

John

MINNOVA INC.

822880

DATE: JUNE 18, 1991.
 TO: I. PIRIE, A. DAVIDSON
 FROM: A. HILL, C. NAGATI
 SUBJECT: GOLD INTERSECTED IN SAM EXPLORATION DRILLHOLE

The following summary describes gold intersections recently returned from diamond drilling:

HOLE: RG 398 (P-7) STARTED: JUNE 11 FINISHED: JUNE 17, 1991.
NORTHING: 800mN EASTING: 12000mW DIP: -55 AZ: 225 DEPTH: 374.8m
PROPERTY: SAM MINING LEASE

Milky white quartz-carbonate veining containing visible gold was intersected as follows :

- 1) At 157.2m a 40cm long vein intersection hosts three clusters of smeared gold grains. Individual grains reach a maximum length of 1.5mm. Approximately 26 grains of gold were seen in this area.
- 2) There are four gold grains found in the interval between 232.9-233.4m. The largest grain is smeared out over an area 2x3mm. Another grain measures 0.5x1mm. The remaining grains are less than 1mm.
- 3) Four grains of gold, the largest of which is just over 1mm, occur in an area 1cm in diameter at 238.15m.

The mineralized veins appear to be part of a swarm that has been subjected to folding along with its host rock. The observed intersections were at all orientations to the core axis. Further drilling will be necessary to determine the exact geometry of the system. True thickness of the mineralization is as yet unknown. Assays are pending.

*RG 400 WAS DRILLED UPDIP OF RG398 AND
 HIT QVEINS AT 93 m (08 TO 90M) WITH
 1 BLEB OF V.G. QVEINS EXTEND ~~FOR~~ ^{FOR} 10-12 m
 DOWN THE HOLE*

*156.3-158.4 208 S 6.07oz 40cm
 (2.1m) L → uncut 1.17oz (40.3) cut to 1oz 0.2oz (6.95) ↘*

232.9 - 233.4 (0.5m)

.172 of (5.95)

235.3 - 240.2 (4.9m) .16 of
semi conformable gv

updip 85m - kls of v.s - 10-12m of gv
100m NW - zip w kls aspy

100m SE - just started

MINNOVA

MEMORANDUM

DATE: March 7, 1989

A
TO: D. H. Watkins, A. J. Davidson

COPIES A
COPIES TO: R. Friesen, D. Heberlein

DE
FROM: I. D. Pirie

SUJET
SUBJECT: Samatosum Drill Contract

Tenders for 10,000 m of drilling at Sam in 1989 have been received. Bidding was restricted to four companies based on the ability to drill to 1000 m if necessary. LDS declined to bid; Fern Boisvenu was late and high and it came down to a choice between Atlas Drilling of Kamloops and Frontier Drilling of Langley. A comparison of their bids is attached.

I have awarded the contract to Atlas after careful consideration. They are low bidder and have received good references from everyone, including Esso for whom they drilled on the adjacent Kamad property. On a 10,000 m program, they came in at \$70,000 less than Frontier. Because of the excellent price, we will be able to consider drilling as much as 500 m more than originally planned for 1989.

Drilling is to be in two phases. Phase 1 will start March 8th and will involve the drilling of two 800 m holes to test the Rea Gold horizon vertically below Sam as well as testing downdip on the Sam and Barite horizons. Also planned for Phase 1 is approximately 1100 mm of drilling in six holes to further test the Barite zone below the NW end of the Sam pit. Phase 2 will be a summer/fall program.

	<u>Atlas</u>	<u>Frontier</u>
O/B		
0-35 m	43.00	0-50 m 49.85
35-60 m	48.00	50+ m cost
Drilling		
0-300 m	43.00	0-300 m 47.56
300-500 m	48.00	300-600 m 57.40
500-1000 m	52.00	600-1000 m 72.16
Mob/Demob	N/C	500.00
Cat	60/hr	60/hr
Manhours	20/hr	26/hr
Machine Hours	N/C	38/hr
Tests		
0-500 m	40/test	0-1000 m 75/test
500-1000 m	60/test	

Cost Estimates

300 m hole

(10 m o/b, 290 m NQ)	\$13,300	\$15,040.90
+ 10 tests	(\$44.33/m)	(\$50.15/m)

650 m hole

(20 m o/b,	\$31,840.00	\$38,066.80
630 m NQ, 21 tests	(\$48.99/m)	(\$58.56/m)
30 man hrs,		
15 machine hrs)		

825 m hole

(10 m o/b,	\$41,580	\$51,871.90
815 m NQ, 25 tests	(\$50.40/m)	(\$62.87/m)
50 man hrs,		
25 machine hrs)		

Programme (10,000 m)

2 x 825 m holes	83,160	103,735.50
1 x 650 m hole	31,840	38,066.80
+ 7700 m of	341,341	386,155.00
< 300 m holes		
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Total	\$456,341.00	\$527,957.30