

Northing: 675.5  
 Easting: -21.0  
 Elevation: 1000.0

Collar Azi.: 225  
 Collar Dip: -50

Hole Length: 150

## DRILL HOLE RECORD

\*\*\* Dip Tests \*\*\*  
 Depth Azi. Dip

Drill Hole: BK00-10

Project: Bucke Kimberlite  
 Date Begun: July 9/00  
 Date Finished: July 22/00  
 Core size: BQ  
 Drilled By: K. ALLEN  
 Logged By: P. Fischer, July 23/00  
 Claim: 1186377

2.23801

RECEIVED

JUN 24 2002

GEO SCIENCE ASSESSMENT  
OFFICE

## Geology

From (m)	To (m)	
.0	60.0	CASING
60.0	101.8	KIMBERLITE Note: Kimberlite described using a code. See appended kimberlite legend. Type A 18 a,b,c,e,g,l alpha beta (epsilon) zeta, FF? Core very soft and crumbly and water absorbent, fairly solid to 101.8m. Colour medium green-grey. Detailed observations restricted to upper portion, core is too soft to be taken out of box. Clasts 30-40%, 1/2 sediment, 1/4 gabbro/diabase, 1/10 autolithic kimberlite, 1/10 mafic/ultramafic, vfg at 62.2m, 20cm clast of carbonate sediment, buff colour. At 83.5m a 20mm size kimberlite autolith, concentric, consisting of 2 types. Phenocrysts, on upper side of core, mostly olivine. 60-73m, number of minor (other than olivine) phenocrysts per successive 3m intervals, starting at 197m. Garnet, red 2,2,2,13, oxide 1,1,0,7, phlogopite 2,2,0,7, garnet (lavender) 0,0,1. 73.0 97.5 Very soft core, crumbly, in part rubble. Number of phenocrysts (other than olivine) on upper and lower core surface. Number of phenocrysts per successive 3m intervals starting at 73m. Red garnet 7,13,11,5,4,4,1,10. Oxide 10,13,7,2,4,0,0,0. Phlogopite grains up to 15mm size. Lavender garnet: 2,0. Core very soft and crumbly from 85-97m. 97.5 101.8 Core soft but hard enough to handle. Red garnet: 26, oxide: 9, Phlogopite: 17, lavender garnet 3 Chrome dipside: 0.
101.8	128.6	DIABASE Olivine diabase. Massive, medium-grained (0.5-2mm grain size), subophitic, approx. 50% femags. At 102.9m, 2% pyrite over 10 cm as 1-5mm patches in fractures. 102.0-113.0 Moderate to strong fracturing, 20 fract/m, 20-60 deg to CA. 113.0-119.8 Weak fracturing, 10 fract/m. 119.8-120.7 Strong fracturing and fault with asbestos and actinolite fibres, 30 deg to CA, normal to fault. 123.0-128.6 Moderate fracturing, 10-20/m, with calcite filling. Chill phase from from 123.0-128.6m, gradational to fine chill phase at contact. Contact developed as breccia with chlorite matrix. Contact not preserved.
128.6	150.0	SEDIMENTS Gowganda Formation metasediments. Bedded, very fine grained arkose, siltsone. Hard, brittle. 128.6 129.0 Breccia with white calcite matrix. 129.0 130.0 Breccia of Gowganda fragments, randomly oriented, 10-20 cm size. Bedding varies from 30 to 60 deg to CA. 130.0 146.0 Fault, rubble. Strongly varying bedding attitudes relative to CA. 150.0 End of Hole. Casing Pulled. Core stored at farm near Englehardt.



31M05NE2016 2.23801 BUCKE

010

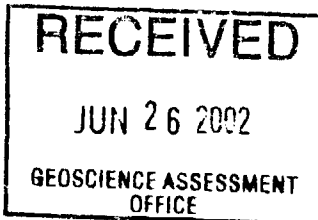
**Kimberlite Legend**

(alpha-numerical)

for Bucke-Pipe Proj, ON, for Novawest Res Inc.

Summer 2000

For drill holes BK00-01 through BK00-10



①

Magn Susc	Type Code	Groundmass	Lithic Clasts	Phenocrysts	Fabric
		Kimberlite: A. Definition of 'Groundmass': <0.1 - 1.0 mm grain size. Ground mass consists of a) matrix b) olivine grains c) lithic clast. All minerals are altered. Colours refer to dry drill core.	General: Almost all lithic clasts are strongly altered, many have reaction rims.		NFF= no flow fabric, i.e. isotropic, massive
8.0 - 12	A1	Overall colour light green gray. Core soft, water adsorbent. Ground mass consists of a) matrix (tc, carb?) white - light gray, with 0.5-1 % tiny black grains (oxide?) b) 0.1 - 1.0 mm round olivine, medium green c) almost no < 1 mm lithic clasts	white carbonate sediment, unmetamorphosed, dense, in part with bedding preserved; and metamorphosed, recrystallized, marble. Very common	alpha	small olivines (1-2 mm) FF= Flow Fabric. Local, weak orientation of elongated olivines and slab-shaped lithic clasts.
0.5 - 0.7	A2	Overall colour beige, light-ochre-gray. Core is soft, water adsorbent. Groundmass consists of a) matrix (tc, carb?) light gray, b) 0.1 - 1.0 mm olivine, light green to medium green, some are brownish. c) other altered Femag minerals (px ?) d) < 1 mm size lithic clasts, colour green, white, brown	Non-carbonate sediment, light gray, dense (clay?, altered siltstone?) Very common	beta	large olivine (2-20 mm)
10.0 - 18.0	A3	Overall colour light to medium green, with slight brownish tinge. Core is solid, fairly hard, not water adsorbent. Ground mass consists of a) Matrix, light green b) 0.1 - 1.0 mm olivine medium green (olive colour) with thin ochre coloured rim around each olivine. Larger (0.5 - 1 mm) olivine are dark green/blackish or with black rim c) no or few lithic clasts < 1 mm.	UM? Serpentine? Chlorite? Light- to medium green and blueish green, dense, no texture. Very common	gamma	other Femag (px?)
	2 A4	Overall colour medium-dark green. Core is harder, consists of a) matrix, light gray, b) 0.1 - 1 mm olivine with light gray core and thin dark green/blackish rim, c) few medium to light green lithic clasts < 1 mm.	beige colored, very soft, vuggy, slightly carbonaceous, with clay minerals. Altered sediment	delta	gamet

Kimberlite legend ②

0.9 A5	Overall colour medium to dark green, as Type 4. Rock solid. Consists of a) matrix light gray b) 0.1-1 mm olivine, of solid dark green colour (no black rim) c) few med-light green lithic clasts < 1 mm	e	mafic igneous rocks with relict texture. Minerals: Hornblende, px, plag. Rock types Gabbro, hbl-gabbro, diab, diorite	epsilon	oxide	
6 A8	Overall colour medium greenish brown. Rock hard, solid, not water adsorbent Consists of a) matrix 1/3 white and 2/3 brown, fresh fine phlogopite b) 0.1 - 1 mm olivine medium green c) few green lithic clasts < 1 mm	f	Felsic igneous rocks with relict texture. Colour pink-gray, buff. Rock types: Granite, granodiorite	zeta	phlogopite	
15 A7	Overall colour brown with dark green spots. Rock very hard, fresh, solid, not water adsorbent and consists of a) matrix, brown, mainly fine grained, fresh, honey brown mica, phlogopite, b) medium to dark green olivine 0.1 - 1 mm (i.p. fresh?) c) no small lithic clasts < 1 mm	g	UM igneous rocks, coarse grained. Oliv, px, garnet. Garnet peridotite, eclogite?	ita	chrom-diopside	
11 A8	Overall colour dark green, rock fairly hard, solid. Consists of a) matrix medium bluish green b) dark/blackish green olivine 0.1 - 1 mm c) no/few lithic clasts < 1 mm	h	Mafic-UM, fine grained rock, dark gray, granular, hornfelsic, massive. As mm-cm clasts and mm-cm wide reaction rims around lithic clasts, UM clasts	thita	chromite	
1 A9	Overall colour dk green, rock fairly hard, solid. Consists of a) dk gy and light gy matrix b) dk green/blackish oliv 0.1-1 mm, > 0.5 mm mostly with white core c) few (1-2%) lt green and bwn lithic clasts 1mm d) few (2-5%) larger (2-5 mm) sed and mafic subophitic clasts.	i	Sediment, bedded. Colour buff/light brown, soft. with mm parallel beds of black Femags.			
0.6 A10	Similar to A5 but has black-green oliv 0.1 - 2 mm. Overall colour: Mottled dark brown-green. Consists of a) matrix of 1/2 white, 1/2 dark green material with minor dusty oxide, trace <1mm garnet b) black-green, 'fish-roe' olivine 0.1-1 mm, bimodal, larger 1-3 mm oliv. c) 5-10%, 1-5 mm clasts, various colours, lithic and phenocrysts. d) a total of 25-40% clasts, <1-1.5 cm. Few > 3cm clasts e) 0.5% UM garnet lherzollite clasts with Chrome diopside and some with lilac garnet.	j	Prophyritic and amygdaloidal volcanics, altered. Various colours			

0.4 - 0.5	A11	Similar to A10, but groundmass uniformly brown gray colour. Only few blackish-green olivine clusters. Consists of a) matrix, light gray with abundant tiny brown spots and cloudy brown coloration b) medium green (olive-coloured) 0.1-1 mm olivines ('fish roe') c) common 0.5-1 mm light green, altered xtls or lithic clasts d) common (10-15 0%) mm - 1 cm sedim and subophitic lithic clasts with dk green rim	k	Black UM hornblende, feldspathic hornblende			
0.3 - 0.8	A12	Overall colour dark, blackish green gray. Groundmass made up of a) dark matrix, rare light gray spots b) 0.1-0.5mm fish egg olivine, in part closely packed c) few < 1 mm lithic clasts light gray medium green. Larger phenocrysts mainly olivine fresh green and brown. Lithic clasts 10-20%	l	autothitic kimberlite, vfg, commonly with chilled rim. Sharp outlines			
2.0 - 7.7	A13	Overall colour medium green gray. Core not water-adsorbent. Matrix of groundmass light gray. Small (< 0.5mm) groundmass olivines have light gray core and thin dark gray/black rim; small olivine phenocrysts (0.5 - 2 mm) the same. Trace dusty oxide in groundmass. 1-2% 1-3 mm light gray sediment clasts.	m				
7.5 - 16.0	A14	Overall colour (dry) medium gray-green. Groundmass made up of: a) matrix, colour (wet) light-green/buff b) oliv (size 0.1 - 0.5mm), colour medium-dark green and small oliv phenoxs (size 0.5-1mm); c) trace vfg dusty brown material, phlogopite(?) << 0.1mm; d) small lithic clast: light gray sediments, gabbro, serpentine (?) e) trace of other small phenocrysts, red garnel, oxide.	n				
11.0 - 14.0	A15	Overall colour (dry) medium to dark gray. Groundmass made up of: a) matrix, colour (wet) light-green/buff with a trace of extremely fine, brownish phlogopite(?) and a trace oxide b) olivine (size <0.1 - 0.5mm), colour medium-dark green and small olivine phenoxs (size 0.5-2mm) with light core and dark rim. Rare (1-2%) large olivine phenocrysts, round and equant. No or rare lithic clasts	o				
0.25 - 0.4	A16	Overall colour medium green. Core is not water-adsorbent. Groundmass appears dense, green, it is difficult to distinguish between matrix and small groundmass-olivines, 0.1-0.5mm. Phenocrysts (3-5%): Olivine, fresh and altered, 1 - 10 mm; phlogopite, ? orthopyroxene?. Lithic clasts: High clast population, 30-40%. Mostly < 1cm size, rare 30-50cm; > 1/2 sediment, 1/4 gabbro, diorite, 1/4 ultramafics and other.	p				

1.5 - 8.0	A17	Overall colour: Dark green-gray, spotted. Groundmass: Dark gray to blackish gray. Matrix dark gray. Groundmass-olivines dark gray, medium gray, medium brown gray. Small phenocrysts (0.5-1mm) Olivine, dk green, fresh and altered. Phlogopite rare but present. Minor garnet, oxide. Small lithic clasts, 1mm, 1-2%, white, green. Larger Phenocrysts (1-5mm): Mainly olivine, fresh, with cleavage, 1-10mm, garnet 1%, red, minor lavender, 1-10mm. Phlogopite 0.1-0.5%, 1-4mm. Oxide, <1-3mm. Lithic clasts 5-10%, mainly light coloured sediments, subophitic mafic intrusives, minor UM and dense, dk green clasts					
0.3 - 2.2	A18	Overall colour: medium gray. Groundmass: medium gray-green. Groundmass-olivines, <0.1-0.5mm medium green-gray core, dark rim. Trace other: Oxide, phlogopite. Larger olivines (0.5-2mm) white and brownish core, medium-dark green rim. Larger lithic clasts: High, 30-40%: Equal proportions of: sediments, gabbro, fg mafic volcanic, other (serpentine, ultramafic)					

Kimberlite Legua

## Work Report Summary

**Transaction No:** W0280.01075    **Status:** APPROVED  
**Recording Date:** 2002-JUN-24    **Work Done from:** 2000-JUL-09  
**Approval Date:** 2002-AUG-16    **to:** 2000-JUL-24

**Client(s):**  
 300189            NOVAVEST RESOURCES INC.  
 301171            WHELAN, ROBIN CLOWATER

**Survey Type(s):**  
 PDRILL

**Work Report Details:**

Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
L 1186377	\$5,953	\$5,953	\$0	\$0	\$3,200	3,200	\$2,753	\$2,753	2005-APR-24
L 1247625	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2004-JUL-05
L 1247626	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2004-JUL-05
L 1247627	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2004-JUL-05
L 1247628	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2004-JUL-05
	<u>\$5,953</u>	<u>\$5,953</u>	<u>\$3,200</u>	<u>\$3,200</u>	<u>\$3,200</u>	<u>\$3,200</u>	<u>\$2,753</u>	<u>\$2,753</u>	

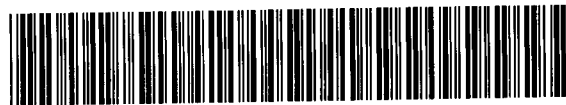
**External Credits:**    \$0

**Reserve:**  
 \$2,753      Reserve of Work Report#: W0280.01075  


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\$2,753      Total Remaining

Status of claim is based on information currently on record.



31M05NE2016 2.23801

BUCKE

900

Date: 2002-AUG-16

GEOSCIENCE ASSESSMENT OFFICE  
933 RAMSEY LAKE ROAD, 6th FLOOR  
SUDBURY, ONTARIO  
P3E 6B5

ROBIN CLOWATER WHELAN  
41 PREMIER AVENUE WEST  
KIRKLAND LAKE, ONTARIO  
P2N 2S7 CANADA

Tel: (888) 415-9845  
Fax: (877) 670-1555

**Submission Number:** 2.23801  
**Transaction Number(s):** W0280.01075

Dear Sir or Madam

**Subject: Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact STEVEN BENETEAU by email at [steve.beneteau@ndm.gov.on.ca](mailto:steve.beneteau@ndm.gov.on.ca) or by phone at (705) 670-5855.

Yours Sincerely,



Ron Gashinski  
Senior Manager, Mining Lands Section

**Cc:** Resident Geologist

Novawest Resources Inc.  
(Claim Holder)

Robin Clowater Whelan  
(Assessment Office)

Assessment File Library

Robin Clowater Whelan  
(Claim Holder)



MINISTRY OF  
NORTHERN DEVELOPMENT  
AND MINES  
PROVINCIAL MINING  
RECORDS OFFICE

**MINING LAND TENURE  
MAP**

Date / Time of Issue **Jul 8 2002** **12:40h Eastern**

TOWNSHIP / AREA **PLAN**

**BUCKE** **G-3413**

**ADMINISTRATIVE DISTRICTS / DIVISIONS**

Mining Division **Larder Lake**  
Land Titles/Registry Division **TIMISKAMING**  
Ministry of Natural Resources District **NORTH BAY**

**TOPOGRAPHIC**

- Administrative Boundaries
- Township
- Concession Line
- Property Line
- Block Face
- City / Town File
- Canal
- Canal - App. Ac. ADM. / P. 1001
- Trail
- Min. Headings
- Railway
- Road
- Trail
- Natural Gas Paths
- Hydro Line
- Communication Line
- Water Pipe
- Metroleum / Coalbed Methane / Hydro. Canal

**LAND TENURE**

- Freehold Farms**
  - Surface And Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- Leasehold Farms**
  - Surface And Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- Estates of Occupation**
  - Users of Surface
  - Surface And Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- Land Use Farms**
- Open Farm**
- Water Power Lease Agreement**
- Mining Claims**

**LAND TENURE WITHDRAWALS**

- Area Withdrawn from Operation Mining Act 1986/1996**
- Wm** Surface and Mining Rights Withdrawal
- Wm** Surface Rights Only Withdrawal
- Wm** Mining Rights Only Withdrawal
- Wm** Decl. in Control Withd. and Type
- Wm** Surface and Mining Rights Withdrawal
- Wm** Surface Rights Only Withdrawal
- Wm** Mining Rights Only Withdrawal

**IMPORTANT NOTICES**

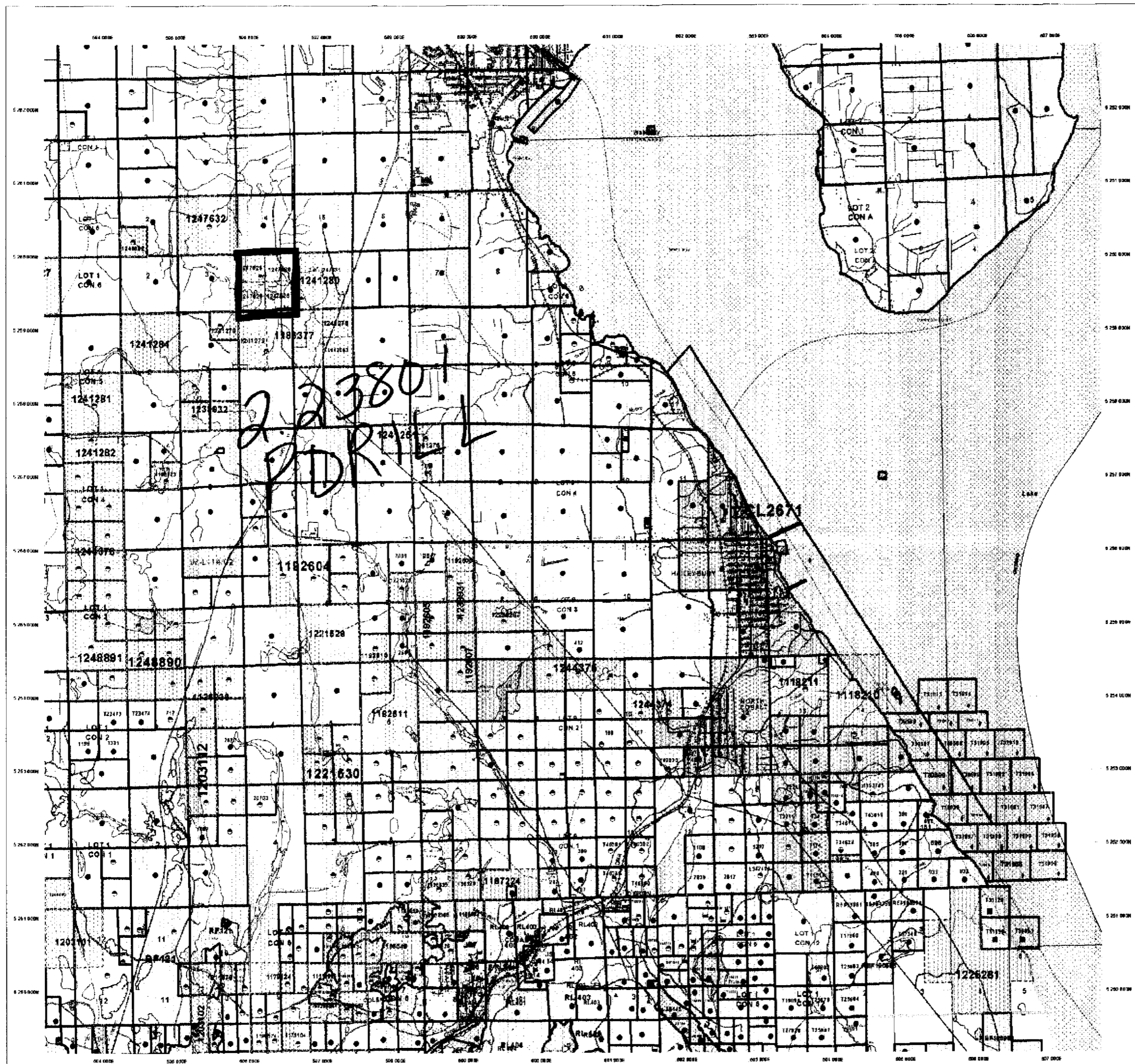


**LAND TENURE WITHDRAWAL DESCRIPTIONS**

Identification	Type	Date	Description
4930	Wm	Jan 1 2001	FLOODING RE-115 ON LAKE (MINING RIGHTS RESERVED TO CONTOUR ELEVATION 535 FT)
4932	Wm	Jan 1 2001	STANDING OF MINING CLAIMS WITHIN TOWNSHIP ONLY WITH CONSENT OF THE MINISTER
4937	Wm	Jan 1 2001	FLOODING RE-115 TO ELEVATION 540 FT ABOVE SEA LEVEL ON LAKE (MINING ACT 13087)
4939	Wm	Jan 1 2001	WITHDRAWN FROM STANDING
4940	Wm	Jan 1 2001	Q.P.
4941	Wm	Jan 1 2001	FLOODING (LLVA) (RE-115) (RE-115) (RE-115)
4942	Wm	Jan 1 2001	Q.P.
4945	Wm	Jan 1 2001	RESERVATION OF ONE CHAIN FROM HIGH WATER MARK TO BE MADE ON ALL PATENTS OF LANDS BOUNDING ON LAKE TIMISKAMING, EFFECTIVE FEBRUARY 13, 1908
4946	Wm	Jan 1 2001	(READING APPLICATION UNDER THE PUBLIC LANDS ACT) (MINING ACT 13087)
W.L. 1493	Wm	Jan 1 1996	W.L. 1493 (MINING RIGHTS)
W.L. 1494	Wm	Jan 17 1996	W.L. 1494 (MINING RIGHTS) (MINING RIGHTS) (MINING RIGHTS)
W.L. 1495	Wm	Jan 17 1996	W.L. 1495 (MINING RIGHTS) (MINING RIGHTS) (MINING RIGHTS)
W.L. 1497	Wm	May 23 1997	W.L. 1497 (MINING RIGHTS) (MINING RIGHTS) (MINING RIGHTS)

**IMPORTANT NOTICES**

Please refer to the Mining Act, 1986/1996 for a complete list of withdrawal descriptions, standing and mineral development activities.



UTM Zone 17  
1 300m Grid

Those wishing to establish mining claims should consult the Provincial Mining Records Office of the Ministry of Northern Development and Mines for a complete list of the lands shown herein. This map is not intended for navigation, survey, or for the determination of boundaries. The information shown on this map is derived from various sources. Completeness and accuracy are not guaranteed. Additional information may be obtained from the Local Land Titles or Registry Office, or the Ministry of Natural Resources. The information shown is derived from digital data available in the Provincial Mining Records Office. All data is the property of the Ministry of Northern Development and Mines and its office.

**General Information and Limitations**

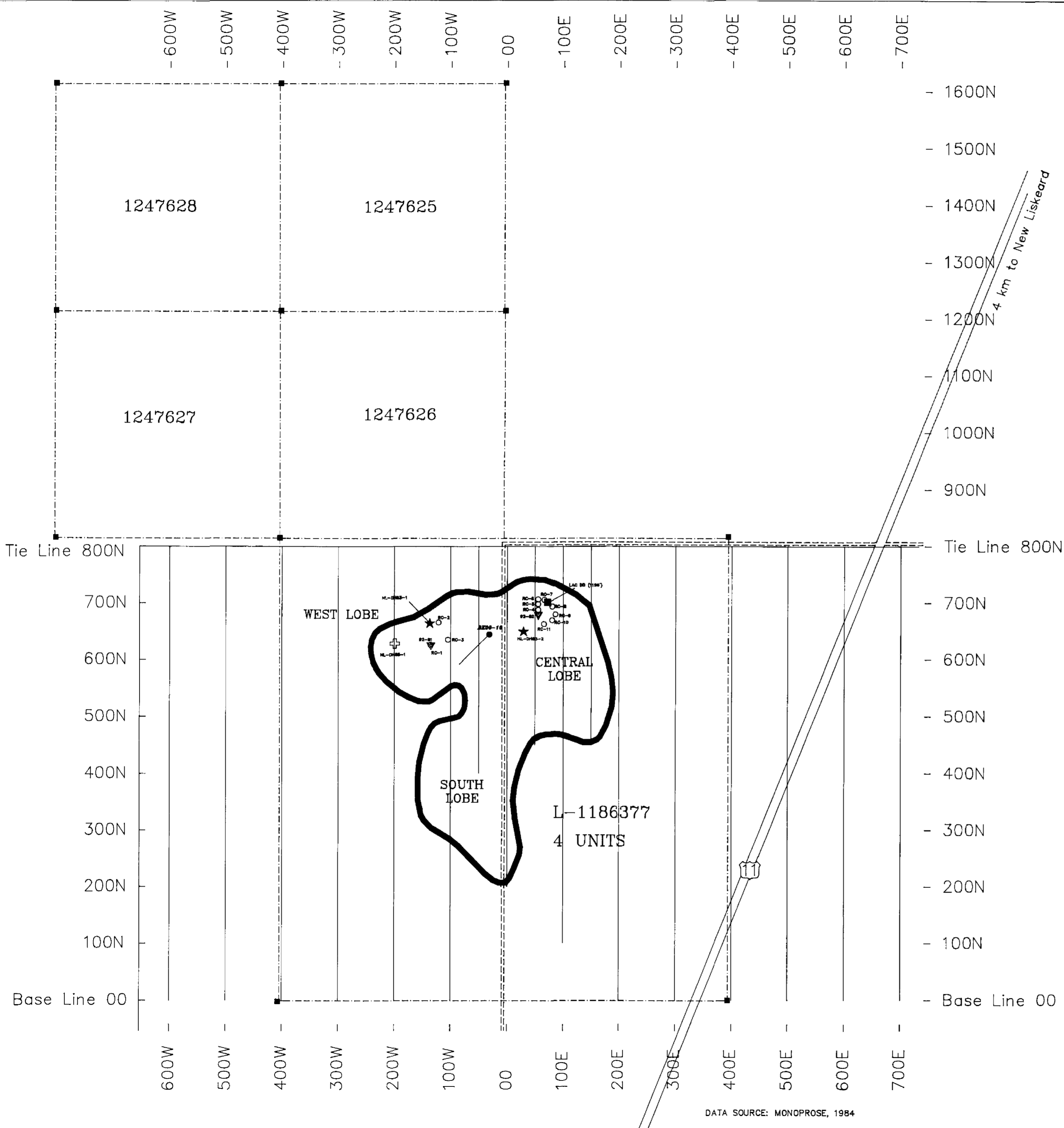
Canada Information  
Provincial Mining Records Office - Toll Free  
1-800-387-6222  
2375 Highway 104, Larder Lake, Ontario  
Sudbury, ON P3E 8M7  
Home Page: [www.gov.on.ca/mining/records.htm](http://www.gov.on.ca/mining/records.htm)

Map Datum: NAD 83  
Projection: UTM (Zone 17)  
Elevation Data Source: Land Information Ontario  
Mining Land Tenure Source: Provincial Mining Records Office

This map may not show all registered land tenure and resources in force including certain patents, leases, mortgages, rights of way, flooding rights, easements, or other forms of encumbrance or rights and interests from the Crown. Also certain land tenure and land uses that result in a prohibition from any mining claims may not be shown.







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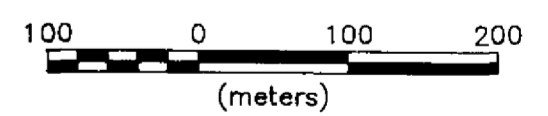


LEGEND

- NL-DH85-1 + MONOPROS 4" DIAMETER CORE
- NL-DH83-2 ★ MONOPROS 6.25" SCHRAMM ROTODRILL (1983)
- LAC MINERALS 4" DIAMETER CORE
- 92-82 ▽ KWG/SPIDER 8" CASED ROTARY HAMMER
- RC-11 ○ KWG/SPIDER 5.3" REVERSE CIRCULATION
- BK00-10 ● NOVAWEST RESOURCES INC. BQ DIAMETER CORE

- INTERPRETED BOUNDARY OF KIMBERLITE PIPE
- - - - ROAD

CONTOUR INTERVAL: 1 nT/m



NOVAWEST RESOURCES INC  
 BUCKE TWP KIMBERLITE PROJECT

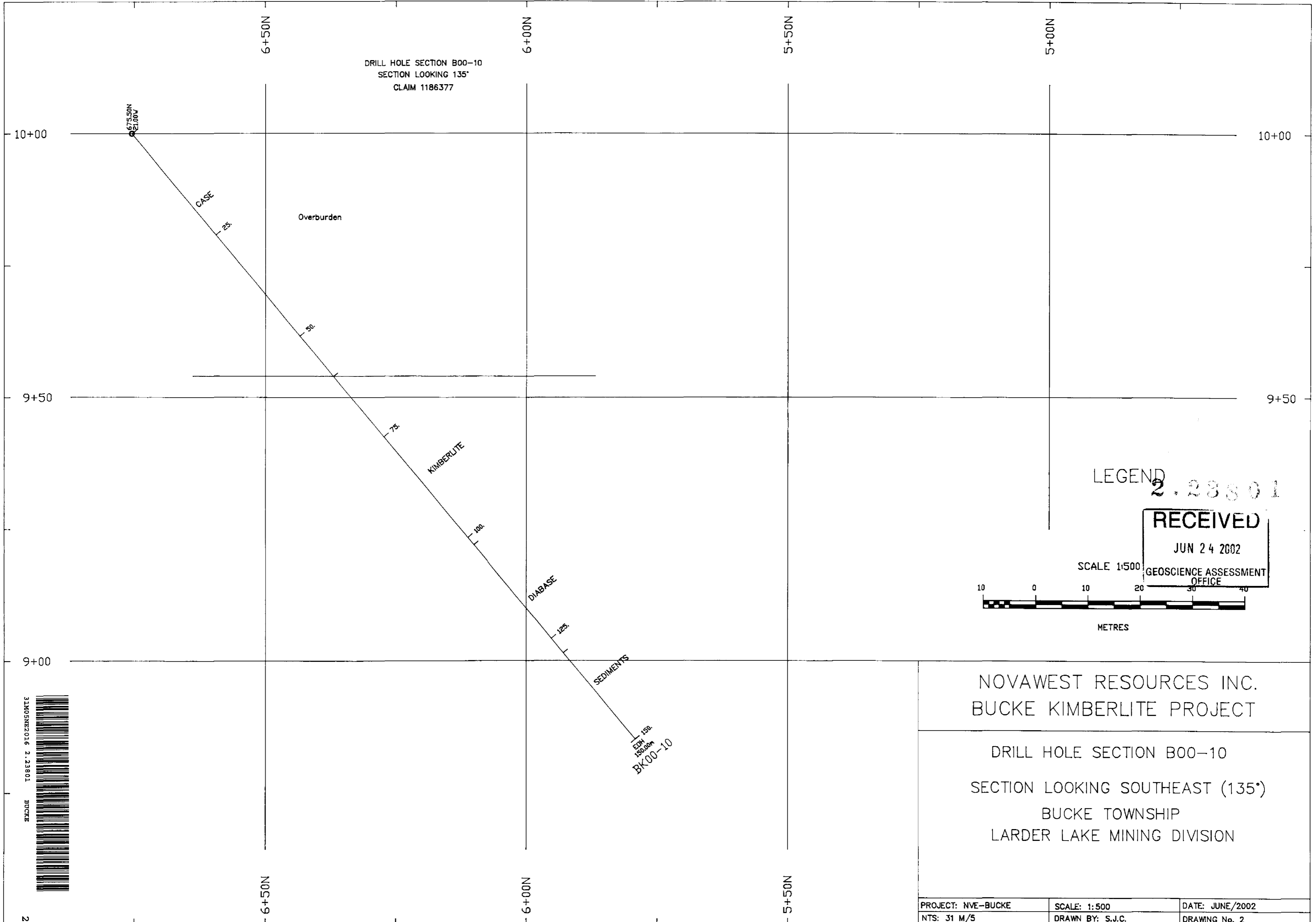
BORE HOLE LOCATIONS

BUCKE TOWNSHIP  
 DISTRICT OF TIMISKAMING, ONT.  
 LARDER LAKE MINING DIV.

PROJECT: NVE/BUCKE	SCALE: 1: 5 000	DATE: JUNE, 2002
NTS: 31M/SW	DRAWN BY: S.J.C.	DRAWING No. 1

DATA SOURCE: MONOPROSE, 1984

DRILL HOLE SECTION B00-10  
SECTION LOOKING 135°  
CLAIM 1186377



LEGEND

2.28801

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JUN 24 2002

GEOSCIENCE ASSESSMENT OFFICE

SCALE 1:500



METRES

NOVAWEST RESOURCES INC.  
BUCKE KIMBERLITE PROJECT

DRILL HOLE SECTION B00-10  
SECTION LOOKING SOUTHEAST (135°)  
BUCKE TOWNSHIP  
LARDER LAKE MINING DIVISION



PROJECT: NVE-BUCKE	SCALE: 1:500	DATE: JUNE/2002
NTS: 31 M/5	DRAWN BY: S.J.C.	DRAWING No. 2