Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

# MEMORANDUM

Smithers telephone: (604) 847-7383

MONTHLY REPORT - OCTOBER 1993 Geologiant Comment

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## Paul Wojdak, NORTHWEST REGIONAL GEOLOGIST

# HIGHLIGHTS

Value of ore,

calculated in

15 ~ \$ 1450,00 pertonne.

Jan. 1993

\* **RETRACTION: Red Mountain** project will not continue through the winter, as reported last month. Prime reason appears to be major reorganization of Lac Minerals corporate structure and coincident major downsizing of exploration and technical staff resulting in (temporary?) inability to arrive at important decisions. Craig Nelson, a key backer of the Red Mountain project, is no longer executive vice president of exploration.

\* Eskay feasibility study estimates capital costs of \$294 million for mine and plant construction, and production cost of \$108 per ounce of gold equivalent. In a significant new development Prime Resources disclosed it is assessing offers by smelters to treat ore direct from the minesite. This would reduce capital requirement by \$150-200 million and eliminate the Houston mill and autoclave facility. <u>Benefits to British Columbia, including jobs would be greatly reduced.</u> <u>Government should take a pro-active approach to this possiblity!</u>

\* New gold zone discovered at Golden Bear, 2 km north of the minesite, 4,000 ft winter drill program has begun. Also, an excellent drill intercept from the Grizzly Zone (formerly Bear South Deep).

\* Red Mountain ore system being recognized as anal@gous to gigantic Porgera gold deposit.

#### **FIELD ACTIVITIES**

\* Mount Harry Davis (93L203) drill project of Teck Corp was examined with Jim Oliver and Greg Thompson on Oct 7. The property was brought to the drill-target stage 10 years ago by previous operators. With a drill contract of just \$10 per foot, Harry Davis is the third property Teck has optioned this season for a fast, low-cost drill test. At Mount Harry Davis subaerial rhyolite and dacite of the Telkwa Formation (Hazelton Group) contains sparse sphalerite and chalcopyrite in a breccia zone. Drilling indicates the breccia zone is structurally controlled rather than stratigraphic. The breccia zone may have potential for epithermal gold-silver mineralization.

\* Allin (093L293) drill program by Equity Silver Mines was just underway on Oct 15 when I visited the property with Equity geologist Trevor Wall and prospector Gerry Klein. Allin adjoins the Equity mine property and the area of interest is just 5 km east of the Equity pit. Allin was explored in 1987 (Normine Resources; IP, soil geochem, 4 drill holes) based on the assumption that strata strike northerly, as at Equity. In 1992 Klein discovered ore grade mineralization in glacial till that is similar to Equity Silver. Careful examination of minimal outcrop by Klein and Wall on this drift covered property indicate that intense argillically altered (and pyritic) Mesozoic lapilli tuffs strike easterly, not north. Equity has laid out a 4000 ft drill program based on this new interpretation.

The story of how Allin came to be optioned is unusual. Equity initially declined to option the claims from Klein. Placer Dome liked the property but could not option it because of a perimeter agreement with Equity Silver Mines. The two related corporations were unable to come to an agreement to defer the perimeter clause and finally Equity was "forced" to undertake an option and exploration program.

\* Telkwa Coal (93L152, 156) property tour south of Telkwa River was completed on Oct 18 with Manalta geologist Angelo Ledda (see PJW Sept report for Telkwa North).

\* Silver Butte (SB, 104B150) development raise from Silver Butte 810 level drift into the West Kansas zone was toured with Paul Lhotka on Oct 25. The project is a joint venture by Westmin Resources and Tenajon to assess production of ore for custom milling at Westmin's Premier mill. Milling of a 1100 tonne bulk sample from the 107 metre raise graded 3.35 g/t Au (minimum ore grade target suggested to be 5 g/t Au). Two slusher drifts were being driven in ore at the time of my visit, to supply a second bulk sample for test milling. Underground evaluation is necessary because detailed drilling was insufficient to determine geometry and continuity of high grade gold intercepts. Work to date indicates that visible gold occurs in randomly oriented 2 cm wide, 1-2 metre long veins and that location of these high grade veins within the zone is impossible to predict. Emphasis now is on evaluating bulk tonnage potential. Lhotka hopes to complete 6000 feet of underground drilling by mid-November. Ultimate potential of the bulk tonnage zone is 750,000 tonnes.

\* Red Mountain (103P086) could not be visited on Oct 26 due to 150 km winds at the mountaintop weather station. (Same weather system delivered 7.5 inches of rain in 22 hours with accompanying mild temperature melting one metre of snow. Bridge footing on Eskay access road was washed out in conditions that exceeded the 200 year flood.) Red Mountain staff have begun to interpret the tremendous volume of data accumulated in a short time span at Red Mountain (eg, 20,000 gold assays). Hans Smit and John Watkins reviewed plans and sections with Homestake geologist (Ron Britten, Dave Kuran) and Westmin staff (Paul Lhotka, Alf Randall, Rob Boyce) and myself. The emerging picture is outlined below:

Red Mountain gold deposits occur within structurally controlled zones of explosive brecciation and are spatially related to a small pipe-shaped offshoot (Hillside porphyry) at the top of the 200 Ma Goldslide hornblende porphyry stock. Country rocks are upper Hazelton Group massive tuff and well-bedded sediments. Goldslide stock hosts a weak chalcopyrite-moly-quartz stockwork with chlorite epidote alteration. In the gold zones, coarse-grained, semi-massive pyrite was deposited in structural openings (breccias, fractures) and is enveloped by sericite alteration. Gold correlates well with pyrite. A zinc halo averages 1000 ppm. Pyrrhotite rather than pyrite is prevalent at higher structural levels. Tourmaline and axinite occur at yet higher levels. The gold zones are compact, dimensions of the Marc Zone are 15-30 metres wide, 150 metre maximum dip length by 250 metres long. The Marc zone breccia occurs within or along the contact of the Hillside porphyry. The breccia includes abundant sedimentary clasts. In general, the high sulphidation ore zones are rooted from an extensive area of gold enrichment developed at the top of the Goldslide stock. Post-mineral quartz-hornblende porphyry, a late differentiate of the Goldslide stock cuts the Hillside porphyry but is weakly altered.

### LAND USE

\* Mount Edziza Recreation Area mineral potential report forwarded to McLaren and GSB for review. Unable to start to Swan Lake mineral potential report contrary to plan.

#### **EXPLORATION AND MINESITE ACTIVITY**

\* North American Metals Corp (Golden Bear Mine) announced discovery of the Kodiak Zone. During trenching of an IP anomaly in the Fleece Bowl zone the exploration geologist discovered the nearby, but separate Kodiak zone. Three trenchs over a 45 meter strike length average 5.5 gpt Au over 18 meters. A 4,000 ft, \$350,000 drill program is underway. If the Kodiak zone proves up 750,000 tonnes of oxide ore, Victor Jutronich (president, North American Metals) suggests that development is viable and it might be possible to raise mill throughput to 600 tpd without the roaster. New management continues to re-evaluate Golden Bear with a high regard for the original work by Chevron and with a different approach from Homestake.

In a separate development, the third hole of a 3-hole drilling program at Golden Bear Mine returned an intercept of 14.4 gpt Au over an estimated true width of 7-8 metres from the **Grizzly Zone**, formerly known as Bear South Deep. The drill program has been extended.

\* Johnny Mountain mill is processing ore, but apparently not from the Zephrin vein as was anticipated.

\* Creditors to the **Dome Mountain** gold mine are taking Timmins Nickel Inc and Habsburg Resources to court to garnish operating proceeds. New management (Habsburg Resources) have an agreement with previous management (Timmins Nickel) stating they are not responsible for past debt. If the dozen local creditors continue to be left holding the bag, it will be a difficult operating scenario for Habsburg. Roscoe Postle Associates and G.A. Harron & Associates are evaluating ore reserves.

\* Noranda has staked 60 units over lapsed claims west of the Tide Lake airstrip at Granduc.

\* Huckleberry reserves estimated by New Canamin:

East zone, 69 million tonnes @ 0.57% Cu

Main zone, 31 million tonnes @ 0.52% Cu.

Drilling has concluded for 1993. New Canamin plan to recommence drilling in mid-January.

\* Noranda has optioned the **Babs** (093Lnew) Cu-Au porphyry property from prospector Ralph Keefe, after the property was returned by Equity Silver Mines. Equity's drilling focused on magnetic anomalies, rather than testing up-ice from the mineralized boulders. Noranda plans a small drill program next month.

\* Noranda are conducting small programs on a number of properties in Northwest BC (Tepee, Pavey, Smaby, GOZ/RDN, Nat, Red Bluff in addition to Babs) but when questioned about overall level of expenditure in BC, Noranda stated that there is still an outflow of exploration dollars from BC.

\* Premier Gold Mine continues to operate profitably supplied solely by ore produced from underground at a rate of 700 tonnes per day (based on a 5-day week). Stability is improved to the point that Premier is no longer on a month-tomonth basis, it appears that it would take one or two disappointing quarters for closure to be considered. Milling ore from caved stopes has been very successful and will be continued from the old Silbak Premier 2-level drift, accessed from the Premier open pit. A large long-hole stope is being developed in the West zone (Northern Light) on 1070 level.

### **OFFICE ACTIVITIES**

\* Big Onion discussed with John Baker and property owner, Jack Hemmelspeck. Hemelspeck donated suite of core samples.

\* Nephrite? jade sample submitted by Dease Lake area placer miner sent to Mac Chaudry for mineral identification by XRD.

\* Criteria for "Major Projects" to be included in Exploration Summary table reviewed with other regional geologists and Tom Schroeter.

\* Memo to Brian Parrott suggesting Prospector Assistance program in 1994.

\* Big Onion paper written on own time for Porphyry Sequel volume.

\* Granduc drill core moved from J.T. Thomas yard to inside storage site.

\* Presented 1993 exploration highlights on 12 major projects to Northwest Mine Development Review Committee on Oct 28. Two-day NWMDR committee was updated on Red Mountain and Eskay projects by the respective companies. Two day meeting also considered 17 other minesites (issues in brackets): Premier Gold (ARD and closure plan), Johnny Mountain (underbonded, site condition), Snip (ARD monitoring, hovercraft), Bell Copper (Babine Lake band have hired environmentalist to review closure plan), Cinola, Gólden Bear (road), Cassiar (Black Swan bonding, tailings disposal), Dome Mountain (reclamation liability, bonding), Mount Klappan (decommissioning), Table Mountain (Cusac start-up, permits), Taurus (minor reclamation, property sale), Catear (equipment, reclamation), Kitsault (ARD in pit), Duthie (ARD of tailings), Engineer (prospectus anticipated), Midway, Telkwa Coal (ARD, public consultation).

\* Minerals North 1994 in Mackenzie on April 14-16. Planning begun with Tom Brazil, Mackenzie Chamber of Commerce. Late date due to Mackenzie desire to hold trade show in ice arena which is not available before early April. Arrange conference call for Nov. 17.

\* Mailout of letters requesting information on 1993 exploration.

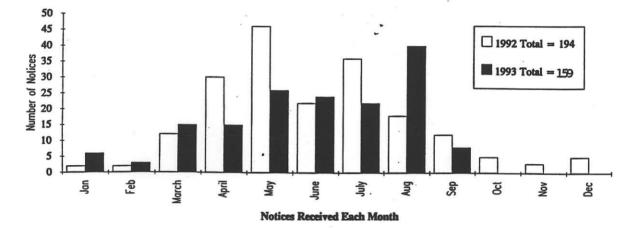
\* Office Rock Library updated with 1993 property visits.

\* Spoke to Walnut Park Grade 3 class on rocks, minerals and Equity Mine.

#### **NOTICES OF WORK**

11 Mineral notices received in October. Total to date is 171. Notices graph was inadvertently deleted and this poorly trained operator cannot re-create it, hence no update for October. Perhaps ExCel training in November will help. Comparison of 1992 vs 1993 data show that unique circumstances have contributed to different patterns. Spring peak in 1992 was an attempt to beat the Notice of Work fee. Late summer peak in 1993 results from increased gold price, success of Red Mountain and Eskay development resulting in other players' ability to raise money and desire to maintain key ground.

#### Mineral Notices of Work - Northwest District 1992-1993



#### TIME DISTRIBUTION

	Number of days
Smithers office general	11.5
Field	3.5
PAS meetings	0
PAS office work	3
NW Mine Development Committe	e 2
TOTAL	20

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Paul Wojdak P.Geo. Regional Geologist

cc. B. Parrot T. Faulkner R. Meyers D. Lefebure

T. Schroeter	G. McLaren
G. McArthur (GSB)	P. Wilton
R. Pinsent	M.L. Malott