

6411

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: ~~92H/5~~

94E/2W

DIAMOND DRILLING REPORT

RAT CLAIM GROUP

DUNCAN LAKE AREA

OMINECA MINING DIVISION

PERIOD OF WORK

August 12, 1977 to August 21, 1977

SEPTEMBER 23, 1977

D.L. COOKE, Ph.D., P.Eng.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. _____

EXPLORATION

WESTERN DISTRICT

23 SEPTEMBER 1977

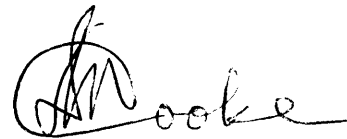
STATEMENT OF QUALIFICATIONS

I, David L. Cooke, with business address at 200 Granville Square, Vancouver, British Columbia, do hereby certify that I have supervised the diamond drilling programme and the logging of the drill core by A.C. Freeze, geologist, and have assessed and interpreted the data resulting from said programme on the Rat claim group.

I also certify that:

1. I am a graduate of the University of New Brunswick with a B.Sc. degree in Geology (1959), and of the University of Toronto, with M.A. and Ph.D. degrees in Geology (1961 and 1966 respectively),
2. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

Respectfully submitted:



D.L. Cooke, Ph.D., P.Eng.

Vancouver, British Columbia

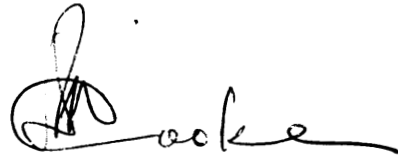
IN THE MATTER OF THE
 B.C. MINERAL ACT
 AND
 IN THE MATTER OF A DIAMOND DRILL PROGRAMME
 CARRIED OUT ON THE MINERAL CLAIM RAT 6
 ON THE
 RAT CLAIM GROUP
 Located at Duncan Lake
 in the Omineca Mining Division of the
 Province of British Columbia
 More Particularly N.T.S. 94E/2W

A F F I D A V I T

I, DAVID L. COOKE, OF THE CITY OF VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, MAKE OATH AND SAY:

1. THAT I AM EMPLOYED AS A GEOLOGIST BY COMINCO LTD. AND, AS SUCH, HAVE A PERSONAL KNOWLEDGE OF THE FACTS TO WHICH I HEREINAFTER DEPOSE;
2. THAT ANNEXED HERETO AND MARKED AS "EXHIBIT A" TO THIS MY AFFIDAVIT IS A TRUE COPY OF EXPENDITURES INCURRED ON DIAMOND DRILLING ON THE MINERAL CLAIM RAT 6;
3. THAT THE SAID EXPENDITURES WERE INCURRED BETWEEN THE 12TH DAY OF AUGUST 1977 AND THE 21ST DAY OF AUGUST, 1977 FOR THE PURPOSE OF MINERAL EXPLORATION ON THE ABOVE NOTED CLAIMS.

Sworn Before Me at the City of Vancouver in the Province of British Columbia this 26th day of September 1977.



 DAVID L. COOKE

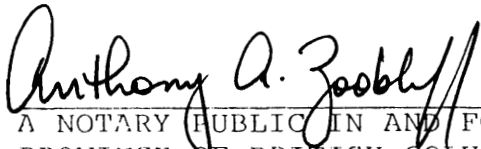

 A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

EXHIBIT "A"

DIAMOND DRILLING COSTS
ON THE
RAT CLAIM GROUP

Situate on Duncan Lake
57°02' North Latitude
126°46' West Longitude

NTS 94E/2W

Salaries:

A.C. Freeze Jr.; Geologist Aug. 12-21/77: 10 days @ \$110/day	\$1,100.00
Andy Nagy; Geological assistant Aug. 12-21/77: 10 days @ \$75/day	750.00
D.L. Cooke; Supervisor Aug. 14-16/77: 3 days @ \$150/day	450.00

Room & Board:

A.C. Freeze & A. Nagy; 20 man days @ \$20/day	400.00
D.L. Cooke; 3 man days @ \$20/day	60.00

Transportation:

Mobilization: of drill equipment and drillers/Connors (Vancouver to Johanson Lake) contract charges	3,750.00
Mobilization: Fixed wing-NT Air; Otter (Johanson to Duncan Lake) 1690 miles @ \$1.60/mile	2,704.00
Helicopter - Northern Mountain Helicopters; Duncan Lake - Campsite 20 hrs. @ \$175/hr.	3,500.00

Drilling:

Size BQ (Connors Drilling); August 18-21, 1977 D.D.H. #77-1/-90°/297 feet @ \$18.50/ foot.	<u>5,494.50</u>
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TOTAL: \$18,208.50

Total Assessment Credits Requested for 80 Claim Years = \$16,000.00

Signed: 
D.L. Cooke

THIS IS EXHIBIT "A" TO THE AFFIDAVIT OF EXPENDITURES RELATING
TO THE DIAMOND DRILL PROGRAMME DECLARED BEFORE ME ON THE 26th
DAY OF SEPTEMBER, 1977 A.D.


A NOTARY PUBLIC IN AND FOR THE
PROVINCE OF BRITISH COLUMBIA

DRILL DATA FOR DIAMOND DRILL HOLE


77-1 ON THE RAT CLAIM GROUP

<u>DRILL HOLE</u>	<u>LOCATION</u>	<u>DIP</u>	<u>BEARING</u>	<u>DEPTH</u>	<u>CORE SIZE</u>	<u>TOTAL COSTS</u>	<u>CREDITS</u>
77-1	Rat #6	-90 ⁰	-----	297'	BQ	18,208.50	16 yrs

All drill core is stored in boxes at the drill site on the Rat #6 claim.

The location of the hole has not been surveyed and hence its exact position and elevation are not known.

Signed by: 
D.L. COOKE, Ph.D. P.Eng.

Approved for
Release by: 
G.Harden, Manager, Exploration

Attachments:

1. Rat Group - Location Map; 1"=32 miles
2. Rat Group - Drill Hole Location; 1"=1000 ft.
3. Drill Hole Record: DDH 77-1

Drill Hole Record



Property	RAT Property	District	Omineca	Hole No.	DDH 77-1
Commenced	August 18, 1977	Location	44E, 26N	Tests at	NIL
Completed	August 21, 1977	Core Size	BQ	Corr. Dip	NIL
Co-ordinates	44E-26N			True Brg.	
Objective	To test for Cu Mo mineralization of the porphyry type.			% Recov.	95+%
				Date	August 23, 1977
				Logged by	A.C. Freeze, Jr.

Footage		Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
From	To											
0	26	Overburden.										
26	28'	Dyke:- altered monzonite to quartz monzonite: - potash feldspar on fractures, late calcite with associated hematite fracture - fillings, plus pyrite (1-2%), 10% biotite and hornblende. - plagioclase, sausseritized, minor kaolinization. - trace chalcopyrite associated with potash feldspar seams.										
28	45'	Mixed andesite and quartz monzonite to monzonite: (rubbly) intrusive (30-30.5', 36-38', 40-45'), trace MoS_2 at 33.5' Andesite - fine grained, grey green, soft, calcite, quartz and K-spar seams cross-cut. Epidote occurs as disseminations and on fractures - minor biotitization along contacts with quartz and K-spar veins (some chlorite). Magnetite and pyrite occur on fractures associated with quartz-calcite fracture-fillings, (32-32.5') ±8%. magnetite (31.5-33'). ±5% pyrite. Intrusive - locally highly biotitic, moderately to intensely kaolinized, sausseritized, and chloritized, 1-2% pyrite (average), trace magnetite, minor calcite, hematite on fractures. (44'-45' fault gouge).										
45	88'	Andesite:(partially hornfelsed) locally rubbly. minor calcite, hematite, chlorite fracture filling, trace epidote, few seams of quartz and K-spar. Trace magnetite, disseminated and on fractures, pyrite less than 0.5% average. Altered quartz monzonite to quartz diorite (55-57'): sausseritized, kaolinized, trace chalcopyrite										

Scale

Colour Plot
& Dips

Drill Hole Record



Property	RAT PROPERTY	District	Hole No.	DDH 77-1
Commenced		Location	Tests at	Hor. Comp.
Completed		Core Size	Corr. Dip	Vert. Comp.
Co-ordinates			True Brg.	Logged by
Objective			% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis
		(26-65') siliceous section, altered andesite to dacite, - scattered specs of chalcopyrite through section.			
88 - 297		Quartz diorite to quartz monzonite: hypidiomorphic granular, calcite and hematite on fractures. - mafics: hornblende and biotite, largely unaltered, average 10 - 15% - alteration varies from fresh to moderately sausseritized and kaolinized feldspars, minor chloritization, tr. epidote and magnetite.			
88 - 108'		- Moderate kaolinization, sausseritization and chloritization of biotite and hornblende. M_oS_2 and chalcopyrite as trace disseminations (100-110'). - Pyrite \approx 1% occurs mainly on fractures.			
108 - 127'		Moderately altered, kaolinization and sausseritization appear related to fractures and subsequent solution corrosion. Calcite and hematite on fractures, trace disseminated epidote. Magnetite plus pyrite average 2%/combined. M_oS_2 plus chalcopyrite as trace disseminations (115-125').			
127' - 146.5'		Quartz diorite to quartz monzonite: Some porphyritic feldspars - Calcite hematite and chlorite on fractures. - Alteration as in 108-127' - pyrite 95% disseminated, 5% fracture controlled (1-2% average).			

M. Cole

Hole No. 77-1 Sheet

Scale

Colour Pict
& Dips

Drill Hole Record



Property RAT PROPERTY District Hole No. DDH 77-1

Commenced Location Tests at Hor. Comp.

Completed Core Size Corr. Dip Vert. Comp.

Co-ordinates True Brg. Logged by

Objective % Recov. Date

Footage From To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length
	- Magnetite and epidote in lesser amounts.								
	- 125-135', 137-145' Tr. Chalcopyrite and Tr. M_oS_2 .								
	146.5'-170':								
	- relatively unaltered, pseudo-porphyrific.								
	- fractures, 1 every 6", healed only by calcite and hematite plus trace chlorite,								
	- Hematization spreads laterally from fractures into intrusive (stain). Mafics are								
	weakly chloritized. Tr. M_oS_2 , trace chalcopyrite. Less than 1% pyrite average.								
	170-193: same as above.								
	- Hematization spreads to 10% of core off fractures. Calcite-chlorite-kaolin seams								
	restricted to fractures.								
	- Shear at 195'.								
	- M_oS_2 @ 172', 192', chalcopyrite @ 182', Pyrite less than 1%								
	193-213: Same as above.								
	- Hematization now has spread through 40-50% of core, mafics lightly chloritized,								
	large calcite seams assoc. with shears @ 198'-203'.								
	- Tr. M_oS_2 @ 207' Tr. chalcopyrite. Pyrite (less than 5%) where hematization is								
	pervasive, feldspars are more intensely kaolinized, (a reflection of fracturing								
	and ground water alteration)								
	213'-238: Same as above. Hematization 60-70% of core, few coarse calcite seams								
	mafics 10-15% (hornblende 12%)								
	- Feldspars moderately kaolinized and sausseritized, trace chalcopyrite, less than								
	1% pyrite.								

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. 77-1 Sheet 3

Scale

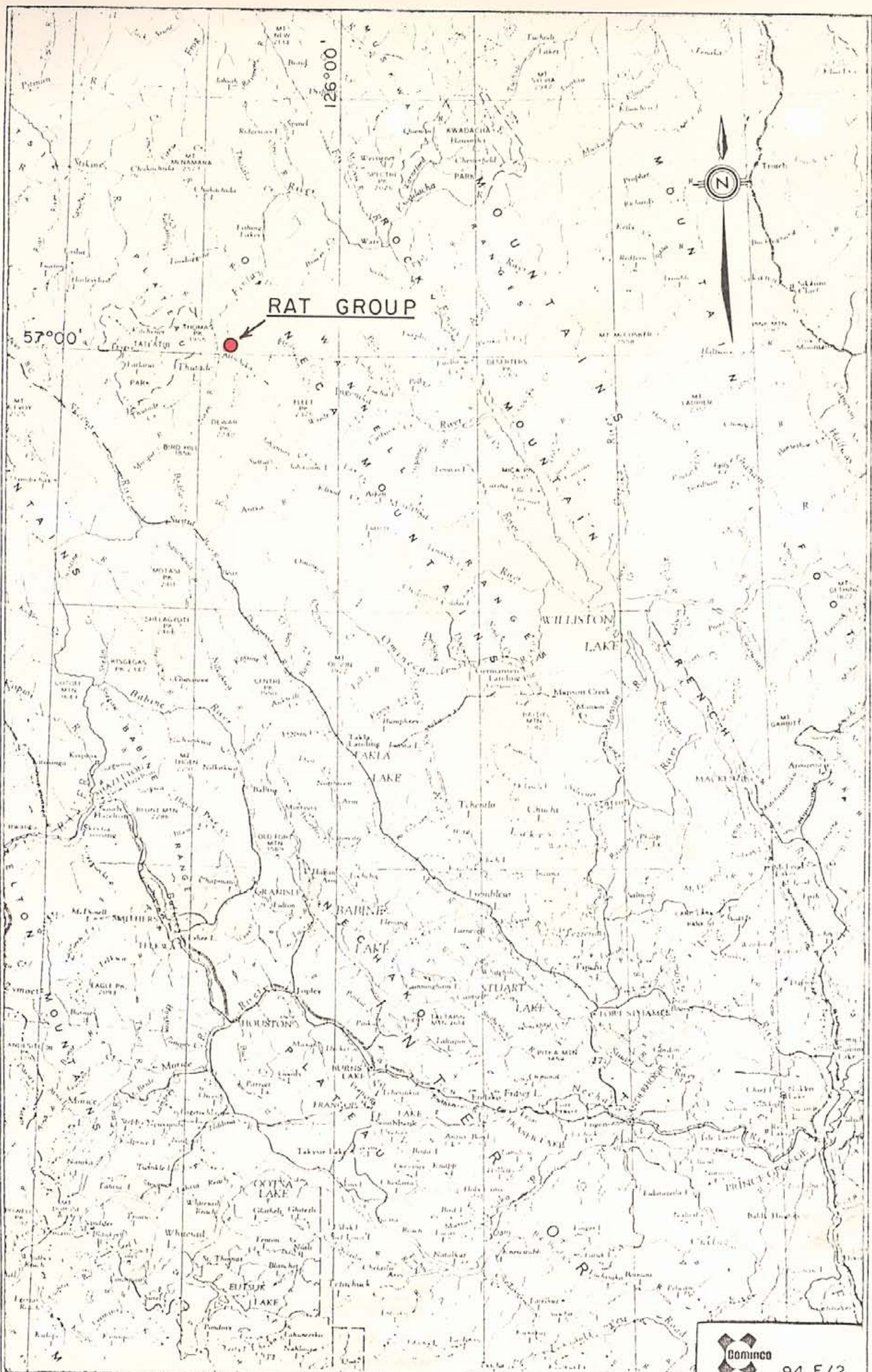
Colour Plot
& Dips

Drill Hole Record



Property	RAT PROPERTY	District	Hole No.	DDH 77-1														
Commenced		Location	Tests at		Hor. Comp.													
Completed		Core Size	Corr. Dip		Vert. Comp.													
Co-ordinates			True Brg.		Logged by													
Objective			% Recov.		Date													
Footage From	To	Description				Sample No.	Length	Analysis										
		238-255': - Same as above																
		- Hematization: 50% of core, pervasive calcite-hematite veining. Coarse rounded clots of hornblende: 248-249', less than 5% pyrite, few specs of chalcopyrite.																
		255'-277': Same as above.																
		255-272': Highly fractured, altered, calcite hematite healed, feldspars extensively kaolinized, less than 5% pyrite.																
		272-277': Partially altered darkish green quartz diorite, somewhat finer grained. granular texture.																
		- narrow hematite seams, mafics partially chloritized (12-14%) combined Hornblende and biotite)																
		277-297': Fine grained, grey green quartz diorite to diorite																
		- hematization with calcite 25-30% of core.																
		- some chloritic sections																
		- less than .4% pyrite.																
		END OF HOLE @297 feet.																

Hole No. 77-1 Sheet



Gomnico 94 E/2

Drawn by:		Traced by:	
Revised by:	Date:	Revised by:	Date:

RAT GROUP
LOCATION MAP

Scale: 1" = 32 miles Date: SEPT. 26, 1977 Plate

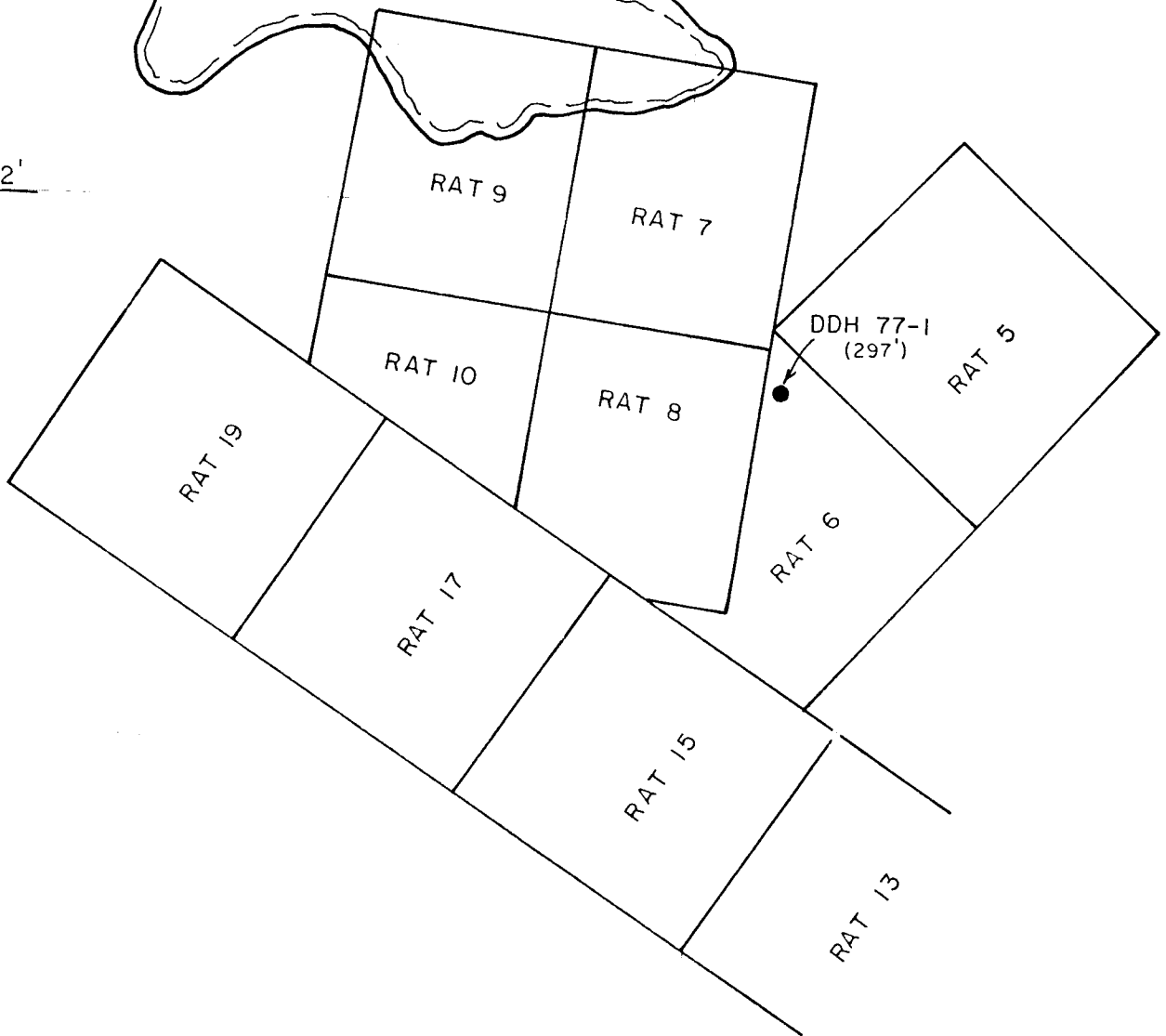
Omineca M.D.

Handwritten signature



DUNCAN
LAKE

57°02'



126°47'



94 E/2 W

Drawn by: <i>P. M. M.</i>		Traced by:	
Revised by	Date	Revised by	Date

RAT GROUP

DRILL HOLE LOCATION

Omineca M.D.

Scale: 1" = 1000'

Date: SEPT. 26, 1977

Plate:

M. Cole