

Telkwa

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*Ashwood project of Aquaterre Mineral Development Ltd was toured with John Kerr, project geologist Scott Weekes, consultant Ron McMillan and EMPR's Ron Smyth, Dani Alldrick and Tom Schroeter on Aug. 20. Mafic to intermediate volcanic rocks, locally pyritic, are overlain by rusty argillite which is intruded by a Coast Range granite dike in the core of an anticline. Anomalous gold in talus fines is localized near the volcanic/sediment contact. It will be drilled as a VMS target although drilling appears to me to be premature.

M. L. Scott

*Willoughby (103P 006) exploration program and drill core were reviewed with Dave Visagie of Camnor Resources Ltd. and Tom Schroeter on Aug 21. Conditions permitted only a fly-by of the 250 m by 600 m Willoughby nunatak where impressive cliff-face rock sampling is clearly visible. The program was wrapping up with 17 holes completed (5750 feet); 6 in the North zone, 9 in Wilby and one in each of Upper Icefall and Willow (formerly Willoughby zone). Intercepts range from modest to spectacular (40 g/t Au over 11.7 m) and continued exploration next year appears certain. Inspection of the core reveals interesting similarities to Red Mountain. The critical host rock is a hornblende-feldspar porphyry that has intruded thin-bedded sediments and andesite tuff. The sediments are strongly bleached (cf "porcellanite" at Red Mountain). Hydrothermal breccias are abundant. An unusual "black chlorite" occurs in some breccia zones. Gold is associated with pyrite (locally coarse grained and strikingly similar to Red Mountain), pyrrhotite, minor spalerite plus variable chalcopyrite and galena; zones have a strong As, Zn, Pb signature. A significant difference from Red Mountain is association of some gold zones (eg, North, Willow) with ductile shearing in the porphyry. Alteration is pervasive sericite and calcite, the latter is more prominent than at Red Mountain, and strengthens a Porgera geological comparison.

John Taylor

*Huckleberry was visited with Tom Schroeter and New Canamin project manager Kelly Illerbrun on Aug 25. Drilling has concluded for the year (1994 drilling = 52,000 ft), unfortunately with the Far East and North zone exploration targets incompletely tested. New Canamin has elected to focus its limited financial resources on completing the feasibility study started in early summer. Expenditure to date this year is \$3 million. Two important geological concerns pertinent to development have been alleviated. First, mineralized fractures are steep and all early drilling was vertical. It is reassuring that copper grade of angle holes is stated to correlate within 2% of vertical holes. Second, early drilling of the East zone was marred by very poor recovery (and hence grade uncertainty) in a 10-20 meter thick broken interval at the subcrop surface caused by dissolution of gypsum from the hard hornfels. Time and money were expended to achieve 80% recovery in recent drilling. Mineable reserves are 80 million tonnes at 0.453% Cu with a starter pit of 18 million tonnes at 0.65% Cu (economics appear marginal). Production rate of 13,500 tpd and capital cost of \$120 million is proposed. Concentrate shipment via Kemano has been ruled out, due to lack of support by Alcan, and would be trucked to the rail line in Houston. Possible scenario: project financing by Hudson Bay Smelting to earn an equity interest and guaranteed supply of copper concentrated for Flin Flon.

Telkwa Coal

*Telkwa Coal project was toured with Manalta Coal geologist Angelo Ledda and VP John Taylor (specially on site to guide Brenda Eaton). The focus of the 1994 program is reconnaissance drilling (500 m spacing) of the large property so that annual fees of coal leases can be trimmed. A secondary objective, fill-in drilling of the Tenas deposit has been disappointing. The deposit is cut by an intraformational channel of Cretaceous river sand. Ballpark mineable reserve is 43 million tonnes in

Wardak, Aug 94



Province of
British Columbia

Ministry of
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MEMORANDUM

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MONTHLY REPORT - SEPTEMBER 1995

by

Paul Wojdak, NORTHWEST REGIONAL GEOLOGIST

OCT 5 1995
Geological Survey Branch
MEMPR

HIGHLIGHTS

*Royal Oak BC regional office to be located in Smithers. Peggy Witte and an entourage of investors visited Stewart, Red Mountain and Kemess in early Sept. Royal Oak is having trouble hiring capable geological personnel with Red Mountain experience (everyone is busy/ committed). Major 1995-96 exploration program planned for Red Mountain to include an extension of the exploration decline plus surface and underground drilling. Metallurgical test sample to be extracted at Kemess by surface excavation.

Red Mt.

*Cominco-Snip is preparing an underground development proposal to evaluate its new Twin West discovery (refer to my Aug report for description).

SNIP

*Booker Gold have encountered good grade porphyry copper and breccia mineralization in drilling at Hearne Hill in the Babine camp.

HEARNE HILL X

*Teuton Resources have discovered new bonanza grade gold mineralization in their EXPLORE BC funded exploration near Red Mountain.

FIELD ACTIVITIES

*Manalta Coal's Telkwa project was visited with Bruce Graff on Sept 6. We reviewed the project with Terry Brazzoni (Exploration Superintendent), Kendall Umscheid and Glenn Seve. Manalta's program consists of 2-300 meter spaced drilling of the Tenas deposit and broader, 7-800 meter spaced drilling to test their extensive coal licenses for coal-bearing stratigraphy. The reconnaissance drilling has encountered glacial overburden up to 160 m thick and except for one 6 m intersection, not much coal. The Tenas deposit is emerging as the best resource on the Telkwa property. The coal seam is up to 9 m thick, dips 10-15° west and is bounded on the west by a normal fault. Geometry is ideal for a shallow open pit. Coal quality is very good: high BTU thermal coal with low sulphur content and locally clean enough not to require washing. Manalta is likely to re-evaluate proposed development and locate the plant site south of Telkwa River, instead of on the north side near the #7 and #8 deposits which were proposed for initial mining. The 1995 program will comprise 95-100 rotary and a few diamond drill holes, and 4 trenches to test ARD potential of the enclosing Skeena Group sandstone and shale.

Telkwa Coal

*Organized/ participated in the Babine Field Trip with Don MacIntyre and Co. held on Sept 7. There were 13 registrants (advertised as 15 max) with representatives from Inco, Teck, Kennecott, Rio Algom and several junior companies.

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gravity gold prior to flotation (recovering 29% of contained gold),
copper-lead with most of the remaining gold and silver,
zinc,
waste pyrite, to be returned underground as ARD mitigation.

Mill tailings will contain less than 1% sulphide but as a further precaution will be mixed with crushed limestone from an on-site quarry. ARD waste rock will be disposed underground. Power supply will be six 1.6 MW generators. Concentrate will be hauled 517 km to Skagway for shipment. Approximately 160 km of new and up-graded road is required from the minesite to Atlin. Once the mine is built, estimated direct employment is 259, including trucking of concentrate to the deep sea terminal at Skagway.

Telkwa
*Manalta estimates the capital cost to develop a 1.0-1.5 million tonne per year open pit mine at Telkwa Coal to be \$70-90 million. Mineable reserves are 46 million metric tonnes. The first 20 years of a 25 year mine life would be based on the Tenas, Pit 3 and Pit 3 satellite deposits on the south side of the Telkwa River. Project application report is anticipated by about February.

Polaris Taku
*Canarc (Golden Angus) is considering a wide variety of development options for Polaris Taku ranging from on-site processing linked to Tulsequah Chief's Atlin road to off-site processing at Premier Gold (Canarc is considering purchase of the facility) or Greens Creek utilizing road/barge transport down the Taku River. They will have to narrow the range before making its Project application report, or face an overwhelming array of base line studies.

*Large claim block staked near Portland Canal north of Maple Bay (20 four-post claims).

*Hera Resources has enlarged their Loring property near Smithers to 200 units.

*Quartzrock (Taurus) gold resource announced by International Taurus Resources,
Inferred 13.7 million tonnes at 1.01 g/t Au (445,743 oz)
Indicated 25.1 million tonnes at 0.67 g/t Au (539,733 oz)
TOTAL 38.8 million tonnes at 0.79 g/t Au (985,476 oz)

*Snip concentrate is being shipped with Eskay ore to DOWA 's smelter in Japan.

Eskay Creek reserves expanded by summer drilling:
21B zone 107,000 tons at 3.81 oz/t Au eq
109 zone 136,000 tons at 0.67 oz/t Au eq
NEX zone 123,000 tons at 1.35 oz/t Au eq

These are diluted geological resources.

*Acquisition of Sulphurets (Brucejack gold-silver deposit) by Canamera not completed. Apparently the company wants to ensure that Granduc Mines does not have a backin right.

P. Wojdak, Dec. '96

3) prior to certification, although overall the report is very thorough. Thanks to everyone who worked hard to review the many volumes and provide coments on time.

* Telkwa Coal has indicated that it is changing some aspects of its proposed mine plan. The Company now proposes a 23 year mine life, rather than 25 years, with 217 workers, rather than 120. Preliminary studies indicate that the tailings pond may be reduced in size by using mined out pits as backfill sites, the "Helps" pit will not be mined and alternate locations for rail loadout are being investgated.

LAND USE PLANNING

Informative discussion will Peter Ostergaard, Rolf Schmitt and others regarding strategic direction for LRMP planning in the Northwest Region, especilly as it relates to the Cassiar LRMP's. This is an area of high potential and the ministry needs to develop sound strategies to take to the tables. Rolf to discuss further with Mary Lou and wally and to provide proposals to Peter.

OTHER

Wally attended the Northern Forestry Producers Association Bulkley Valley - Lakes Community Dinner in Houston on Wednesday evening. The mills in the north are facing near term layoffs of 3,500 until market and stumpage conditions improve. Association working closely with government to identify solutions, but no immediate solutions. Jack Munroe was the guest speaker. Speech was informative, invigorating and humorous.

Wally

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Bergen - Nov. 7/97

Telkwa Gold propose to drill 3-4 holes on the Del Santo VMS prospect near Smithers.

Consolidated Magna Ventures are doing IP over the southwest faulted extension of the Big Onion porphyry prospect near Smithers. They expect to follow up with 1000 metres of drilling. Current "reserves" at Big Onion comprise significant supergene copper that is amenable to SX-EW recovery, and discovery of an extension would have similar potential.

Booker Gold, finally, has released a resource estimate for Heame Hill and Morrison. The Morrison figures are based primarily on re-appraisal of Noranda data as Booker only drilled 3 additional holes in the deposit.

Prime/Homestake and Uiterre Resources Ltd have broken off discussion of the SIB gold-silver prospect after 2 years of negotiation. This is unfortunate as one of the best "Eskay look-alike" targets will remain inactive.

TELKWA COAL
Manalta Coal is expected to make an announcement with regard to the Luscar takeover bid early in the week of Aug 3. Evaluation of coal quality/geotechnical in the Tenas and Pit 3 deposits at Telkwa is underway (57 planned holes). Six-inch coring of holes will ensure a representative bulk sample of the Tenas deposit. Observed this work by MacCauley Drilling on Aug 1.

Visited Teck exploration of the old IN porphyry prospect (94D 061) on July 31, with Tom Schroeter. Scott Smith and Andy Betmanis are mapping, soil sampling (45 km grid) and re-sampling old core for Teck. Previous exploration by Canadian Superior and Cities Service (1973-77) did not include gold analyses, the focus of Teck's re-evaluation. Reconnaissance soils taken last year returned a 250 m wide 500 ppb gold anomaly. Porphyry mineralization is associated with a northeast dike swarm of Kastberg (biotite)-hornblende-feldspar porphyry. Two intrusive phases are recognized. Best gold values appears to occur where biotite monzonite cuts and alters pre-mineral andesite dikes.

Xplorer Gold drilled 5000 ft (in just 8 days) on Red Cap in the Taku district.

Exploration spending in Northwest continues to project at about \$9 million.

Wojdak, July 27/98