	400 - 410	21546	0.005	0.05
	410 - 420	21545	0.007	0.07
	420 - 430	21644	0.009	0.02
	430 - 440	21543	0.003	0.03
	440 - 450	21542	0.003	0.13
	450 - 460	21541	0.009	0.07



Bonanza Sampling, Cont.

<u>Trench</u>	<u>Interval</u>	<u>Tag No.</u>	<u>Au</u>	<u>Ag</u>
T6	460 - 470 m	21540	0.004	0.07
	470 - 480	21539	0.008	0.05
	480 - 490	21538	0.003	0.09
	490 - 500	21537	0.006	0.05

End of Trench 6

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Pit Samples

Pit 3A	along vein (5m)	20703	0.103	0.14
	" (5m)	20704	0.023	tr
	average (5m)	20705	0.013	0.09
	" (5m)	20706	0.002	tr
	" (5m)	20707	0.005	0.12
Pit 3B	across vein (15cm?)	21536	0.049	0.11
	average (7m)	21535	0.013	0.08
Pit 3C	across vein (20cm)	21533	1.18	1.07 x
	average (2.5m)	21534	0.220	0.12 x
Pit 3D	average (7m)	21532	0.001	0.04
Pit 3E	average (4m)	21519	0.002	0.13
Pit 3F	across vein (2.5m)	21529	0.005	tr
	average (10m)	21530	0.002	tr
	average (10m)	21531	0.001	0.08

End of Pit Samples

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Bonanza Sampling, Cont.

Outcrop Samples

			<u>Au</u>	<u>Ag</u>
Outcrop 100m west of Pit 3A	(10m)	20794	0.001	tr
"	(10m)	20795	0.004	tr
"	(10m)	20796	0.001	tr
"	(10m)	20797	0.002	0.01
"	(10m)	20798	0.002	0.01
Outcrop below T3	(10m)	20799	0.007	tr
Outcrop grab below T5	--	21637 A	0.001	0.05

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