APPENDIX B

Geological and Geotechnical

Drill Logs 1-44 - Volume 3 of 3

Noranda Minerals Wisconsin Corp.

LYNNE PROJECT

19

(p. 141-210)

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-98

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
				b							SLch	^^ 882.0 894.0 Cherty Siltstone, with scattered pyrrhotite and dalmatianite alteration	a					4		4
				b						-70B			a					4		4
886.00													a					4		4
	100	100	R3	b	5	3				-45B			a					4		4
				c	30								a					4		4
891.00					50								a					4		4
	100	100	R3	c	5	3							a					4		4
				b	30						SLm	^^ 894.0 912.5 Siltstone, laminated, with magnetite and wacke and crystal tuff interbeds	a					4		4
896.00					60								a					4		4
	100	95	R3	b	5	3							a				2	2		4
				b	30								a				2	2		4
				b	60					-40B			a				2	2		4
906.00				b									a				2	2		4
													a				2	2		4
										-60F			a				2	2		4
													a				2	2		4
													a				2	2		4
											Rc/SS	** 912.5 928.0 INTERBEDDED RHYOLITE CRYSTAL TUFF AND SANDSTONE	a				2	2		4
											R1	** 928.0 945.5 RHYOLITE LAPILLI TUFF								
											Wf	^^ 928.0 936.4 Feldspathic Wacke, silty matrix, grey green with pR clasts. Possible arsenopyrite @ 928.0-932.0.							x	
																			x	
																			x	
											Ag	** 936.4 945.5 AGGLOMERITIC WACKE, silty matrix with rounded breccia-sized clasts of underlying siltstone								
												Note: @ 937.5-938.5 Spherulitic Rhyolite								
946.00																				
	100	100	R3	b	10	3					SS	** 945.5 962.4 SANDSTONE, massive, possible diopside alteration								
				b	30															
				b	60															

DRILL HOLE: LYN91-98

ROCK QUALITY:

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A:0-3,B:3-10
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E:>100 cm.

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
				b																
956.00				b																
	100	100	R2	c	5	3														
				c	30															
				c	60					-50B	SLch,p	** 962.3 969.0 SILTSTONE, WITH BEDDED PYRRHOTITE, cherty, laminated	c				2	10	
				b																
966.00				b									c				2	10		
	100	95	R2	b	5	3				-75B			c				2	10		
				b	30					-62B	CS	** 969.0 971.5 CALCAREOUS SEDIMENT, "oolitic"	c				2	10	
				b	60															
				b																
				b						-70B	SL	** 971.5 1068.3 SILTSTONE, laminated, with massive intervals, patchy talcose intervals, black chlorite, bleached patches. Interfingering crystal tuff lobes and more sediment-rich or reworked lobes. @ 980.0-1012.0 scattered 2-4" clasts.								
976.00																				
	100	95	R2	b	10	3														
				b	30															
				c	60															
				c																
986.00				c																
	100	100	R2	c	10	2														
				d	30															
				c																
				c																
996.00				c																
	100	100	R2	c	10	3														
				c	30															
				c	60															
				c																
1006.00				c																
	100	100	R2	c	10	3														
				d	30															
				c	60															
				c																
1016.00				c																
	100	90	R2	c	5	2														
				c	30															
				b																
				c																
1026.00				c																
	99	90	R2	c	10	1														

ROCK QUALITY:

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E:>100 cm.

DRILL HOLE: LYN91-98

SULFIDES: (T)
A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
1031.00				c																
	100	90	R2	b	10	3														
				b	30															
				b	60															
1041.00				c																
				c																
	100	95	R2	c	60	1														
1046.00				c																
	100	100	R2	c	30	2						^^ 1048.0 1053.0 Stringery Sulfides, amber sphalerite	b	5						5
				c	60								b	5						5
				c									b	5						5
				c									b	5						5
1056.00				c																
	100	100	R2	c	15	3														
				c	30															
				b	60															
				c						-558										
				c																
1067.00																				
	100	100	R2	b	10	3				-488	SS	** 1068.3 1121.3 SANDSTONE, dark blue grey, massive fine-grained, grainy								
				b	30															
				c	60															
				c																
1077.00				b																
1096.00																				
	100	100	R2	c	10	2														
				c	60															
				c																
				c																
1106.00				c																
	100	95	R3	c	15	3														

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
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E:>100 cm.

DRILL HOLE: LYN91-98

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalZ	Sp	Cp	Ga	Py	Po	As	T
				b	40							Note: @ 1111.0-1115.0 Pyrite replacement of subrounded clasts								
				b	60															
				b																
1116.00				b																
	100	95	R3	b	5	3														
				c	40															
				c	60						R	** 1121.3 1263.0 RHYOLITE								
				b																
				b							gR	^^ 1121.3 1157.0 Granophyric Rhyolite, medium-grey with pinkish traces, scattered plag crystals in glassy matrix, silicification along fractures								
1126.00												Note: @ 1129.0 High angle quartz vein @ 20 degrees								
											Rc	^^ 1157.0 1263.0 Rhyolite Crystal Tuff, silicified, possible hornfelsed. Blue quartz eyes, in places almost granophyric.								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-98

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
									-20		Note: @ 1188.0-1205.0 Fault Zone, 20 degrees to axis, silicification along fault plane, chloritic gouge @ 1196.0, yellow-beige, non-calcareous mineral-possibly a sulfate or magnetite silicate								
									-20										

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E:>100 cm.

DRILL HOLE: LYN91-98

SULFIDES: % (T)

A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE				Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										QD	**	1263.0	1325.0	QUARTZ DIORITE								
										gQD	^^	1263.0	1270.0	Granophyric Quartz Diorite								
														E.O.H. 1325' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	182.9	-63.1
300'	183.5	-62.8
600'	188.2	-63.4
900'	191.1	-60.4
1200'	195.3	-58.3
1455'	200.2	-56.2

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 2-27-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-99 (WDNR #271)

DATE: 5-13-91
PAGE 1 OF 22

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-7-91

BEARING: S180E INCLINATION: -62 T.D: 1455'
COORDINATES: L10000 E, 12525 N
ELEV: 1553' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 44.0			** 0.0 44.0 OVERBURDEN	
44.0 226.0		sRb	** 44.0 226.0 RHYOLITE TUFF BRECCIA	
236.0 239.5		Md	^^ 236.0 239.5 Mafic Dike	
253.0 258.7		Md	^^ 253.0 258.7 Mafic Dike	
258.7 266.0		Rl	^^ 258.7 266.0 Lapilli Tuff	
266.0 336.0		D	** 266.0 336.0 DACITE	
274.0 278.0		Rb	^^ 274.0 278.0 Rhyolite Tuff Breccia	
287.0 305.6		D	^^ 287.0 305.6 Dacite	
305.6 310.0		Ch	^^ 305.6 310.0 Chert	
310.0 318.3		Wl	^^ 310.0 318.3 Lapilli Wacke	
336.0 360.0		gR	** 336.0 360.0 GRANOPHYRIC RHYOLITE	
360.0 374.0		Rb	** 360.0 374.0 RHYOLITE TUFF BRECCIA	
374.0 681.0		Rt	** 374.0 681.0 RHYOLITE TUFF	
383.3 404.6		Wf	^^ 383.3 404.6 Feldspathic Wacke	
404.6 417.5		gR	^^ 404.6 417.5 Granophyric Rhyolite	
417.5 418.5		D	^^ 417.5 418.5 Dacite	
418.5 432.0		Wf	^^ 418.5 432.0 Feldspathic Wacke	
432.0 559.0		SS	^^ 432.0 559.0 Sandstone	
559.0 565.5		gR	^^ 559.0 565.5 Granophyric Rhyolite	
619.0 655.0		Wf	^^ 619.0 655.0 Feldpathic Wacke	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	182.9	-63.1
300'	183.5	-62.8
600'	188.2	-63.4
900'	191.1	-60.4
1200'	195.3	-58.3
1455'	200.2	-56.2

PROJECT: LYNNE P.O. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 2-27-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-99 (WDNR #271)

DATE: 5-13-91
PAGE 1 OF 22

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-7-91

BEARING: S180E INCLINATION: -62 T.D: 1455'
COORDINATES: L10000 E, 12525 N
ELEV: 1553' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
655.0 671.0		SS	^^ 655.0 671.0 Sandstone	
671.0 678.0		D	^^ 671.0 678.0 Dacite	
678.0 681.0		SS	^^ 678.0 681.0 Sandstone	
681.0 1193.0		Rb	** 681.0 1193.0 RHYOLITE TUFF BRECCIA	
840.0 844.0		Rtch	^^ 840.0 844.0 Rhyolite Tuff	
844.0 869.0		pR	^^ 844.0 869.0 Porphyritic Rhyolite	
869.0 898.0		Rb	^^ 869.0 898.0 Rhyolite Tuff Breccia	
898.0 912.0		Rt	^^ 898.0 912.0 Rhyolite Tuff	
912.0 925.0		pIR	^^ 912.0 925.0 Porphyritic Intrusive Rhyolite	
925.0 930.0		Rt	^^ 925.0 930.0 Rhyolite Tuff	
930.0 938.0		pIR	^^ 930.0 938.0 Porphyritic Intrusive Rhyolite	
938.0 945.0		Wf	^^ 938.0 945.0 Feldspathic Wacke	
945.0 992.3		Rtch	^^ 945.0 992.3 Rhyolite Tuff	
992.3 1007.0		Rb	^^ 992.3 1007.0 Rhyolite Tuff Breccia	
1007.0 1020.0		Rt	^^ 1007.0 1020.0 Rhyolite Tuff	
1020.0 1048.0		pR	^^ 1020.0 1048.0 Porphyritic Rhyolite	
1048.0 1090.0		Wlch	^^ 1048.0 1090.0 Lapilli Wacke	
1090.0 1193.0		Rt	^^ 1090.0 1193.0 Rhyolite Tuff	
1193.0 1388.0		IR	** 1193.0 1388.0 INTRUSIVE RHYOLITE	
1231.0 1269.5		SS	^^ 1231.0 1269.5 Sandstone	
1269.5 1273.0		*R	^^ 1269.5 1273.0 Spherulitic Rhyolite	
1273.0 1319.5		Ch	^^ 1273.0 1319.5 Chert	
1319.5 1329.0		Rt	^^ 1319.0 1329.0 Rhyolite Tuff	
1329.0 1333.0		Ch	^^ 1329.0 1333.0 Chert	
1333.0 1345.0		Wq	^^ 1333.0 1345.0 Quartz Wacke	

Noranda Exploration Inc.
Eastern Division

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	182.9	-63.1
300'	183.5	-62.8
600'	188.2	-63.4
900'	191.1	-60.4
1200'	195.3	-58.3
1455'	201.2	-56.2

PROJECT: LYNNE P.O. 1976
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 2-27-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-99 (WONR #271)

DATE: 5-11-91
PAGE 1 OF 22

COL./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-7-91

BEARING: S180E INCLINATION: -62 T.D: 1455'
COORDINATES: L10000 E, 12525 N
ELEV: 1553' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
1345.0 1388.0		PL	^^ 1345.0 1388.0 Rhyolite Tuff	
1388.0 1455.0		DD	** 1388.0 1455.0 QUARTZ DIORITE	
1388.0 1411.0		qpDD	^^ 1388.0 1411.0 Granophyric Quartz Diorite	

E.O.H. 1455' (total depth)

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
0.0 44.0											** 0.0 44.0 OVERBURDEN								
										sRb	** 44.0 266.0 RHYOLITE TUFF BRECCIA, very strongly sheared, clasts mainly aphanitic to glassy rhyolite, plag-phyric rhyolite and pumice, orange iron staining, (altered feldspars ?), hole possibly drilled sub-parallel to a large fault zone								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalZ	Sp	Cp	Ga	Py	Po	As	T
											Note: @ 133.0-190.0 Rock very broken and fractured								
											Note: @ 155.0-170.0 Minor blue quartz eyes								
										FZ	^^ 170.0 173.0 Fault Zone, abundant pink, bladed calcite, vuggy, minor quartz crystals								
										FZ	^^ 182.0 183.0 Fault Zone, strong brecciation, clay gouge and carbonate infilling								
								-0F -10F			Note: @ 189.0-195.0 Very strongly sheared and granular rhyolite (cataclasite ?), strong chlorite alteration								

ROCK QUALITY:

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C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
									-15F -20F		Note: @ 225.0-254.0 Major shearing, high angle dikes, abundant carbonate along fractures, abundant clay gouge and breccia development								
										Md	^^ 236.0 239.5 Mafic Dike (?), light green, aphanitic, highly fractured								
									-40C	Md	^^ 253.0 258.7 Mafic Dike, green, aphanitic, numerous carbonate veinlets								
									-30C	R1	^^ 258.7 266.0 Lapilli Tuff, (possibly a ash flow tuff), porphyritic matrix with elongated porphyritic to aphanitic rhyolite clasts, abundant pumice clasts								
									-30 -40		Note: @ 262.0-263.0 Texture looks similar to a welded tuff								
										D	** 266.0 336.0 DACITE, abundant large								

ROCK QUALITY:

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E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

A:1-5,B:5-10
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E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalZ	Sp	Cp	Ga	Py	Po	As	T
											2-4 mm feldspar phenocrysts								
										Rb	^^ 274.0 278.0 Rhyolite Tuff Breccia, (possibly a brecciated rhyolite dike)								
										D	^^ 287.0 305.6 Dacite, with inter-bedded sandstone								
										Ch	^^ 305.6 310.0 Chert, mainly clasts in a sandy matrix								
										Wl	^^ 310.0 318.3 Lapilli Wacke, cherty to rhyolitic clasts in a black, fine-grained to porphyritic matrix								
										gIR	** 336.0 360.0 GRANOPHYRIC RHYOLITE (INTRUSIVE ?), black matrix with large 3-5 mm feldspars and blue quartz eyes								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										Rb	** 360.0 374.0 RHYOLITE TUFF BRECCIA ?, black, fine-grained matrix with large orange rhyolitic clasts, minor fault breccia along fractures							
										Rt	** 374.0 681.0 RHYOLITE TUFF or SANDSTONE, black, very fine-grained, massive							
										Wf	^^ 383.3 404.6 Feldspathic Wacke or Feldspar Rich Crystal Tuff							
										gR	^^ 404.6 417.5 Granophyric Rhyolite Intrusive, very feldspar rich with minor blue quartz eyes							
								-45C		Dd	^^ 417.5 418.5 Dacite Dike (or Sandstone ?), black, trace subtle feldspars							
										Wf	^^ 418.5 432.0 Feldspathic Wacke or							

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	I
											Feldspar Rich Crystal Tuff								
										SS	^^ 432.0 559.0 Sandstone, black, very fine-grained, massive, occasional plag-phyric zones (reworked dacite ?)								
											Note: @ 469.0-477.0 Rock very fractured with weak carbonate alteration (?)								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											Note: @ 500.0-600.0 Rock weakly to strongly magnetic (magnetite)								
										gR	^^ 559.0 565.5 Granophyric Rhyolite, black to orange-tan matrix, blue quartz eyes, gradational contacts								
											Note: @ 565.5-619.0 Occasional lapilli to agglomerate sized clasts in a predominatly sandstone matrix								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)
% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
										Wf	^^ 619.0 655.0 Feldspathic Wacke or Feldspar Rich Crystal Tuff, cherty or siliceous								
										SS	^^ 655.0 671.0 Sandstone								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
										D	^^ 671.0 678.0 Dacite, large feldspars, gradational contacts								
										SS	^^ 678.0 681.0 Sandstone, minor subtle feldspars								
										Rb	×× 681.0 1193.0 RHYOLITE TUFF BRECCIA, grey porphyritic matrix, mottled appearance								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

% A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										Rtch	^^ 840.0 844.0 Rhyolite Tuff, cherty, grey-green, bedded or flow banded ?								
									-40B										
									-15C ?	pR	^^ 844.0 869.0 Porphyritic Rhyolite, dark grey, abundant subhedral to anhedral feldspars								
											Note: @ 869.0-879.0 Good flow banding or bedding, elongated pumice								
										Rb	^^ 869.0 898.0 Rhyolite Tuff Breccia to Lapilli Tuff								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										Rt	^^ 898.0 912.0 Rhyolite Tuff, black, very fine-grained								
										pIR	^^ 912.0 925.0 Porphyritic Intrusive (?) Rhyolite, tan-orange matrix, minor blue quartz eyes								
											Note: @ 923.0-925.0 Rock looks similar to a feldspathic wacke or a chilled finer-grained margin								
										Rt	^^ 925.0 930.0 Rhyolite Tuff or Sandstone								
										pIR	^^ 930.0 938.0 Porphyritic Intrusive (?) Rhyolite, same as @ 912.0-925.0								
										Wf	^^ 938.0 945.0 Feldspathic Wacke, fine to coarse-grained, minor magnetite								
										Rtch,m	^^ 945.0 992.3 Rhyolite Tuff, cherty, dark green to brown, very fine-grained, minor subtle feldspars, bedded to contorted, minor magnetite, minor lapilli sized clasts in a sandy matrix								
965.00											Note: @ 963.0-965.0 Trace brecciation								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	% 100	RQD 100	Rf R3	ABCDE		Jn 3	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
				b	10															
				b	30															
				b	60															
				b																
975.00				b																
	100	100	R2	b	30	2														
				b	50															
				c																
				c																
985.00				b																
	100	100	R3	b	5	3			-35B											
				b	30															
				b	50															
				b							Rb	^^ 992.3 1007.0 Rhyolite Tuff Breccia, black porphyritic matrix with blue quartz eyes							
995.00				b																
											Rt	^^ 1007.0 1020.0 Rhyolite Tuff, (similar to 945.0-922.3), black to green, numerous calcite filled fractures parallel to bedding (?)							
									-25B											
											pR	^^ 1020.0 1048.0 Porphyritic Rhyolite, tan to black martix, blue quartz eyes							

ROCK QUALITY: FRACTURE FREQ. A:0-3,B:3-10 C:10-30,D:30-100 E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	-50C	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											Wlch	^^ 1048.0 1090.0 Lapilli Wacke, cherty, bedded, mostly cherty clasts in a predominatly sandy matrix								
												Note: @ 1071.0-1077.0 Well bedded spherulitic rhyolite and a tan to white rhyolite (?)								
											Rt	^^ 1090.0 1193.0 Rhyolite Tuff or Sandstone, black to green, fine to medium-grained, minor pyrrhotite								
												Note: @ 1123.5-1125.0 Small shear zone, minor brecciation and carbonate								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											Note: @ 1148.0-1163.0 Cherty or more silicic zone (intrusive rhyolite)								
											Note: @ 1180.0-1187.0 Cherty or more silicic zone (intrusive rhyolite ?)								
										IR	** 1193.0 1388.0 INTRUSIVE (?) RHYOLITE, black to tan, aphanitic, subtle feldpars								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										SS	^^ 1231.0 1269.5 Sandstone or Rhyolite Tuff, fine to medium-grained, weak bedding								
										*R	^^ 1269.5 1273.0 Spherulitic Rhyolite								
										Ch	^^ 1273.0 1319.5 Chert or Cherty Tuff, grey, highly fractured and broken								
											Note: @ 1273.0-1281.0 Possible shear zone								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)
A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalZ	Sp	Cp	Ga	Py	Po	As	T
											Note: @ 1292.0-1307.0 Rock highly fractured and broken								
										Rt	^^ 1319.5 1329.0 Rhyolite Tuff, poor flow banding or bedding								
										Ch	^^ 1329.0 1333.0 Chert, grey, fractured								
										Wq	^^ 1333.0 1345.0 Quartz Wacke, coarse-grained, blue quartz eyes, very highly fractured and broken (crystal tuff ?)								
										Rt	^^ 1345.0 1388.0 Rhyolite Tuff, fine to medium-grained, black to grey, massive								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-99

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
									-10F		Note: @ 1379.0-1380.0 Small fault with breccia and carbonate development								
										QD	** 1388.0 1455.0 QUARTZ DIORITE								
										gQD	^^ 1388.0 1411.0 Granophyric Quartz Diorite								

DRILL HOLE: LYN91-99

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	I
											E.O.H. 1455' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	182.2	-56.5
200'	181.6	-56.3
300'	182.1	-55.7
420'	182.2	-55.1

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-28-91
REMARKS: Log checked against assays
CORE SIZE: NQ

HOLE NO: LYN91-100 (WDNR #264)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-2-91

BEARING: S178.2E INCLINATION: -58.9 T.D: 420'
COORDINATES: L10500 E, 10520 N
ELEV: 1560.5' SEC: 15 TWP: 37N RANGE: 4E

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 57.0			** 0.0 57.0 OVERBURDEN	
57.0 193.0		R	** 57.0 193.0 RHYOLITE	
193.0 211.0		SL,Ch	** 193.0 211.0 INTERBEDDED SILTSTONE AND CHERT	
207.0 211.0		SLs	^^ 207.0 211.0 Siltstone, With Sulfides	207.0 211.0 7% Sp
211.0 254.5		R	** 211.0 254.5 RHYOLITE	
254.5 258.0		D	** 254.5 258.0 DACITE	
258.0 279.0		Chp	** 258.0 279.0 CHERT, With Pyrrhotite	258.0 279.0 8% Po, Py
274.3 279.0		Chps	^^ 274.3 279.0 Chert, With Pyrrhotite and Sulfides	274.3 279.0 5% Sp, 8% Po, Py
279.0 354.1		TS	** 279.0 354.1 TALC SEDIMENT	
285.0 288.4		CSt	^^ 285.0 288.4 Calcareous Sediment, Talcose	
292.4 302.0		TSp	^^ 292.4 302.0 Talc Sediment, With Pyrrhotite	285.0 288.4 15% Po, Py
307.0 320.0		TSp	^^ 307.0 320.0 Talc Sediment, With Pyrrhotite	292.4 302.0 15% Po, Py
336.0 339.0		TSp	^^ 336.0 339.0 Talc Sediment, With Pyrrhotite	336.0 339.0 15% Po, Py
354.1 420.0		QD	** 354.1 420.0 QUARTZ DIORITE	
354.1 373.0		gQD	^^ 354.1 373.0 Granophyric Quartz Diorite	
			E.O.H. 420' (total depth)	

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-100

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
0.0 57.0											** 0.0 57.0 OVERBURDEN								
										R	** 57.0 193.0 RHYOLITE								
										gR	^^ 57.0 87.8 Granophyric Rhyolite, black, fine-grained matrix, small white feldspar laths. Alteration (oxidation) of fractures.								
									-35C	D	^^ 87.8 99.5 Dacite Dike, very fine, dense, black, calcite, chilled upper contact								
									-30C -30F -27F -30F	IR	^^ 99.5 158.0 Intrusive Rhyolite, tan, with porphyritic intervals, with blue quartz eyes, Fe-staining @ 99.0-108.0, & 130.0-155.0 Note: @ 100.0-108.0 Fault Zone, quartz-carb filled fractures @ 30 degrees								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-100

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										-15F	FZ	^^ 134.0 155.0 Fault Zone, high angle carb-filled fractures (15-20 degrees)								
											RI	^^ 158.0 193.0 Rhyolite Lapilli Tuff, lt. grey, ashy matrix, few quartz eyes, ashy or pumice clasts, appears homogeneous or welded								
195.00										-40C	SL,Ch	** 193.0 211.0 INTERBEDDED CHERT AND SILTSTONE, chert is grey to white, siltstone is laminated, with wacke-rich intervals with blue quartz eyes								
	100	100	R2	b	10	3				-50B										
				b	30															
				b	50					-60B										
				b																
205.00				b						-60B										
	100	95	R3	a	10	3						Note: @ 207.8-208.4 Sphalerite rich,	e	45						45

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-100

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
				a	30							45%, stringery								
				b	50															
				a							R	** 211.0 254.5 RHYOLITE								
				a																
											IR	^^ 211.0 244.0 Intrusive Rhyolite, pinkish-grey, quartz flooding								
215.00																				
										-22C										
												Note: @ 236.0-244.0 Fracture Zone, core broken, Fe-staining & epidote alteration								
245.00																				
	100	80	R3	a	10	3				-65C	Rc	^^ 247.9 254.5 Rhyolite Crystal Tuff, bedded, blue quartz eyes, sericite altered matrix								
				a	30															
				a	60															
				a																
				a						-68C	D	** 254.5 258.0 DACITE, black, massive, calcite, fractured								
255.00																				
	100	90	R3	a	10	3														
				a	40															
				a	65						Chp	** 258.0 279.0 CHERT, with pyrrhotite	b			3	5		8
				b									b			3	5		8
				b									b			3	5		8
265.00													b			3	5		8
	100	90	R2	b	20	3							b			3	5		8
				b	40								b			3	5		8
				b	70								b			3	5		8
				b									b			3	5		8
275.00				b						-60B			b			3	5		8
	100	100	R3	a	50	2							c	1	1	4	6		12
													c	1	1	4	6		12

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	RF	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
278.00				b	65								c	1		1	4	6		12
	100	85	R2	b	5	3					TS	** 279.0 354.1 TALC SEDIMENT, possible	c	1		1	4	6		12
				a	50							serpentine in fractures @ 45 degrees to	c	1		1	4	6		12
				a	70							axis	c	1		1	4	6		12
				a									c	1		1	4	6		12
										-15F	FZ	^^ 281.0 285.0 Fault Zone, brecciated,	c	1		1	4	6		12
										-10F		gouge, high angle (10-15 degrees)	c	1		1	4	6		12
												to axis	c	1		1	4	6		12
285.00													c	1		1	4	6		12
										-45B	CSt	^^ 285.0 288.4 Calcareous Sediment,	c	1		1	4	6		12
	100	90	R2	a	30	2						talcose, well-bedded	c	1		1	4	6		12
				a	50								c	1		1	4	6		12
				a						-60B	TSz,p	^^ 292.4 302.0 Talc-pyrrhotite,	c	1		1	4	6		12
				a								stringery	b				3	5		8
295.00				a									a				1	2		3
	100	100	R2	b	10	3							a				1	2		3
				c	30								c				5	10		15
				c	50								c				5	10		15
				b									c				5	10		15
305.00				b									c				5	10		15
	99	85	R2	c	10	2					TSzp	^^ 307.0 320.0 Talc-pyrrhotite,	a				1	2		3
				b	30							stringery	a				1	2		3
				b									a				1	2		3
				c									c				5	10		15
315.00				b									c				5	10		15
	100	95	R2	b	25	2							c				5	10		15
				b	50								c				5	10		15
				c									c				5	10		15
				a									c				5	10		15
325.00				a									c				5	10		15
	98	60	R2	a	20	2							c				5	10		15
330.00				a	40								a				1	2		3
	100	100	R3	a	5	3							a				1	2		3
				b	25								a				1	2		3
335.00				b	55					-60B	TSzp	^^ 336.0 339.0 Talc-pyrrhotite, stringery	a				1	2		3
		100	R2	b	5	3						possible chalcopyrite ?	a				1	2		3
				b	30					-60B			a				1	2		3
				b	50								a				1	2		3
				b								Note: @ 340.0 Thin beds of actinolite ?	c		1		5	10		16
				b								present or chlorite	c		1		5	10		16
													b				2	4		6

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-100

SULFIDES: (T)
A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
345.00													b				2	4		6
	100	100	R2	c	10	3							b				2	4		6
				b	30					-45F			b				2	4		6
				c	60					-60B			b				2	4		6
				c									b				2	4		6
354.00				b						-20C	QD	** 354.1 420.0 QUARTZ DIORITE, high angle (20 degrees) contact	b				2	4		6
											gQD	^^ 354.1 373.0 Granophyric Quartz Diorite								
												Note: @ 359.0-363.0 High angle (10 degrees) fracturing, brecciation								
												Note: @ 381.0-385.0 Oxidized calcite-filled fracture @ 15 degrees to axis, core broken								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-100

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											E.O.H. 420' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
150'	183.0	-65.4
400'	186.6	-65.4
650'	191.8	-65.2
800'	193.1	-64.8
986'	195.1	-63.4

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff / T. Harding
DATE COLLARED: 2-28-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-101 (WDNR #270)

DATE: 9-16-
PAGE 1 OF 1

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-5-91

BEARING: S181.6E INCLINATION: -63.7 T.D: 98
COORDINATES: L9900 E 11715 N
ELEV: 1558.9' SEC: 15 TWP: 37N RANGE:

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 64.5			** 0.0 64.5 OVERBURDEN	
64.5 427.0		D	** 64.5 427.0 DACITE	
83.0 93.0		SS	^^ 83.0 93.0 Sandstone	
127.0 283.0		D	^^ 127.0 283.0 Dacite	
283.0 316.0		D	^^ 283.0 316.0 Dacite	
316.0 343.0		pIR	^^ 316.0 343.0 Porphyritic Rhyolite Sill	
354.6 377.0		pRd	^^ 354.6 377.0 Porphyritic Rhyolite Dike	
419.0 427.0		IR	^^ 419.0 427.0 Intrusive Rhyolite Dike	
427.0 610.0		SS	** 427.0 610.0 SANDSTONE	
445.0 465.0		Sk	^^ 445.0 465.0 Tactite	
465.0 471.0		W	^^ 465.0 471.0 Wacke	
471.0 484.0		SS	^^ 471.0 484.0 Sandstone	
484.0 508.0		Sk	^^ 484.0 508.0 Tactite	
508.0 514.0		Rlb	^^ 508.0 514.0 Rhyolite Lapilli Tuff Breccia	
514.0 565.0		SS	^^ 514.0 565.0 Sandstone	
565.0 589.0		*R	^^ 565.0 589.0 Spherulitic Rhyolite	
589.0 610.0		SS	^^ 589.0 610.0 Sandstone	
610.0 709.0		IR	** 610.0 709.0 INTRUSIVE RHYOLITE	
658.0 662.2		Rc	^^ 658.0 662.2 Rhyolite Crystal Tuff	
662.2 664.0		Rlch	^^ 662.2 664.0 Rhyolite Lapilli Tuff	
664.0 674.0		*R	^^ 664.0 674.0 Spherulitic Rhyolite	
674.0 681.0		Rt	^^ 674.0 681.0 Rhyolite Tuff	
681.0 700.0		Rcl	^^ 681.0 700.0 Rhyolite Crystal Lapilli Tuff	
700.0 709.0		Rtch	^^ 700.0 709.0 Rhyolite Tuff, Cherty	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
150'	183.0	-65.4
400'	186.6	-65.4
650'	191.8	-65.2
800'	193.1	-64.8
986'	195.1	-63.4

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff / T. Harding
DATE COLLARED: 2-28-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-101 (WDNR #270)

DATE: 9-16-91
PAGE 1 OF 15

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-5-91

BEARING: S181.6E INCLINATION: -63.7 T.D: 986.0
COORDINATES: L9900 E 11715 N
ELEV: 1558.9' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
709.0 831.0		TS	** 709.0 831.0 TALCOSE SEDIMENT	
729.0 737.0		xR	^^ 729.0 737.0 Spherulitic Rhyolite	
737.0 766.0		Ch	^^ 737.0 766.0 Chert	
766.0 795.0		VCS	^^ 766.0 795.0 Siltstone	
795.0 815.0		TS	^^ 795.0 815.0 Talcose Sediment	
815.0 831.0		TSp	^^ 815.0 831.0 Talcose Sediment	
831.0 941.0		Chp	** 831.0 941.0 CHERT	
888.0 888.4		QDd	^^ 888.0 888.4 Quartz Diorite Dike	
888.4 893.0		SL	^^ 888.4 893.0 Siltstone	
893.0 902.0		QDd	^^ 893.0 902.0 Quartz Diorite Dike	
902.0 931.0		SS	^^ 902.0 931.0 Sandstone	
931.0 934.8		SSs	^^ 931.0 934.8 Sandstone	
934.8 941.0		BP	^^ 934.8 941.0 Bedded Pyrrhotite	
941.0 986.0		QD	** 941.0 986.0 QUARTZ DIORITE	
941.0 955.0		gQD	^^ 941.0 955.0 Granophyric Quartz Diorite	

E.O.H. 986' (total depth)

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											** 0.0 64.0 OVERBURDEN								
										D	** 64.5 427.0 DACITE, abundant 2-5 mm feldspars, minor interbedded sandstone								
									-15F	SS	^^ 83.0 93.0 Sandstone, black, fine-grained Note: @ 84.2 Small .2" fault, brecciated, strong carbonate, minor serpentine								
										D	^^ 127.0 283.0 Dacite/Sandstone, subtle feldspars								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
											Note: @ 140.0 142.0 Fracturing @ high angle to core axis, with pink carbonate and fault breccia. Totally cool								
											Note: @ 179.0 181.0 Fracturing at -30 to axis. Oxidized								
											Note: @ 215.0 218.0 Laminated interval								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											with altered (epidote) beds.								
										D	^^ 283.0 316.0 Dacite, plag-phyric, large 2-4 mm feldspars Note: @ 283.0 Gradational contact								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
									-90C	pIR	^^ 316.0 343.0 Porphyritic Rhyolite Sill, tan matrix, siliceous								
									-30C	pRd	^^ 354.0 377.0 Porphyritic to Granophyric Rhyolite Dike, black matrix, abundant large feldspar phenocrysts and minor blue quartz eyes								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										-40C										
											IR	^^ 419.0 427.0 Rhyolite Dike?, porphyritic to aphanitic, black							
											SS	** 427.0 610.0 SANDSTONE, black to green, massive to weakly bedded							
435.00																				
	100	95	R3	b	15	3														
				a	30															
				a	70															
				a																
445.00				b							Sk	^^ 445.0 465.0 Tactite, dark green chlorite & epidote alteration, contorted or mottled appearance, trace to strong magnetite, protolithology probably a chloritically altered sediment							
	100	100	R3	b	15	2								1			2			3
				b	30															
				c																
				c																
455.00				c																
	100	95	R3	c	15	2														
				c	30															
				c																
				b																
465.00				b							W	^^ 465.0 471.0 Wacke to Cherty Wacke ?, coarse-grained, minor "accidental" blocks							
	100	100	R3	b	5	2														
				b	20															
				c							SS	^^ 471.0 484.0 Sandstone, (possibly a mafic basalt flow), black to green, occassional contorted zones							
				b																
475.00				b																
	100	100	R3	b	5	2														
				b	30															
				b																
				b																

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
485.00				b							Sk	^^ 484.0 508.0 Tactite, same as 445.0 to 465.0'	a					1		1
	100	100	R3	b	15	2							a					1		1
				b	55								a					1		1
				c									a					1		1
				b									a					1		1
495.00				c									a					1		1
	100	100	R3	c	20	1							a					1		1
				b									a					1		1
				c									a					1		1
				c								Note: @ 505.0 508.0 Interbedded Tactite and crystal tuff, poorly bedded	a					1		1
505.00				c									a					1		1
	99	90	R3	b	5	2							a		1			1		2
				c	20								a		1			1		2
				c							Rlb	^^ 508.0 514.0 Lapilli Tuff Breccia, graded, fractured with chlorite in-filling	a					1		1
				c																
				c																
515.00											SS	^^ 514.0 565.0 Sandstone/Dacite, black, fine-grained, occasional plag-phyric (dacite) zones								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										×R	^^ 565.0 589.0 Spherulitic Rhyolite with minor interbedded feldspathic wacke								
										SS	^^ 589.0 610.0 Sandstone, black, fine-grained, minor plag-phyric zones								
										IR	×× 610.0 709.0 INTRUSIVE RHYOLITE, greenish-black, aphanitic with subtle feldspars								
											Note: @ 641.0 656.5 Rhyolite, very								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
												strongly bleached, white to tan, minor chlorite?								
											Rc	^^ 658.0 662.2 Rhyolite Crystal Tuff, coarse-grained								
											Rlch	^^ 662.2 664.0 Rhyolite Lapilli Tuff, cherty, rounded blockly appearance (soft sediment deformation ?)								
											xR	^^ 664.0 674.0 Spherulitic Rhyolite, bedded to graded								
											Rt	^^ 674.0 681.0 Rhyolite Tuff, green, medium grained								
											Rcl	^^ 681.0 700.0 Rhyolite Crystal Lapilli Tuff, abundant blue quartz eyes, graded, trace sulfides								
695.00																				
	100	100	R2	c	5	3							a	1			1	1		3
				c	30								a				1	1		2
				c	60						Rtch	^^ 700.0 709.0 Rhyolite Tuff, cherty, interbedded spherulitic rhyolite	a				1	1		2
				b									a				1	1		2
705.00				c									a				1	1		2
	100	100	R2	b	10	3							a				1	1		2
				b	30						TS	xx 709.0 831.0 TALCOSE SEDIMENT, green, minor cubic pyrite, trace Sp, Ga and Po	a				1	1		2
				c	60								a				1	1		2

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
712.00				c									a				1	1		2
	100	100	R2	c	20	3							a				1	1		2
				b	40								a				1	1		2
				c	60								a				1	1		2
				c									a				1	1		2
721.00				c									a				1	1		2
	99	95	R2	c	5	3							a				1	1		2
				c	30								a				1	1		2
725.00					60								a				1	1		2
	100	90	R2	b	10	3							a				1	1		2
				b	30						*R	^^ 729.0 737.0 Spherulitic Rhyolite,	a				1	1		2
				b	60							laminated and graded	a					1		2
				b									a					1		2
735.00				b									a					1		
	99	70	R2	a	5	3					Ch	^^ 737.0 766.0 Chert with interbedded	a					1		
				a	30							Spherulitic Rhyolite, light grey,	a					1		
				a	60							laminated to bedded, trace chalcopyrite	a					1		
				a									a					1		
745.00				a									a					1		
	99	80	R2	a	10	3							a					1		
				a	30							Note: @ 748.0 753.0 Moderate epidote	a					1		
				b	60							alteration	a					1		
				c									a					1		
755.00				b									a					1		
	100	100	R2	c	20	1							a					1		
				c									a					1		
				b								Note: @ 760.0 766.0 Bedded to massive	a					1		
				c								pyrrhotite, minor serpentine	a					1		
765.00				c									a					1		
	99	90	R2	b	5	3					VCS	^^ 766.0 795.0 Siltstone, green to	c				3	15		18
				c	30							black, minor calcite filled fractures,	c				3	15		18
				b	60							trace disseminated pyrite and pyrrhotite,	c				3	15		18
				b								weakly bedded								
775.00				b																
	100	85	R2	b	10	3														
				b	30															
				b	60															
				b																
785.00				b																
	100	100	R2	c	30	1														

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
786.00																				
	100	100	R2	c	20	2														
789.00					60															
	100	95	R2	b	5	3														
				b	30															
795.00				c	60						TS	^^ 795.0 815.0 Talcose Sediment								
	100	90	R2	b	10	3														
				b	30															
				b	60															
				b																
805.00				b																
	100	95	R2	b	10	3														
				c	30															
				c	60															
				c																
815.00				c							TS	^^ 815.0 831.0 Talcose Sediment with disseminated to bedded pyrrhotite	b				5		5
	100	100	R2	c	10	3							b				5		5
				c	30								b				5		5
				c	60								b				5		5
				c									b				5		5
825.00				c									b				5		5
	100	100	R2	c	5	3							b				5		5
				c	30								b				5		5
				c	60					-30B	Chp	** 831.0 941.0 CHERT TO CHERTY SILTSTONE, with well bedded sulfide (pyrrhotite and chalcopyrite) horizons	b		1		5		6
				b									b		1		5		6
835.00				b									b		1		5		6
	100	100	R3	c	5	3							b		1		5		6
				b	20								b		1		5		6
				c	40								b		1		5		6
				c						-40B			b		1		5		6
845.00				c									b		1		5		6
	100	100	R3	b	5	3							b		1		5		6
				b	20								b		1		5		6
				b	40								b		1		5		6
				b									b		1		5		6
855.00				b									b		1		5		6
	100	100	R3	b	5	3							b		1		5		6
				b	30								b		1		5		6
				b	60								b		1		5		6
				b									b		1		5		6

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-101

SULFIDES: (T)

% A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
865.00				a									b		1			5		6
	100	100	R3	b	10	3							b		1			5		6
				b	30					-60B			b		1			5		6
				b	60								b		1			5		6
				b									b		1			5		6
875.00				b									b		1			5		6
	100	100	R3	c	20	3							b		1			5		6
				c	40								b		1			5		6
				b	60								b		1			5		6
				b									b		1			5		6
885.00				c									b		1			5		6
	100	100	R2	c	20	2							b		1			5		6
				c	45					-45C	QDd	^^ 888.0 888.4 Quartz Diorite Dike	b		1			5		6
				b									b		1			5		6
				c						-20C	SL	^^ 888.4 893.0 Siltstone or Sandstone similar to 831.0 888.0	b		1			5		6
				b																
											QDd	^^ 893.0 902.0 Quartz Diorite Dike	a		1			1		2
895.00													a		1			1		2
	100	100	R3	c	20	2							a		1			1		2
				c	40								a		1			1		2
				b									a		1			1		2
				b							SS	^^ 902.0 931.0 Sandstone, minor laminated siltstone, trace chalcopyrite and pyrite, crude bedding	a		1			1		2
905.00				b									a		1			1		2
	100	100	R2	b	20	2							a		1			1		2
				b	40								a		1			1		2
				b									a		1			1		2
				b									a		1			1		2
				b									a		1			1		2
915.00				b									a		1			1		2
	100	100	R3	c	15	3							a		1			1		2
				c	30								a		1			1		2
				c	55								a		1			1		2
				c									a		1			1		2
925.00				c									a		1			1		2
	100	100	R2	b	10	3							a		1			1		2
				b	25								a		1			1		2
				c	55						SSs	^^ 931.0 934.8 Sandstone with disseminated sulfides	a		1			1		2
				c									b	5	1	1		1		8
				c									b	5	1	1		1		8
935.00										-60B	BP,ch	^^ 934.8 941.0 Bedded Pyrrhotite,	d		3			25		28

DRILL HOLE: LYN91-101

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

SULFIDES: % (T)

A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
	100	100	R2	c	15	3						cherty (?)	d		3			25		28
				c	35								d		3			25		28
				c	50						QD	** 941.0 986.0 QUARTZ DIORITE								
				b																
				b							gQD	^^ 941.0 955.0 Granophyric Quartz Diorite								
945.00																				
												Note: @ 941.0' Weak chilled margin								
										-30F		Note: @ 955.0 970.0 Sheared quartz diorite								
												E.O.H. 986' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
75'	181.7	-59.0
125'	181.5	-58.6
175'	183.3	-59.0
225'	182.7	-59.0
285'	183.2	-59.0

PROJECT: LYNNE P.O. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: A. Zielinski
DATE COLLARED: 3-2-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-102 (WDNR #216)

DATE: 3-15-91

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-3-91

BEARING: S180E INCLINATION: -59.5 T.D: 285'
COORDINATES: L9400 E, 10840 N
ELEV: 1562.3' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	TONNAGE FACTOR	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 48.0		15.00		** 0.0 48.0 OVERBURDEN	
48.0 51.0	(not recovered)				
48.0 72.2		11.60	pR	** 48.0 72.2 PORPHYRITIC RHYOLITE	
72.2 96.0		11.00	SL	** 72.2 96.0 SILTSTONE, Cherty	
96.0 129.4		11.60	Rt	** 96.0 129.4 RHYOLITE TUFF	
129.4 136.2		11.60	Rd	** 129.4 136.2 RHYOLITE DIKE	
136.2 166.2		11.60	pR	** 136.2 166.2 PORPHYRITIC RHYOLITE	
166.2 188.9		11.85	gQD	** 166.2 188.9 QUARTZ DIORITE, Granophyric	
188.9 226.4		11.00	Dd	** 188.9 226.4 DACITE DIKE	
226.4 285.0		11.85	gQD	** 226.4 285.0 QUARTZ DIORITE, Granophyric	
				E.O.H. 285' (total depth)	

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-102

SULFIDES: (T)

% A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
												** 0.0 48.0 OVERBURDEN								
											pR	** 48.0 72.2 PORPHYRITIC RHYOLITE, black matrix, white feldspar laths, (subtle) at base up into smoky quartz and white and brick-red feldspars, highly fractured, some calcite and chlorite filled							
										-30C	SLch	** 72.2 96.0 SILTSTONE,Cherty and interbedded siltstone, chert light grey, minor fractures								
											Rt	** 96.0 129.4 RHYOLITE TUFF, fine-grained, black, some porphyritic intervals with small indistinct white feldspars, 90 degree contacts, also cherty intervals, two major fractures at 97' and 109.3'. Many smaller fractures.								
116.00																				
	99	90	R3	b	10	3														
				a	35															
				a	60															
125.00				a																

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-102

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
	99	95	R3	a	10	3														
				a	40						Rd	** 129.4 136.2 RHYOLITE DIKE, Skarn alteration above and below actinolite, garnets, minor sphalerites, chert filled fractures	b	2	1		3	1		7
				a	60								b	2	1		3	1		7
				b						-27C			b	2	1		3	1		7
				a																
135.00										-90F										
	100	95	R3	a	10	2					pR	** 136.2 166.2 PORPHYRITIC RHYOLITE, grey at top, darkens downward, feldspars more distinct downward, large quartz filled viens, smaller fractures with epidote alteration								
				a	35															
				b	60															
				b																
145.00				a																
	100	100	R3	a	10	3														
				a	30															
				a	60															
153.00				a																
											gQD	** 166.2 188.9 QUARTZ DIORITE, Granophyric alternating fine and coarse-grained laths in fine-grained grey matrix								
										-20C	Dd	** 188.9 226.4 DACITE DIKE, some horizontal fractures, and granophyric inclusions								
										-20F										

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-102

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
									-20F C	gDD	** 226.4 285.0 QUARTZ DIORITE, Granophyric Note: @ 226.4 227.0 Pyrrhotite Rich (17) Chalcopyrite (1), Pyrite (2), successive flows, coarse-grained medium grey at base, fine-grained, dark grey at top Note: @ 275.0 276.0 Altered, brecciated massive quartz, feldspar, chlorite, hornsfelsed minor pyrrhotite, chalcopyrite, red friable mineral (orpiment ?) E.O.H. 285' (total depth)	c		1		2	17		20

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
250'	180.1	-62.7
400'	181.2	-62.2
600'	183.3	-61.9
800'	185.0	-61.6
1000'	187.6	-60.6
1162'	189.4	-59.5

PROJECT: LYNNE P.O. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 3-3-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-103 (WDNR #274)

DATE: 5-13-91
PAGE 1 OF 17

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-9-91

BEARING: S180E INCLINATION: -62 T.D: 1162'
COORDINATES: L9600 E 12330 N
ELEV: 1553' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	TONNAGE FACTOR	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 36.0		15.00		** 0.0 36.0 OVERBURDEN	
36.0 189.0		11.60	R	** 36.0 189.0 RHYOLITE	
189.0 265.0		11.00	D	** 189.0 265.0 DACITE	
265.0 461.0		11.60	R	** 265.0 461.0 RHYOLITE	
461.0 524.0		11.00	SS	** 461.0 524.0 SANDSTONE	
524.0 531.0		9.50	BP	** 524.0 531.0 SILTSTONE, with bedded Pyrrhotite and Pyrite	
531.0 537.5		11.00	SLmp	** 531.0 537.5 SILTSTONE, with Magnetite, Pyrrhotite, and Pyrite	
537.5 549.0		11.60	IR	** 537.5 549.0 INTRUSIVE RHYOLITE	
549.0 584.9		11.00	SL	** 549.0 584.9 SILTSTONE	
589.9 760.5		11.60	R	** 584.9 760.5 RHYOLITE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
250'	180.1	-62.7
400'	181.2	-62.2
600'	183.3	-61.9
800'	185.0	-61.6
1000'	187.6	-60.6
1162'	189.4	-59.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 3-3-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-103 (HONR #274)

DATE: 5-13-91
PAGE 1 OF 17

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-9-91

BEARING: S180E INCLINATION: -62 T.D: 1162'
COORDINATES: L9600 E 12330 N
ELEV: 1553' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	TONNAGE FACTOR	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
760.5 788.0		11.00	D	** 760.5 788.0 DACITE	
788.0 907.0		11.60	R	** 788.0 907.0 RHYOLITE	
907.0 995.5		11.00	SL	** 907.0 995.5 SILTSTONE	
995.5 1024.5		9.50	BP	** 995.5 1024.5 BEDDED PYRRHOTITE	
1024.5 1067.5		11.60	Rt?	** 1024.5 1087.5 SANDSTONE OR RHYOLITE TUFF	
1067.5 1087.5		11.00	SLp	** 1067.5 1087.5 SILTSTONE WITH Pyrrhotite	
1087.5 1162.0		11.85	QD	** 1087.5 1162.0 QUARTZ DIORITE	
1087.5 1090.0		11.85	gQD	^^ 1087.5 1090.0 Granophyric Quartz Diorite	

E.O.H. 1162' (total depth)

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
											** 0.0 36.0 OVERBURDEN								
										R	** 36.0 189.0 RHYOLITE								
										Rcl	^^ 36.0 84.0 Rhyolite Crystal Lapilli Tuff								
										Rt	^^ 84.0 90.5 Rhyolite Tuff								
											Note: @ 87.0 90.5 Shearing @ 60 degrees to axis								
										Rb	^^ 90.5 104.5 Rhyolite Breccia, porphyritic rhyolite matrix, with glassy and porphyritic rhyolite clasts (2-4")								
										Wl	^^ 104.5 115.0 Lapilli Wacke, fine-grained								

ROCK QUALITY: FRACTURE FREQ. A:0-3,B:3-10 C:10-30,D:30-100 E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											matrix, with subangular lithic (porphyritic rhyolite) clasts (0.5-1")								
										SS	^^ 115.0 129.5 Sandstone, green-grey, massive								
											Note: @ 122.5 126.0 Fracturing @ 20 degrees to axis. Epidote and iron alteration. No gouge, little shattering								
										pR	^^ 129.5 140.0 Rhyolite Porphyry with blue quartz eyes.								
										Rt	^^ 140.0 183.0 Rhyolite Tuff, or Sandstone, medium grey matrix, scattered plag laths, patchy epidote alteration								
										Wl	^^ 183.0 189.0 Lapilli Wacke, blue-grey, lithic clasts < 0.5"								

FRACTURE FREQ.
A:0-3,B:3-10
ROCK QUALITY: C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

A:1-5,B:5-10
SULFIDES: % C:10-25,D:25-40
(T) E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										D	** 189.0 265.0 DACITE, dark grey, epidote altered patches, massive.								
										R	** 265.0 461.0 RHYOLITE								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: % (T)

A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										ChT	^^ 265.0 277.5 Cherty Tuff								
										R1	^^ 277.5 394.0 Rhyolite Lapilli Tuff, more ash-rich with wispy clasts, like a flow to ~310, then lapilli tuff.								
											Note: @ 290.0 300.0 Core oxidized and broken								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										Rt	^^ 394.0 441.0 Rhyolite Tuff, fine-grained, granophyric								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T)

A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											Note: @ 427.0 427.5 Oxidized, chloritic fracture								
										Wlf	^^ 441.0 461.0 Lapilli Feldspathic Wacke, 1/4" clasts, with tiny plag crystals								
										SS	×× 461.0 524.0 SANDSTONE, blue-grey, fine-grained, massive								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											Note: @ 511.0 524.0 Fist-sized cherty subangular fragments								
515.00																			
	100	100	R2	b	20	2													
				b	45														
				b															
				c															
525.00				c															
	100	100	R2	c	40	1				BP	** 524.0 531.0 SILTSTONE, with bedded pyrrhotite	d		1		5	35		41
				c								d		1		5	35		41
				c								d		1		5	35		41
				b						SLmp	** 531.0 537.5 TACTITE altered siltstone with magnetite, pyrite, and pyrrhotite	b				2	7		9
535.00				c								b				2	7		9
	100	100	R3	c	10	3				IR	** 537.5 549.0 INTRUSIVE RHYOLITE, pinkish-grey, granophyric	b				2	7		9
				b	25														
				a	50														
				a															
545.00				a															
	100	100	R3	a	5	3													
				a	20					SLm	** 549.0 552.0 TACTITE forest green, with magnetite								
				b	50														
				b															
555.00				a						SL	** 552.0 584.9 SILTSTONE, blue,green, occasionally laminated								
	100	100	R3	a	5	3													
				c	20							a		1		12			13
				c	50							a		1		12			13
				c								a		1		12			13
565.00				c															
	100	100	R3	c	10	3													
				c	30														
				c	50														
				c						Rc,SL	^^ 573.0 584.9 Interbedded Crystal Tuff, siltstones								
575.00				c															
	100	100	R3	c	10	3													
				c	40														
				b	60														
				b															

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T)

% A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
585.00				b							R	** 584.9 760.0 RHYOLITE								
	100	100	R3	c	25	3														
				a	40						Wlf	^^ 584.9 589.0 Lapilli Feldspathic Wacke, (altered bedded rhyolite crystal lapilli tuff)								
				b	70															
				b																
				a																
											gR	^^ 589.0 601.0 Granophyric Rhyolite								
595.00																				
	100	100	R3	a	30	3														
				a	45															
				b	60															
				b																
605.00				b							Wlf,p	^^ 601.0 609.5 Interbedded Lapilli Feldspathic Wacke, and Tactite								
	100	100	R3	b	20	2														
				b	40															
				c							Wlf	^^ 609.5 632.0 Lapilli Feldspathic Wacke, (or rhyolite crystal tuff), with disseminated pyrrhotite and pyrite	b			2	7		9
				c									b			2	7		9
615.00				b									b			2			2
	100	100	R3	c	10	4							b			2			2
				c	25															
				c	35															
				c	50															
625.00				b																
	100	100	R3	b	30	2														
627.00					55															
	100	100	R3	b	5	2														
				c	25															
				c																
635.00				b							SK	^^ 632.0 646.0 TACTITE, Epidote, and Magnetite, with disseminated pyrite and pyrrhotite, and green alteration	c			1	2		3
	100	100	R3	a	10	3							c			1	2		3
				b	30								c			1	2		3
				c	70								c			1	2		3
				c									c			1	2		3
645.00				b									c			1	2		3
	99	90	R3	b	10	2					Rcl	^^ 646.0 737.0 Rhyolite Crystal Lapilli Tuff	c			1	2		3
				c	60															
				c																
				c																

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T)
A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE c	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	TotalX	Sp	Cp	Ga	Py	Po	As	T
655.00																			
											Note: @ 667.0 670.0 Altered/Bleached								
											Note: @ 683.0 688.0 Intrusive Rhyolite								
									-20		Note: @ 698.0 711.0 Mafic Dike, high angle								
									-20										

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											gR	^^ 737.0 760.5 Granophyric Rhyolite, with epidote bleached base								
											D	** 760.5 788.0 DACITE								
785.00																				
	100	100	R3	b	15	3														
				b	30						R	** 788.0 907.0 RHYOLITE								
				b	60															
				b							Wf,Rc	^^ 788.0 808.0 Interbedded Feldspathic Wacke, and Rhyolite Crystal with pyrrhotite and magnetite								
795.00				b																
	100	100	R3	b	10	3														
				b	30															
				b	60															
				b																
											Rb	^^ 808.0 823.0 Rhyolite Breccia to Crystal Lapilli Tuff								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T)
A:1-5,B:5-10
% C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
815.00																			
										Rt	^^ 823.0 837.0 Rhyolite Tuff, fine-grained, moderately granophyric								
										SS	^^ 837.0 844.0 Sandstone? Possible some talc								
										IR	^^ 844.0 862.5 Intrusive Rhyolite								
										SL	^^ 862.5 867.5 Siltstone, some serpentine beds, could be talcose								
										gR	^^ 867.5 907.0 Granophyric Rhyolite								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: % (T)

A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										SL	** 907.0 995.5 SILTSTONE								
										SS,Wl	^^ 912.0 949.0 Interbedded Siltstone, Lapilli Wacke, 1-2 foot intervals, lapilli wacke is reworked rhyolite crystal tuff.								
										SLm	^^ 949.0 995.5 Siltstone, predominantly green-grey, finely laminated with scattered pyrrhotite and magnetite with cherty lapilli wacke intervals								

ROCK QUALITY:

FRACTURE FREQ.
A:0-3,B:3-10
C:10-30,D:30-100
E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: % (T)
A:1-5,B:5-10
C:10-25,D:25-40
E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	I	T.
									-47B											
									-50B	BP,SL	** 995.5 1024.5 BEDDED PYRRHOTITE AND SILTSTONE, laminated	d				10	30	40	
												d				10	30	40		
												d				10	30	40		
									-56B			d				10	30	40		
									-56B			d				10	30	40		
												d				10	30	40		
												d				10	30	40		
												d				10	30	40		
												d				10	30	40		
									-60B			d				10	30	40		
												d				10	30	40		
											^^ 1019.0 1024.5 Talcose, pyrrhotite with cherty interbeds	d				10	30	40		
												d				10	30	40		
									-52B			d	2	1		5	30	38		
										SS	** 1024.5 1067.5 SANDSTONE OR RHYOLITE TUFF	d	2	1		5	30	38		

ROCK QUALITY: FRACTURE FREQ. A:0-3,B:3-10 C:10-30,D:30-100 E:>100 cm.

DRILL HOLE: LYN91-103

SULFIDES: (T) % A:1-5,B:5-10 C:10-25,D:25-40 E:40-60,F:>60

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										SLs,p	** 1067.5 1087.5 SILTSTONE, laminated with pyrrhotite and sulfides	b	5			1	4		10
									-60B			b	5			1	4		10
												b	5			1	4		10
									-60B			b	5			1	4		10
												b	5			1	4		10
												b	5			1	4		10
												b	5			1	4		10
									-60B			b							
												b							
									-80C	QD	** 1087.5 1162.0 QUARTZ DIORITE	b							
										gQD	^^ 1087.5 1090.0 Granophyric Quartz Diorite								
											E.O.H. 1162' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
75'	182.2	-62.9
150'	182.4	-63.0
225'	183.4	-62.6
300'	184.7	-62.4
355'	185.1	-62.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: A. Zielinski
DATE COLLARED: 3-3-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-104 (WDNR #217)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 3-5-91

BEARING: S182.2E INCLINATION: -62.9 T.D: 355'
COORDINATES: L9500 E, 10890 N
ELEV: 1564.1' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-12-91
PAGE 1 OF 6

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 39.0			** 0.0 39.0 OVERBURDEN	
39.0 42.5	(not recovered)			
39.0 65.9		Rt	** 39.0 65.9 RHYOLITE TUFF	
57.7 61.3		Rt*	^^ 57.7 61.3 Rhyolite Tuff, Altered	
65.9 85.4		pD	** 65.9 85.4 PORPHYRITIC DACITE	
81.3 85.4		Ra	^^ 81.3 85.4 Ash Tuff	
85.4 95.5		Xp	** 85.4 95.5 TUFFITE, Pyrrhotite Rich	
95.5 110.5		Ra	** 95.5 110.5 ASH TUFF	
100.6 108.0		MS,ca	^^ 100.6 108.0 Massive Sulfide, Calcareous Sediment	
110.5 140.1		D	** 110.5 140.1 DACITE	
140.1 153.0		Ra*,p	** 140.1 153.0 ASH TUFF, Altered, Pyrrhotite	
153.0 211.0		D,ch	** 153.0 211.0 DACITE, Cherty	
182.8 184.8		BP	^^ 182.8 184.8 Bedded Pyrrhotite	