

Red Chris  
886913

To: Nobuhiro Takayanagi, Harry Kondo, Neil Seldon, Tom Schroeter, Chuck Wills

From: Norm Anderson

Date: September 15, 2000

Subject: Red Chris Technical Meeting

East: > 18MT @ .88% Cu, 80 g/t Au  
Main: > 40MT (~14 dth) planned  
@ .55% Cu, 44 g/t Au  
also 1 hole in both East + Main 2001  
@ 180° to all previous drilling  
(due diligence)  
Value Au ~ 30%  
Cu ~ 70%

I propose the following program/itinerary for the upcoming technical meeting and mine visit. Your comments are invited (soon as possible).

1. Participants - Friday

Mitsubishi Materials (MM)

- Harry Kondo, Mining Engineer (leader)
- Mike Shirai - Geologist
- Yasushi Kihara - Metallurgist

American Bullion (ABP)

- Norm Anderson (leader)
- Neil Seldon - Commercial
- Don Barker - Engineering and Geology
- Tom Schroeter - Geology and Government
- Dave Mehner - Geology
- Mike Ross - Construction and Metallurgy
- Barry Hancock - Economic Model

Total: 182MT @ .44% Cu, 34 g/t Au  
To Do:  
1) 1.3M in-fill dth (high-grade core)  
2) Met. testing on core (esp. high-grade recoveries)  
3) 'Re-think' of mining plan (e.g. 4/6 block caving, open pit)  
4) Rewrite 2001 Feasibility Study @ 1200m dev.  
[3 vol. study + diskette]  
18 holes = 7,565m dth req'd [\$.13M]  
[HOC] [+ geotechnical engineer]  
- ongoing env'ts (Research)

2. Friday Itinerary

Time and Place:

September 22, 2000 at 9:00 AM  
Ste 502, 455 Granville Street

Dave Johnson (Granbrook - ex-MMC)  
Mike Young (VP - Hameslake, ret'd)  
Rob McCallum (ex-Corona) - head up 2000 re-write

9:00 AM - Coffee and introductions

9:15 AM - Norm Anderson - History, property location, evolution of prefeasibility planning, data available, uniqueness of our current plan.

9:35 AM - Tom Schroeter - Tom is Chief Geologist for the Province of British Columbia. He was stationed in Smithers for several years and knows the copper mines, of B. C.'s history and geology. He will also address B. C. government matters in a general way.

9:50 AM - Dave Mehner - ABP's consulting geologist will introduce the mine geology and ore reserves history. He will then focus on our new manually generated sections and reserves and discuss the need and budget for a fill in drill program.

\$2.5M total  
i) 1.35 - in-fill  
ii) 0.15 - met. test.  
iii) 0.1 - re-think  
iv) 0.5 prefa.  
v) 0.4 cont. ya

300 m deep ore passes  
(1500m → 1200m)

10:10 AM – Coffee Break

10:25 AM – Don Barker has managed the ABP technical affairs for the past two years and is intimately familiar with both the geology and the mining plans. Don will –

- Review our unique mining plan and how it developed
- Our mill/tailings/acid rock drainage containment
- Permitting
- Socio economic
- First Nations

@ 7.75 Au; 0.75 Cu

(Louie Louie) – Klappan road block (?) – Iskut peoples

11:25 AM - Mike Ross – ABP's consultant will discuss opportunities to rebuild a good, used mill on site. (Orocon) - Snip, Rey, Erickson, Skinkum, Ketz R., Endako (in-pit crusher);

Proposals → Riddgeway; Carolina gold plant (15,000 TPD) + need 20 MW power plant + camp/fac. (Can # 70M plus tailings dam)

11:45 AM – Barry Hancock – ABP's consultant will present our new economic modeling ideas. (Details will be in your Friday briefing book).

~ 19.7% I.R.R. \$45/Tonne of concentrate to ship con. from mill to Stewart. [based on ore passes, vs. conventional open pit]

12:15 PM – Break for a sandwich lunch.

1:30 – 5:00 PM – I propose we reconvene into two or three groups.

#### GROUP I

Lead by Dave Mehner to review all geological data on file.

#### GROUP II

Lead by Don Barker to review the mining details.

#### GROUP III

Lead by Norm Anderson and Mike Ross to review the flow sheet and the metallurgical data on file.

**COMBINED GROUP** to review environmental, socio economic, permitting and related data on file.

3:00 or 3:30 PM – Coffee Break

#### Wind Up

- Reconvene to discuss our going forward plans and budget (details will be in our briefing book Friday).
- Review our Monday itinerary.

5:00 PM – Adjourn

3. **Monday Itinerary (September 25)**

**6:15 AM - Assemble at the South Terminal of the Vancouver Airport for Charter flight departure.**  
Wear warm, water repellent outdoor clothing (including a hat) and hiking boots.

**6:30 AM - Depart on Pacific Coastal charter (King Air)**

**Participants:**

MM: Harry Kondo  
Mike Shirai  
Yosushi Kihara

ABP: Chuck Wills - President  
Alan Akerman - investor - \$ man  
Norm Anderson  
Don Barker  
Dave Mehner

\* Fog - couldn't land  
in Smithers (i.e. no PW)

- ✓ Don Garret - Rescan Environmental Monitor
  - ✓ Paul Wajack - B.C. Government, Geologist headquartered in Smithers
  - ✓ Neil Seldon
- (One or two of these if space is available.)

**FIELD ARRANGEMENTS**

**Weather permitting** we will have a good and busy day. We will land at Iskut where a four passenger (plus the pilot) helicopter will shuttle participants to Red Chris (12 minute flight time one way). Everyone is expected to be on site by say 11:00 AM.

We will see the outcrop, core, camp (unoccupied) and be shuttled to a point for a panoramic view of the entire planned layout (mine/mill/tailings).

At 3:30 PM or 4:00 PM we expect to depart from Smithers.

At 9:00 we expect to arrive Vancouver.

Again, I invite your input.

Norm Anderson

Copies to:  
D. Barker, B. Hancock, D. Johnston  
D. Mehner, M. Ross

## **Schroeter, Tom EM:EX**

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**From:** Schroeter, Tom EM:EX  
**Sent:** Wednesday, September 20, 2000 8:20 AM  
**To:** 'Anderson & Associates'  
**Subject:** RE: RED CHRIS TECHNICAL MEETING

Thanks, Norm. I just returned from the North and actually ran in to the Japanese partners at Huckleberry on Monday. See you on Friday. Tom.

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**From:** Anderson & Associates[SMTP:namedd@istar.ca]  
**Sent:** Friday, September 15, 2000 11:58 AM  
**To:** Nobuhiro Takayanagi; Neil Seldon; Schroeter, Tom EM:EX; Chuck Wills; Harry Kondo  
**Cc:** Barrie Hancock  
**Subject:** RED CHRIS TECHNICAL MEETING

<<File: Red Chris Technical Meeting.doc>>  
Please see attached revised memo.

# MITSUBISHI

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*Sept 1 13/00  
Red-Chris Mehner*

→ Red Chris

**Schroeter, Tom EM:EX**

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**From:** Schroeter, Tom EM:EX  
**Sent:** Friday, September 22, 2000 3:12 PM  
**To:** Anderson, Duane EM:EX  
**Subject:** RE: Van. MDO (GSB): Sept. 10-23/00  
**Sensitivity:** Private

Duane - had a very good meeting today. Suggest you touch base with Don Barker. This project has the potential to 'open' up the North and revitalize the resource sectors as well as the local communities. Tom.

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**From:** Anderson, Duane EM:EX  
**Sent:** Friday, September 22, 2000 10:05 AM  
**To:** Schroeter, Tom EM:EX  
**Subject:** RE: Van. MDO (GSB): Sept. 10-23/00  
**Sensitivity:** Private

be interested in your comments re: Red Chris: geological concepts & models, basis for reserve calculations (grades, tonnages, cut-off, zone boundaries/dilution), mine concept & logistics, LRMP & FN considerations.

have good trip,

Duane A.

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**From:** Schroeter, Tom EM:EX  
**Sent:** Friday, September 22, 2000 8:41 AM  
**To:** Adams, Rick; Andrew Whale; Bob Lane; Brian Grant; Christy Cattermole; Dave Lefebure; Denis Lieutard; Derek Brown; Duane Anderson; Ed Beswick; Finvers, Maija; Fred Hermann; Gib McArthur; Graeme McLaren; Jacques Houle; Jim Lewis; John Errington; Karen Koncohrada; Larry Jones; Mike Cathro; Paul Wilton; Rick Conte; Robert Pinsent; Ron Smyth; Ted Hall; Wally Bergen  
**Subject:** Van. MDO (GSB): Sept. 10-23/00  
**Sensitivity:** Private

**1) Priorities For Coming Week:**

a) Fieldwork (with Paul Wilton, 25th-28th): i) Pakk/Hellroaring pegmatites; ii) Findlay South core; iii) Bootleg core; iv) Greenland Creek core; v) Coyote Creek core; vi) McPhee; vii) Kena; viii) Rozan; ix) Remac; x) Oxide.

b) Expl'n tracking/Monitoring/Trends: Ongoing.

c) KEG (30th) [With Cathro et al.]

d) North Coast CR11 : Pinsent.

e) New LSO2 JD (MDO): Staffing Authoriazation from Headquarters.

**2) Status of Strategic Projects:**

a) Expl'n Tracking/Monitoring/Trends: i) staking continues (>80% from '99); ii) increased interest/activity continues (incl ~ 50 drilling projects)

b) Cariboo Compilation: Release of "Cariboo Exploration Projects and Discoveries -

# **OROCON INCORPORATED**

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1138 HILARY PL., NORTH VANCOUVER, BC. V7J 3N6

TEL: 604 929 7592

FAX: 604 929 0517

## ***INTRODUCTION TO OROCON***

Orocon Inc. has been engineering and building small gold mills in Canada and the U.S. for the last 12 years on a competitive fixed and target price basis. During this period we have constructed 9 mills on a turnkey basis, performed many mine engineering and feasibility studies and operated our own heap leach in Arizona. We have evolved a tight engineering and construction approach which has enabled us to underbid our competitors and dramatically reduce construction costs for our customers.

Our approach can be applied to much larger projects and we have reviewed several feasibility studies prepared by major engineering companies, and prepared our own. Our analysis reinforces our conviction that substantial reductions in capital costs can be achieved for large projects with our approach which can turn uneconomic or marginal deposits into profitable ventures.

## ***THE OROCON APPROACH TO MILL & PLANT CONSTRUCTION***

The major difference between the standard project "EPCM" approach and Orocon's to mill design and construction is the cost-benefit considerations used in the engineering design phase. We believe that most engineering and construction management companies are not sufficiently motivated to reduce or optimize the capital cost of a project because their profit is often based either on a percentage of the total engineering and construction cost or a fixed fee.

The other major cost savings in control of our construction and engineering costs is a reduction in the levels of management for project control. A typical project will have the following levels of supervision:

- Owners' Engineers
- Design Engineers (consultants)
- Project Managers (consultants)
- Construction Manager & Supt. (Contractors)
- Sub Contractors
- Trades, labour

Our preferred approach is to combine at least three levels, and usually four levels. We believe that a competitive, fixed price engineering and construction bid will optimize design and reduce construction costs in a way the traditional "cost plus" or fixed fee "EPCM" cannot hope to do. The savings in small mill (300-1,000 tpd) costs are usually 40 to 60%.

### **Summary of Orocon's Approach**

- Optimization of project capital costs using capital cost-conscious engineering design.
- Reduce and simplify the project organization chart allowing tight control of all activities and costs. We do all construction work ourselves, with little or no sub-contracting.
- Orocon management are major owners in the company and we also limit the amount of work we take on in order to achieve a "hands on" approach.
- Non-union, direct hire crews, supervised by on-site management.



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## DESCRIPTION OF MILLS CONSTRUCTED IN CANADA & U.S.A.

A listing of Orocon's completed turnkey mill projects is shown below. Most of the projects consisted of fixed price contracts. All projects were completed in 8-10 months from contract signing, including engineering. The scope of the projects was as follows:

- Reviewing existing or supervising original metallurgical testwork.
- Process selection.
- Complete Engineering - conceptual through detailed.
- Procurement of all equipment, materials, structural and mechanical steel, piping, electrical, consumables, equipment rentals and all other items required to complete construction of the facility.
- Transport to site of the above items, often by difficult methods such as winter road, complete fly-in, hovercraft, and always to remote areas. To avoid wasting money, intensive and complete planning as well as good execution is required for such exercises.
- Construction, using Orocon's own superintendents and crews. Only the pre-engineered building is usually sub-contracted. Manpower accommodation was always supplied in Owner supplied camps.
- Complete metallurgical and mechanical assistance in the mill start up phase to rapidly achieve the contract specified guarantees.

Throughput and metallurgical objectives were always met within 2 weeks of mill start-up.

### **1. Magino**

Owner: Muscocho Explorations  
Location: Near Wawa, N. Ontario  
Access: All weather gravel road

#### Project Description

The Magino mill is a 400 tpd Merrill Crowe cyanidation plant, completed in December, 1987. The approximate cost of the mill was \$5 million. This project, as well as nearby Magnacon was located on line power, so no generators were required. The mill operated successfully at 500 tpd until ore depletion in 1993

## **2. Magnacon**

**Owner:** Muscocho Explorations  
**Location:** Near Wawa, N. Ontario  
**Access:** All weather gravel road

### Project Description

The Magnacon mill is a 800 tpd Merrill Crowe cyanidation plant, completed in February, 1989. The approximate cost of the mill was \$7 Million. A cyanide destruction facility using hydrogen peroxide was also built for this job. The mill is still running under a different owner (River Gold Mines) at about 750 tons per day on a much higher grade, harder ore which is trucked some 20 km. to the Magnacon mill.

## **3. Ketz River**

**Owner:** Canamax Resources  
**Location:** Ross River, YT  
**Access:** All weather gravel road

### Project Description

The Ketz River mill is a 350 tpd Gold Carbon In Pulp cyanidation plant, completed in March, 1988. The approximate cost of the mill was \$7 Million and includes a 2.0 mw power plant, mine and truck shops, assay office, and warehouse – all located in the mill building. A generator waste heat system was also designed and installed. The mill operated successfully until 1992 when the ore was depleted.

## **4. Johnny Mountain**

**Owner:** Skyline Explorations  
**Location:** Northwest B.C. at 5000 ft. elevation.  
**Access:** Fly-In

### Project Description

The Johnny Mountain mill is a 350 tpd Flotation/ Cyanide plant. The approximate cost of the mill, 2.2 mw power plant, mine dry, assay office, warehouse and shops was \$7.5 Million. Skyline was a very demanding project as all equipment and material had to be flown to a gravel landing strip at site using Hercules or similar smaller aircraft, from Wrangell, Alaska, after having been barged there from Vancouver. The largest piece flown in was an 8' dia. x 12' long ball mill shell.

The poor weather on site (10 m. annual snowfall and possible snow year round) made access and transportation extremely difficult, however it was completed on time and within budget. The project was mobilized in September 1997 and the mill was fully operational in early June 1988. Unfortunately, miscalculated ore reserves led to only an 18 month life.

## **5. Golden Patricia**

**Owner:** Bond Gold  
**Location:** Northwest Ontario  
**Access:** Winter road or small airplane access.

### Project Description

The Golden Patricia mill is a 300 tpd Merrill Crowe cyanidation plant, completed in October, 1988. The approximate cost of the mill was \$5.5 Million and it operated very successfully at 400 tpd until the property recently shut down. The property was on line power.

## **6. Snip**

**Owner:** Cominco Ltd.  
**Location:** Northwest B.C.  
**Access:** Air/Hovercraft

### Project Description

The Snip mill is a 400 tpd mill, completed in December, 1990 and still operates at about 500 tpd. The approximate cost of the mill was \$4.6 Million. The plant is gravity/flotation mill with onsite direct refining of gravity concentrates produced by jig and table. This amounts to about 40% of gold production. A backfill system was also installed involving pyrite removal with humphrey spirals prior to cycloning and pumping to the mine using a "Geho" pump. A waste heat recovery system was also installed. Flotation concentrate is either flown or hover-crafted to Wrangell from where it is sent to smelters. All mill equipment and material was assembled in Vancouver before barging to Wrangell where it was hover-crafted to site – about an hour's time. The hovercraft payload was 13 tons.

## **7. Congress**

**Owner:** Republic Gold Fields  
**Location:** Near Phoenix, Arizona  
**Access:** All weather road

### Project Description

The Congress mill is a 350 tpd CIL plant, completed in April, 1990. The approximate cost of the mill was \$5.6 Million U.S. and included a 2.4mw. power plant designed by Orocon. The plant design for this mill differs substantially from the other, cold weather mills. All facilities except the carbon stripping, electrowinning, carbon regeneration and refining were located outside. We completed this mill in record time – less than 7 months. The mill operated successfully at above design capacity for 3 years until the ore was depleted.

## **8. Seabee**

Owner: Claude Resources  
Location: N. Saskatchewan  
Access: Winter road, Small plane access.

### Project Description

The Seabee mill is a 450 tpd Gold Carbon In Pulp cyanidation plant, completed in November, 1991. The approximate cost of the mill, admin offices, 40 man dry, assay office, warehouse, truck shop and 5 mw 138k/4160 v substation was \$6.8 million. The mill still operates successfully at a 500 tpd rate.

## **9. Mt. Nansen**

Owner: BYG Resources  
Location: 90km west of Carmacks, YT  
Access: All weather gravel road

### Project Description

The Mt. Nansen mill is a 700 tpd CIL plant, completed in November, 1996. The approximate cost of the mill and 2.7 mw power plant with heat recovery was \$7 million. This project involved the expansion and conversion to cyanidation of a 200 tpd flotation plant to 700 tpd cyanidation (CIL). After ore reserve exhaustion and environmental problems with the tailings dam, the plant was shut down in February 1999.

## **OTHER MAJOR PROJECTS**

## **10. Bighorn**

Owner: Orocon  
Location: Arizona  
Access: All weather gravel road

### Project Description

The Bighorn project was a 2000 tpd Heap Leach plant which was purchased and operated by Orocon for several years until shut down in 1995. Low grades, low gold prices and poor recoveries caused by oxide copper present in the ore caused the mine to cease operations.

## **11. Thompson Creek**

Owner: Thompson Creek  
Location: Clayton, ID, elevation 6500ft.  
Access: All weather road

### Project Description

The Thompson Creek mill is a 35,000 tpd primary Molybdenum Flotation plant. During 1996, two projects totaling \$4.7 Million U.S. were completed and operate successfully. The projects involved the installation of a pyrite flotation circuit on the moly final tails to eliminate the possibility of acid generation in the existing centerline constructed tailings dam. The pyrite concentrate was thickened and pumped 9500 ft. to the pond area of the tails dam and was sub-aerially deposited there.

A new primary tailings pumping station was also installed next to the dam for the final phase of the minelife because the dam height was getting too high for gravity feed from the mill to the cyclones on the dam crest.

## **12. Endako**

Owner: Thompson Creek  
Location: Endako, B.C.  
Access: All weather road

### Project Description

The Thompson Creek mill is a 30,000 tpd primary Molybdenum Flotation and roasting facility purchased by Thompson Creek Mining Co from Placer Dome in June, 1997. For the balance of 1997 Orocon re-worked the crusher dust collection system and performed other minor capital improvements around the mill. In May 1998, Endako purchased a used 54" x 72" in-pit Gyratory crusher and a 300' long x 54" wide ore conveying system from The Island Copper mine on Vancouver island. From early June to the end of October, Orocon dismantled the crusher system (1100 tonnes) and conveyor drive end, barged (2 barges) the components from the local dock to Prince Rupert, BC, unloaded the barges onto trucks and installed most of the in-pit crusher at Endako. On Oct. 31, the contract was terminated by Endako when they announced a mine shutdown due to low Moly prices.

Engineering work was completed on the re-installation of the 54" conveyor.