



Province of
British Columbia

Ministry of Employment and
Investment
Energy and Minerals Division
3990 - 22nd Avenue
Prince George BC V2N 3A1

MEMORANDUM

TGS → RG
Pr. Geo
JUN 6 1996
Geological Survey Branch
MEMPR

May 1996 Monthly Report
for the
Northeast-Central Region
by

Bob Lane, Regional Geologist, Prince George

HIGHLIGHTS:

Preliminary estimate for 1996 exploration expenditures in the NE-C region total \$16 million.

1996/97 Prospectors Assistance Program grants awarded to the region. Eleven, out of a possible 32, prospectors/geologists have been awarded grants, ranging from \$6,400 to \$8,100, that total \$78,000 for the NE-C region. Only 2 of 17 placer gold submissions were favourably reviewed... many received low factor scores because their proposed *exploration* projects were thinly veiled bulk sampling or mining programs.

Mount Polley construction resumes. Contracts have been awarded for many facets of mine and mill construction. Site work has resumed.

Sable to develop small open pit on Multinational B zone. Sable Resources has been issued an amended permit to mine, by open pit methods, remaining at its Multinational B gold-copper deposit, part of the old Baker/Dupont mine property, in the Toodoggone. In 1992, an attempt to re-enter 1991 underground workings, and access an estimated 2,500 tonnes of ore (grading approx. 0.5 opt Au and 6 opt Ag), was unsuccessful because of instability of mine workings.

QR Mine - Production for 1st Quarter 1996

There was no mining during the first quarter--all production was from stockpiled ore. Production for the first 3 months of 1996, ended March 31, was 7,530 ounces (234,200 grams) gold. However, the normally smooth operating crushing plant and crushed ore storage facilities were affected by record cold temperatures during January and February. This, together with a lower-than-anticipated stockpile grade, reduced scheduled mill throughput by 32% and increased cash costs per ounce by 23% to US\$306. In mid-March mining resumed as planned, daily production returned to normal, and modifications had been made to the crushed ore storage facility. Brian Miller (ex-Westmin) has replaced Jason Mckenzie as General Manager at QR.

Carrier Sekani Tribal Council Meeting an eye-opener! Attended AiP meeting with the CSTC, in Tache, on May 8. The intent of the meeting was to develop a workplan and

Baker

QR



August 1996 Monthly Report
for the
Northeast-Central Region
by

Bob Lane, Regional Geologist, Prince George

JCB → RG
- P.G. Geo

OPERATING METAL MINES

QR

QR- Kinross Gold Corporation reports that gold production for the first 6 months of 1996 totaled 16,770 ounces (521,600 grams). Cash operating costs for the first half of the year were US\$313/ounce of gold produced, down from US\$318 for the same period last year. Mill throughput has stabilized at 1200 tpd, up from 800 tpd, with no adverse effect on gold recovery. Significant improvements have been made in blasting and ore handling in the Main pit resulting in a reduction in ore dilution. Underground development on the Midwest zone is on schedule to bring the zone into production in 1997. Initial mining from the West zone pit, started in June, has resulted in higher gold grades and more tonnes than expected.

Gibraltar

Gibraltar- Gibraltar Mines produced 31.6 million lbs of copper (14,330 tonnes) during the first half of the year at a cash cost of US\$0.93, up from US\$0.88 for the same period last year. The increase in cost is due mainly to lower mill throughput and the processing of harder ore. The company reported a net loss of \$340,000 for the period, mainly due to the low copper prices.

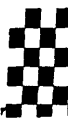
MINE DEVELOPMENTS

Mount Polley- Mine and mill construction at the site is ahead of schedule. Assays of material from the second ore blast in the Cariboo/Starter/Central pit were well above average ore grade.

Kemess South- Visited the mine development and revisited the hypogene and supergene ore test pits. The temporary camp is extremely active, with heavy machinery (loaders, graders, small haul trucks, etc), Atco trailers and construction material arriving constantly. Photographs of the test pits, and ground preparation for the permanent camp, mill complex, airstrip and tailings pipeline corridor were taken for the record. The weather has been wet and miserable for most of the 'summer' and, as a result, much of the work area is a quagmire and progress at the site is several weeks behind schedule. The cleared area for the camp and staging areas is enormous as is the area laid out for the mill complex. The cleared area for the airstrip measures 2000 metres by 50 metres. An additional 75 metres at either end will be logged. Actual construction has not yet begun. The camp facilities at the past producing Chemi mine are being readied for relocation to the permanent camp site at Kemess.

FIELD ACTIVITIES

JD- AGC Americas Gold Corp. provided an excellent update of their diamond drilling program at the JD epithemal Au-Ag prospect. A first phase of drilling, consisting of 6100 metres in 59 holes, has been completed and the company plans to drill an additional 3000 metres. Drilling has targeted the Finn zone and its extensions to the east, west, and down dip. The Gasp and Gumbo zones, identified as clay-rich, shallow dipping zones during past programs by Energec Minerals, may be up-dip extensions to the Finn zone. Assays from recent diamond drilling include 14 metres grading 0.109 opt Au (ddh JD96-157) and 10 metres averaging 0.138 opt Au (ddh JD96-158). The most recent drill results suggest that the Finn zone has more potential for a low grade, bulk tonnage gold deposit with local, narrow, high-grade gold, bonanza-style veins.



**November 1996 Monthly Report
for the
Northeast-Central Region
by
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MINES and MINE DEVELOPMENTS

Baker. Sable Resources produced 63 tons of concentrate, grading 24 opt Au, 240 opt Ag and 15% Cu, from the milling of 2577 tons of ore from the Multinational B orebody. In 1997 the company plans to mine additional tonnage from this small open pit development, as well as reprocess approximately 2500 tons of tailings. Further reclamation and a modest exploration program are also planned.

Kemess South. Construction is continuing at a fast pace considering weather conditions. Over 300 people are at the mine site; the airstrip is almost complete—the final surface layer will be added next year and the airstrip access road is complete; development of structures that will divert the flow of Kemess Creek away from the tailings impoundment area, are underway.

Mount Polley. Approximately 750,000 tonnes of ore and waste have been mined from the starter pit, located between the Cariboo and Bell pits. The crushing plant is expected to start up in the spring and process waste for use as road bed material. The concentrator/service/office complex and crusher building are roofed and clad. Interior construction is ongoing and will continue throughout the winter.

Mt. Milligan. Placer Dome Inc. continues to re-evaluate the economics of their bulk tonnage Cu-Au porphyry project in the Omineca. Site work has included test pitting, geotechnical drilling and a fish study as well as public relations meetings.

QR. Third quarter production totaled 14,036 ounces of gold at cash operating costs of US\$220/ounce. Total production for the first 9 months of the year is 30,806 ounces of gold. Current mineable reserves, from the Main, Midwest and West zones combined, total 1.2 million tonnes with an average grade of 4.3 gpt Au. The mine opened in June of last year with mineable reserves of 1.3 million tonnes grading 4.5 gpt Au (visited Oct. 1/96 and Oct. 28/96).

EXPLORATION MONITORING

Beekeeper. Results have been released from a 10-hole diamond drill program on this porphyry copper-gold prospect located 22 km SE of Mount Polley. Three holes returned encouraging assays including 30 metres grading 0.31 gpt Au and 0.20% Cu in B-96-1; and 22 metres grading 0.96 gpt Au and 0.70% Cu in B-96-3.



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**March 1997 Monthly Report
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MINES and MINE DEVELOPMENTS

Gibraltar. In 1996, the McLeese Lake Operation, now owned by Westmin, produced 31,691 tonnes of copper (2,555 tonnes of which was cathode copper) and 182.3 tonnes of molybdenum from 13.2 million tonnes of ore milled at a rate of approximately 38,000 tonnes per day. Head grades averaged 0.28% Cu and 0.014% MoS₂. Proven and probable reserves for the Gibraltar East, Granite Lake and Pollyanna deposits, as of December 31, 1997, totaled 142.5 million tonnes grading 0.303% Cu and 0.009% Mo, sufficient to sustain operations for about 11 years. The leachable ore reserve, for the Connector zone and Pollyanna stage IV pit combined, is 3.04 million tonnes at an acid soluble grade of 0.197% Cu. The Gibraltar North and Sawmill mineralized zones are not part of the mineable reserves at Gibraltar.

Kemess South. Clearing of the powerline right-of-way is progressing. However, a request by First Nations (Tsay Keh Dene Band) for a court order to stop clearing of the powerline pending the outcome of a Petition to the Court, was denied. The next court date is scheduled for April 14th. Construction of the mill building (concentrator) is approximately 35% complete.

Mount Polley. Continued progress at the minesite with startup scheduled for late May.

QR. More detailed production figures from QR, the mine processed 382,472 tonnes of ore in 1996, primarily from the Main zone open pit, producing 43,421 ounces of gold and 16,023 ounces of silver. As of Jan. 31, 1997 615,792 tonnes of ore has been mined from the Main zone. The Main zone will provide most of the mill feed during 1997, and reserves there will be exhausted by July. Mining of the Midwest zone is underway and will continue through to early 1999. During 1996, 65,000 tonnes of ore was mined from a small open pit on the 'North Lobe' of the West zone. The current plan for the West zone is to proceed with open pit mining of the 'South Lobe' (306,000 tonnes grading 4.04 gpt Au) by the middle of the year. Later in the year, underground development is planned to provide access to the lower portion of the 'North Lobe' (146,000 tonnes grading 4.73 gpt Au), which will be extracted by longhole mining methods.

EXPLORATION MONITORING

Beekeeper. Drilling has begun at the Eastfield-Imperial Metals JV property 28 km SE of Mount Polley.

Cariboo Gold Quartz. Chris Ash (GSB) met with International Wayside and Gold City Resources regarding a possible 'Geoscience Program' partnership to study gold veins in the Wells area.

QR. First quarter production totaled 10,099 ounces of gold (vs. 7,530 in 1st ¼ of '96) at a cash cost of US\$339 per ounce (vs. US\$306/ounce for the same period in 1996). Cash operating costs were higher because of costs to repair a damaged crusher, processing of 20% more ore and increased mining costs associated with the extraction of ore from the underground Midwest zone.

EXPLORATION MONITORING

Beekeeper. Visited the Eastfield-Imperial Metals JV property, 28 km SE of Mount Polley, and examined diamond drill core from the recently completed 7-hole, 1100-metre drill program. Much of the core is K-spar altered fine to medium-grained monzonite to syeno-diorite. Subparallel quartz-pyrite veinlets cut (post-date) host rock that contains sparsely disseminated chalcopyrite. The most encouraging assays were from hole 97-B-12 (15 metres averaging 0.55 g/t Au and 0.33% Cu) and hole 97-B-15 (6 metres grading 2.12 g/t Au and 0.12% Cu) which tested the west and east extensions to mineralization identified in hole 96-B-3.

Chaco Bear. Imperial Metals plans a \$500,000 diamond drill and mapping program on its porphyry-related prospect west of Bear Lake.

Domin. Staking along the Isaac Lake fault immediately north of Bowron Lake Park, by Gold City Resources, adds to their existing claims which cover the Dominion Creek gold deposit.

Fawn. Equity Engineering has completed a 7-hole, 613-metre diamond drill program on the Giver zone on behalf of Craven Ventures, a private company that is earning an interest in the property from Western Keltic Mines. The drilling tested the Giver zone at 150 metre intervals along its east-west trend. The moderately south-dipping epithermal vein system was intersected in several holes.

Gibraltar. A 34-hole, 6400-metre diamond drill program has been completed on the Connector zone, located between the Gib East and Pollyanna pits. Pre-existing leachable reserves (mineable) for the Connector zone are 1.2 million tonnes grading 0.293% acid soluble copper. Early results are apparently very encouraging and will result in a substantial increase in leachable reserves and new sulphide (millable) reserves. The development of this zone may supersede that of the Pollyanna/GM stage IV if results warrant. In other news, Gibraltar is looking at the possibility of developing a moly leach plant using new technology.

Jacobie Lake. Navarre Resources plan to continue evaluating the porphyry Cu-Au potential of the JC1 property, immediately east of Jacobie Lake, with a modest diamond or percussion drilling program.

JD. AGC Americas Gold Corp. has submitted their NoW for this years exploration program on the JD property. A diamond drill program consisting of approximately 30 holes will test for the strike extensions to the Finn epithermal gold zone. AGC also plans to complete 10 ddh on the AL epithermal gold property and 5 ddh on the Moose property (Porphyry Pearl prospect).

Lane, Apr. '97-MR



~~June 1997~~ Monthly Report
for the
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HIGHLIGHTS

Kemess. A road block was constructed on the ORAR by the Tsay Keh Dene band at Black Pine. Royal Oak is attempting to have the blockade removed by court injunction (Note: the blockade was removed voluntarily by the Tsay Keh Dene on July 4 and discussions between representatives from Royal Oak, First Nations and the provincial government will hopefully resolve the outstanding issues).

Presented Exploration Overview talk in Tumbler Ridge, on June 4, as part of the informal Coal Symposium, organized each year by Barry Ryan (GSB-Victoria). Approximately 30 locals took in the talks which focused on coal fluidity (Ryan), Jade (Lefebure), Arctic coal (Rick Richardson), and updates of Quintette (Helene Lukey) and Bullmoose (Dan McNeil) operations.

MINES and MINE DEVELOPMENTS

OR. The Main pit has been shut down temporarily while engineering studies are completed on an area of possible failure in the ramp area. In-pit reserves contain an estimated 6,000 to 8,000 ounces of gold. Stockpiles contain approximately 2 months of millfeed. Underground development on the Midwest zone will enable mining to proceed, from the 985 level, within weeks. Development of the Southlobe pit (West zone) has not yet begun. Exploration and underground development is ongoing (see below).

Quintette. Toured the Shikano pit and Babcock (Little Windy-phase 1) developments with Ryan and Lefebure on June 5. La Prairie Contracting (Tumbler Ridge) will mine and stockpile approximately 500,000 tonnes of met. coal while they are constructing about half of the 9.5 km mine access road to the Babcock site. At the time of our visit about 150,000 tonnes of coal had already been stockpiled. The project is scheduled to be in full operation by 1998 with projected annual production of 2 million tonnes. Reserves will be mined out by 2003. Quintette's total planned clean coal production for 1997 is 4.4 million tonnes.

Bullmoose. An exploration/geotech drilling program, consisting of 50-60 rotary holes each averaging approximately 80 metres in length, is planned to get underway in September on the West Fork deposit.

Hannandor. The Hannandor placer gold property, owned by Gallery Resources, is located 22 km east of Quesnel and consists of 12 placer leases that cover a portion of Lightning Creek, as well as benches north and south of the current channel. Project consultant Terry Garrow provided a tour of operations on June 19. Production in 1997 began on May 10. Pay gravels are trucked from the North Moustique pit several kilometres to the plant site in the old Hannandor pit. The 150

93 QR

Midwest zone on June 25th. Approximately 500 metres of drifting has been completed so far this year and the 985 level is now fully developed. Several new, but small, ore zones have been encountered (including ore grade material located entirely within the siltstone unit (hanging wall) and a zone of disseminated tetrahedrite in the volcanics at the siltstone-volcanic contact. Other activity includes: reserve drilling on the fringes of the West zone and diamond drilling on the North zone (2 holes completed so far). Additional drilling is scheduled for the North and East zones and a mapping and sampling program will proceed on Kinross' claims south of the Quesnel River.

Our visit included an examination of the pending failure in the ramp area of the Main pit. Movement of approximately 12 cm has occurred along one fracture plane that dips toward the base of the pit. Several cracks have also appeared in the ramp. The company and its consultants are considering several options to stabilize the situation including backfilling part of the pit with waste rock from the West zone open pit development.

Hampton Placer Claims. Bob Hampton provided Ed Beswick and me with a tour and overview of activity on his placer leases, near Likely, on June 25. The property is not currently active, but some prestripping has been completed. Mining will only proceed when/if the price of gold rebounds to the US\$400 per ounce level.

Lloyd-Nordik. Visited with Lloyd Tattersall and Stu Tennant of Big Valley Resources on June 27. Diamond drilling on the Lloyd 2 zone and its western extension has been temporarily suspended. The drill has been moved to the company's Morehead Creek project, located 3 km south of QR. A total of 22 holes were completed on the western extension. An examination of the drill core suggest that this is zone is a more typical alkalic porphyry system (disseminated pyrite and chalcopyrite in potassically altered monzodiorite and intrusion breccias) than is the Lloyd 2 zone. Assay results are generally low grade (i.e. hole 97-99: 104 metres grading 0.12% Cu and 0.02 g/t Au).

Layers. Owner/operator Don Williams provided Ken MacDonald and me with a tour of the Layers 1-4 claims on June 30. Industrial mineral potential is in varicoloured, cherty or chalcedonic quartz layers, exposed along the east bank of the Fraser River. Individual beds are up to 0.5 metres thick and colours range from a vitreous pale green to dark grey to red. Low grade rhodonite (white to pale pink with abundant manganese oxide) was also noted. The claims produced aggregate and stucco dash in the late 1960s.

EXPLORATION MONITORING

Brenda. Diamond drilling has begun on the Brenda Cu-Au porphyry prospect in the Toadoggone.

JD. A due diligence of AGC Americas Gold Corp., and its holdings in the Toadoggone region, by Antares Exploration and Mining, was to be completed by June 30. The pending deal would secure several years worth of exploration funding for the Toadoggone properties, including JD, AI and Moose, as well as the Lawyers past producer, and result in Antares becoming the majority (55-60%) owner.

Received NoW for exploration programs on the Pine (north of Kemess) porphyry prospect, Soup (Johanson Lake area) gold-magnetite skarn prospect, Other Activities

Swan. Stratabound Minerals Corp. plans to drill 6 holes on its MVT-Zn-Pb-Ag prospect south of the Swannell River in the Lay Range.

Lane MR - June '97
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**July 1997 Monthly Report
for the
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by
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HIGHLIGHTS

A total of 23 companies or individuals purchased RGS data packages during the release on July 10 (many bought both the 94D and 94E packages). Wayne Jackaman was in the Prince George office to assist walk-in clients. Approximately 550 units were staked during a one week period following the release, mostly in NTS 94D.

The North Gataga lake sediment geochem survey data will be released from the Prince George office on August 12. Steve Cook (GSB) will be orchestrating the release.

MINES and MINE DEVELOPMENTS

Kemess South. On July 25 Harold Bent, Kemess Mines Environmental Monitor at the site, provided Jamie Pardy and me with a tour of the mine development. Construction of diversion dams are nearing completion. The starter tailings dam is more than 50% complete and will become part of the footprint of the main tailings impoundment structure, which is also well underway. The open pit has been cleared of all forest cover and topsoil. Stripping of overburden is well underway. The first bench (1365m) at the extreme northern end, and highest point, of the pit exposes intensely fractured pyritic grey and graphitic black chert which is cut by a pyroxene-phyric andesite dyke. An excellent view looking south over the primary crusher, mill and mine buildings can be had from the pit ring-road above the first bench.

The temporary blockade at Black Pine I.R. was removed July 4th after being in place for only a few days. Meetings between Royal Oak Mines and Tsay Kay Dene are scheduled.

North of the mine development, Aerodat has begun a Mag-EM-Radiometrics survey over the Kemess Mines-owned Kemess North and Riga properties.

QR. The weak price of gold, coupled with a) failure of the north wall of the Main pit, and b) the costly transition from an open pit to underground producer, is beginning to have a serious impact on the viability (profitability) of Kinross's QR gold mine. The Main pit is still being backfilled in an attempt to stabilize the northwall of the pit which continues to move. It may not be feasible to extract a core of high grade ore from the pit.

Underground development drilling (and to a lesser degree, exploration drilling) continues at a rapid pace on the Midwest zone. Kinross is preparing as many headings and faces as possible for mining in the very near future. Some of the development work is producing ore.

The surface exploration drilling program has been expanded and will continue to focus on the North and East zones. One of five holes completed in the North zone yielded an ore grade intersection. The others cut strong propylitic alteration.

MINES and MINE DEVELOPMENTS

- 1) **Babcock (Quintette).** The Babcock development, managed by Quintette Operating Corporation, is immediately S-SE of the Shikano Pit. Phase 1 of the project includes development and mining of the Little Windy Starter Pit, which will be completed by September or October, 1997 (480,000 - 500,000 tonnes total will be mined from the starter pit). By March 31, 1998 - Shikano, Wolverine and Deputy pits will be closed (reserves exhausted). The current schedule of mining runs to 2003.
- 2) **Kemess South.** Over 400 workers are currently onsite. Construction is more than 50% complete. Top soil is being stripped from the pit area; the roof is on the mill and service complexes; tailings dam construction is steadily progressing, and; mining equipment is arriving daily, including seven 260 tonne Euclid diesel-electric haul trucks that are on their way from the factory in Guelph, Ontario. Logging of the powerline will resume following the approval of amendments to the logging plans and the issuance of the Licence to Cut for the centre section of the 384 km right-of-way. An injunction by First Nations has been sought to prevent any further work on the powerline access corridor. The application will be heard in court on June 16-17th.
- 3) **Mount Polley.** The mine is in the final preparations prior to start-up and should be fully operational by the end of June. The crusher has been processing waste which is being used to upgrade mine roads; staff are now housed in the combined concentrator/office complex; drilling of the starter pit has resumed, and; exploration/definition drilling is underway on the southeast margin of the existing pit design. The tentative date for official startup is August 22.
- 4) **QR.** Operating at approximately 1400 tpd! Development of the Midwest underground zone is progressing very well, but mining of the zone has not yet begun. Once underground mining commences higher grade ore from the development will be blended with lower grade Main zone ore. Mining is continuing at the Main Zone open pit with gold grades in the 3-4 g/t range.
- 5) **Willow Creek.** The Willow Creek Coal property consists of 33 coal licenses in Willow Creek area. It is being explored by Pine Valley Coal Ltd. To date 523 exploration drill holes, totaling 34,500 metres, have been completed in Willow Creek coal block. In addition, 50 percussion holes have been drilled on claims to the SE in the Pine Pass area. The mineable reserve now stands at 15 million tonnes of low grade ('semi-soft') metallurgical coal and thermal coal. An Environmental Impact Assessment and Mine Permit application are expected by June or July, 1997. If the project receives the necessary permits, construction will commence in May of 1998 with startup scheduled for October-November, 1998. The planned 600,000 tonne per year operation has an estimated minimum mine life of 20 years.

The deposit occurs on the north side of Willow Creek and the coal measures are hosted by the Gething Formation within the east limb of the Pine River anticline. The coal occurs in 8 major seams (estimated combined thickness is about 21 metres) which are gently dipping and are affected by minor block faulting. The coal will be mined from three pits: North, North-Central and South-Central blocks. The mine will employ approximately 85 to 100 workers.

Winter drilling was completed by the first week of April. A 2-tonne bulk sample, is planned for July, using large diameter drilling. Geotech drilling will also take place this summer.

BL MR - May '97



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MINES and MINE DEVELOPMENTS

Mount Polley OFFICIAL OPENING held on September 13. An estimated 300+ were in attendance. The project was completed in June at a cost of \$115 million, approximately \$8.5 million under budget and about 5 months ahead of schedule. Full production of 18 000 tpd will yield 71,500 ounces (2.22 million grams) of gold and 29 million pounds (13 200 tonnes) of copper per annum over the 12 year mine life. Mining is going very smoothly, but there are some minor adjustments needed in the mill to reach capacity. Four exploration holes were just completed south of the pit and identified mineralized, but subeconomic, breccias similar to those that host part of the deposit.

QR. The mine is currently producing from the Midwest zone (underground) using longwall stoping methods. The Main zone has been re-accessed and broken ore is being removed from the pit using relatively small equipment. The mill is processing 800 to 900 tpd. Target production through the winter is 18,000 tonnes per month. Plans call for the West zone pit to be brought into production in early 1998 following an est. \$2 million prestripping program. This waste will be placed in the mined out Main pit. Exploration to date includes 14 surface diamond drill holes, totaling approx. 6700 metres, that targeted the North zone and areas between the Midwest and West zones. Detailed soil geochemistry has identified new targets west of the Midwest zone in areas that had more or less been written off in the past.

Kemess. Mine development continues on all major projects at the site. Approximately 1000 workers are on site. Examined intensely folded and pyritic Paleozoic cherts exposed on the footwall (north wall) of the Kemess South orebody. Also investigated supergene mineralization exposed immediately north of the pit ring road. Abundant native copper and chalcocite occur as disseminations and fracture fillings in hematite volcanic breccia.

EXPLORATION MONITORING

Beekeeper/Arab (093A 155). NoW submitted by Eastfield Resources for 5 diamond drill holes to test the Cu-Au potential of the Early Jurassic alkalic porphyry system. A 7-hole program was completed in March and was followed up by an IP survey and the staking of 48 additional claim units. Drilling will test several of the IP anomalies.

CH. Orvana has completed a 7-hole diamond drill program on their Cu porphyry prospect in the Nechako Plateau.



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**April 1998 Monthly Report
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Bob Lane, Regional Geologist, Prince George**

MINES AND MINE DEVELOPMENTS

QR. Mining stopped on March 31 and the mill processed its last ore in late April. An estimated 128,000 ounces of gold were recovered during the mines operation (almost three full years of production).

Exploration continued into 1998 with a total of 84 diamond drill holes completed by the end of the program (April 28th) for a composite length of 6318 metres. Many of the holes reached vertical depths of only 75 metres and the focus of the program was to outline near surface, open pit reserves. Encouraging assay results from late 1997 led to a concentration of drilling in an area just north of the West zone haul road. The new zone (Northwest zone) covers an area 150 m by 50 m by 20-30 m deep and represents approximately 120,000 tonnes grading about 3.5 g/t Au. The overburden in the area is also enriched and may make 'ore grade' and the stripping ratio would essentially be zero. The program represents about a \$450,000 expenditure. The area requires further evaluation, but a follow-up drill program is unlikely.

Remaining reserves in the Midwest and West zones, together with the resource in the new Northwest zone, may support economic mining if the price of gold recovers sufficiently. Alternative processing techniques, such as heap leaching, may also contribute to a more economically sound project (*visited April 30th*).

Kemess. The plant is energized and production is expected to begin in mid May. To date over 9 million tonnes of waste has been stripped from the open pit area.

Mount Polley. Imperial Metals is considering a temporary suspension of operations at the mine. The suspension would go into effect as of July 31, 1998. The mine is presently working on an economic plan with the Job Protection Commission that would enable it to remain in operation. The mine directly employs 167 people.

Gibraltar. George Barker, mine geologist, provided Romona Blackwell and me with an update of activities and a tour of the site. Boliden's announcement regarding the suspension of operations at Gibraltar by the end of the year should be regarded as a notice of standby or temporary shutdown, not closure. However, the mine does not appear to figure into Boliden's plans and it is being aggressively shopped around. The operation employs 278 people.

The mine wisely presold 50% of its 1998 copper production at \$0.98/pound. This has allowed the mine to remain operational until the end of the year when reserves from the Gibraltar East pit will be exhausted. Development of the Pollyanna phase IV pit has been halted. The prestripping program would have allowed mining to commence from the new development at the end of the year—replacing the lost production from Gib East. The SX-EW plant continues to produce on schedule. It is currently drawing pregnant solution from two dumps and one engineered leach pad.

WELLS-BARKERVILLE AREA

CGA Note: Activity in the camp hasn't taken off as expected. The halt in trading of International Wayside Gold Mines stock on the CDNX, and especially its 7-8 week duration, generated a tremendous amount of uncertainty about the validity of discovery and integrity of the company. While some of the exchange's concerns were warranted, others were at best questionable; regardless, the momentum that the project built up was gone. The halt also 'undermined' the ability of numerous junior companies, who had just staked or optioned claims in the camp, to raise the risk capital required to explore their new tenure. While there has been a notable increase in the number of claims staked in the camp, there has not been nearly as significant an increase in exploration.

Bonanza Ledge. International Wayside has released assay data for holes 20-29 on its Bonanza Ledge high grade gold zone. The best assay was from a 9.8 metre intersection in hole BC2K-29 that graded 27.58 g/t Au. The holes were drilled on 50 ft. spacings and provide some much needed structural detail for the zone. The Bonanza Ledge zone now has a proven strike length of 400 ft. and vertical extent of 200 ft. (over which several stacked mineralized zones occur). A total of 33 holes have been completed on the property to date.

Stanley. Castle Metals are conducting mag-vlf surveys on 4 small grids on their Grub claims near Lightning Creek, south of the historic townsite of Stanley.

CD claims (40 units) and MB claims (20 units). Two claim groups purchased by Starfire Minerals Inc.

Mosquito Creek. A diamond drilling program was initiated by Island Mountain Gold Mines on the Mosquito Creek property, but inexplicably halted (poor choice of words!) before completing the first hole.

Other News

QR. Big Valley Resources (partnered with Dean Mason (CA), 568674 British Columbia Ltd. and several related companies from Prince George) has reached an agreement with Kinross Gold Corporation to purchase the former QR gold mine and property. The purchase price of \$4.5 million is payable over 3 years commencing Jan. 1, 2001.

Frank Callaghan
- Richard Hall intersected only + largest dyke he has ever seen in the camp.

incl. Allan Contracting (ex-Martin Mines)

Bob.

Lane, Aug. 22/00