













DIAMOND DRILL RECORD

DESCRIPTION		CORE LENGTH				ASSAYS				ACCUMULATIVE AVERAGES			
FROM	TO	FROM	TO	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	% Zn	AU W	AG W	CU W	
71.8	87.9												
		argillite at 87.9' is distinct at 56° to core axis.											
87.9	90.0												
		ARGILLITE - medium to dark grey slightly cleaved, barren, bedding 71° to core axis. Contact with andesite at 90.0' is 55° to core axis.											
90.0	109.0												
		ANDESITE - 90.0-91.5' - dark grey, competent, contact 75° to core axis. 91.5-109.0 - light green, competent but with some faulting at 105' and 108-109.0', with quartz, calcite in gangue.											
109.0	147.4												
		ARGILLITE - well bedded 46°, at 124' 75°, at 143' 55°, colour varies from light grey to black. Mineralized throughout but best occurs in blackest portion. Pyrrhotite is main sulphide, traces of sphalerite and chalcopryrite occur in heaviest sulphide bands.											
		117.5	117.8			—	—	0.04	0.08				
		117.5-117.8' - best mineralization.											





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DESCRIPTION		CORE LENGTH				ASSAYS				ACCUMULATIVE AVERAGES				
FROM	TO	FROM	TO	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU			AU W	AG W	CU W	
81	85													
		(Con't)												
		sphalerite, galena and chalcopyrite, but makes up only a small portion of the total mass.												
		Bedding highly distorted. Upper contact well defined at 55 <sup>0</sup> , lower contact at 60 <sup>0</sup>												
85	95.5													
		ANDESITE - compact, medium grey												
95.5	97													
		QUARTZ-CALCITE VEIN at contact between argillite and andesite. Slightly mineralized with sphalerite adjacent to all argillite fragments.												
97	114													
		ARGILLITE - medium grey competent. Bedding:												
		97'-30 <sup>0</sup>												
		102'-15 <sup>0</sup>												
		110'-30 <sup>0</sup>												
		Minor sphalerite along bedding planes. Quartz-calcite filled fractures show minor to heavy mineralization of pyrite, sphalerite and galena with occasional disseminations of chalcopyrite.												
		Lower contact @ 39 <sup>0</sup>												
114	117													
		ANDESITE - lower contact not well defined.												









DIAMOND DRILL RECORD

FROM		TO	DESCRIPTION	CORE LENGTH				ASSAYS				ACCUMULATIVE AVERAGES						
				FROM	TO	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W				
190.2	194.0		ANDESITE - Dark grey. Fractured and filled with weakly mineralized quartz and calcite.															
194.0	229		ARGILLITE - Dark grey to black. Slightly replaced argillite by pyrrhotite. Very competent formation. Formation cut by series of veinlets with no general trend. All contain fair amounts of sphalerite and galena but make up only a small percentage of the whole mass.															
	229'		End of hole Hole ended in a fault zone. Total loss of water and finally a portion of the machine broke down.  However, the last two diamond drill holes explain the reason for the lead and zinc and Cu anomalies but do not satisfactorily explain the EM anomaly. Attempts at completing the hole were discontinued as the rock ( argillite) showed itself to be competent. The lack of shear zones would reduce the number of channelways open for ascending mineralized solutions and no orebody could be forseen under these conditions.															

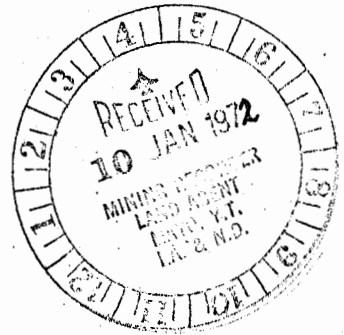
conditions.

**TRANS NORTH TURBO AIR LTD.**

BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON



TO: Hart River Mines Ltd.  
844 West Hastings  
Vancouver 1, B.C.



DATE July 30, 1971

INVOICE NO. 463-71

P.O. NO.

TO:	Charge you with the charter of Bell 206-A Jet Ranger Helicopter CF-TNT Crew: Armstrong & Whitticase	
FLYING:	July 18 & 25, 1971 Daily Flight Report No.'s 640 & 645	
	6.1 hours at \$237.00 per hour (rate when charterer supplies fuel)	\$1,445.70
PLUS:	Ten kegs of fuel purchased by T.N.T.A. on your behalf	<u>127.23</u>
	<b>INVOICE TOTAL</b>	<b><u>\$1,572.93</u></b>

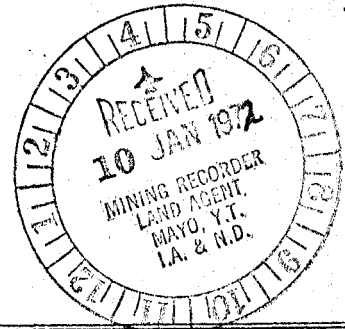
TERMS: One per cent interest per month will be charged on all invoices not paid within 30 days of date issued.

*116-A-10  
Diamond Drill Logs  
Hart R. Mines Ltd  
July 71  
Ray M.D.*

*45615  
"MARK" claims*

**TRANS NORTH TURBO AIR LTD.**

BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON



TO:

Hart River Mines Ltd.  
844 West Hastings  
Vancouver 1, B.C.

Date: August 31, 1971

Invoice No. 642-71

P.O. No.

TO: Charge you with the following helicopter charters:

Bell 47G-3B-2 Helicopter CF-QJW  
Crew: Kipke & McKnight

FLYING: August 9, 10, 13, 15, 22 & 23, 1971  
Daily Flight Report No.'s 8644, 8648,  
8653, 8655 & 8661 & 8662

13.3 hours at \$155.00 per hour      \$2,061.50  
(rate when carrier supplies fuel)

9.4 hours at \$144.00 per hour      1,353.60  
(rate when charterer supplies fuel)

PLUS: Excess cost of fuel at Mayo  
Charterer assessed with cost of fuel  
over \$.60 per gallon

240 gallons at \$.19 per gallon      45.60

PLUS: Prorated crew expenses at Mayo      108.00  
(2/3 cost of 2 men for 5 days)

Bell 47G-3B-2 Helicopter CF-QJY  
Crew: Plaster & Domonkos

FLYING: August 5, 1971  
Daily Flight Report No.'s 9086 & 9087

6.1 hours at \$155.00 per hour      945.50  
(rate when carrier supplies fuel)

3.0 hours at \$144.00 per hour      432.00  
(rate when charterer supplies fuel)

PLUS: Excess cost of fuel at Dawson  
Charterer assessed with cost of fuel  
over \$.60 per gallon

110 gallons at \$.32 per gallon      35.20

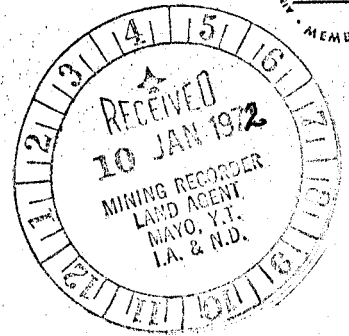
INVOICE TOTAL      \$4,981.40

TERMS: One per cent interest per month will be charged  
on all invoices not paid within 30 days of date  
issued.

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**TRANS NORTH TURBO AIR LTD.**

BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON



TO:

Hart River Mines Ltd.  
848 West Hastings  
Vancouver 1, B.C.

Date: September 30, 1971

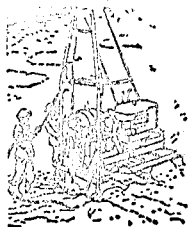
Invoice No. 730-71

TO: Charge you with the charter of Bell 47G-3B-2  
Helicopter CF-QJW  
Crew: Kipke & McKnight

FLYING: September 8, 1971  
Daily Flight Report No. 8678

2.3 hours at \$155.00 per hour (Rate when carrier supplies fuel)	\$356.50
1.0 hours at \$144.00 per hour (Rate when charterer supplies fuel)	\$144.00
PLUS: Excess cost of fuel at Mayo Charterer assessed with cost of fuel over \$.60 per gallon	
41 gallons at \$.58 per gallon	23.78
PLUS: Prorated crew expenses at Mayo (Cost of 2 men for 1 day)	28.00
<b>INVOICE TOTAL</b>	<b>\$552.28</b>

TERMS: One per cent interest per month will be charged  
on all invoices not paid within 30 days of date  
issued.

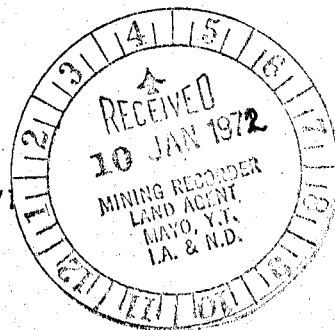


# Rupert Drilling Exploration Ltd.

1227 RICHARDS STREET • VANCOUVER 2, B.C. • 683-9381

DRILLING CONTRACTORS  
BLAST HOLE DRILLING  
CORE DRILLING

July 28, 1971



Hart River Mines Ltd.  
848 West Hastings Street  
Vancouver, B.C.

Period July 1 - 15 1971

Model 3y

A.Q.W.L.

TO LABOR

Driller	311.50		
Helper	<u>71.50</u>	383.00	✓
Plus 20% Fringe benefits		<u>76.60</u>	✓ 459.60

Frt. chgs.

Western Air cooled Engines	8.65		
Canadian Long year Ltd.	<u>44.84</u>		53.49

EQUIPMENT RENTAL

Rig 1	JVA	July 1-31 1971	300.00	✓
Rig 2	Longyear 34	July 1-11 11 days	110.00	✓
		@10.00	<u>410.00</u>	
			923.09	✓

*small underground drill*

→ at July 11 on the started using this one drilling contract

923.09  
less rental 410.00  
\$ 513.09



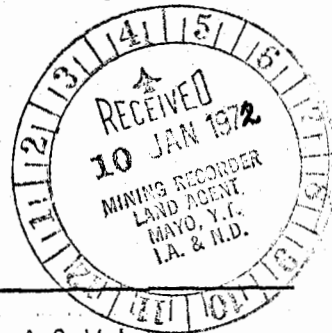
# Rupert Drilling Exploration Ltd.

1227 RICHARDS STREET • VANCOUVER 2, B.C. • 683-9381

DRILLING CONTRACTORS  
BLAST HOLE DRILLING  
CORE DRILLING

August 30 1971

Hart River Mines Ltd.  
848 West Hastings Street  
Vancouver B.C.



Period Aug. 1 - 25 1971

A.Q.W.L.

### TO DRILLING

Hole # 71-2	0 to 192	192 feet
Hole # 71-3	0 to 130	130 feet
Hole # 71-3A	0 to 240	240 feet
Hole # 71-4	0 to 229	<u>229</u> feet

791 @ 8.75

\$ 6,921.25

### TO CASING

Hole # 71-2	AW	0 to 28	28 feet
Hole # 71-3	AW	0 to 18	18 feet
Hole # 71-3	BW	0 to 14	14 feet
Hole # 71-3A	AW	0 to 18	18 feet
Hole # 71-3A	BW	0 to 5	5 feet
Hole # 71-4	AW	0 to 15	15 feet
Hole # 71-4	BW	0 to 8	<u>8</u> feet

106 @ 5.50

583.00

### EQUIPMENT LIFT IN HOLE # 71-3

1 5 ft. BQWL core barrel complete	\$275.00
10 10 ft. BQWL rods @ 19.95	199.95
1 5 ft. BQWL rod	10.00
1 AQ core bit	70.00
1 AQ reaming shell	<u>75.00</u>

\$275.00
199.95
10.00
70.00
<u>75.00</u>

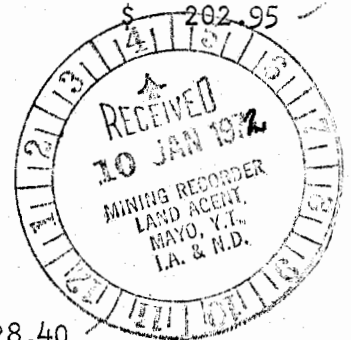
629.95

LIFT IN HOLE # 71-4 (AT REQUEST OF COMPANY)

2 X 3'	BW casing	@ 15.40
1 X 2'	BW casing	@ 13.00
1	BW casing shoe (new)	@ 98.00
6 X 2'	AW casing	@ 7.20
1 X 3'	AW casing	@ 8.20
1	AW shoe (new)	@ <u>61.15</u>

TO MOVING & TRAVEL TIME

Aug. 1	Foreman	4	Hrs. O.T. @ 6.675	\$26.70 /
Aug. 5	Foreman	3	Hrs. S.T. @ 4.45	13.35 /
Aug. 5	Helper	3	Hrs. S.T. @ 3.45	10.35 /
Aug. 16	Foreman	8	Hrs. S.T. @ 4.45	35.60 /
Aug. 16	Foreman	4	Hrs. O.T. @ 6.675	26.70 /
Aug. 17	Foreman	8	Hrs. S.T. @ 4.45	35.60 /
Aug. 17	Foreman	4	Hrs. O.T. @ 6.675	26.70 /
Aug. 25	Foreman	12	Hrs. S.T. @ 4.45	<u>53.40 /</u>
Plus 20% Fringe Benefits				



\$ 228.40  
45.68

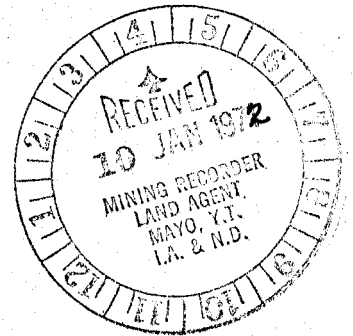
202.95  
274.08

TO WATER SUPPLY, CEMENTING

Aug. 2	Foreman	2	Hrs. O.T. @ 6.675	\$13.35
" "	Helper	2	Hrs. O.T. @ 5.175	10.35
Aug. 3	Foreman	6	Hrs. S.T. @ 4.45	26.70
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
" "	Helper	6	Hrs. S.T. @ 3.45	20.70
" "	Helper	4	Hrs. O.T. @ 5.175	20.70
Aug. 4	Foreman	2	Hrs. S.T. @ 4.45	8.90
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
" "	Helper	2	Hrs. S.T. @ 3.45	6.90
" "	Helper	4	Hrs. O.T. @ 5.175	20.70
Aug. 5	Foreman	7	Hrs. O.T. @ 6.675	46.725
" "	Helper	7	Hrs. O.T. @ 5.175	36.225
Aug. 6	Foreman	2	Hrs. S.T. @ 4.45	8.90
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
" "	Helper	2	Hrs. S.T. @ 3.45	6.90
" "	Helper	4	Hrs. O.T. @ 5.175	20.70
Aug. 7	Foreman	4	Hrs. O.T. @ 6.675	26.70
" "	Helper	4	Hrs. O.T. @ 5.175	20.70
Aug. 8	Foreman	6	Hrs. O.T. @ 6.675	40.05
" "	Helper	6	Hrs. O.T. @ 5.175	31.05
Aug. 9	Foreman	8	Hrs. S.T. @ 4.45	35.60
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
" "	Helper	8	Hrs. S.T. @ 3.45	27.60
" "	Helper	4	Hrs. O.T. @ 5.175	20.70
Aug. 10	Foreman	2	Hrs. O.T. @ 6.675	13.35
" "	Helper	2	Hrs. O.T. @ 5.175	10.35
Aug. 11	Foreman	8	Hrs. S.T. @ 4.45	35.60
" "	Foreman	3	Hrs. O.T. @ 6.675	20.025
" "	Helper	8	Hrs. S.T. @ 3.45	27.60
" "	Helper	3	Hrs. O.T. @ 5.175	15.525

Aug. 12	Foreman	2	Hrs. S.T. @ 4.45	\$ 8.90
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
" "	Helper	2	Hrs. S.T. @ 3.45	6.90
" "	Helper	4	Hrs. O.T. @ 5.175	20.70
Aug. 13	Foreman	2	Hrs. O.T. @ 6.675	13.35
" "	Helper	2	Hrs. S.T. @ 3.45	6.90
Aug. 14	Foreman	8	Hrs. O.T. @ 6.675	53.40
Aug. 15	Foreman	3	Hrs. O.T. @ 6.675	20.025
Aug. 19	Foreman	5	Hrs. O.T. @ 6.675	33.375
Aug. 20	Foreman	8	Hrs. S.T. @ 4.45	35.60
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
Aug. 21	Foreman	6	Hrs. O.T. @ 6.675	40.05
Aug. 22	Foreman	9	Hrs. O.T. @ 6.675	60.075
Aug. 23	Foreman	4	Hrs. S.T. @ 4.45	17.80
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
Aug. 24	Foreman	7	Hrs. S.T. @ 4.45	31.15
" "	Foreman	4	Hrs. O.T. @ 6.675	26.70
Plus 20% Fringe Benefits				

\$1,134.43  
226.89      \$ 1,361.32



OUT OF POCKET EXPENSE  
 Cab fares

19.55

EQUIPMENT RENTAL

Rig # 1	JVA	Aug. 1 - 31 @	\$ 300.00	
Rig # 2	Long year 31	Aug. 26 - 31 6 days @ 10.00	<u>60.00</u>	<u>360.00</u>

\$10,352.10

less rental 360.00

\$9,992.10

