010

Diamond Drilling

Township of OATS

Report No: 10

Work performed by: Amax Explorations

Claim No	Hole No	Footage	Date	Note
P.256477	KX-65-71	837'	June/71	(1)
	KX-66-71	628'	July/71	(2) (3)
		1465'		

Notes:

(1) 81/74 See Oates & Nova Twp.

(2) 94/72

(3) Autopositive enclosed

Nova + Oates Twp #81

AMAX EXPLORATION, INC.

DIAMOND DRILL RECORD

Hole No. KX-65-71

Hole No. KX-65-71 Sheet 1
Property Nova-Oates Group 2
Township ~~Nova~~ OATES
Location 40+00E 12+50N
Logged by: S.A. Averill

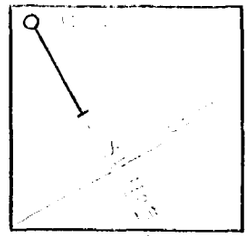
Length 837'
Bearing 150°
Dip 45°
Objective Test electromagnetic anomaly with coincident and flanking magnetic anomaly.

Commenced June 30, 1971
Completed July 14, 1971
Drilling Co. Bradley Bros.
Core Size AQ
Casing Left in Hole Non

Dip: Collar 46°

Etch Test	Depth	Rdg.	True
	50'	53°	47°
	250'	50°	44°
	450'	48.5°	42.5°
	837'	41.0°	36°

Location Sketch



North

Claim No. 256477

Scale: 1" = 1000'

Remarks Water source 2500' west at 18+00E, 12+00N. Camp location 44+00E 2+00N. Drill moved from end of Oates Twp. road to set-up by swamp buggy.

Footage From	Footage To	DESCRIPTION	
0	34	OVERBURDEN	
34	43	BASALT	Hornblende-biotite gneiss with minor calcite. Hb.>bt. except for narrow bt.-rich layers. Trace chalcopyrite in 3/4" g.v. at 12.5.
43	44.5	GRANODIORITE	Dike. Fine-grained, 7% bt.
44.5	70.8	BASALT	Massive-to-gneissic. Gneissosity variable 20°-30°. 40-50% hb., minor garnet. Trace-to-1% py throughout, greatest in carbonate-rich layers.
70.8	100.8	BASALT.	Garnetiferous. Local sub-concordant quartz-carbonate veins and patches with shreddy texture. Trace po. throughout. Trace cpy in qtz -carb. vein at 75.6.
100.8	103.7	GRANODIORITE	Dike. Coarse-grained.
103.7	110.1	BASALT	Garnetiferous hb-bt gneiss with trace po-py.
110.1	110.8	GRANODIORITE	
110.8	124	BASALT	Garnetiferous hb-bt gneiss. Gneissosity at 20°.
124	143	GRANITE	Leucocratic. 1% py, trace fluorite.
143	151	BASALT	Hb-bt gneiss.

AMAX EXPLORATION, INC.

DIAMOND DRILL RECORD

Hole No. KX-65-71
Sheet No. 2

Footage From	Footage To	DESCRIPTION	
151	151.6	APLITE	Dike.
151.6	157.5	BASALT	Hb-bt gneiss with numerous shreddy qtz-carb veins. Veins contain chlorite, garnet, trace po, py, and cpy. Trace po in gneiss.
157.5	158	GRANODIORITE	
158	162	BASALT	
162	163.5	GRANODIORITE	Dike. Fine-grained.
163.5	168	BASALT	Garnetiferous hb-bt gneiss with numerous shreddy qtz-carb veins.
168	168.5	PEGMATITE	White.
168.5	173.5	BASALT	Garnetiferous hb-bt gneiss. Gneissosity at 35°.
173.5	175.8	GRANODIORITE	
175.8	180.5	BASALT	Trace po.
180.5	181.5	GRANITE	Fine-grained, muscovitic. Trace po.
181.5	182.5	BASALT	
182.5	185.1	APLITE	Fractured with py on fracture surface.
185.1	201.5	PERIDOTITE	Actinolite-talc-carbonate schist with bt segregations. Trace po.
201.5	204	GRANODIORITE	Medium-grained. Foliated.
204	209	GRANODIORITE	
209	212	PERIDOTITE	Talc-calcite-actinolite schist.

AMAX EXPLORATION, INC.

DIAMOND DRILL RECORD

Hole No. KX-65-71
Sheet No. 3

Footage From	Footage To	DESCRIPTION	
212	213	APLITE	Fractured
213	225.4	PERIDOTITE	Talc + actinolite with 20% calcite segregations. Local magnetic biotite-rich dikes (pyroxenite).
225.4	226.5	GRANODIORITE	Chloritic.
226.5	253	PERIDOTITE	Talc-carbonate schist. Slightly magnetic. No sulphides. Numerous pyroxenite dikes. Serpentinite at 236. Schistosity at 35°. Carbonate locally a bluish colour.
253	257.5	PERIDOTITE	Coarse-grained talc-chlorite-carbonate schist.
257.5	283	PERIDOTITE	Chlorite-carbonate-actinolite-biotite schist. Green-to-white calcite. Trace po to 280. 3% po, trace py 280-283.
283	287.5	ARGILLITE	Minor chlorite-carbonate schist bands. 10% po, minor py, trace cpy. Po occurs as stringers to 1/4" wide. 3" massive py 285.8-286.
287.5	293	PERIDOTITE	Garnetiferous. 5% po 287.5-289. Trace po to 293.
293	294	PEGMATITE	White. Fractured.
294	295	PERIDOTITE	Biotite + actinolite + minor calcite.
295	297	MONZONITE	Pink, porphyrytic. Fractured, fractures filled with py.
297	367.8	PERIDOTITE	Chlorite-carbonate-talc-biotite gneiss and schist. Garnetiferous. Calcite and mafics in 0.5-3mm layers. Gneissosity at 30°. Dissem. py to 1%. Trace po. Pyroxenite dike 333-334.5. Local aplite and porphyrytic monzonite dikes.
367.8	373	GRANITE	Composite dike of white granite and biotite granodiorite. 1% po, trace cpy.

AMAX EXPLORATION, INC.

DIAMOND DRILL RECORD

Hole No. KX-65-71
Sheet No. 4

Footage From	Footage To	DESCRIPTION	
373	392	PERIDOTITE	Garnetiferous chlorite-biotite-carbonate gneiss.
392	420	PERIDOTITE	Chlorite + biotite + carbonate + actinolite, locally coarse massive actinolite. Some sections up to 70% calcite. Trace po, py. 8" greygranitic dike at 398.
420	421.5	GRANODIORITE	Grey.
421.5	460.8	PERIDOTITE	Actinolite-biotite-carbonate gneiss and serpentinite. 6" leucogranite at 451, 14" grey granite with 1-2% po at 453.
460.8	463	GRANITE	Composite leucogranite-grey granite dike with serpentinite xenoliths.
463	465.1	PERIDOTITE	Serpentinite and massive actinolite + carbonate.
465.1	470.2	PERIDOTITE	Fine-grained porphyrytic (contact zone) Augite (?) phenocrysts in carbonate-phlogopite-amphibole matrix. 1" inclusion argillite 467.8.
470.2	477	ARGILLITE	10-20% graphite, 3-5% py as stringers and disseminations along bedding plane. Trace galena and sphalerite in 0.5 mm brown carbonate veinlets.
477	478.5	DACITE	Tuff and lapilli tuff. Beds 2"-4" thick. Bedding at 65°.
478.5	494	ARGILLITE	10% disseminated graphite, numerous graphitic shears. 3-5% py as stringers and dissem.
494	499	PERIDOTITE	Porphyrytic. As 465.1-470.2.
499	503	ARGILLITE	10% graphite, 2-5% py. Layering at 40°
503	570	PERIDOTITE	Actinolite-biotite-carbonate gneiss, talc-actinolite schist, and massive actinolite. Trace po. Local magnetic

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DIAMOND DRILL RECORD

Hole No. KX-65-71
Sheet No. 5

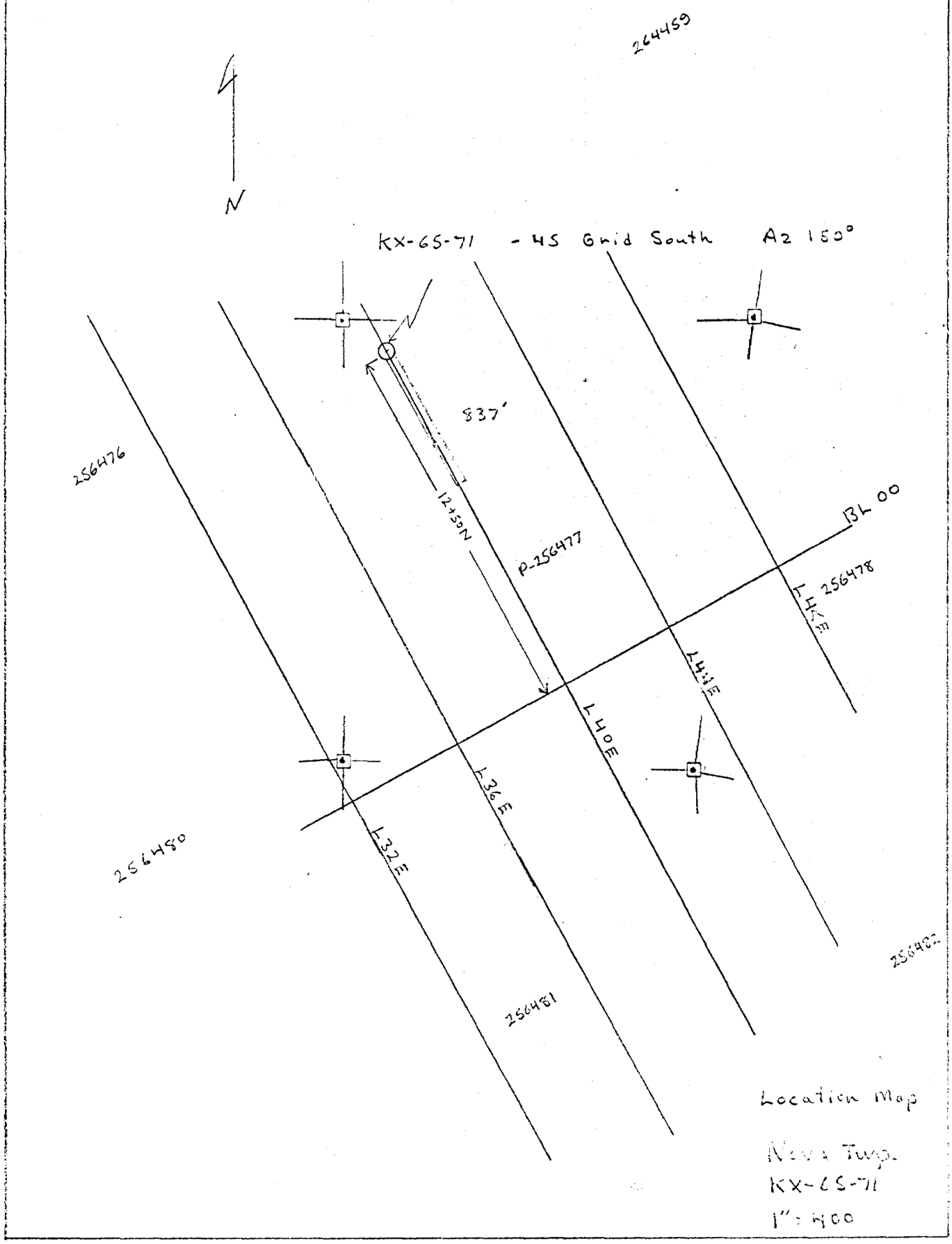
Footage From	Footage To	DESCRIPTION	
570	582.5	GRANODIORITE	Fractured dike. 1' lamphrophyre dike at 576.
582.5	601	PERIDOTITE	Carbonate-serpentine-actinolite gneiss. 50-6-% calcite. Trace po.
601	672	PERIDOTITE	Mainly massive actinolite-tremolite-serpentine-carbonate rock with local biotite-rich layers. Garnetiferous and calcite-rich 662-665. Mariposite at 672. 1-2% po throughout. Pyroxenite dike at 650. Granodiorite 624.7-630.
672	692	ARGILLITE	10% graphite on clearage planes, numerous graphitic shears 5% py and minor po occurs as disseminations and 1-5 mm stringers. Granitic dikes at 677.5, 679-681, 682-685, 685.5-688.
692	697	RHYOLITE	Bedding at 40°. Fine-grained. 5% dissem. py-po.
697	701	ARGILLITE	10% graphite. 5% po, minor py, trace cpy.
701	712	ARGILLITE	15% graphite. 10-15% po, estimated 0.2% cpy, trace sphalerite. Py occurs mainly as 1-10 mm concordant strings, po in minute random fractures. Granitic dike with 5% dissem po 707-708.
712	714	ARGILLITE	10% graphite, 5% py.
714	749.8	DACITE	Tuff, finely interbedded with argillite. Bedding at 30%. 5% dissem. po-py.
749.8	753	SHEAR ZONE	Green, chloritic.
753	757	ARGILLITE	30% graphite
757	769	ARGILLITE	Finely interbedded with dacite tuff. 5-7% py-po.
769	777.5	DACITE	Tuff. Minor argillite interbeds. 3-5% py-po.

AMAX EXPLORATION, INC.

DIAMOND DRILL RECORD

Hole No. KX-65-71
Sheet No. 6

Footage From	Footage To	DESCRIPTION	
777.5	791.5	DACITE	Finely bedded. 15-20% po, minor py, trace cpy
791.5	809.5	DACITE	Massive tuff. 15-20% biotite. 3-5% po, 1% py.
809.5	837	GRANITE	Medium-grained, muscovitic.
837		END OF HOLE.	


264459
N
KX-65-71 - 45 Grid South Az 150°
837'
1245N
P-256477
256476
BL 00
256478
L44E
L40E
L36E
L32E
256480
256481
256482
Location Map
New Twp.
KX-65-71
1" = 400

AMAX EXPLORATION, INC.

DIAMOND DRILL RECORD

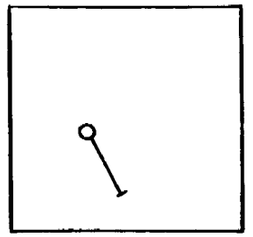
Hole No. KX-66-71

Hole No.	KX-66-71 Sheet 1	Length	628'	Commenced	July 15, 1971
Property	Nova-Oates Group 2	Bearing	150°	Completed	July 19, 1971
Township	Nova	Dip	55°	Drilling Co.	Bradley Bros.
Location	40 + 00E	Objective	Test electromagnetic	Core Size	AQ
	5 + 50N		and flanking magnetic	Casing Left in Hole	18'AW
Logged by:	S.A. Averill		anomaly.		18'AW

Dip: Collar

Etch Test	Depth	Rdg.	True
	100'	58.5°	52°
	300'	54°	48°
	500'	52°	46°

Location Sketch



North

Claim No. 256477

Scale: 1" = 1000'

Remarks: Water source 2,500' west - camp at 44+00E 2+00N. AW casing broken - pull out and start over - hole set up at 45°, steepened to 56° at collar. Core stored in Timmins as Amax office.

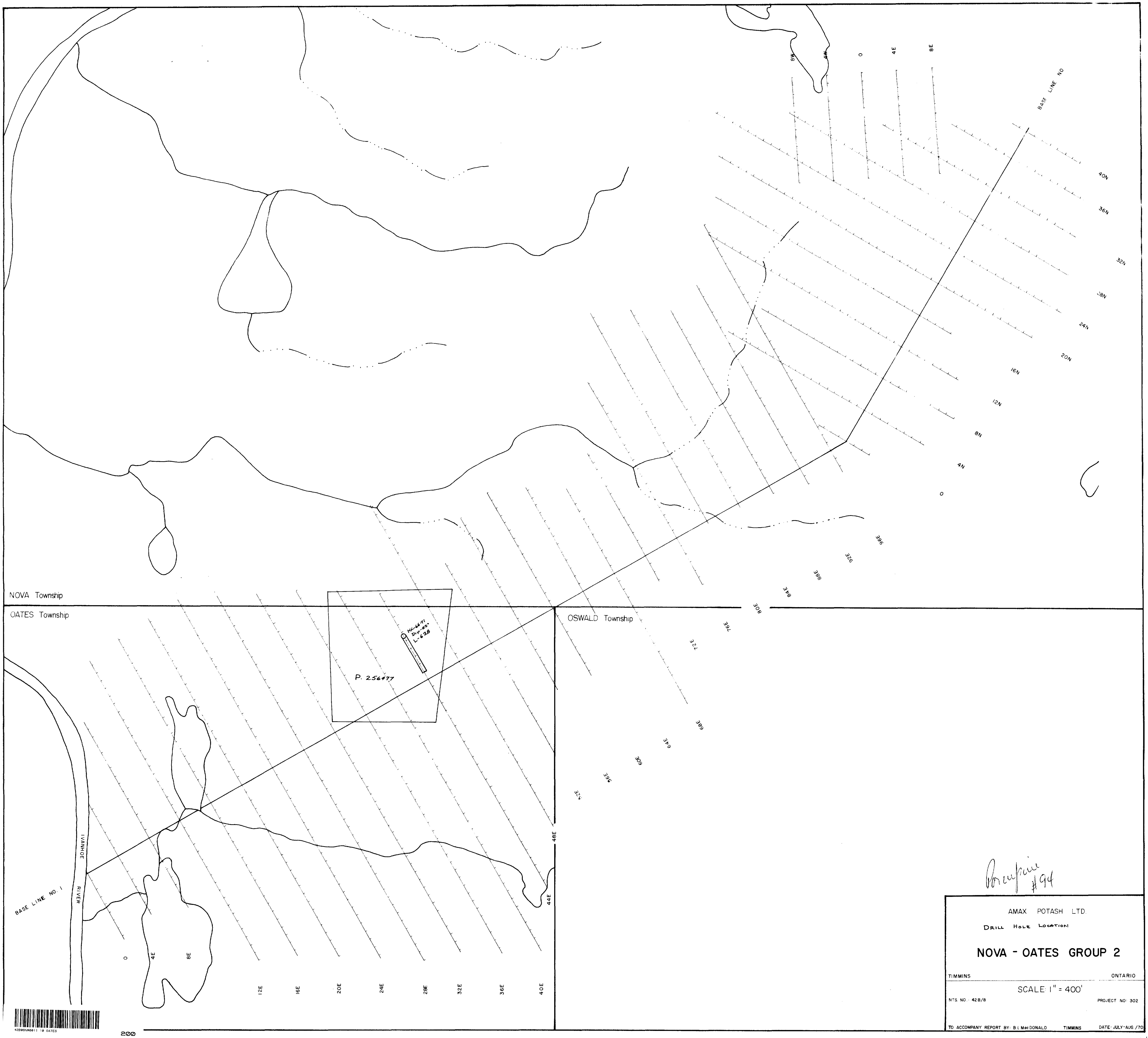
Footage From	Footage To	DESCRIPTION		Sample No.	From	To	Length	Cu ppm	Zn ppm	Ni ppm
0	72	OVERBURDEN								
72	83	PERIDOTITE	Massive-to-foliated. Actinolite + talc + minor carbonate.							
83	85.6	GRANITE	Leucocratic. Medium-to-coarse-grained.							
85.6	95	PERIDOTITE	Actinolite + talc + calcite.							
95	97.5	BASALT	Xenolith. 2-3% dissem. py.							
97.5	136	PERIDOTITE	Massive actinolite with increase in calcite toward end of section.							
136	141	PYROXENITE	Dike. Fine-grained biotite + calcite + pyroxene. Strongly magnetic.							
141	187	PERIDOTITE	Actinolite + serpentine + calcite. Local calcite segregations.							
187	189.5	PYROXENITE	Magnetic dike.							
189.5	216	PERIDOTITE	Mainly massive actinolite with a little serpentine and calcite. Some relict pyroxene.							
216	219	PYROXENITE								

AMAX EXPLORATION, INC.

DIAMOND DRILL RECORD

Hole No. KX-66-71
Sheet No. 2

Footage From	Footage To	DESCRIPTION		Sample No.	From	To	Length	Cu ppm	Zn ppm	Ni ppm	Ag ppm	Au oz/ton
219	256	PERIDOTITE	Actinolite + minor serpentine. 30% calcite as segregated layers. Trace po.	1	235.0	237.0	2.0	22		450		
256	260	APLITE										
260	515	PERIDOTITE	Mineralogy variable from massive actinolite through biotite + actinolite to actinolite + serpentine with calcite segregations. Pyroxenite dikes at 346 and 395-398. Basalt xenolith at 343-444.5. Trace po.									
515	518	ARGILLITE	20% graphite, 5-10% py. as stringers and disseminations.	2	515.0	518.0	3.0	230				
518	520.4	GRANITE	Grey. Fractured, brecciated. 5% py.									
520.4	521.5	MASSIVE GRAPHITE	5% py	6	520.4	521.5	1.1	154	780			
521.5	532	GRANITE	Grey. 1-2% py.									
532	555	ARGILLITE	Graphite content variable 20-100%. 5-10% pyrite as stringers, blebs, and disseminations. Strongly brecciated and veined with calcite 541-550. Trace cpy in calcite. 6" feldspar porphyry dike at 551.	7	532.0	535.0	3.0	119	342			
				8	535.0	540.0	5.0	93	139			
				3	540.0	545.0	5.0	385	146	92	0.2	nil
				4	545.0	550.0	5.0	1570	129	180	1.0	
				9	550.0	550.9	0.9	137	59			
				10	551.4	555	0.6	110	420			
555	557.5	RHYOLITE	Tuff. Finely banded. 3-5% py-po.									
557.5	559.5	PYROXENITE	Magnetic dike. Biotite + pyroxenite + carbonate.									
559.5	627	RHYOLITE AND DACITE	Tuff, finely interbedded at 40-45°. Rhyolite sericitic, locally porphyritic (crystal tuff) with 1-2 mm. feldspar phenocrysts. Dacite biotitic, local garnet and hornblende. 1-2% py, trace po throughout.	5	580.0	582.0	2.0	39	74	50		
627		END OF HOLE.										



NOVA Township
OATES Township
OSWALD Township
BASE LINE NO
BASE LINE NO. 1
IVANHOE RIVER
KX-66-71
Dip-55°
L-628
P. 256477
8W
4W
0
4E
8E
40N
36N
32N
28N
24N
20N
16N
12N
8N
4N
0
96E
92E
88E
84E
80E
76E
72E
68E
64E
60E
56E
52E
48E
44E
40E
36E
32E
28E
24E
20E
16E
12E
8E
4E
0
Porcupine #94
AMAX POTASH LTD.
DRILL HOLE LOCATION
NOVA - OATES GROUP 2
TIMMINS
ONTARIO
SCALE: 1" = 400'
NTS. NO.: 42B/8
PROJECT NO: 302
TO ACCOMPANY REPORT BY: B. L. MacDONALD
TIMMINS
DATE: JULY-AUG./70

200

244