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926/10

January 17, 1989

To: AJD, IDP, DHW

From: CB

Subject: 1988 Tonto Drill Program, Maggie Option

After this morning's meeting with Tonto management it is evident that they know little about events in the field. It is my opinion that Tonto allowed a project to continue with excessive cost overruns long after corrective measures should have been taken. The Maggie project is technically the most difficult of our western projects. The drill holes must be located on steep, narrow, switchback roads and drillers must be capable of coping with the hard and blocky ground of a hornfelsed rock. It is well known in the drilling community that the Indian River valley has historically been difficult drilling due to the blocky nature of the ground. It should be mentioned that unlike other bidders on the job Tonto declined to visit the project area in the company of a Minnova representative because Jamie Hutton and driller Jeff Miller from Squamish had drilled in the valley for Anaconda in 1982 and were satisfied they knew the situation. Prior to beginning work last summer Tonto was advised of the difficult nature of the job and that only experienced drillers would be able to manage the program.

The drill project began on August 15, 1988 after a costly roadbuilding program providing access to drillsites. Ron Northrop Contracting constructed the road in a professional and diligent manner. Ron Northrop has been building road for logging and mining outfits on the coast for over thirty years. It is the opinion of Ron and myself that although the road is very steep (28-30% grades), it is solid and in good condition having been blasted out of solid rock. It was estimated, based on our progress during 1987 that the proposed 2000 meter program would be completed by the middle of October. Frontier averaged 44 meters per day on last years project utilizing one LY38.

The water supply chosen for the program was an old drill hole providing water continually, located near the Maggie adit. This required a 250 metre lift with a second pumping station. This is not an unusual situation in B.C. The Gold Hill drilling program (contracted to Tonto) also required that pumping be done for over 200 meter vertical and no serious problems were encountered.

The total length of the 1988 program was 121 days (calendar days) during which time a total of 1800 meters drilling was done. A second machine, a LY44, was engaged for 86 days. The performance was best in the first 35 days of the program when 30% of the project total meterage was drilled averaging 15 meters per day advance (MM-10 and the top of 11). In fact the LY38 with Jeff Miller on days and John Fitton on nights (the original crew) drilled 767 meters in 46 days averaging 17m/day. This represents over 40% of the project total. Unfortunately John Fitton had an accident and left the job and his replacement did not have the experience in difficult ground conditions John had. (figures include machine move time).

After 35 days a decision was made to bring a second machine in and as well a foreman was added to the crew. The production figures after this point became much worse. The LY44 drilled a total of 620 meters in 51 days (12m/day) and in the period after John left the LY38 drilled for total of 437 meters in 33 days averaging 13 m/day. These figures illustrate that the Tonto foreman and subsequent personnel combined were unable to produce core at an adequate rate.

It is my opinion that although conditions were tough they were not adverse and that the major factors contributing to the dismal performance were:

1. No management support. In my experience with other drill outfits there is much more support in the form of supplies and expertise from the company's management. Fern Boisvenu, Dave Burwash or Harold Harvey (Frontier) all provide their crews with able assistance in the field and expedite from town personally. They are also present to provide their employees with advice on drilling techniques and are always on hand for mobes or when bad ground is encountered. I was at the Squamish field office for 118 of the 121 day job and at no time did I see Tonto management nor to my knowledge did they make an effort to see me in the field. I was aware that Jamie Hutton had made trips to the site on two or three occasions but he was not present during mobes or at the critical time when MM-13 was abandoned leaving the core barrel in the hole.

2. Equipment failures. Tonto Drilling has had a reputation for utilizing good quality gear but the equipment breakdowns were epidemic on this job. The result is that the drill crews became demoralized and frustrated.

3. Foreman. As the program progressed it became apparent that the foreman Eric Gowens had severe alcohol problems. He preferred to manage the program from his room and in the event of breakdowns in the field the drill crews would have to attend to these problems by shutting down. Eric did drive a cat very well and I think that he felt that this was the only responsibility a foreman had on the job site. I found what Eric said he was going to do and what he actually did were two different things.

4. Personnel. Tonto could not provide us with 15-20 year experienced professional drillers required for the job after the original crew left. This was despite a telephone conversation with Jamie Hutton shortly after John Fitton left warning him of the developing situation.

It is evident that Tonto management regarded this program as basically being on a cost basis therefore I would not recommend that Tonto Drilling be invited to bid on any future Minnova jobs. I believe that engaging Tonto in any future work would merely be allowing an inefficient and poor organization to continue thereby reducing the quality of mining exploration in the province

The following list summarizes the more noteworthy incidents which occurred throughout the program with respect to time lost at the machine;

MOBE: 5 days were required for both the LY38 and LY44 for an 8 km. walk in from a good gravel road. (Arrival time to collaring). In 1987 Frontier mobed in to a setup lower down on the hill in a single day.

MM-10:

- LY38
- 2 lost time breakdowns of pump
- 1 lost time waiting for pump delivery
- 2 generator breakdowns - lost time
- A brand new 4WD truck purchased with a flaw required repair contributing to down time
- Gamma Goat, a useful fuel and personnel carrier had three breakdowns resulting in down time.
- B rods sent from shop did not have a rod sloop throughout the program
- when lowering the B size core barrel and a 10 ft B rod after reducing the hole they slipped through the chuck. Lost time fishing. The driller said the Materials had been shipped from the shop with insufficient labelling
- Minnova staff found core had been placed in the previous core row rather in a new box.

- MM-11
- LY38
  - light plant problems lost time 3 occasions
  - loss 3.5hrs operating to walk cat out to get other machine... Where was foreman?
  - loss of shift helping unload other machine
  - water supply lost time problems on 6 occasions including establishing 3rd pump station.
  - 3 pump breakdowns causing lost time
  - 4hrs lost awaiting new pump
  - gamma goat 2 breakdowns 7 hrs
  - no driller 1 shift... Where was foreman?
  - Mud specialist (with Minnova's approval) dropped rubber plugs from tool downhole loss of shift drilling out... Where was management?
  - cat time charged to company for repairing road damaged by returns from other machine despite frequent requests to properly ditch returns.
  - slipping chuck
  - company charged for catwork on next set up that should have been done by foreman during drilling of MM-11.
- MM-12
- LY44
  - 5 day mobe LY44
  - light plant gone never got new one
  - machine starter problems on 3 occasions
  - pump starter gone
  - pressure pump problems
  - water line and supply problems cost a total of 36.5 hrs operating time
  - foreman's cousin helping, very green, driller must do most things around rig himself.
  - gamma goat clutch burned out 6 hrs
  - drillers in town getting pump 4hrs ...Where was foreman?
  - water swivel problems
  - blower gone on drill lost 3 shifts
- MM-13
- LY38
  - pressure pump starter 9hrs
  - light plant problems
  - supply pump 3hrs
  - drill starter 1.5 hrs
  - Gamma goat 1 hr
  - Water delivery 2 hr
  - Jeff Miller leaves lose shift no driller where was foreman?
  - following shift lost no helper. Where was foreman?
  - helper made driller
  - massive core marking error, worst I've ever seen core marking confused over about 5 meters result = core loss 1.64m

- green helpers need lesson in core marking
- both crews putting B core in N boxes with plywood footage markers. Minnova must again instruct helpers  
result=markers easily slide up and down box program finished using useless blocks despite Minnova requests for new ones.
- Oct 26 timesheet falsely accuse Minnova of not being available for consultation when drillers met on road going out at 3:00pm
- Encounter problems in hole over  
7 meters core loss in zinc rich Slumach rhyolite
- Hole abandoned short of critical contact leaving core barrel in hole.

## MM-14

- LY44
- foreman knocks Maggie Mines gate out during move
- Oct. 28 timesheet records 4 hrs charged and no shift due to darkness! hole located on road along valley floor
- twist rods off at core barrel
- waiting for parts 1 shift
- water pump gone loss 14 hrs
- head gasket on drill goes lose 2.5 shifts
- demob takes 2 days