Snip
887745

August 5, 1988

Report - Northern B.C. Field Trip, July 13-22
(A. Panteleyev, T. Schroeter, D. MacIntyre, D. Lefebure)
by: W. J. McMillan

Synopsis

9 Properties visited:
SNIP, Skyline, McLymont, Trophy, Kerr, Sulphurets, Catear, Waratah (Bug Lake)

5 Crews visited:
Ferri (Germansen Lake), Brown (Telegraph), Logan (Stikine), MacIntyre (Telkwa), Alldrick (Sulphurets)

Contacts made with (A) 9 companies:
Pamicon, Cominco, Gulf, Skyline, Kerr, Newhawk, Catear, Consolidated Gold, Equity Engineering

(B) Industry interaction (main contacts):
Cominco - Steve Kenwood, Tim Tremundy, Ian Patterson
Gulf - Patrick Gannon, Paul Carter
Skyline - Jim Smith
Western Canadian Mining - Bob Hewton, Brian Butterworth, Mike Jerema, Scott Castleman
Continental Gold - Doug Forester, Greg Dawson, Bob Lane Peter Read, Sylvia Heinrich
Pamicon - Bob Darney, Robin Forestan, Chuck Ikona, Ian Hagaman Forshaw
Newhawk - Tom Drown, Norm Tribe
Catear - Erik Ostensoe
Waratah (Equity Eng.) - Dave Caulfield

Travel - Scheduled airlines - 4 flights - Victoria-Smithers,-return
- Sessna - 1 flight (wheels) to Germansen
- Sessna 185 - 1 flight (floats) from Germansen
- Twin Otter - 1 flight (wheels) to Bronson
- Helicopter - to various properties - 18 flights

Field Crews - Comments on visits:

1. Filippo Ferri - MD901 Germansen (4 man crew):
Working out of Manson Creek, moving to Germansen Landing in August.
Outcrop is sparse (bugs are not), the geology is complex. Doing a careful job and doing well with the data available.
Crew is now operating effectively and morale is good.

Exploration - quiet; placer mining active.

2. Derek Brown - MD1002 Telegraph (4 man crew):
Working out of same camp as Logan (MD1101) on the Scud River.
Map sheet is largely underlain by intrusive rocks (Hickman batholith) and Stikine assemblage rocks.
Traverses are logically organized and work is progressing well. Crew is well motivated; morale is high.

3. Jim Logan - MD1101 Stikine (4 man crew):
Map sheet is underlain by rocks ranging from Paleozoic to late Mesozoic in age. Structure and stratigraphy are complex. Doing well-conceived, careful work; traverses well planned. Crew is well motivated; morale is high.

2&3. The crews are working well in very severe terrane in poor weather conditions. Fly camps have not been feasible. More helicopter time (up to 10 hours) has been authorized. Exploration activity is moderate - Cominco, Equity Eng. Consolidated Gold, but expected to increase with geochem release.

4. Dani Alldrick - MD602 (6 man crew):
Working from two base camps, the crew has been working largely without helicopter support because weather has been poor. The geological units are gradually being traced and put into a regional context; mineral showings are being mapped and sampled. Traverses are impeccably planned and good progress is being made. Crew is enthusiastic and morale is high. Exploration activity is low in the present camp area but a program on the Red Bluff prospect is expected in August.

5. Don MacIntyre/Patrick Desjardins:
Working from a rented house in Smithers with truck support and helicopter setouts.
The geology of the Telkwa Range compares closely with the Babine Range albeit it is less deformed. The work done by Rod Kirkham or Hudson Bay Mtn. is good and is being incorporated.
Work is advancing well, traverses are well designed.
Exploration is relatively quiet; a production decision is pending at Dome Mtn. and drilling is underway at the Fireweed silver prospect near Babine Lake.

Property Overviews

SNIP PROPERTY - COMINCO

- 55 person camp; well managed; optimistic atmosphere
- country is steep and bush is very thick below ~ 3000'

- prospecting is being done by soil sampling along contour parallel grid lines - Au and As are pathfinders
- General Geological Setting:
  - country rock is feldspathic wacke mainly - correlation regionally is uncertain. Layers of pyritic chlorite schist crop out along the portal access road.
  - mineralized zones occur within zones of biotite annite-calcite-sericite alteration that are well foliated - auriferous veins of pyrite pyrrhotite ± quartz both cut and lie parallel to foliation. In some instances foliation is axial plane to minor folds outlined by sulphides.
  - minor amount of galena and blackjade occur
  - post sulphide deformation is extensive
  - mineralization occurs in veins, crackle breccias
  - gold seems to be best with late-stage structures
  - pyrite occurs as masses with medium grained crystals in a finer pyrite matrix
  - pods of epidote occur near the portal - alteration zoning?
  - carbonate occurs as part of the alteration sequence and as veins and stringers
  - veins are multicyclic - for example, calcite-chlorite veins are cut by pyrite - chalcopyrite veins, pyrite stringers are cut and offset by fibrous carbonate veins but the veins do not penetrate pyrite pods.
  - veins are locally vuggy ie. calcite-pyrite-ankerite
  - potassium feldspar occurs locally (white - identified by staining) but is not apparently abundant
- The deposit is near Red Bluff a rust weathering Kspar porphyry with porphyry-style quartz-sericite alteration and silicification; some mineralization occurs.

Synopsis

- Snip is apparently a mesothermal deposit. There is considerable post mineral tectonism but the twin zone is reasonably predictable and traceable (albeit there are "rolls" caused by folding and some fault offsets).
- A zone reportedly similar to SNIP - the Road Zone - is near Sky Creek on the road to the Skyline property. Skyline are currently investigating it.

SNIP Underground Tour - July 16, 1988

- 300 Level toured; 180 level adit being driven
- bedding east-west/30°N
- contacts of ore zones are sharp

- Twin zone - two bands, waste between (1/2 - 3m wide) zone 120° steep to shallow, average 45°
- mineralized zones are lenticular (due to deformation?) - to date, strike length 700m; dip length 500m; open at depth
- reserves 1.1MT at 24 grams Au/T (waste band included) drilled at 50m centres; about 85 holes so far
- mineralization types (informal usage):
  1. Calcareous streaky-usually with good grades -biotite-calcite altered rock
  2. Crackle quartz
  3. Sulphide
- small amounts of base metal occur (Zn, Pb)
- mineralized zone in 300 raise "rolls" due to Z-shaped folds
- late stage calcite or calcite-ankerite±pyrite gashes and carbonate-annite(?)
- small post-mineral faults offset the Twin Zone

Potential

- on surface, two new zones have been discovered and are being explored and Skyline's Road Zone is similar. The bush is awful so prior exploration below treeline has been minimal

WARATAH, BUG LAKE PROPERTY - Gold Bug and other Showings

- the country rock is largely pyroclastic andesites in the east giving way to wackes and siltstones in the west.
- mineralization consists of auriferous quartz-pyrite-chlorite magnetite±pyrite±chalcopyrite±arsenopyrite veins with bleached halos. Chlorite-altered.
- shear zones are related. Base metals (Pb, Zn) occur with carbonate alteration in peripheral showings. There is no pyrrhotite. Gold correlates with pyrite and chalcopyrite. gold to silver is about 1:1.
- strong structures trending 040° attracted attention to the area but mineralized veins tend 120-140°.
- prospecting tools are magnetometer and VLF surveys and soil geochemistry.
- the deposits are mesothermal Cu-Au systems

REG - SKYLINE EXPLORATIONS LTD.

- underground tour with Jim Smith started on 11 level, then climbed down ladders to the 1075 level (395 steps)
- mineralization consists of silicified rock with splashes of chalcopyrite, patches of sphalerite and some galena.
- the Main Ore Zone consists of 16 veins.

- the Discovery vein has the following features:
  - wallrock is dominantly feldspar biotite and pyrite; protolith uncertain
  - massive sulphide lenses characterize the mineralization
  - mineralization/wallrock contacts are sharp
  - average grade in 11.29 stope is about 16 grams but locally higher; massive sulphide zones average 13 grams; siliceous zones average 30 grams; width 1 1/2 - 4 metres.
    copper averages 1 1/2%; gold to silver ratio is 1:1 to 1:2; zinc is less than 1%. gold grades are lower where copper grades are highest.
- faults offset the veins - undulating "flat" or "quartz" faults have average 1m offset, steeper faults with gouge zones have larger movements.
- typically major faults are accompanied by a series of minor fault offsets.
- country rocks are variably interpreted to be cataclasites
- (Grove) or volcaniclastic rocks and Kfeldspar porphyries.
- reserves are 237,000 tons at .556 oz Au plus another 300,000 tons of inferred ore of similar grade. Mill heads should be 0.75 oz.
- expected *productionrate will be 500 TPD
- we also toured the mill, it is not yet operational but will include the following simplified circuit:

Stage	Process
1	ore ground - 40 Tons/hour expected primary crusher, ball mill, cyclones
2	Jig & Shaking Table (concentrate from this step goes to a secure room) [25% of gold expected to be recovered in stage 2]
3	Flotation to collect the copper and silver - some gold reports with the float [concentrate bagged (2 ton in nylon bags) - will go out on backhaul fuel flights to Wrangell, be barged to Prince Rupert and go to the smelter from there]
4.	Cyanidation followed by production of Dore bars [treatment of waste by the INCO SO_2 process should destroy cyanide; they are trying to electroplate copper from the remainder of the 'pregnant' solution after the gold is precipitated in order to try to reuse the cyanide]

Predicted recoveries: gold 95%
..copper 85%
silver 85%

MCLYMONT PROPERTY

- Thick report from 1987/88 FAME-assisted program on file (As Rpt 16695)
- Our brief visit we toured with Patrick Gannan, project geologist.
- The country rock consists of Paleozoic limestone overlain by Triassic argillite sandstone conglomerate and fragmental andesites. These are cut by Cretaceous to tertiary quartz porphyry, quartz monzonite and diorite intrusives.
- mineralized zones show at least 2 periods of silification. The rock is bleached and carbonate veined. Early sphalerite galena ankerite veins are cut by younger quartz-pyrite-chalcopyrite±molybdenite. Some ankerite alteration is reported.
- Gangue minerals in the NW zone include barite and possibly gypsum. Grove (As Rpt. 16695) reports a number of stratabound pyrite-chalcopyrite-magnetite-barite zones.
- The present program is exploring the Camp East Zone but two other zones also have promise, for example Hole 87-29 in the NW grid zone returned 36' of 1.6 oz Au. some 20,000 feet of drilling are planned in 1988.
- History (from As Rpt. 16695 by E.W. Grove):
  - Staking based on geochemical stream and soil samples.
  - Early drilling (1986) hit auriferous quartz-ankerite veins.
  - A major program of sampling and drilling in 1987 found gold mineralization in veins in the quartz monzonite stock and in massive sulphide zones in altered country rock sediments.
  - Gold mineralization occurs in ankerite and quartz pyrite veins as well as in stratabound (?) massive sulphide zones.

TROPHY (CONTINENTAL GOLD) - OLD HUMMINGBIRD

The field visit was led by Doug Forester, Sylvia Heinrich and Bob Lane; Peter Read came toward the end of the visit.

The country rock is largely volcanic pyroclastic rocks and what appear to be volcanic debris flows unconformably(?) overlying monzonite that is likely an offshoot of the Hickman batholith. The volcanic host rock is strongly bleached, rusty weathering, locally silicified and

sericitized and cut by auriferous galena-sphalerite-arsenopyrite chalcopyrite-quartz-calcite veins. Other minerals found are gold, electrum, tetrahedrite and sulphosalts.

Dominant mineralized structures trend 010-040/steep but others trend 375°/steep.

RED BLUFF - TOM MCKAY LAKE AREA

Red Bluff Zone - presently inactive, work expected in august

Dani Alldrick and his crew have traced the silicified zone for several kilometres along strike. The zone is along a porphyritic andesite (?) - pillow form basaltic(?) lava contact. The basalt, which is to the west, is relatively fresh; the andesite is strongly bleached and silicified. Locally the silicified zone is pyritic and is cut by quartz-sphalerite-tetrahedrite veins.

KERR PROPERTY (WESTERN CANADIAN MINING)

The crew were very hospitable and we discussed the deposit mainly with bob Hewton and Brian Butterworth.

The area of interest was located by soil geochemical anomalies; subsequently 6 zones of interest have been identified.

The country rock consists of rusty altered tuffaceous sedimentary and volcaniclastic rocks cut by several generations of Kfeldspar porphyry, andesite and hornblende porphyry dykes.

The assemblage is strongly foliated, bleached and altered to quartz-sericite schist in the mineralized area. Foliation strikes 145 to 175 and dips steeply west.

Mineralization consists of quartz-pyrite-chalcopyrite veins. Locally copper grades are upgraded by weathering (chalcocite, native copper).

The setting is porphyry-like with "phyllic" alteration. gold values are low and copper grades misleading (high values not recoverable). On the positive side, gold grades are better northward in some of the less tested zones.

SULPHURETS PROPERTY - NEWHAWK

The tour was brief and preceded by a short discussion with Norm Tribe about the geologic setting; Tom Drown took us underground. Dave Lefebure joined us for this part of the tour.

The deposit is within a large rusty area of strong hydrothermal alteration. The protolith(s) are obscured and subjects of ongoing debate. Away from the alteration, the country rock is largely gray wackes and volcaniclastic rocks cut by syenite phys. and younger dykes - some syenites are Kfeldspar megacrystic - like the Premier Porphyry. C.R. may be Betty Creek or possibly Unuk River Formation.

In mineralized zones, silicification and quartz veins zone outward through quartz-sericite-pyrite to sericite pyrite to chlorite or sericite with minor pyrite. Kfeldspar alteration is present but minor. Late stage calcite veins are local.

Mineralization consists of quartz-pyrite veins with sphalerite±galena±tetrahedrite±ruby silver; there are several generations - the ruby silver is late stage. Early flow sulphide quartz-pyrite-galena-sphalerite-electrum-silver minerals are followed by late high sulphide zones with ruby silver.

Extensive underground development has been done on two levels connected by a decline.

Published reserves are 1 1/2MT of oz. (2/3 of this is West Zone, the rest is from the Gossan [30,000 Tons of 2 oz. Au] and Shore Zones.

Generalization - if there is no quartz and/or silicification then gold grades are very low.

GOLD WEDGE PROPERTY - CATEAR RESOURCES

The geology was discussed with and an underground tour was led by Erik Ostensoe. Very hospitable.

The country rock is generally fragmental andesite that is variably foliated; textures are well preserved.

The main showing - the Golden Rocket vein- has been tested with drill holes, and down-spiralling adit and two drifts. Mineralization is electrum with local galena, sphalerite, tetrahedrite and minor ruby silver in silicified zones in sericite-pyrite alteration zones. The zone averages 3m in width but is variable.

Adjacent to mineralization the country rock is variably sericitized and pyritized. The 'vein' is locally fault-offset.

History:

In the Discovery Trench some 300 Tones of high grade silicified, quartz veined rock were mined. The mineralized zone is about 3m wide and trends 035/75NW. The property is a small fractional claim within the large Newhawk claim block (formerly Granduc and Esso).