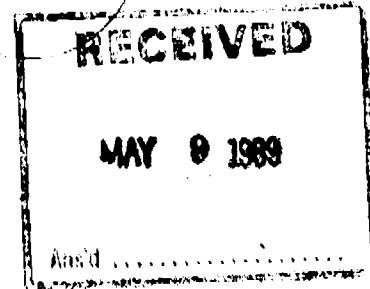


826222

# tonto drilling

 DIAMOND AND  
 ROTARY DRILLING

May 5, 1989



MINNOVA  
 4th Floor - 311 Water Street  
 Vancouver, B.C.  
 V6B 1B8

Attention: Mr. Alex Davidson

Dear Alex:

RE: Maggie Project - Drilling Invoices

I understand as a result of recent discussions between John Baxter and Ian Pirie that Minnova has agreed to reimburse Tonto for a portion of the invoiced amounts that were withheld by Minnova. While this cooperation is appreciated, the Maggie drilling job remains the single worst loss that Tonto has experienced. To give you an idea of the magnitude, I have laid out below a summary of the numbers:

## Revenue

Invoiced Amounts	\$ 254,698.00
less Withheld by Minnova	( 44,918.00)
plus Negotiated Settlement	27, 624.00
<b>Net Revenue</b>	<b>\$ 237,404.00</b>

## Costs

Job Costs, Rentals, and O/H	\$ 386,640.00
<b>Net Loss</b>	<b>\$ 149,236.00</b>

/ ... 2

# MINNOVA

MEMORANDUM

DATE: March 30, 1989  
A TO: A. J. Davidson  
COPIES A COPIES TO: D. H. Watkins  
DE FROM: I. D. Pirie  
SUJET SUBJECT: Tonto Problem

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On March 23rd I spent several hours going over the Maggie invoices with John Baxter of Tonto. As per DHW instructions, I attempted to compromise on the difference between what we had been invoiced for and what we paid. In order to do so I made several concessions, the most important being as follows:

1. Many of the material and labour costs that I initially rejected were related to drilling that we did not consider to be at COST since we had not been notified of such. This is still the case but I now take the view that much of the materials component is due to problems during reaming. Since we accept the labour costs related to reaming, I am prepared to accept the materials costs.
2. A second drill was put on the project when it became obvious that Tonto would not be able to complete their contract minimum before the onset of winter. I disputed several of the mob/demob charges as being unreasonable and refused travel time charged for this second drill. At our meeting I reassessed the "reasonableness" of several of the charges and agreed to allow the travel time.

The bottom line of these concessions along with a few minor adjustments is that I have offered to pay Tonto an additional \$27,624.20 contingent upon your approval. John Baxter is not in a position to say whether or not this would satisfy them.

The difference between this offered amount and their original invoicing is still \$17,794.94. Almost all of this can be attributed to labour costs in holes MM-10, 11 and 12 before we were notified that drilling could only continue on a COST basis.

Please advise.

Ian

- always tender - min. 2 - up to 4, 5.
- not on tendering list until this dispute resolved  
(by Alex / Ian)

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 year's 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.

- 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 used over about 5 meters result = core is 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

# MINNOVA

MEMORANDUM

DATE: March 15, 1989  
A TO: AJD, DHW  
COPIES A COPIES TO:  
DE FROM: IDP  
SUBJECT: MEETING WITH TONTO DRILLING, OCTOBER 1988

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On October 7th, 1988, I met with Jamie Hutton and Noble Larsen of Tonto Drilling to discuss progress on the Maggie drill program. The meeting was at their request and was held in our Water St. offices.

Tonto were concerned with the way the job was going and indicated that they were \$40,000 "in the hole" already. They were specifically concerned about the problem of water return, or the lack there of. We reviewed the drill contract which clearly states (Sect. 13.0) that if it is decided by the Contractor that a hole requires cementing due to lost water, then drilling may be stopped to do so upon the consent of the Company's Representative. What is not covered by the contract is what happens if cementing fails to fix the problem. Tonto's view was that any further work would be at cost. I agreed, but emphasized that we also had the option to abandon the hole and perhaps return to it later with a different operator. Implicit in this was that we had to have a well defined point at which to make the decision and that that point was where our Representative had agreed to a cement job and it had failed.

Tonto agreed that they would continue to take all reasonable measures to maintain water flow before having to go to cement. They indicated that they had reached this point in MM-11 and we agreed that they would reduce to BQ and go to cost. They also indicated that they were going to try Thin-Wall BQ to cut down on bit problems, but this was never done.



-2-

Subsequent invoices were treated as had been agreed. In MM-11, we paid cost from the time of cementing on. A similar attitude was adopted for the already drilled MM-10. However, in MM-12, which was also in progress at the time of our meeting, invoices were for cost from a point considerably higher in the hole and without having reached the agreed upon decision point. That point was reached later in the hole and all drilling beyond it was paid at cost.