

REPORT ON DIAMOND DRILLING

HOLES NK-1, NK-2, NK-3

KUTCHO PROPERTY

58°12'N

128°30'W

1041 1W & 2E

LIARD MINING DIVISION

BY

R. MacArthur

NORANDA EXPLORATION COMPANY, LIMITED

February 14, 1978

part 2 of 2

MINERAL RESOURCES BRANCH ASSESSMENT REPORT 6686 NO. _____

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<i>deleted (duplicate)</i> CLAIM LOCATION MAP 1:50,000 Fig. 2	In Pocket
DRILL HOLE LOCATION MAP 1:10,000 Fig. 3	In Pocket

INTRODUCTION

The "Kutcho" property referred to in this report consists of 10 claims numbered Kutcho 1 to Kutcho 10.

The property is located approximately 95km southeast of the village of Dease Lake in northwestern B.C. The Kutcho Creek airstrip is approximately 3km north of the property.

Equipment was transported from Dease Lake to the Kutcho airstrip by Twin Otter aircraft, then by helicopter to the property.

The drilling was planned as a follow-up to geological, geochemical and geophysical work carried out earlier (see Geochemical and Geophysical Report Kutcho 1 to 6 Mineral Claims by R. MacArthur and T. Walker March 1, 1977).

CLAIMS AND OWNERSHIP

The Kutcho property consists of the following claims:

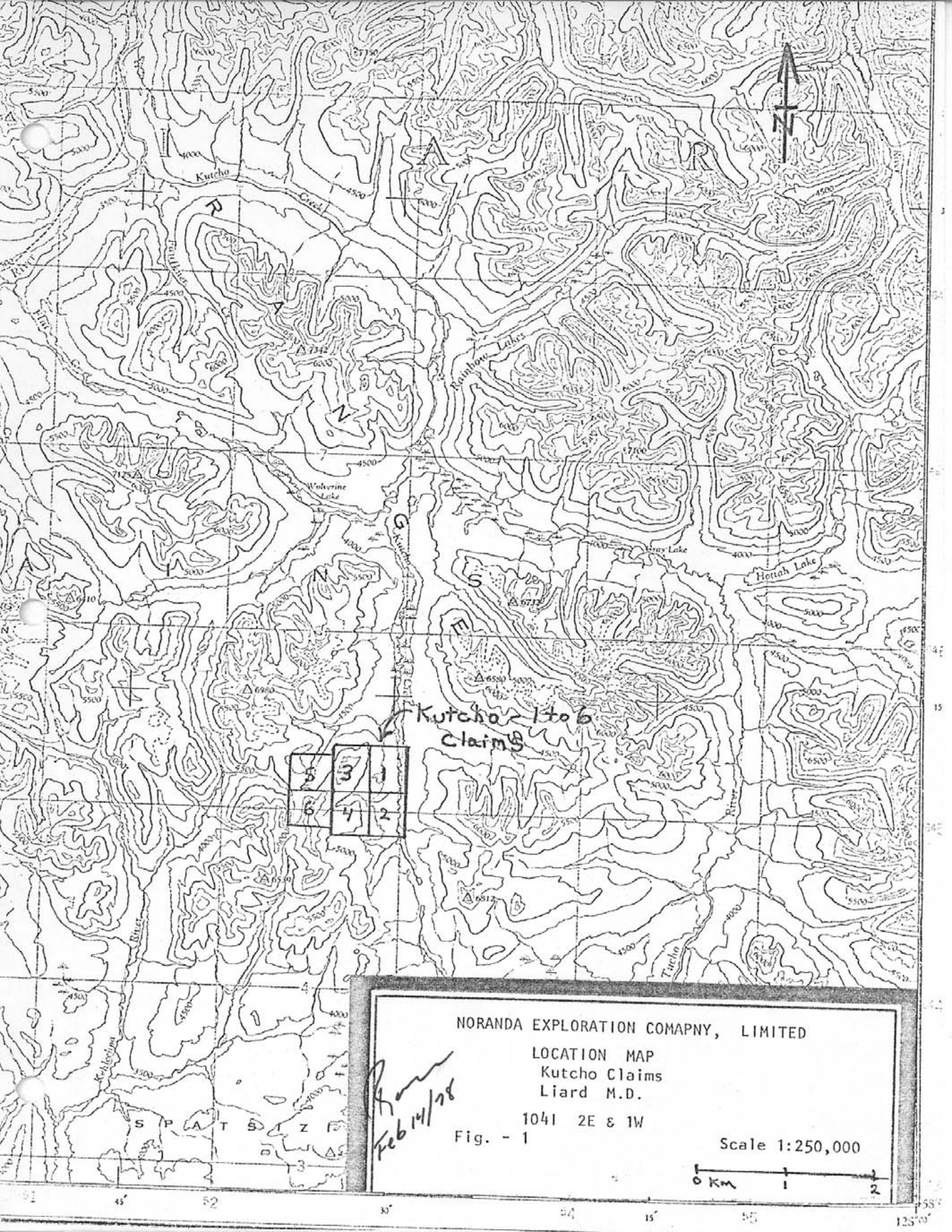
<u>Claim</u>	<u>Units</u>	<u>Record Number</u>	<u>Record Date</u>	<u>Owner</u>
Kutcho 1	20	99	March 10, 1976	Moranda Exploration Company, Limited (No Personal Liability)
Kutcho 2	20	100	"	"
Kutcho 3	20	101	"	"
Kutcho 4	20	102	"	"
Kutcho 5	20	103	"	"
Kutcho 6	20	104	"	"
Kutcho 7	4	149	July 12, 1976	"
Kutcho 8	20	192	Aug. 27, 1976	"
Kutcho 9	15	193	Aug. 27, 1976	"
Kutcho 10	15	194	Aug. 27, 1976	"

DIAMOND DRILLING

Three AQ diamond drilling holes for a total of 229.9m were drilled on the property between May 17, 1977 and August 2, 1977. Drilling was done under contract by A. Allen Diamond Drilling Ltd. of Merrit B.C., using a Longyear 24 drill and AQ wireline equipment. A helicopter was used for all moves.

The core is stored in wooden boxes on a rack near the 1977 campsite at 102N on L92E.

Descriptive logs are included with this report.



5	3	1
6	4	2

Kutcho 1 to 6
Claims

NORANDA EXPLORATION COMPANY, LIMITED
 LOCATION MAP
 Kutcho Claims
 Liard M.D.
 1041 2E & 1W
 Fig. - 1
 Scale 1:250,000
 0 Km 1 2

Ron
Feb 14/78

S P A T S Z F

1 45 52 30 54 15 55 58

NORANDA EXPLORATION COMPANY, LIMITED

Collared 27/7/77	Completed 30/7/77	Core Size A0	Property Kutcho	Project No 1015	NTS No. 1041/2E
FIELD COORDINATES			SURVEYED COORDINATES		
Lat. 101 + 50N	Elev.	Dip -50°	Lat.	Elev.	Dip
Dep. 88 + 00E	Depth 72.7	Bearing 180° Az	Dep.	Depth	Bearing
					Sheet 1 of 1
					Hole No. NK - 2

Footage	Rec'y	Graphic Log	Description	% Sulp.	Est. Grade	Sample No.	Lt.				
0 - 1.2			Casing - Overburden (casing left in hole)								
1.2 - 4.1	80		Schistose rhyolite and rhyolite porphyry badly weathered								
4.1 - 61.9	90		Gray green quartz-eye chlorite sericite schist with sections of more massive gray green rhyolite interbedded. Also sections of quartz-sericite rich rock (low chlorite) interbedded generally more quartz rich toward lower end of section 19.1 - 19.2 quartz 23.3 - 24.3 f.g. well factured brown rhyolite - limonite stain. 28.2 - narrow rusty fracture zone 28.6 - 30.2 - rusty quartz eye sericite schist with quartz stringers. 30.6 - 32.0 - traces of diss. chalcopryite 37.6 - 38.0 - 2cm quartz vein // to core axis 38 to 42.8 - quartz eye sericite schist, rusty from 42.0 to 42.8 48 to 49.9 - quartz rich - mottled gray green and white 49.9 - 55 - quite porphyritic, less schistose 61.1 - 61.9 - finely bedded, chlorite rich quartz eye schist (tuff) with abundant pyrite traces of chalcopryite								
61.9 - 64.4	90		Black finely bedded, graphitic phyllite and slate with interbedded fine tuff.								
64.4 - 72.7			Gray - green argallite and tuff with interbedded black graphitic phyllite and slate disseminated pyrite throughout.								
72.7			End of Hole								

R. G. MacArthur

DATE Aug. 3, 1977

LOGGED BY

R.G. MacArthur

NORANDA EXPLORATION COMPANY, LIMITED

Collared 25/7/77	Completed 27/7/77	Core Size AQ	Property Kutcho	Project No 1015	NTS No. 1041 2E
FIELD COORDINATES			SURVEYED COORDINATES		
Lat. 100+50N	Elev.	Dip -50°	Lat.	Elev.	Dip
Dep. 74+00E	Depth 63 meters	Bearing 180°Az	Dep.	Depth	Bearing
					Hole No. NK - 1

Footage	Rec'y	Graphic Log	Description	% Sulp.	Est. Grade	Sample No.	Lt.			
0 - 5	0		Casing - overburden (casing left in hole)							
5 - 6	70		Gray f.g. rhyolite, a few rusty weathered pyrite bands	<2						
6-6.9	50		Gray f.g. rhyolite poor recovery, broken and ground core	<2						
6.9-8.8	85		Gray f.g. rhyolite w a few coarse rhyolite porphyry bands as @ 7.4 to 7.6 w fracture filling and disseminated pyrite.	<2						
8.8 - 10.3	30		Gray to brown rhyolite (1m lost @ 9 to 10) badly weathered, many rusty fractures	<2						
10.3 - 11.9	90		Rhyolite porphyry - badly weathered a few stringers and patches of quartz and calcite. Most of sulphides weathered out. Chlorite and sericite along shear planes and fractures.	<2						
11.9 - 13.4	60		Gray to brown sericitic rhyolite and massive gray rhyolite, poor recovery.							
13.4 - 43.8	95		Gray f.g. weakly foliated rhyolite w chlorite and sericite along shears minor disseminated and fracture filling pyrite. A few narrow possibly tuffaceous bands as @ 31.2 - 31.3, milk white quartz veins @ 29.9 to 30.0 @ 32.6 to 32.7	<2						

DATE Aug. 3, 1977 LOGGED BY R.G. MacArthur

NORANDA EXPLORATION COMPANY, LIMITED

Collared		Completed	Core Size	Property			Project No	NTS No.				
FIELD COORDINATES				SURVEYED COORDINATES					Sheet 2 of 2			
St.		Elev.	Dip	Lat.		Elev.	Dip		Hole No.			
Dep.		Depth	Bearing	Dep.		Depth	Bearing		NK-1			
Footage	Rec'y	Graphic Log	Description				% Sulp.	Est. Grade	Sample No.	Lt.		
13.4 - 43.8 cont'd			40.5 to 43.8 - gradual change into a sequence of chloritic argillite and tuff, rock is more finely banded, by 43.8 this is quite pronounced, foliation 65° to 85° to core axis.									
43.8 - 50.2			Argillite and tuff, gray to green, some quartz eyes, rock is darker (green) than above.									
50.2 - 58.3	95		Interbedded black (graphitic) phyllite and gray green tuff. Disseminated and small lenses (<1cm) of pyrite throughout. Abundant small quartz stringers and blebs, 65 - 85° to core axis.				42					
58.3 - 63.0	95		Similar to above but mainly f.g. to m.g. tuff w narrow 20cm sections of graphitic material, 61.1 to 61.2 buff to cream rhyolite tuff with disseminated pyrite, foliation 65° to 85° to core axis.									
63.0			End of Hole									

R. G. MacArthur

NORANDA EXPLORATION COMPANY, LIMITED

Collared 30/7/77		Completed 2/8/77		Core Size AQ		Property Kutcho		Project No 1015		NTS No. 1041/2E				
FIELD COORDINATES						SURVEYED COORDINATES						Sheet 1 of 1		
Lat. 92 + 00N		Elev. -		Dip -50°		Lat.		Elev.		Dip		Hole No.		
Dep. 104 + 00E		Depth 94.2m		Bearing 180° Az		Dep.		Depth		Bearing		NK - 3		
Footage	Rec'y	Graphic Log	Description				% Sulp.	Est. Grade	Sample No.	Lt.	Ag oz/ton	Cu %	Pb %	Zn %
0-2.2	0		Casing - overburden (casing left in hole)											
2.2 - 2.6			Boulders (ground core)											
2.6-94.2	90%		Green chlorite schist - finely banded 65° to 90° to core axis.											
			2.6 - 26.0 - 1 to 3% pyrite, mottled with quartz and calcite stringers <2cm wide. 26 - 64 - Pyrite 2 - 5% disseminated and small stringers (.8m lost between 55.5 and 56.5)				Sampled from 38.00 - 71.00m		Nk3-1	3m	0.06	0.04	<0.01	0.06
			64.0 - 64.2 fault gray gouge (lost circulation)											
			69.4 - 69.8 blocky zone probable shear											
			72.2 - 73.3 - blocky zone probable shear				1 to 3%							
			74.2 - small shear											
			81.9 - 82.0 - quartz calcite vein											
							Sampled from 91.1 - 94.1m							
			91.1 - 94.1 - 2 to 5% pyrite with diss. chalcopryrite also hematite, 10cm quartz calcite vein with c.g. pyrite @ 92.5 to 92.6				2 to 5%		Nk 3-2	3m	0.09	0.11	<0.01	0.06
			93.0 to 94.0 = 0.5m of quartz calcite rich rock (vein)				10%	Note						
			with heavy sulphide, mainly pyrite but minor chalcopryrite. Hematite stain					This Box was spilled so depths are approximate						
94.2			End											

Ronald MacArthur

STATEMENT OF QUALIFICATIONS

I, Ronald G. MacArthur of the town of Smithers, Province of British Columbia, do certify that:

- 1) I have been an employee of Noranda Exploration Company, Limited since May 1972.
- 2) I am a graduate of Dalhousie University with a Bachelor of Science Degree in Geology.
- 3) I am a member of the Canadian Institute of Mining and Metallurgy.
- 4) I am a member of the Geological Association of Canada.

Feb 14/1978 Ronald MacArthur

R.G. MacArthur

Geologist
Noranda Exploration Company, Limited
(No Personal Liability)

STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT Kutcho
TYPE OF REPORT Diamond Drilling

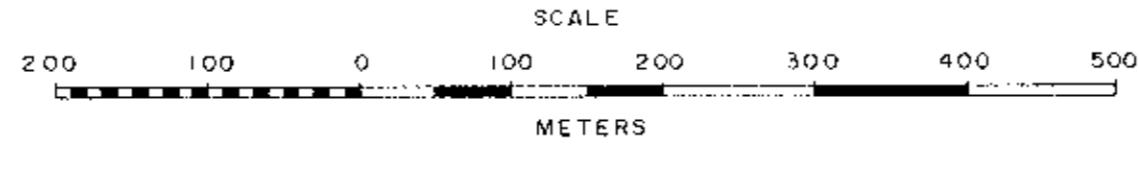
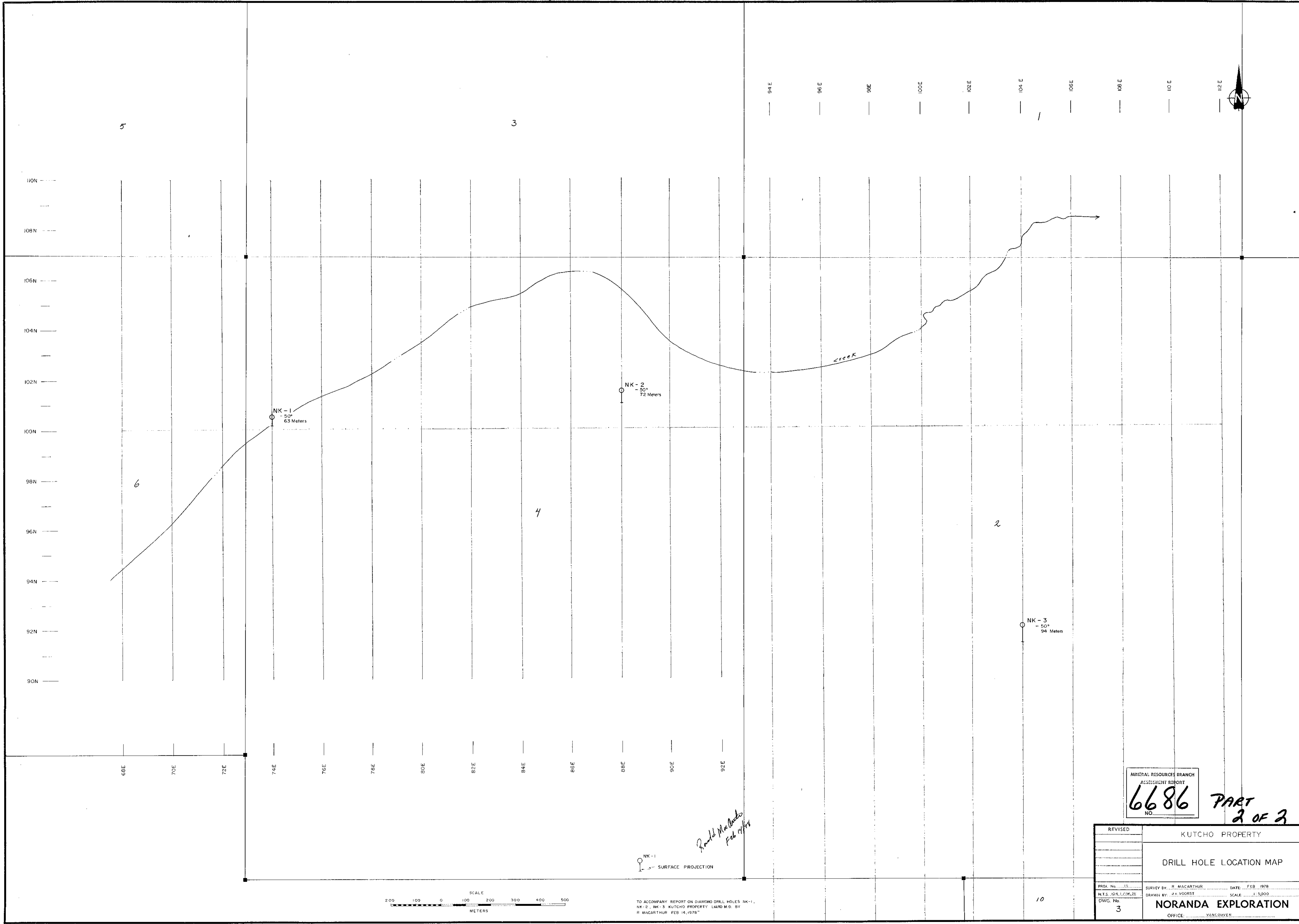
DATE February 14, 1978

- a) Wages:
No. of Days 60
Rate per Day \$ 51.35
Dates: from May 17 to August 4, 1977
Total Wages 60 x \$ 51.35 3,081.00
- b) Food and Accomodation:
No of days 60
Rate per day \$ 31.22
Dates: from May 17 to August 4, 1977
Total Cost 60 x \$ 31.22 1,873.20
- c) Transportation:
No of days 60
Rate per day \$ 197.23
Dates: from May 17 to August 4, 1977
Total Cost 60 x \$ 197.23 11,833.80
- d) Instrument Rental:
Type of Instrument
No of days
Rate per day \$
Dates: from to
Total Cost X \$
- Type of Instrument
No of days
Rate per day \$
Dates: from to
Total Cost X \$

f) Analysis (See attached schedule)		
g) Cost of preparation of Report		
Author	51.35	
Drafting	270.00	
Typing	200.00	521.35
h) Other:		
H. Allen Diamond Drilling	10,025.54	
Camp Supplies & Equip.	335.64	
Supervisors R.C. Helm PhD, P.Eng. & G.E. Dirom P. Eng. (7days)	1,260.00	
		<u>11,621.18</u>

Total Cost 28,930.53

e) Unit costs for Diamond Drilling		
No of days	60	
No of units	229.9m	
Unit costs	\$125.84 / m	
Total Cost	\$125.84 x 229.9	<u><u>28,930.53</u></u>



NK-1
SURFACE PROJECTION

*Ronald MacArthur
Feb 14/78*

TO ACCOMPANY REPORT ON DIAMOND DRILL HOLES NK-1,
NK-2, NK-3, KUTCHO PROPERTY LAND M.D. BY
R. MACARTHUR FEB 14, 1978

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6686
NO.

**PART
2 OF 3**

REVISED	KUTCHO PROPERTY	
	DRILL HOLE LOCATION MAP	
PROJ. No. 15	SURVEY BY: R. MACARTHUR	DATE: FEB 1978
N.T.S. 104.1/2/1/28	DRAWN BY: J.V. VOORST	SCALE: 1:5000
DWG. No. 3	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	