APPENDIX B

Geological and Geotechnical

Drill Logs 1-44 - Volume 2 of 3

Noranda Minerals Wisconsin Corp.

LYNNE PROJECT

9

(pg 1 – 70)

ORIGINAL

LYNNE PROJECT

GEOLOGIC AND GEOTECHNICAL DRILLING LOGS

Explanation of Terms and Abbreviations

Geotechnical Terms

Run - Footage of rock drilled during each successive drilling interval or "run." The parameters listed below are determined on the basis of each run.

% - Percentage of rock recovered in each run.

RQD - "Rock Quality Determination" - the length of core recovered in solid cylinders, each more than four inches long, expressed as a percentage of the length of the core run.

Rf - "Intact rock strength" - related to an empirical scale, this parameter approximates the unconfined compressive strength of a given rock. For example, "R1" corresponds to very weak rock, whereas "R5" denotes very strong rock.

Fracture frequency - The frequency of fractures or discontinuities in the core.

Jn - Number of joints or fracture sets.

Jrc - "Joint roughness coefficient" - describes the surface roughness of joints or fractures.

Ja - "Joint alteration" - identifies specific alteration minerals or other criteria associated with joints.

SpG - Specific Gravity.

Fol - The orientation of fractures, foliations, or other planar fabrics with respect to the core axis.

Geologic Terms

Code - A letter code identifying the rock type, used for a computerized data base. (Please ignore this acronym and refer to the Lithology.)

Lithology - Rock type. A list of rock names with specific meanings to the Lynne Project is given below:

Massive Sulfide - Any rock with base-metal sulfide minerals comprising more than 25-30% of the rock volume. The base-metal sulfide minerals logged at Lynne are galena, sphalerite, and chalcopyrite.

Tuffite - Any rock with base-metal sulfide minerals comprising more than 10%, but less than 25-30%, of the rock volume.

Tufa - A sedimentary rock composed largely of carbonate minerals, predominantly calcite.

Wacke - A rhyolitic volcanic to volcaniclastic rock with some evidence of having been reworked or resedimented.

Sulfides - The sulfide minerals are identified, and their abundance (volume percent) is estimated. The total amount of sulfide minerals is also estimated. Individual sulfide minerals are identified by the following abbreviations:

Sp - Sphalerite	**Py - Pyrite**
Cp - Chalcopyrite	**Po - Pyrrhotite**
Ga - Galena	**As - Arsenopyrite**

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	180.3	-69.7
400'	183.6	-69.7
600'	186.7	-69.7
800'	188.4	-69.6
1004'	189.4	-69.4

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding
DATE COLLARED: 12-14-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-45 (WDNR #182)

DATE: 1-11-92
PAGE 1 OF 16

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 12-27-90

BEARING: S180.3E INCLINATION: -69.6 T.D: 1004'
COORDINATES: L10400 E, 11600 N
ELEV: 1559.0' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 58.0			>< 0.0 58.0 OVERBURDEN	
58.0 63.0	(not recovered)			
63.0 67.0	(HQ core)			
58.0 248.0		Rt	>< 58.0 248.0 RHYOLITE TUFF	
71.5 80.5		Wlf	^^ 71.5 80.5 Wacke Lapilli-feldspathic	
173.0 181.0		Rl	^^ 173.0 181.0 Rhyolite Lapilli tuff	
188.0 194.5		Rt*	^^ 188.0 194.5 Rhyolite Tuff, Altered	
197.0 203.7		Rl	^^ 197.0 203.7 Rhyolite Lapilli tuff	
248.0 358.0		IR/Rb	>< 248.0 358.0 INTRUSIVE RHYOLITE/RHYOLITE BRECCIA	
358.0 371.0		Rch,l	>< 358.0 371.0 RHYOLITE TUFF, Cherty, Laminated	
371.0 381.0		IR	>< 371.0 381.0 INTRUSIVE RHYOLITE	
381.0 411.0		Rt	>< 381.0 411.0 RHYOLITE TUFF	
390.7 400.0		pRd	^^ 390.7 400.0 Rhyolite Porphyry dike	
411.0 446.0		IR	>< 411.0 446.0 INTRUSIVE RHYOLITE	
446.0 463.9		Rt/IR	>< 446.0 463.9 INTERBEDDED INTRUSIVE RHYOLITE, RHYOLITE TUFF	

ORIGINAL

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Eastern Divison

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COORDINATES: L10400 E, 11600 N
ELEV: 1559.0' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
463.9 509.4		Rcl	><< 463.9 509.4 RHYOLITE CRYSTAL LAPILLI TUFF	
509.4 519.8		Rt	><< 509.4 519.8 RHYOLITE TUFF	
519.8 538.0		Rcl	><< 519.8 538.0 RHYOLITE CRYSTAL LAPILLI TUFF	
538.0 558.2		Rt/D	><< 538.0 558.2 RHYOLITE TUFF/DACITE ?	
558.2 608.0		Rlc	><< 558.2 608.0 RHYOLITE LAPILLI CRYSTAL TUFF	
558.0 597.0		Rt	^^ 588.0 597.0 Rhyolite Tuff	
608.0 655.3		Rc	><< 608.0 655.3 RHYOLITE CRYSTAL TUFF "DACITE"	
655.3 665.0		SL	><< 655.3 665.0 SILTSTONE, laminated, With Magnetite	
665.0 702.5		Wl	><< 665.0 702.5 LAPILLI WACKE	
702.5 708.8		xR	><< 702.5 708.8 SPHERULITIC RHYOLITE	
708.8 765.5		Rc,Rl	><< 708.8 765.5 RHYOLITE CRYSTAL AND LAPILLI TUFFS	
708.0 726.5		D	^^ 708.0 726.5 Dacite	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	180.3	-69.7
400'	183.6	-69.7
600'	186.7	-69.7
800'	188.4	-69.6
1004'	189.4	-69.4

PROJECT: LYNNE P.D. 1876
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DATE: 1-11-92
PAGE 1 OF 16

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
726.5 731.5		W	~~ 726.5 731.5 Wacke	
734.0 740.0		TS	~~ 734.0 740.0 Talcose Sediment, With Sulfides	734.0 740.0 8% Sp
747.5 749.2		SL3	~~ 747.5 749.2 Siltstone, Altered, With Sulfides	
765.5 795.0		BP	><< 765.5 795.0 BEDDED PYRRHOTITE, With Laminated Intervals	
775.0 777.0		gQD	~~ 775.0 777.0 Quartz Diorite Dike, Granophyric	
782.0 791.0		BPs	~~ 782.0 791.0 Bedded Pyrrhotite, with sulfides	
795.0 813.0		Rl	><< 795.0 813.0 RHYOLITE LAPILLI TUFF	
813.0 826.5		Rch,p	><< 813.0 826.5 RHYOLITE TUFF, Cherty, With Pyrrhotite	
826.5 830.0		Xp,l	><< 826.5 830.0 TUFFITE, Laminated, With Sulfides	826.5 830.0 5% Sp, Po
830.0 854.5		Rt	><< 830.0 854.5 RHYOLITE TUFF	
854.5 871.0		xR	><< 854.5 871.0 SPHERULITIC RHYOLITE	
871.0 931.0		Rt	><< 871.0 931.0 RHYOLITE TUFF	
931.0 1004.0		gQD	><< 931.0 1004.0 QUARTZ DIORITE, Granophyric	

E.O.H. 1004' (total depth)

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
0.0 58.0											** 0.0 58.0 OVERBURDEN						
											^^ 0.0 40.0 Sand						
											^^ 40.0 58.0 Sand, gravel, and boulders						
											Note: @ 52.0-56.0 Lost circulation						
										Rt	** 58.0 248.0 RHYOLITE TUFF, medium grey, fine-grained						
63.00																	
	100	100	R3	c	5	2											
67.00				c	60												
	100	100	R3	c	10	2											
				c	50					Wlf	^^ 71.5 80.5 Wacke Lapilli-Feldspathic, greenish, crystal-rich matrix, with tiny red-stained fragments and subangular chert (?) clasts						
74.00				c													
	100	100	R3	c	10	1											
				c													
79.00				c													
	100	100	R3	c	25	1											
				c													
84.00				b													
	100	100	R3	c	20	1											
				b													
				c													
				b													
94.00				c													
	100	100	R3	b	20	1											
				c													
				c													
				c													
104.00				c													
	100	100	R3	b	10	3											
				b	30												

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
				b	60													
				b														
114.00				b														
	99	90	R3	b	10	3												
				b	30													
				a	60													
				a														
124.00				b														
	100	100	R3	a	5	3												
				b	20													
				b	60													
				c														
134.00				b														
	100	95	R3	a	5	3												
				b	20													
				b	60													
				a								Note: @ 141.0-144.0 Occasional laminations					
144.00				a														
	100	100	R3	a	5	3												
				b	20							Note: @ 147.5-151.0 Lapilli-rich						
				c	50													
				b														
154.00				b														
	100	95	R3	b	10	3												
				a	30													
				a	60							Note: @ 160.5-164.5 Lapilli-rich						
				b														
164.00				c														
	100	90	R3	b	10	3												
167.00				b	40													
					60													
	100	100	R3	b	10	3												
				c	40													
				c	60													
174.00				c							RI	^^ 173.0 181.0 Rhyolite Lapilli Tuff						
	100	100	R4	a	10	2												
				c	30													
				c														
				c														
184.00				c														

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
	100	100	R3	c	20	2												
				c	40						Rt*	^^ 188.0 194.5 Rhyolite Tuff, altered						
				b														
191.00				c														
	100	95	R3	b	20	2												
194.00				b	40													
	100	95	R3	b	10	2												
				c	30						Rl	^^ 197.0 203.7 Rhyolite Lapilli Tuff						
				c														
				c														
204.00				c														
	100	100	R4	c	10	1						Note: @ 203.4-226.0 Occasional laminations						
				c														
				c														
				c														
214.00				c														
	100	100	R3	c	10	2												
				c	30													
				c														
				c														
223.00				c														
	99	95	R3	b	10	2												
227.00				c	30													
	99	95	R3	c	10	2												
				c	30													
				b														
234.00				c														
	100	95	R4	c	10	2												
238.00				b	30													
	100	100	R3	b	10	2												
				c	30													
244.00				a														
	100	100	R3	a	20	2												
247.00				b	40						IR/pRb	** 248.0 358.0 INTRUSIVE RHYOLITE/ RHYOLITE BRECCIA, greenish white, porphyritic matrix with lapilli and clasts at top, decreasing by 320 degrees to pinkish-grey, granophyric						
	100	95	R3	a	20	3												
249.50				a	40													
					60													
	99	90	R3	a	10	3												
				a	40													
256.00				b	70													

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
	100	95	R3	b	20	2												
259.00				c	60													
	100	100	R2	b	10	2												
				c	60													
				c														
				c														
269.00				c														
	100	95	R3	c	10	2												
271.00					30													
	100	100	R3	c	10	1												
				b														
				b														
				c														
281.00				c														
	100	100	R3	c	10	1												
				c														
				d														
				d														
291.00				d														
	100	100	R3	d	10	2												
				d	30													
				b														
				c														
301.00				c														
	100	100	R3	c	10	2												
				c	30													
				c														
				c														
311.00				c														
	99	90	R3	b	10	2												
314.00				b	30													
	100	100	R3	c	10	3												
				c	30													
				c	60													
322.00				b														
	99	90	R3	a	10	3												
325.00				a	30													
					60													
	100	100	R3	a	10	3												
				b	30													

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
330.00				c	60													
	99	90	R3	b	10	3												
332.00					30													
					60													
	100	95	R3	a	10	3												
				a	30													
338.00				c	60													
	100	100	R3	c	30	2												
339.00					60													
	100	95	R3	b	10	2												
				c	40													
				c														
346.00				b														
	100	100	R3	b	15	2												
				c	40													
352.00				c														
	100	100	R3	c	30	1												
354.00																		
	100	100	R3	c	20	2												
				c	60						Rch,l	** 358.0 371.0 RHYOLITE TUFF, cherty, laminated						
				a														
				a														
364.00				a														
	99	85	R3	a	10	2												
368.00				a	60													
	99	85	R3	a	10	2												
369.00					60													
	100	90	R3	a	10	2					IR	** 371.0 381.0 INTRUSIVE RHYOLITE						
				a	60													
375.00				a														
	100	95	R3	a	10	3												
379.00				a	40													
					60													
	99	90	R3	a	10	2					Rt	** 381.0 411.0 RHYOLITE TUFF						
382.50				a	60													
	100	95	R3	a	15	3												
				a	30													
				a	60													
				a							pRd	^^ 390.7 400.0 Rhyolite Porphyry Dike, pinkish grey, granophyric						
392.50				a														

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
	99	95	R3	b	15	2												
395.00				b	60													
	99	95	R3	b	15	2												
				c	30													
				a														
				c														
404.00				c														
	100	100	R3	c	20	1												
				c														
				c														
				c							IR	** 411.0 446.0 INTRUSIVE RHYOLITE, pinkish grey, granophyric						
413.00				b														
	100	100	R3	a	10	2												
415.00					30							Note: @ 411.0-415.5 Porphyritic, gradational downward						
	100	100	R3	b	10	2												
				c	30													
				b														
424.00				b														
	100	100	R3	b	10	2												
				c	30													
				c														
				b														
434.00				c														
	100	100	R3	c	10	3												
				b	30													
				c	50													
				b														
444.00				b														
	100	100	R3	a	20	2					Rt/IR	** 446.0 463.9 INTERBEDDED RHYOLITE TUFF, INTRUSIVE RHYOLITE						
				b	70													
				c														
				c							IR	^^ 450.3 452.0 Intrusive Rhyolite						
				b														
454.00																		
	100	100	R3	b	20	2												
				b	60						IR	^^ 457.0 459.5 Intrusive Rhyolite						
				b														
				b							IR	^^ 460.0 463.5 Intrusive Rhyolite						
				b														
464.00											Rcl	** 463.9 509.4 RHYOLITE CRYSTAL LAPILLI						

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
	100	95	R3	b	20	2						TUFF						
				a	60													
470.00				a														
	100	100	R3	b	15	2												
				b	60													
				a														
				c														
480.00				c														
	99	95	R3	b	10	2												
				b	30													
				c														
				c														
490.00				c														
	100	100	R3	c	15	2												
				c	30													
				c														
				c														
500.00				b														
	100	100	R3	a	10	3												
				b	30													
				c	60													
				c														
510.00				b							Rt	** 509.4 519.8 RHYOLITE TUFF						
	100	90	R3	a	10	2												
512.00					30													
	100	100	R3	a	10	3												
				b	30													
				c	50													
				b							Rcl	** 519.8 538.0 RHYOLITE CRYSTAL LAPILLI TUFF						
522.00				c														
	100	100	R3	c	10	2												
524.00					30													
	100	100	R3	c	10	2												
				c	30													
				c														
532.50				c														
	100	100	R3	c	20	3												
				c	40													
				b	70						Rt/D	** 538.0 558.2 RHYOLITE TUFF/DACITE (?)						
				b														

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
543.00				c														
	100	100	R3	b	10	2												
544.00					30													
	100	90	R3	b	10	3												
				b	30													
				b	60													
				c														
553.00				c														
	99	80	R3	a	10	3												
556.00				a	40													
					60						Rlc	** 558.0 608.0 RHYOLITE LAPILLI CRYSTAL, TUFF, greyish white, coarse-grained matrix with "cherty" or "tuff" fragments, lower contact is fractured, brecciated, @ 10 degrees to core axis						
	100	100	R3	b	10	2												
				b	30													
				b														
564.00				b														
	99	90	R3	c	10	1												
				c														
				c														
572.50				b														
	100	95	R3	b	10	3												
				a	30													
				a	60													
				a														
				a														
583.00				a														
	100	100	R3	a	10	3												
				a	30						Rt	^^ 588.0 597.0 Rhyolite Tuff, medium grey, "hornfelsed"						
				a	70													
591.00				a														
	100	95	R3	a	10	3												
				a	30													
				a	60													
				b														
601.00				a														
	100	100	R3	a	10	2												
				a	30													
				a							Rc	** 608.0 655.3 RHYOLITE CRYSTAL TUFF, "dacite", dark grey to black, fine-grained matrix, with tiny plag (?) crystals						
				a														
611.00				a					2.82									
	100	100	R4	a	10	3												

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
				b	30													
				c	70													
				c														
621.00				b														
	100	100	R4	c	10	2												
				c	30													
				c														
				c														
631.50				c														
	100	100	R4	c	20	3												
				a	40													
				b	60													
				c														
641.50				a														
	100	95	R4	a	10	3												
				a	30													
648.00				b	60													
	100	100	R4	c	10	3												
				c	30													
				b	70													
				b							SL,lm	** 655.3 665.0 SILTSTONE, laminated, with magnetite						
658.00				a														
	100	95	R2	b	10	2												
				b	30							Note: Lapilli-rich and cherty interbeds and green color						
				b														
				c														
				b							W1	** 665.0 702.5 LAPILLI WACKE						
667.00																		
	100	100	R3	a	10	2												
				a	40													
				a														
674.00				b														
	100	100	R3	b	10	3												
				b	30													
				a	70													
				b														
684.00				a														
	99	90	R2	b	10	2												
				b	30													
				b														

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
				b														
694.00				b														
	99	85	R2	a	10	2												
				a	30													
699.00				a														
	99	85	R3	b	10	2					*R	** 702.5 708.8 SPHERULITIC RHYOLITE	a				2	
703.00				a	30								a				2	
	99	85	R3	a	10	2							a				2	
706.00				a	30								a				2	
	100	90	R3	a	10	3					D	** 708.8 726.5 DACITE	a				2	
				a	30								a				1	
				a	70								a				1	
714.00				b									a				1	
	100	100	R3	c	10	3							a				1	
				c	30								a				1	
				c	70								a				1	
				a									a				1	
724.00				a									a				1	
	100	100	R3	b	10	3					W	^^ 726.5 731.5 Wacke, with stringer pyrrhotite	a				1	
				a	40								a				1	1
				a	60								a				1	1
				a									a				1	1
734.00				a							TS	^^ 734.0 740.0 Talcose Sediments, talcose, with sulfides	a	2	1		1	
	100	90	R2	b	10	3							a	2	1		1	
				b	40								a	2	1		1	
				b	60								a	2	1		1	
				b									a		1			
744.00				a									a		1			
	100	90	R2	b	20	3							a		1			
				a	40						SL*	^^ 747.5 749.2 Siltstone, altered with sulfides	a		1			
750.00				a	60								a		1			
	100	90	R3	a	20	3												
				a	40						D	^^ 749.2 795.0 Dacite						
					60													
753.00													a		1			
													a		1			
	99	95	R3	a	20	3							a		1			
				a	40								a		1			
757.00				a	60								a		1			
	100	100	R3	a	20	2							a		1			
													a		1			

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
759.00					40							Note: @ 760.0-765.0 Rock is shattered	a			1			
	99	95	R3	a	20	2							b			5		2	1
761.00					40								b			5		2	1
	90	crush	R3	no data									b			5		2	1
762.00													b			5		2	1
	99	70	R3	a	20	2							b			5		2	1
				a	45						BP	** 765.5 795.0 BEDDED PYRRHOTITE		f			75	10
				a										f			75	10
				b										f			75	10
771.00				a										f			75	10
	100	95	R3	b	15	3								f			75	10
				b	40						gQD	^^ 775.0 777.0 Granophyric Quartz		f			75	10
				b	70							Diorite Dike, coarse-grained, blue		e			50	3
				b								quartz phenocrysts, weakly chilled		e			50	3
781.00				a								margins		e			50	3
	100	95	R3	a	10	3												
				a	30						BPs	^^ 782.0 791.0 Bedded Pyrrhotite, with		e	5		25	30
				b	70							sulfides		e	5		25	30
				a										e	5		25	30
				b										e	5		25	30
791.00														e	5		25	30
	99	90	R3	a	10	3								e	5		25	30
				a	30									f	2		25	30
798.00				a	70						Rl,p	** 795.0 813.0 RHYOLITE LAPILLI TUFF,		f	2		25	30
	100	100	R3	a	10	3						with diseminated pyrrhotite	a					2
801.00				a	30								a					2
					70								a					2
	100	100	R3	a	10	3							a					2
804.00				a	30								a					2
					70								a					2
	98	75	R3	a	20	2							a					2
806.00					40								a					2
	99	75	R3	b	20	2							a					2
809.00				b	40								a					2
	99	50	R3	a	10	2							a					2
812.00				a	30								a					2
	99	85	R3	a	10	3							a					2
815.00				a	30						Rch,p	** 813.0 826.5 RHYOLITE TUFF, cherty,		d	3	3	20	5
					50							occasional weakly bedded pyrrhotite and		d	3	3	20	5
												pyrite						

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
	99	90	R3	a	10	3							d	3	3		20	5
				b	30								d	3	3		20	5
				a	50								d	3	3		20	5
822.00				a									a	1			1	
	100	90	R3	a	10	2							a	1			1	
				b	30						Xp,l	** 826.5 830.0 TUFFITE, bedded pyrrhotite and pyrite	a	1			1	
827.00				a									e	10				40
	99	95	R3	a	10	2					Rt	** 830.0 854.5 RHYOLITE TUFF, black, fine-grained						
				a	30													
834.00				a														
	99	95	R3	a	10	3												
				a	30													
839.00				a	70													
	100	95	R3	a	10	3						Note: .5" quartz vein offset .5" along a small fracture						
				a	30													
846.00				a	50													
	100	100	R3	a	10	3												
849.00				b	30													
					60													
	100	95	R3	a	10	3												
852.00				a	30													
					70						*R	** 854.5 871.0 SPHERULITIC RHYOLITE						
	100	100	R2	a	10	3												
				a	30													
858.00				a	70													
	100	90	R2	a	10	2												
862.00				b	40													
	100	85	R2	b	10	2												
865.00				a	50													
	100	100	R3	a	10	2												
868.00				b	50													
	100	95	R3	b	10	2												
870.00					50						Rt	** 871.0 931.0 RHYOLITE TUFF, black, fine-grained						
	100	95	R3	b	20	2												
872.00					50													
	100	85	R3	a	20	2												
873.00					40													
	99	50	R3	a	10	3												
876.00				a	40													

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
					60													
	99	75	R3	a	10	2												
878.00					40													
	100	85	R3	a	10	2												
881.00				a	40													
	100	90	R3	a	20	2												
				a	40													
				a														
890.00				a														
	99	85	R3	a	20	2												
892.00					40													
	99	85	R3	a	20	2												
896.00				a	40													
	99	70	R3	a	20	3												
898.00					40													
					60													
	99	50	R3	a	20	3												
901.00					40													
					60													
	99	85	R3	a	10	2												
902.00					40													
	98	50	R3	a	10	3												
				a	40													
906.00				a	70													
	100	90	R3	a	10	3												
908.00					40													
					60													
	10	100	R3	a	10	3												
				a	30													
913.00				a	70													
	100	100	R3	a	10	3												
918.00				a	30													
					50								a				1	
	100	100	R3	a	10	3							a				1	
				a	30								a				1	
924.00				a	50								a				1	
	100	100	R3	a	10	3							a				1	
926.00					30								a				1	
					50								a				1	
	100	100	R3	a	10	3							a				1	
													a				1	

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

SULFIDES: % 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
928.00					30							Note: @ 928.0-931.0 Stringer sulfides	a		1		1	
					50								a		1		1	
	100	100	R3	a	10	3							a		1		1	
931.00				a	30						gQD	** 931.0 1004.0 QUARTZ DIORITE,	a		1		1	
					50							Granophyric, blue quartz eyes						
	100	95	R3	a	10	3												
				a	30													
				b	50													
				b														
941.00				b														
	100	100	R3	b	10	3												
				b	30													
947.00				c	50													
	100	100	R3	c	10	3												
				c	30													
				c	50													
				b														
957.00				c														
	100	100	R3	c	20	2												
				c	40													
				c														
				c														
967.00				c														
	100	100	R3	c	10	3												
				c	30													
				b	50													
				b														
977.00				b														
	100	100	R3	b	10	2												
981.00				b	30													
	100	100	R3	b	10	3												
				b	30													
				b	50													
				b														
				b														
994.00				a														
	100	100	R3	a	10	2												
				b	30													
				b														
				a								Note: @ 1002.0-1004.0 Quartz Diorite is finer grained						

ROCK QUALITY:

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

DRILL HOLE: LYN90-45

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

Run	%	RQD	Rf	ABCDE a	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po
1004.00											E.O.H. 1004' (total depth)						

Noranda Exploration Inc.
Eastern Divison

DATE: 12-11-91
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HOLE SURVEY DATA

Footage	Bearing	Inclination
50'	176.8	-61.4
85'	177.0	-61.2
282'	177.0	-61.2

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding
DATE COLLARED: 12-18-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-46 (WDNR # 191)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 12-20-90

BEARING: S178.2E INCLINATION: -60.4 T.D: 282.5'
COORDINATES: L10300 E, 10510 N
ELEV: 1563.1' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 60.0			><< 0.0 60.0 OVERBURDEN	
60.0 65.0	(not recovered)			
65.0 69.0	(HQ core)			
60.0 71.5		pRd	><< 60.0 71.5 RHYOLITE PORPHYRY DIKE	
71.5 161.0		Wq	><< 71.5 161.0 QUARTZ WACKE	
96.0 112.0		pRd	^^ 96.0 112.0 Rhyolite Porphyry Dike	
147.0 151.0		Wq	^^ 147.0 151.0 Quartz Wacke	
161.0 177.2		Wq	><< 161.0 177.2 QUARTZ WACKE	
177.0 177.7		Ch	><< 177.2 177.7 CHERT	
177.7 179.5		pRd	><< 177.7 179.5 RHYOLITE PORPHYRY DIKE	
179.5 190.0		BP	><< 179.5 190.0 BEDDED PYRRHOTITE Note: 179.5-190.0 Possible Fracture Zone	
190.0 198.0		Wq	><< 190.0 198.0 QUARTZ WACKE	
198.0 208.0		BP,l	><< 198.0 208.0 BEDDED PYRRHOTITE, Laminated	

ORIGINAL

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
50'	176.8	-61.4
85'	177.0	-61.2
282'	177.0	-61.2

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding
DATE COLLARED: 12-18-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-46 (WDNR # 191)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 12-20-90

BEARING: S178.2E INCLINATION: -60.4 T.D: 282.5'
COORDINATES: L10300 E, 10510 N
ELEV: 1563.1' SEC: 15 TWP: 37N RANGE: 4E

DATE: 12-11-91
PAGE 1 OF 5

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
202.5 203.7		MS	^^ 202.7 206.0 Massive Sulfide	202.7 206.0 50% Sp
208.0 220.5		TS	><< 208.0 220.5 TALC SEDIMENT	208.0 220.5 5% Sp
220.5 233.5		gQD	><< 220.5 233.5 QUARTZ DIORITE, Granophyric	
233.5 252.5		VCS	><< 233.5 252.5 SANDSTONE	
238.0 242.0		Xz,t	^^ 238.0 242.0 Tuffite, Talcose, Stringery Note: 243.0-247.5 Possible Fracture Zone	238.0 242.0 15% Sp
252.5 266.5		VCS	><< 252.5 266.5 VOLCANCLASTIC SEDIMENT	
266.5 282.5		gQD	><< 266.5 282.5 QUARTZ DIORITE, Granophyric	
			E.O.H. 282.5' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN90-46

SULFIDES: % 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
0.0 60.0												** 0.0 60.0 OVERBURDEN						
												^^ 0.0 30.0 Fine sand						
												^^ 30.0 38.0 Silt, sticky						
												^^ 38.0 60.0 Sand, gravel, and boulders						
											pRd	** 60.0 71.5 RHYOLITE PORPHYRY DIKE						
65.00																		
	90	85	R3	a	30	2												
67.00					50													
	100	100	R3	a	30	2												
68.00					60													
	100	100	R3	a	10	3												
69.00					30													
					70						Wq	** 71.5 161.5 QUARTZ WACKE						
	98	90	R3	a	20	2												
74.00				a	70													
	60	crush	R3	a	30	2												
78.00				a	70													
	60	crush	R3	a	5	3												
				a	40													
				a	70													
86.00				a														
	100	95	R3	a	5	3												
89.00				a	30													
					70													
	100	85	R3	a	10	3												

ROCK QUALITY:

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

DRILL HOLE: LYN90-46

SULFIDES: % 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
91.00				a	30													
					60													
	100	90	R3	a	5	3												
93.50				a	20													
					60													
	99	90	R3	a	5	3												
96.50				a	20						pRd	^^ 96.5 112.0 Rhyolite Porphyry Dike						
					60													
	99	85	R3	a	5	3												
100.00				a	20													
					60													
	100	100	R3	b	20	2												
101.00					60													
	100	100	R3	b	15	3												
103.50				b	40													
					60													
	99	90	R3	a	10	3												
				a	40													
				a	60													
111.00				a														
	100	100	R3	a	10	3												
				a	40													
117.00				a	60													
	100	100	R3	a	10	3												
120.50				a	40													
					60													
	99	95	R3	a	10	3												
124.00				a	40													
					60													
	99	85	R3	a	10	3												
128.00				a	40							Note: @ 127.5-132.0 Core Broken, Fe-stained core						
					60													
	98	85	R3	a	10	3												
132.00				a	30													
					60													
	80	85	R4	a	10	3												
136.00				a	30													
					60													
	98	85	R4	a	15	2												
139.00				a	60													

ROCK QUALITY:

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

DRILL HOLE: LYN90-46

SULFIDES: % 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
	100	100	R3	a	15	3												
144.00				a	30													
					60													
	99	90	R3	a	15	3												
148.00				a	30						Wq	^^ 147.5 151.0 Quartz Wacke						
					50													
	99	85	R3	c	15	2												
152.00				b	50													
	99	85	R3	a	15	2												
				a	30													
158.50				a														
	60	crush	R2	a	15	3												
				a	30						Wq	>< 161.0 177.2 QUARTZ WACKE						
				a	60													
				a														
168.00				a														
	95	crush	R2	b	15	2												
172.00				b	40													
	99	75	R2	b	10	2												
				b	30													
178.00				a														
	99	85	R2	a	10	3					Ch	>< 177.2 177.7 CHERT, greyish white, translucent						
					30													
					60													
											pRd	>< 177.7 179.5 RHYOLITE PORPHYRY DIKE						
											BPs	>< 179.5 190.0 BEDDED PYRRHOTITE, with sulfides	c	5	1			15
													c	5	1			15
180.00													c	5	1			15
												Note: @ 179.0-190.0 Possible fracture zone-carb veinlets, gouge @ 20 degrees to core axis	c	5	1			15
	100	100	R2	a	10	3							c	5	1			15
184.00				a	30								c	5	1			15
					60								c	5	1			15
	98	85	R1	a	10	3							c	5	1			15
				a	30								c	5	1			15
				a	60						Wq	>< 190.0 198.0 QUARTZ WACKE	c	5	1			15
				a														
194.00				a														
	99	90	R2	a	30	2												

ROCK QUALITY:

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

DRILL HOLE: LYN90-46

SULFIDES: % 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
				b	60						BP,l	** 198.0 208.0 BEDDED PYRRHOTITE, laminated	c						25
				c									c						25
				c									c						25
				c							MS	^^ 202.7 206.0 Massive Sulfide		f	30	50			25
204.00														f	30	50			25
	99	90	R2	a	20	2								f	30	50			25
				a	50						TS	** 208.0 220.5 TALC SEDIMENT	c						25
				a									b		4	1			5
211.50				a									b		4	1			5
	99	85	R2	a	20	2						Note: Core broken/shattered with carb-cherty veinlets	b		4	1			5
				a	50								b		4	1			5
				a									b		4	1			5
				a						-25C	gQD	** 220.5 233.5 QUARTZ DIORITE, Granophyric, upper/lower contacts broken, red stained, moderately sheared, blue quartz eyes elongated @ 0-25 degrees to core axis	b		4	1			5
221.00				a															
	100	100	R3	a	15	2													
224.00				a	30														
	99	85	R2	a	15	2													
				a	30														
				a															
				a															
233.00				a						-40F	VCS	** 233.5 252.5 SANDSTONE							
	100	95	R3	a	15	2													
236.00				a	50														
	100	90	R1	a	15	2													
				a	50					-30F	Xz,t	^^ 238.0 242.0 Tuffite, talcose, stringery	c		15				
				a									c		15				
				a									c		15				
244.00										-30F		Note: @ 243.0- 247.5 Fracture zone, core brecciated, with carb-quartz veinlets, sheared							
	100	90	R2	a	15	3													
				a	30														
				a	50														
				a						-40F	Xz,t	^^ 248.0 249.0 Tuffite, talcose, stringery	c		15				
250.00																			
	100	90	R2	a	15	3													
252.50				a	30						VCS	** 252.5 266.5 VOLCANCLASTIC SEDIMENT, moderately sheared 35 degrees to axis							
					50														
	100	90	R3	a	15	3													
255.00				a	30														
					50														
	98	85	R3	a	15	3													

ROCK QUALITY:

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

DRILL HOLE: LYN90-46

SULFIDES: % 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
260.00				a	30													
					50													
	100	100	R2	a	15	2												
261.00					30													
	99	80	R2	a	15	2												
263.50				a	30													
	100	100	R2	a	15	3												
				a	30					-20C	gQD	** 266.5 282.5 QUARTZ DIORITE,						
268.00				a	60							Granophyric, sheared hi-angle upper						
	100	90	R3	a	15	3						contact						
				a	30													
274.00				a	60													
	90	crush	R3	a	15	3												
276.50				a	30													
					60													
	100	95	R3	a	15	3												
				a	30													
282.50				a	60							E.O.H. 282.5' (total depth)						

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
25'	180.8	-58.6
75'	182.3	-57.3
150'	182.7	-57.5
225'	183.5	-57.7
287'	183.5	-57.7

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling
LOGGED BY: J. Schaff/T. Harding
DATE COLLARED: 1-8-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-47 (WDNR #189)

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

BEARING: S181.6E INCLINATION: -58.6 T.D: 287'
COORDINATES: L10100 E, 10608 N
ELEV: 1570.6' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91
PAGE 1 OF 5

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 63.0			** 0.0 63.0 OVERBURDEN	
63.0 69.0	(not recovered)			
63.0 84.0		Rt	** 63.0 84.0 RHYOLITE TUFF	
84.0 94.5		Rt*	** 84.0 94.5 RHYOLITE TUFF, Altered	
94.5 129.0		BM	** 94.5 129.0 BEDDED TO MASSIVE MAGNITITE	
108.5 114.0		Rt*	^^ 108.5 114.0 Rhyolite Tuff, Altered	
129.0 151.5		Sk,em	** 129.0 151.5 CALC-SILICATE ALTERED TUFF	
151.5 194.5		BM	** 151.5 194.5 BEDDED MAGNETITE	
194.5 235.5		Rt	** 194.5 235.5 RHYOLITE TUFF	
205.0 210.0		Rt,t	^^ 205.0 210.0 Rhyolite Tuff, Talcose	
228.5 230.0		pRd	^^ 228.5 230.0 Porphyritic Rhyolite Dike	
235.5 287.0		QD	** 235.5 287.0 QUARTZ DIORITE	
235.5 251.0		gQD	^^ 235.5 251.0 Quartz Diorite, Granophyric	
			E.O.H. 287' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN91-47

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 63.0												** 0.0 63.0 OVERBURDEN								
												^^ 0.0 30.0 Sand								
												^^ 30.0 45.0 Gravel and boulders								
												Note: @ 35.0-55.0 Lost circulation								
												^^ 45.0 60.0 Gravel, loose								
												^^ 60.0 63.0 Cobbles								
											Rt	** 63.0 84.0 RHYOLITE TUFF								
69.00																				
	100	100	R3	b	45	3														
72.00				a	55															
					10															
	100	100	R3	a	45	3														
				a	55															
77.00				a	10															
	100	100	R3	a	20	2														
79.00				a	40															
	100	95	R3	a	10	3														
				a	30						Rt*	** 84.0 94.5 RHYOLITE TUFF, altered								
				a	55															
87.00				a																
	100	100	R3	b	15	3														
				b	35															
				a	75						BM	** 94.5 129.0 BEDDED TO MASSIVE MAGNETITE, with pervasive epidote alteration								
				a																
97.00				a																
	100	100	R3	a	5	3														
				a	30															
				b	65															
				b																
107.00				b							Rt*	^^ 108.5 114.0 RHYOLITE TUFF, altered								
	98	80	R3	a	15	3														
				a	40							Note: @ 108.5-117.5 Core broken,								

ROCK QUALITY:

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

DRILL HOLE: LYN91-47

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	70							possible granophyric dike								
				a																
117.00				b																
	75	95	R3	b	30	2														
121.00				b	45															
	100	100	R3	b	15	2														
				b	40															
127.00				b																
	100	100	R3	b	15	3					Sk,em	** 129.0 151.5 CALC-SILICATE ALTERED TUFF, with epidote, magnetite, garnet								
				b	40															
				b	55															
				a																
137.00				b																
	100	95	R3	b	15	2														
				b	35															
144.00				b																
	99	80	R3	a	30	2														
147.00				a	55															
	100	100	R3	a	15	2														
				b	40															
				a																
				b																
157.00				c																
	100	100	R3	b	20	2														
				b	40															
				a																
				b																
167.00				b																
	100	100	R3	b	20	2						Note: @ 168.0-177.0 Strong bleaching of epidote								
				b	50															
				b																
				b																
177.00				b														1		
	99	90	R3	b	15	2												1		
				a	50													1		
				a														1		
				b														1		
187.00				b														1		
	100	100	R3	b	25	2												1		
				a	45													1		

ROCK QUALITY:

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

DRILL HOLE: LYN91-47

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 1	As	T
				a							Rt	** 194.5 235.5 RHYOLITE TUFF, black, fine-grained								
				a																
197.00				a																
	100	95	R2	a	10	4														
				a	30															
				b	45															
				a	60						Rt,t	^^ 205.0 210.0 Rhyolite Tuff, talcose								
207.00				b																
	100	100	R2	b	25	2														
				b	40															
				b																
				c																
217.00				c																
	99	80	R2	c	30	2														
221.00				b	60															
	99	75	R3	a	30	2														
224.00				a	60															
	99	85	R3	b	10	3														
				a	30						pRd	^^ 228.5 230.0 Porphyritic Rhyolite Dike								
				a	50															
				a																
				a																
				a							gQD	** 235.5 251.0 QUARTZ DIORITE, Granophyric								
237.00				a																
	100	90	R3	a	10	3														
				a	30															
				a	50															
				a																
247.00				a																
	100	100	R3	a	15	2														
				a	60						QD	** 251.0 287.0 MASSIVE QUARTZ DIORITE								
				a																
				a																
257.00				a																
	100	100	R3	a	10	3														
				a	25															
				a	60															
				a																
267.00				a																
	100	95	R3	a	10	2														

ROCK QUALITY:

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

DRILL HOLE: LYN91-47

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	40															
				a																
276.00				b																
	100	100	R3	a	15	2														
				a	60															
				a																
				b																
				a																
287.00				a								E.O.H. 287' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
50'	182.4	-64.3
200'	184.3	-63.7
550'	189.2	-63.1
900'	194.3	-62.1
1308'	196.8	-61.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 1-9-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-48 (WDNR #222)

DATE: 7-18-91
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CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-17-91

BEARING: S182.1E INCLINATION: -63.1 T.D: 1308'
COORDINATES: L9800 E, 12525 N
ELEV: 1558.6' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 50.0			0.0 50.0 OVERBURDEN	
50.0 476.8		R	50.0 476.8 RHYOLITE	
50.0 80.0		Rt	50.0 80.0 Rhyolite Tuff	
80.0 100.0		pR	80.0 100.0 Rhyolite Porphyry	
100.0 145.8		Rf	100.0 145.8 Rhyolite Flow	
145.8 161.7		pR	145.8 161.7 Rhyolite Porphyry	
161.7 246.0		Rf	161.7 246.0 Rhyolite Flow	
246.0 272.5		D	246.0 272.5 Dacite	
272.5 435.0		Rf	272.5 435.0 Rhyolite Flow	
435.0 459.5		pR	435.0 459.5 Rhyolite Porphyry	
459.5 476.8		LWf	459.0 476.8 Lapilli Wacke (Feldspathic)	
476.8 662.0		D	476.8 662.0 DACITE	
517.0 522.8		pR	517.0 522.8 Rhyolite Porphyry	
522.8 524.0		Rf	522.8 524.0 Rhyolite Flow	
622.0 716.0		R	662.0 716.0 RHYOLITE	
662.0 669.0		FW	662.0 669.0 Feldspathic Wacke	
669.0 716.0		Rlc	669.0 716.0 Lapilli Crystal Tuff	
716.0 729.0		D	716.0 729.0 DACITE	
729.0 733.7		IR	729.0 733.7 INTRUSIVE RHYOLITE	
733.7 789.5		D	733.7 789.5 DACITE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
50'	182.4	-64.3
200'	184.3	-63.7
550'	189.2	-63.1
900'	194.3	-62.1
1308'	196.8	-61.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 1-9-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-48 (WDNR #222)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-17-91

BEARING: S182.1E INCLINATION: -63.1 T.D: 1308'
COORDINATES: L9800 E, 12525 N
ELEV: 1558.6' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
754.0 758.0		Rlc	^^ 754.0 758.0 Lapilli Crystal Tuff	
789.5 795.5		FW	>< 789.5 795.5 FELDSPATHIC WACKE	
795.5 858.5		SS	>< 795.5 858.5 SANDSTONE	
822.3 826.0		pR	^^ 822.3 826.0 Rhyolite Porphyry	
858.5 893.0		R	>< 858.5 893.0 RHYOLITE	
858.5 882.5		Rlc	^^ 858.5 882.5 Lapilli Crystal Tuff	
882.5 893.0		QFW	^^ 882.5 893.0 Quartz Feldspathic Wacke	
893.0 923.0		SL	>< 893.0 923.0 SILTSTONE	
918.0 923.0		SLm	^^ 918.0 923.0 Siltstone With Magnetite	
923.0 993.0		R	>< 923.0 993.0 RHYOLITE	
923.0 954.0		Rt	^^ 923.0 993.0 Rhyolite Tuff	
954.0 976.5		Rf	^^ 954.0 976.5 Rhyolite Flow	
976.5 993.0		Rc	^^ 976.5 993.0 Crystal Tuff	
993.0 1012.4		SL*p	>< 993.0 1012.4 SILTSTONE, Diopside Alteration, With Pyrrhotite & Pyrite	993.0 1012.4 10% Pyrrhotite & Pyrite
1012.4 1019.2		BFpo	>< 1012.4 1019.2 BEDDED TO MASSIVE PYRITE	1012.4 1019.2 70% Pyrrhotite & Pyrite

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
50'	182.4	-64.3
200'	184.3	-63.7
550'	189.2	-63.1
900'	194.3	-62.1
1308'	196.8	-61.5

PROJECT: ILYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 1-9-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-48 (WDNR #222)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-17-91

BEARING: S182.1E INCLINATION: -63.1 T.D: 1308'
COORDINATES: L9800 E, 12525 N
ELEV: 1558.6' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91
PAGE 1 OF 19

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
1019.2 1035.2		CSp	1019.2 1035.2 CALCAREOUS SEDIMENT	1019.2 1035.2 10% Po, Py
1035.2 1050.5		SLmp	1035.2 1050.5 SILTSTONE, With Magnetite & Pyrrhotite	
1050.5 1054.3		MS	1050.5 1054.3 MASSIVE SULFIDE	1050.5 1054.3 70% Sp, 10% Ga
1054.3 1089.3		CS,TS	1054.3 1089.3 CALCAREOUS AND TALCOSE SEDIMENTS, Alternating	1054.3 1089.3 5-10% Po, Py
1089.3 1097.7		SL	1089.3 1097.7 SILTSTONE	
1097.7 1130.0		TS	1097.7 1130.0 TALCOSE SEDIMENT	
1130.0 1147.0		SL,W?	1130.0 1147.0 SILTSTONE, WACKE	
1147.0 1152.8		ChT	1147.0 1152.8 CHERTY, CHLORITIC TUFF	
1152.8 1154.5		BPpy	1152.8 1154.5 BEDDED PYRRHOTITE, With Pyrite	
1154.5 1162.0		SL	1154.5 1162.0 SILTSTONE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
50'	182.4	-64.3
200'	184.3	-63.7
550'	189.2	-63.1
900'	194.3	-62.1
1308'	196.8	-61.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 1-9-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-48 (WDNR #222)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-17-91

BEARING: S182.1E INCLINATION: -63.1 T.D: 1308'
COORDINATES: L9800 E, 12525 N
ELEV: 1558.6' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
1162.0 1164.0		MS	** 1162.0 1164.0 MASSIVE SULFIDE	
1164.0 1169.5		CS	** 1164.0 1169.5 CALCAREOUS SEDIMENT	
1169.5 1175.0		MPpy	** 1169.5 1175.0 SEMI-MASSIVE PYRRHOTITE/PYRITE	
1175.0 1192.7		QW	** 1175.0 1192.7 QUARTZ WACKE	
1192.7 1308.0		QD	** 1192.7 1308.0 QUARTZ DIORITE	
			E.O.H. 1308' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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
1.0 50.0											** 0.0 50.0 OVERBURDEN								
										Rt	** 50.0 80.6 RHYOLITE TUFF, lt. grey, fine-grained, "felsite"								
								2.71			Note: @ 56.0-63.0 Crystal-rich interval								
								2.75			Note: @ 68.0-79.0 Reddish alteration and core broken								
								2.78		pR	** 80.6 100.0 RHYOLITE PORPHYRY, blue quartz eyes, Fe-staining along fractures								
								2.76											
										RF	** 100.0 145.8 RHYOLITE FLOW ?, lt. grey, glassy, fine-grained rhyolite tuff. Embayed clasts of pR and other lithics, clasts increase toward base								
									-40F		Note: @ 106.0-111.0 Fracture zone, Fe-staining and carb-chlorite along fractures								

DRILL HOLE: LYN91-48

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
								2.76											
									-70	pRd	** 145.8 161.7 RHYOLITE PORPHYRY, blue quartz eyes, Fe-staining, sharp lower contact but gradational upper contact-sheared								
								2.70											
									-35F										
									-25F										
									-30C	RF	** 161.7 246.0 RHYOLITE FLOW, Chaotic, lt. grey, fine-grained, "glassy" matrix, with black plag-phyric stretched clasts and very fragmental "porcelainite" zone								
										Md	^^ 161.7 164.0 Mafic Dike								
											Note: @ 100.0-178.7 Flow, with large (~6") porcelainite clasts at base								
											Note: @ 178.7-246.0 Flow, fragmented top, with increasing clasts toward base. Predominantly black plag-phyric and porphyry rhyolite clasts. Dark rock.								
									-35F										

DRILL HOLE: LYN91-48

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
									-45C	Md	^^ 238.2 241.0 Mafic Dike								
									-25C										
										Dd	** 246.0 272.5 DACITE DIKE ?, dark grey, fine-grained, dense, broken upper contact, contains possible blocks of country rock at base								
										RF	** 272.5 435.0 RHYOLITE FLOWS, (looks like Rl,ch in NWMA skeleton), lt. grey, with fine-grained "glassy" intervals, and shards at top; appears laminated toward base								

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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: @ 272.5-297.0 One flow, fragment top, becoming coarser and more banded, predominatly black plag-phyric fragments								
											Note: @ 297.0-340.5 Fragment, pinkish top to 319.0, then lapilli tuff, with beige & dark grey subrounded clasts (~1") mixed lilthology, to 337, then big (2-4") clasts, broken								
											Note: @ 337.5-342.0 Flow top with shards								
											Note: @ 340.5-435.0 Flow								
											Note: @ 345.0 6" Basalt ? Dike @ 10 degrees to core axis								
										FZ	><< 346.0 381.0 FAULT ZONE/FRACTURE ZONE FRACTURE ZONE								
									-15		Note: @ 346.0-381.0 Carb-filled fractures with fault breccia, rock is								

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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
											granophyric, Fe-stained								
									-10F										
									-20F										
									-20F										
									-20F										
										R1	** 395.0 435.0 LAPILLI-RICH BASE, grey, medium-grained matrix, with clasts up to 6mm								
											Note: @ 340.5-415.0 Flow, with fragment top, lapilli-rich base, @ 415.0 435.0 flow with fragment top, lapilli-rich base								

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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
										pR	** 435.0 459.5 RHYOLITE PORPHYRY, plag-phyric, with blue quartz eyes. Crystals ~ 1mm in size, dark grey matrix							
										RF	** 459.5 476.8 RHYOLITE FLOW								
								2.68			Note: @ 459.5-466.0 Fragment, lt. grey, flow top, @ 446.0-476.8 Feldspathic Wacke with sericite bleached pR clasts @ 471.8-473.0								
									-40C	D	** 476.8 517.0 DACITE ?, dark grey, fine-grained								
								2.74											
								2.80			^^ 491.6 495.5 Epidote (bleached) alteration								
								2.80											
								2.93	-50C		Note: @ 510.7 516.0 DACITE, medium-grained, low-angle lower contact,								

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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
								2.94			sheared upper contact with carb veinlets								
									-70C										
										pR	** 517.0 522.8 PORPHYRY RHYOLITE, medium-grained, blue-quartz eyes, sheared lower contact								
								2.75											
									-30C	RF	** 522.8 662.0 RHYOLITE FLOW								
									-20C	D	** 524.0 666.8 DACITE								
										FZ	^^ 532.0 546.0 Fracture Zone, carb-chlorite filled fractures								
								2.84											
								2.88											

DRILL HOLE: LYN91-48

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
								2.85											
								2.82											
								2.80											
										pR	** 662.0 716.0 RHYOLITE PORPHYRY								
										FW	^^ 662.0 669.0 WACKE, feldspathic								

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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
										Rcl	^^ 669.0 716.0 Rhyolite Crystal Lapilli Tuff								
								2.80											
								2.72											
								2.64											
									-40	Md	^^ 702.2 706.9 Mafic Dike, fractured								
								2.81											
									-40										
								2.69	-80	D	>< 716.0 729.0 DACITE, dark grey, fine-grained, scattered plag veinlets, upper contact has slight chill zone								
								2.76											
									-40C	gIR	>< 729.0 733.7 GRANOPHYRIC INTRUSIVE RHYOLITE								
									-60C	D	>< 733.7 789.5 DACITE, dark grey, fine-grained								
								2.75											

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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
									-50C										
								2.60		Rcl	^^ 754.0 758.0 Rhyolite Crystal Lapilli Tuff								
								2.78											
								2.75											
									-70C	W	** 789.5 795.5 WACKE, feldspathic sheared lower contact								
									-45C	SS	** 795.5 858.5 SANDSTONE, dark grey, fine-to-medium grained								
											Note: @ 797.0-800.0 Fragment top alternating bleached/nonbleached beds-1 1/2" thick. Epidote & chlorite (and possible kspar) alteration along fractures								
											Note: @ 811.0-817.0 Disseminated pyrite, pyrrhotite	a a a a			.5 .5 .5 .5	.5 .5 .5 .5			1 1 1 1
									-80C	pR	^^ 822.3 826.0 Rhyolite Porphyry Flow or Sill, upper and lower contacts flat								

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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 -80C	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
										Rcl	** 858.5 882.5 RHYOLITE CRYSTAL LAPILLI TUFF, black and white crystal rich matrix, with cherty and porphyrytic rhyolite clasts (Lynne Rhyolite), clasts size and frequency increase toward base								
										QW	** 882.5 893.0 FELDSPATHIC QUARTZ WACKE, patchy epidote alteration with patchy plag veinlets, blue quartz eyes								
											Note: @ 891.0-893.0, @ 897.0-1002.0, laminations								
									-50L	SLlm	** 893.0 923.0 SILTSTONE, with altered dark green and laminated cherty intervals								
									-50L										

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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
									-40L										
										Wmt	^^ 918.0 923.0 WACKE, with magnetite, talcose, with (plag) beds and chlorite crystal								
										Rch	** 923.0 954.0 RHYOLITE TUFF, cherty, (or silicified)								
											Note: @ 954.0 2" of possible flow-top breccia-clast-rich oxidized layer								
										RF	** 954.0 976.5 RHYOLITE FLOW, Chert, Lynne Rhyolite (black, white), with plag crystals, with cherty interbeds								
971.50																			
	99	85	R3	c	5	2													
974.50				b	30														
	99	crush	R3																
975.00										Rc	** 976.0 993.0 RHYOLITE CRYSTAL TUFF,								

DRILL HOLE: LYN91-48

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
	99	90	R3	b	10	2						with blue quartz eyes and plag laths									
				b	25																
				c																	
				c																	
985.00				b																	
	99	90	R3	a	10	2															
				a	30																
				a																	
				b							SL	** 993.0 1012.4 SILTSTONE, fine-grained,	b				3	7		10
995.00				b								with laminated pyrrhotite and pyrite,	b				3	7		10
	99	95	R3	c	15	2						and diopside alteration	b				3	7		10
				c	30								b				3	7		10
				b									b				3	7		10
				c									b				3	7		10
1005.00				c									b				3	7		10
	100	95	R3	b	10	2							b				3	7		10
				c	30								b				3	7		10
				c							BP,po	** 1012.4 1019.2 BEDDED TO MASSIVE PYRITE,	b				3	7		10
				c								with pyrrhotite and with splashes (< 5%)		f			60	10		70
				c								black chlorite		f			60	10		70
1017.00				c										f			60	10		70
	100	100	R3	c	30	1					CSp	** 1019.2 1035.2 CALCAREOUS SEDIMENT, with		f			60	10		70
				d								pyrite and pyrrhotite	c				10	5		15
				d									c				10	5		15
				d									c				10	5		15
1027.00				d							CS	^^ 1027.0 1035.2 Calcareous Sediment, with	c				10	5		15
	100	100	R3	d	20	1						diopside, pyrrhotite, pyrite, and magne-	b				7	3		10
				d								tite	b				7	3		10
				d									b				7	3		10
				c							SLlmp	** 1035.2 1050.5 SILTSTONE, laminated,	b				7	3		10
1037.00				c								with magnetite	b				5	5		10
	100	90	R3	b	10	2							b				5	5		10
1041.50				b	30																
	100	95	R3	b	10	2															
				c	30																
1047.00				c							BP	^^ 1047.5 1050.5 Bedded Pyrrhotite,	d				8	17		25
												laminated, with talcose intervals	d				8	17		25
													d				8	17		25
	100	100	R2	c	10	3					MS	** 1050.5 1054.3 MASSIVE SULFIDE	d				8	17		25
				b	30									f	70		10			80

DRILL HOLE: LYN91-48

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
				c	60							** 1054.3 1056.5 TALCOSE SEDIMENT, with laminated pyrite	f	70		10				80
													c				25			25
													c				25			25
				c							CS,TS	** 1056.5 1089.3 ALTERNATING CALCAREOUS & TALCOSE SEDIMENTS	c				25			25
1057.00				c									a				1	4		5
	100	100	R2	c	10	2							a				1	4		5
				c	30							Note: @ 1062.0-1072.5 Talcose sediment, with pyrrhotite and pyrite	a				1	4		5
				c									b				3	5		8
1066.00				c									b				3	5		8
	99	90	R2	c	30	2							b				3	5		8
				c	60								b				3	5		8
				c									b				3	5		8
				c									a				1	1		
1076.00				c									a				1	1		
	100	95	R2	b	10	2						Note: @ 1078.0-1084.0 Talcose sediment, with pyrite and pyrrhotite	a				1	1		
				c	40								b	5			4	2		11
				b									b	5			4	2		11
				a									b	5			4	2		11
				b																
1087.00				b								Note: @ 1087.3-1089.3 Talcose, with pyrite								
	100	95	R2	a	40	1														
1089.00													b	3	1		3			7
											SL	** 1089.3 1097.7 SILTSTONE, occasionally laminated	a				1	1		2
	100	100	R3	b	10	2							a				1	1		2
				b	40								a				1	1		2
				b									a				1	1		2
1097.00				b									a				1	1		2
	100	100	R2	b	10	2					TS	** 1097.7 1130.0 TALCOSE SEDIMENT, (black chlorite) throughout	a				1	1		2
1099.00					40															
	99	90	R2	b	10	2						Note: @ 1101.0-1103.0 8% Sphalerite	b	8			2			10
				b	40								c				10	2		12
				b									b	6			1	1		8
1107.00				b									a				1			
	100	75	R2	b	10	2										1				
1107.80					40											1				
	99	80	R2	b	10	2										1				
				a	40											1				
				a												1				
				b								Note: @ 1116.0-1118.0 5% Sphalerite	c				12			12
1117.00				c									b	5			2	1		8

DRILL HOLE: LYN91-48

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
	99	95	R2	c	10	2														
				c	30															
				c								Note: @ 1123.0-1126.8 Blotchy pyrite	c				20	5	25
				c									c				20	5	25
1126.00											Xz,tp	^^ 1126.8 1130.0 Tuffite, talcose,	c				20	5	25
	100	100	R2	c	30	1						stringery, with pyrite	c	10		3	5	2	20
1127.00													c	10		3	5	2	20
	100	95	R2	b	10	2					SL,W	** 1130.0 1147.0 SILTSTONE/WACKE	c	10		3	5	2	20
				b	30															
				b																
1135.50				b																
	100	100	R3	a	10	2														
1137.00					30															
	100	100	R3	a	10	2														
				a	30															
				a																
1145.00				a																
	100	100	R3	a	10	2														
1147.00					30							** 1147.0 1152.8 CHERTY, CHLORITIC TUFF								
	98	75	R2	a	10	2														
1150.00					30															
	98	80	R2	a	10	2					BP,py	** 1152.8 1154.5 BEDDED PYRRHOTITE, with								
				a	30							pyrite	e				10	45	55
													e				10	45	55
1153.00													e				10	45	55
	100	95	R2	b	10	2					SL	** 1154.5 1162.0 SILTSTONE, with black	e				10	45	55
1157.00				b	30							chlorite, pyrrhotite	c	2			2	8	12
	99	80	R2	b	10	2							c	2			2	8	12
				c	30								c	2			2	8	12
				c							MS	** 1162.0 1164.0 MASSIVE SULFIDE	c	2			2	8	12
1163.00													e	40		5			45
	100	100	R2	c	10	2					CS	** 1164.0 1169.5 CALCAREOUS SEDIMENTS	e	40		5			45
1167.00				c	30								b	2					2
	100	100	R2	b	10	2							b	2					2
				c	30								b	2					2
1172.50				c							MPpy	** 1169.5 1175.0 SEMI-MASSIVE PYRRHOTITE	b	2					2
	100	100	R3	c	10	2						AND PYRITE							
				b	30						QW	** 1175.0 1192.7 QUARTZ WACKE							
1177.00																			
	100	95	R3	b	10	2													

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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	50															
				c																
				b																
1187.00				b																
	100	95	R3	b	10	2														
				a	50						QD	>< 1192.7 1308.0 QUARTZ DIORITE								
				b																
				c																
1197.00				c																
	100	100	R3	c	15	3														
				c	30															
				c	50															
				c																
1207.00				c																
	100	100	R3	c	15	3														
				c	30															
				c	50															
				b																
1217.00				c																

ROCK QUALITY:

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

DRILL HOLE: LYN91-48

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 1308' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
25'	178.6	-58.0
100'	176.2	-57.9
200'	176.8	-58.3
300'	176.7	-58.7
399'	176.8	-58.6

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 1-10-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-49 (WDNR #190)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-12-91

BEARING: S178.6E INCLINATION: -58 T.D: 399'
COORDINATES: L10100 E, 10720 N
ELEV: 1566.2' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91
PAGE 1 OF 6

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 58.0			0.0 58.0 OVERBURDEN	
58.0 73.0		Rt	58.0 73.0 RHYOLITE TUFF	
67.0 73.0		Rt	67.0 73.0 Rhyolite Tuff, Epidote Alteration	
73.0 120.0		BPm	73.0 120.0 BEDDED PYRRHOTITE/MAGNETITE TUFF	
120.0 131.0		Sk	120.0 131.0 CALC-SILICATE ALTERED TUFF	
131.0 144.5		BPz,ca	131.0 144.5 BEDDED PYRRHOTITE TUFF	
144.5 160.5		BP	144.5 160.5 BEDDED PYRRHOTITE TUFF, Diopside Alteration	
160.5 181.0		X	160.5 181.0 TUFFITE, Diopside Alteration	
181.0 189.5		CS,c	181.0 189.5 CALCAREOUS SEDIMENT	
189.5 205.5		BP,p	189.5 205.5 BEDDED PYRRHOTITE	
205.5 228.0		Xp	205.5 228.0 TUFFITE, With Amber Sphalerite	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
25'	178.6	-58.0
100'	176.2	-57.9
200'	176.8	-58.3
300'	176.7	-58.7
399'	176.8	-58.6

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 1-10-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-49 (WDNR #190)

DATE: 7-18-91
PAGE 1 OF 6

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-12-91

BEARING: S178.6E INCLINATION: -58 T.D: 399'
COORDINATES: L10100 E, 10720 N
ELEV: 1566.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
228.0 305.0		MSPch	>< 228.0 305.0 MASSIVE SULFIDE, Cherty	
305.0 309.0		sRt,t	>< 305.0 309.0 RHYOLITE TUFF, Talcose	
309.0 332.5		XPb	>< 309.0 332.5 TUFFITE, Pyrrhotite-rich	
332.5 336.0		QD	>< 332.5 399.0 QUARTZ DIORITE	
336.0 399.0		gQD	^^ 332.5 336.0 Quartz Diorite, Granophyric	
			E.O.H. 399' (total depth)	

DRILL HOLE: LYN91-49

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
0.0 58.0											** 0.0 58.0 OVERBURDEN								
											^^ 0.0 20.0 Fine sand								
											^^ 20.0 40.0 Sand, gravel, and boulders								
											^^ 40.0 50.0 Sand and gravel								
											^^ 50.0 58.0 Sand, gravel, and boulders								
											Note: @ 59.0 Lost circulation								
										Rt	** 58.0 73.0 RHYOLITE TUFF, black to dark green, fine-grained								
64.0																			
	100	100	R3	a 5	2														
67.0				a 20						Rt	^^ 67.0 73.0 Rhyolite Tuff, medium green, fine-grained, epidote alteration	a				5		5
	99	100	R3	b 5	3							a				5		5
				b 20								a				5		5
73.0				b 40						BPm	** 73.0 120.0 BEDDED PYRRHOTITE-MAGNETITE TUFF	a				5		5
	100	100	R3	a 30	2							a				5		5
				b 60								a				5		5
				c								a				5		5
				c								a				5		5
83.0				b								a				5		5
	100	100	R3	b 15	2							a				5		5
87.0				b 35								a				5		5
	100	100	R3	a 25	2							a				5		5
				a 65								a				5		5
				c								a				5		5
				c								a				5		5
97.0				b								a				5		5
	99	100	R3	c 10	3							a				5		5
				c 30								b	1			5		6
				b 60								b	1			5		6
				b								b	1			5		6
107.0				b								b	1			5		6
	100	100	R3	b 10	2							b	1			5		6
				b 30								a				5		5
												a				5		5

ROCK QUALITY:

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

DRILL HOLE: LYN91-49

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								a					5		5
				a								a					5		5
117.0				b								a					5		5
	99	100	R2	b	10	2				Sk	** 120.0 131.0 CALC-SILICATE ALTERED TUFF, with garnets								
				b	25														
				a															
				a															
127.0				a															
	100	100	R2	a	5	2													
				a	25					BPz,ca	** 131.0 144.5 BEDDED PYRRHOTITE TUFF, with carbonate alteration	c	1				15		16
				c								c	1				15		16
				c								c	1				15		16
137.0				c															
	100	100	R3	b	5	3						c					15		15
				b	20							c					15		15
				a	65					BP	** 144.5 160.5 BEDDED PYRRHOTITE TUFF, strong doipside alteration, calcite crystals developed along open fractures	c					15		15
				a								c					15		15
148.0				a								b					6		6
	100	100	R3	a	10	3						b					6		6
				a	45							b					6		6
				a	65							b					6		6
				a								b					6		6
157.0				a								b					6		6
	100	95	R3	a	10	2				X	** 160.5 181.0 TUFFITE, strong diopside alteration	b					6		6
				a	45							b					6		6
				b								c	15						15
				b								c	15						15
167.0				c								c	15						15
	100	100	R3	b	10	2						c	15						15
				a	45							c	15						15
				a								c	15						15
				a								c	15						15
177.0				a								c	15						15
	100	95	R3	b	10	3						c	15						15
				b	45							c	15						15
				a	65					CS,c	** 181.0 189.5 CALCAREOUS SEDIMENT, contorted bedding or anhealed breccia fragments, occassional bladed, tremolite (?) crystals	c	15						15
				a								a	3				1		4
187.0				a								a	3				1		4
												a	3				1		4
	99	95	R3	a	15	3				BP,p	** 189.5 205.5 BEDDED PYRRHOTITE, with	c	5	1			5		11

ROCK QUALITY:

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

DRILL HOLE: LYN91-49

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	50							sphalerite and chalcopyrite	c	5	1			5		11
				a	80								c	5	1			5		11
195.0				a									c	5	1			5		11
	100	95	R3	a	40	2							c	5	1			5		11
197.0					70								c	5	1			5		11
	100	100	R3	a	45	2							c	5	1			5		11
				a	75								c	5	1			5		11
205.5				a							Xp	** 205.5 228.0 TUFFITE, with minor amount of amber sphalerite	c	5	1			5		11
	99	80	R2	a	5	3							d	22				5		27
				a	30								d	22				5		27
				b	45								d	22				5		27
				b									d	22				5		27
215.0				c									d	22				5		27
	100	100	R2	b	85	1							d	22				5		27
217.0													d	22				5		27
	99	95	R2	c	10	2							d	22				5		27
				b	45								d	22				5		27
				c									d	22				5		27
				c									d	22				5		27
227.0				c							MSPch	** 228.0 305.0 MASSIVE SULFIDE, cherty	d	22				5		27
	100	95	R3	c	20	2							f	30	15			23		68
				c	45								f	30	15			23		68
				c									f	30	15			23		68
				d									f	30	15			23		68
237.0				b									f	30	15			23		68
	100	100	R3	c	65	1							f	30	15			23		68
				d									f	30	15			23		68
				d									f	30	15			23		68
				d									f	30	15			23		68
247.0				c									f	30	15			23		68
	100	95	R3	b	45	1							f	30	15			23		68
251.0				c									f	30	15			23		68
	99	100	R3	c	60	1							f	30	15			23		68
251.9													f	30	15			23		68
	99	95	R3	c	70	1							f	30	15			23		68
				c									f	30	15			23		68
257.0				c									f	30	15			23		68
	100	95	R3	c	35	2							f	30	15			23		68
				c	70								e	25	11			20		56
				c									e	25	11			20		56
													e	25	11			20		56

ROCK QUALITY:

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

DRILL HOLE: LYN91-49

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	
				c									e	25	11			20		56	
267.0				c																	
	100	95	R2	c	45	2							e				60.			60	
				c	70								e	17	15			20		52	
				c									e	17	15			20		52	
				c									e	17	15			20		52	
277.0				b									e	17	15			20		52	
	100	100	R3	c	10	3							e	17	15			20		52	
				b	45							Note: @ 281.0-283.0 Zone barren of sulfides	e	17	15			20		52	
				c	70																
				c									e		30			12		42	
287.0				c									f	60		3		5		68	
	100	95	R2	d	50	1							f	60		3		5		68	
				d									f	40		3		25		68	
				c									f	40		3		25		68	
				d									f	40		3		25		68	
297.0				c									f	40		3		25		68	
	99	90	R2	a	15	2							f	40		3		25		68	
				c	45								f	40		3		25		68	
				c									f	40		3		25		68	
				c									f	40		3		25		68	
											sRt,t	** 305.0 309.0 RHYOLITE TUFF, talcose, weakly sheared	f	40		3		25		68	
307.0				a																	
	100	95	R2	c	40	1					XPb	** 309.0 332.5 TUFFITE, pyrrhotite-rich, sulfides bedded	d	9	4	1		13		27	x
				c									d	9	4	1		13		27	x
				c									d	9	4	1		13		27	
				b									d	9	4	1		13		27	
317.0				c								Note: @ 318.5 323.0 Zone barren of sulfides	d	9	4	1		13		27	
	99	100	R3	c	5	2															
				c	50																
323.0				c									d	9	4	1		13		27	
	100	100	R2	c	5	2							d	9	4	1		13		27	
327.0				c	40								d	9	4	1		13		27	
	99	100	R2	c	5	2							d	9	4	1		13		27	
				c	50						gQD	** 332.5 336.0 QUARTZ DIORITE, granophyric	d	9	4	1		13		27	
				c									d	9	4	1		13		27	
				c																	
336.0											QD	** 336.0 399.1 MASSIVE QUARTZ DIORITE									
	100	100	R3	c	5	3															
				c	25																

ROCK QUALITY:

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

DRILL HOLE: LYN91-49

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
				c	60															
				c																
346.0				c																
	100	100	R3	a	10	3														
347.0					25															
					60															
	98	95	R3	b	5	2														
349.0					60															
	100	100	R3	b	15	3														
				c	40															
355.0				c	60															
	100	100	R3	b	20	2														
				c	40															
				b																
				b																
365.0				b																
	100	100	R3	c	5	2														
				c	30															
				c																
372.0				b																
	99	100	R3	b	5	2														
375.0				b	30															
	100	100	R3	a	20	2														
				b	40															
				b																
383.0				b																
	100	100	R3	b	20	2														
387.0				b	40															
	100	100	R3	a	20	2														
389.0					40															
	100	100	R3	b	20	2														
390.1					40															
	100	100	R3	c	20	2														
				b	40															
				c																
397.0				c																
	100	100	R3	c	20	2														
399.1					40							E.O.H. 399.1' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	180.7	-55.2
200'	181.5	-55.1
300'	180.9	-55.5
400'	181.0	-55.4
523'	181.0	-55.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 1-12-90
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-50 (WDNR #192)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-14-91

DATE: 7-18-91
PAGE 1 OF 9

BEARING: S179.8E INCLINATION: -56.2 T.D: 523'
COORDINATES: L10100 E, 10830 N
ELEV: 1563.8' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 57.0			>< 0.0 57.0 OVERBURDEN	
57.0 67.0	(not recovered) (No HQ core)			
67.0 75.5		BPM	>< 67.0 75.5 BEDDED PYRRHOTITE-MAGNETITE TUFF	
75.5 92.5		MSp,ca	>< 75.5 92.5 CALCAREOUS MASSIVE SULFIDE	
92.5 116.0		Xb,ca	>< 92.5 116.0 BEDDED, CALCAREOUS TUFFITE	
102.0 103.0		pRd	^^ 102.0 103.0 Porphyritic Rhyolite Dike	
116.0 148.0		Xb	>< 116.0 148.0 PYRITIC TUFFITE	
148.0 159.0		ChC,ca	>< 148.0 159.0 INTERBEDDED CHERT, And Diopside Rich Ash	
159.0 180.0		Xch,b	>< 159.0 180.0 CHERTY TUFFITE	
180.0 265.5		Xca,c	>< 180.0 265.5 CALCAREOUS TUFFITE	
202.0 211.0		Dd	^^ 202.0 211.0 Dacite Dike	
265.5 283.0		MS	>< 265.5 283.0 MASSIVE SULFIDE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	180.7	-55.2
200'	181.5	-55.1
300'	180.9	-55.5
400'	181.0	-55.4
523'	181.0	-55.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 1-12-90
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-50 (WDNR #192)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-14-91

BEARING: S179.8E INCLINATION: -56.2 T.D: 523'
COORDINATES: L10100 E, 10830 N
ELEV: 1563.8' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91
PAGE 1 OF 9

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
283.0 327.5		MSca,c	** 283.0 327.5 CALCAREOUS MASSIVE SULFIDE	
327.5 340.0		BP	** 327.5 340.0 BEDDED PYRRHOTITE TUFF	
340.0 386.0		MSb,p	** 340.0 386.0 BEDDED MASSIVE SULFIDE, Cherty	
349.0 355.0		Xch,b,p	^^ 349.0 355.0 Bedded Tuffite, Cherty	
355.0 358.0		Md	^^ 355.0 358.0 Mafic Dike	
386.0 397.0		ChP	** 386.0 397.0 BEDDED PYRRHOTITE TUFF, Cherty	
391.0 392.5		Md	^^ 391.0 392.5 Mafic Dike	
395.0 397.0		Md	^^ 395.0 397.0 Mafic Dike	
397.0 523.0		QD	** 397.0 523.0 QUARTZ DIORITE	
397.0 400.0		gQD	^^ 397.0 400.0 Quartz Diorite, Granophyric	
409.0 428.0		Md	^^ 409.0 428.0 Mafic Dike	
458.0 471.5		Md	^^ 458.0 471.5 Mafic Dike	
479.0 489.0		Md	^^ 479.0 489.0 Mafic Dike	
509.5 513.5		Md	^^ 509.5 513.5 Mafic Dike	
			E.O.H. 523' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN91-50

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	c		1			11		12
													c		1			11		12
												^^ 0.0 25.0 Sand	c		1			11		12
													c		1			11		12
												^^ 25.0 40.0 Sand and gravel	c		1			11		12
													c		1			11		12
												^^ 40.0 57.0 Sand, gravel, and cobbles	c		1			11		12
													c		1			11		12
												Note: @ 60.0-62.0 Cavedn; lost circulation	c		1			11		12
													c		1			11		12
													c		1			11		12
													c		1			11		12
													c		1			11		12
													c		1			11		12
											BPM	** 57.0 75.5 BEDDED PYRRHOTITE-	c		1			11		12
												MAGNETITE TUFF	c		1			11		12
													c		1			11		12
													c		1			11		12
													c		1			11		12
67.00													c		1			11		12
	100	100	R3	c	40	1							c		1			11		12
				c									c		1			11		12
				c									c		1			11		12
				c									c		1			11		12
				c							MSp,ca	** 75.5 92.5 CALCAREOUS MASSIVE SULFIDE	c		1			11		12
77.00				a									d	32	1			6		39
	100	100	R3	c	5	2							d	32	1			6		39
				a	25								d	32	1			6		39
				b									d	32	1			6		39
				b									d	32	1			6		39
				b																
87.00													c		3			12		15
	100	100	R3	b	20	1							c		3			12		15
				b							Xb,ca	** 92.5 116.0 BEDDED CALCAREOUS TUFFITE,	c		3			12		15
				b								with amber sphalerite	c		3			12		15
96.00				c									d	23				4		27
	100	95	R3	c	40	1							d	23				4		27
				c									d	23				4		27
				b							pRd	^^ 102.0 103.0 Porphyritic Rhyolite Dike	d	23				4		27
				b									d	23				4		27
106.00				b									d	23				4		27

ROCK QUALITY:

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

DRILL HOLE: LYN91-50

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	b	5	2								d	23				4		27
				c	40									d	23				4		27
				b										d	23				4		27
				b										d	23				4		27
116.00				c							Xb	** 116.0 148.0 PYRITIC TUFFITE, weakly bedded		f	21			70	1		92
	100	100	R2	b	5	2								f	21			70	1		92
				b	50									f	21			70	1		92
				a										f	21			70	1		92
				c										f	21			70	1		92
126.00				c										f	21			70	1		92
	100	100	R3	c	20	2								f	21			70	1		92
				c	60									f	21			70	1		92
				c										f	21			70	1		92
				a										f	21			70	1		92
136.00				b										f	21			70	1		92
	100	100	R2	c	20	2								f	21			70	1		92
				c	50									f	21			70	1		92
				c										f	21			70	1		92
				c										f	21			70	1		92
146.00				c										f	21			70	1		92
	100	100	R2	c	20	2					ChC,ca	** 148.0 159.0 INTERBEDDED CHERT and diopside-rich ash (?), weakly calcareous		f	21			70	1		92
				b	50								a		1			1			2
				c									a		1			1			2
				a									a		1			1			2
156.00				a									a		1			1			2
	100	100	R2	b	30	2							a		1			1			2
				a	60						Xch,b	** 159.0 180.0 CHERTY TUFFITE, with amber sphalerite, weak epidote alteration, bedded	a		1			1			2
				c										c	11		1		4		16
				c										c	11		1		4		16
166.10				c										c	11		1		4		16
	100	95	R3	b	5	3								c	11		1		4		16
170.00				a	30									c	11		1		4		16
					60									c	11		1		4		16
	100	95	R3	c	2	3								c	11		1		4		16
				a	20									c	11		1		4		16
				c	50									c	11		1		4		16
177.00				c										c	11		1		4		16
	100	100	R3	c	30	2					Xca,c	** 180.0 265.5 CALCAREOUS TUFFITE, contorted bedding, amber sphalerite rich, moderate epidote alteration		c	11		1		4		16
				c	60									c	11		1		4		16
				c										c	10		1		1		12
														c	10		1		1		12

ROCK QUALITY:

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

DRILL HOLE: LYN91-50

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									c	10		1		1		12
187.00				c									c	10		1		1		12
	100	100	R3	c	30	2							c	10		1		1		12
				c	60								c	10		1		1		12
				c									c	10		1		1		12
				c									c	10		1		1		12
197.00				c									c	10		1		1		12
	99	90	R3	c	10	3							c	10		1		1		12
				c	30						Dd	^^ 202.0 211.0 Dacite Dike, black, very fine-grained	c	10		1		1		12
				b	60															
				b																
207.00				b																
	99	80	R3	b	10	2														
210.00				a	30															
	99	95	R3	b	10	2							c	10		1		1		12
213.00				c	40								c	10		2		1		13
	100	100	R3	c	20	1							c	10		2		1		13
				c									c	10		2		1		13
				c									c	10		2		1		13
221.00				c									c	10		2		1		13
	100	100	R3	c	20	1							c	10		2		1		13
				c									c	10		2		1		13
227.00				c									c	10		2		1		13
	100	100	R3	c	60	1							c	10		2		1		13
				c									c	10		2		1		13
				c									c	10		2		1		13
				c									c	10		2		1		13
237.00				c									c	10		2		1		13
	100	100	R2	c	15	2							c	10		2		1		13
				c	60								c	10		2		1		13
				c									c	10		2		1		13
				c									c	10		2		1		13
247.00				c									c	10		4		1		15
	99	95	R2	c	15	2							c	10		4		1		15
				c	60								c	10		4		1		15
				b									c	10		4		1		15
				c									c	10		4		1		15
257.00				c									c	10		4		1		15
	100	100	R3	c	15	2							c	10		4		1		15
				c	60								c	10		4		1		15

ROCK QUALITY:

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

DRILL HOLE: LYN91-50

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
				c								c	10		4		1		15
				b						MS	** 265.5 283.0 MASSIVE SULFIDE,	c	10		4		1		15
267.00				c							sphalerite-rich	f	90				1		91
	100	100	R3	b	20	2						f	90				1		91
				b	60							f	90				1		91
				a								f	90				1		91
				a								f	90				1		91
277.00				a								f	90				1		91
	100	85	R2	c	20	2						f	90				1		91
				b	55							f	90				1		91
				b								f	90				1		91
				b						MSca,c	** 283.0 327.5 MASSIVE SULFIDE,	f	90				1		91
286.00				a							sphalerite rich, contorted bedding (?),	e	42				2		44
	100	85	R2	a	30	2					weak epidote and carbonate alteration	e	42				2		44
289.00				b	60							e	42				2		44
	100	90	R2	b	30	2						e	42				2		44
				b	50							e	42				2		44
				a								e	42				2		44
297.00				b								e	42				2		44
	100	100	R2	b	25	3						e	42				2		44
				b	40							e	42				2		44
				b	60							e	42				2		44
				c								e	42				2		44
307.00				c								e	42				2		44
	100	100	R2	c	10	2						e	42				2		44
				c	35							e	42				2		44
				c								e	42				2		44
				b								e	42				2		44
317.00				b								e	42				2		44
	100	100	R2	c	35	2						e	42				2		44
				c	60							e	42				2		44
				b								e	42				2		44
				b							Note: @ 323.0-327.5 Bedded	e	42				2		44
327.00				c								e	42				2		44
	100	85	R2	c	40	2				BP	** 327.5 339.0 BEDDED PYRRHOTITE	e	42				2		44
				b	65							b	4	4		2	22		32
				b								b	4	4		2	22		32
				c								b	4	4		2	22		32
336.00				c								b	4	4		2	22		32
	100	100	R3	c	20	2						b	4	4		2	22		32
												b	10	4		2	22		38

ROCK QUALITY:

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

DRILL HOLE: LYN91-50

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
				c	60						MSb,p	** 340.0 386.0 BEDDED MASSIVE SULFIDE, cherty	d	30				17		47
				b									d	30				17		47
				c									d	30				17		47
346.40				c									d	30				17		47
	100	95	R2	c	20	3							d	30				17		47
				b	45						Xch,b,p	^^ 349.0 355.0 Tuffite, bedded, cherty	c	17	2			38		57
				b	60								c	17	2			38		57
				c									c	17	2			38		57
356.60				a							Md	^^ 355.0 358.0 Mafic Dike, black, very fine-grained, minor sulfides	c	17				38		55
	99	95	R2	c	10	3														
				c	30								d	32				8		40
				b	60								d	32				8		40
				b									d	32				8		40
366.80				b									d	32				8		40
	98	85	R2	b	10	3							d	32	2			28		62
				c	30								d	32	2			28		62
				c	80								d	32	2			28		62
				b									d	32				28		60
377.00				b									d	32				28		60
	98	90	R3	c	10	2							d	32				28		60
				c	60								d	32				4		36
				a									d	32				4		36
386.70				c							BP,ch	** 386.0 397.0 BEDDED PYRRHOTITE TUFF, cherty	d	32				4		36
	100	95	R3	c	5	2							a		1			10		11
				c	50								a		1			10		11
				b							Md	^^ 391.0 392.5 Mafic Dike, black, very fine-grained	a		1			10		11
				c									a		1			10		11
				b									a		1			10		11
396.90											Md	^^ 395.0 397.0 Weak Mafic Dike Swarm, near the quartz diorite contact	a		1			10		11
	100	100	R3	a	5	2														
					30															
397.40											gQd	** 397.0 400.0 QUARTZ DIORITE, Granophyric								
	100	100	R3	a	10	2				-20C	QD	** 400.0 523.0 MASSIVE QUARTZ DIORITE								
				c	40															
				c																
406.60				c																
	100	100	R3	b	20	1														
				b							MD	^^ 409.0 428.0 Mafic Dike								

ROCK QUALITY:

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

DRILL HOLE: LYN91-50

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
				c															
				d															
415.00				d															
	99	100	R3	c	20	2													
417.00					45														
	100	100	R3	b	20	2													
				c	45														
				c															
				c															
427.00				c															
	100	100	R3	c	5	2													
				d	30														
				d															
				d															
437.00				d															
	99	95	R3	b	5	2													
439.80					35														
	100	100	R3	c	5	2													
				c	20														
				c															
447.00				c															
	100	100	R3	b	5	2													
				b	20														
				c															
				c															
457.00				c						Md	^^ 458.0 471.5 Mafic Dike								
	100	100	R4	c	5	3													
				c	15														
				c	60														
				b															
467.00				c															
	100	95	R4	c	15	2													
471.50				b	60					ü									
	100	100	R3	c	10	2													
				c	30														
				c															
480.00				c						Md	^^ 479.0 489.0 Mafic Dike								
	100	100	R4	c	20	2													
				b	40														
				c															

ROCK QUALITY:

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

DRILL HOLE: LYN91-50

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
487.00				c																
	100	100	R4	b	10	2														
				c	40															
				b																
				b																
497.00				a																
	99	95	R4	b	5	3														
				b	25															
502.30				a	65															
	100	100	R4	b	5	2														
				a	25															
507.00				a																
	99	75	R3	a	5	2														
510.50				a	20						Md	^^ 509.5 513.5 Mafic Dike								
	100	100	R2	a	5	3														
				a	25															
				c	65															
				b																
520.00				a																
	100	100	R3	b	5	2														
523.00				b	30							E.O.H. 523' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
25'	179.4	-62.3
100'	178.6	-61.7
200'	179.3	-61.9
300'	180.6	-61.3
400'	182.4	-61.2
525'	183.2	-61.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 1-12-90
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-51 (WDNR #207)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 1-16-91

BEARING: S180.4E INCLINATION: -62.3 T.D: 525'
COORDINATES: L10200 E, 11030 N
ELEV: 1559.8' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91
PAGE 1 OF 8

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 46.0			** 0.0 46.0 OVERBURDEN	
46.0 52.0	(not recovered)			
	(No HQ core)			
46.0 117.0		R	** 46.0 117.0 RHYOLITE	
117.0 137.2		W	** 117.0 137.2 WACKE (Quartz-lithic)	
137.2 175.0		R/Cht	** 137.2 175.0 INTERBEDDED CHERTY TUFF, RHYOLITE	
175.0 216.0		SS	** 175.0 216.0 SILTSTONE	
216.0 227.0		*R	** 216.0 227.0 SPHERULITIC RHYOLITE	
227.0 257.8		D	** 227.0 257.8 DACITE ?	
257.8 325.0		LR	** 257.8 325.0 LYNNE RHYOLITE	
325.0 347.2		D	** 325.0 347.2 DACITE OR SILTSTONE	