APPENDIX B

Geological and Geotechnical

Drill Logs 1-44 - Volume 2 of 3

Noranda Minerals Wisconsin Corp.

LYNNE PROJECT

14

(p. 351 - 420)

ROCK QUALITY:

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

DRILL HOLE: LYN91-77

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	R3	a	10	2														
				a	30							Note: @ 263.3-265.2 Feldspathic Wacke								
				a																
				a						-80C	TS	** 263.3 269.0 TALCOSE SEDIMENT								
266.00				b																
	100	100	R3	b	10	3							a				1	1		2
				a	30						D	** 269.0 306.0 DACITE								
				a	50															
				a																
276.00				a																
306.00											TS	** 306.0 390.3 TALCOSE SEDIMENT, with bedded pyrrhotite and sulfides	b	3				5		8
	99	90	R2	b	5	3							b	3				5		8
				b	30								b	3				5		8
				b	60						TSp	^^ 306.0 312.0 Talcose Sediment, with pyrrhotite	b	3				5		8
				b									b	3				5		8
				b									b	3				5		8
													b	3				5		8
316.00																				
	99	95	R2	a	10	3														
				a	35															
				b	60															
				c							TSp	^^ 324.0 330.0 Talcose Sediment, with pyrrhotite	b					5		5
326.00				c									b					5		5
	99	95	R2	c	10	2							b					5		5
				c	60								b					5		5

DRILL HOLE: LYN91-77

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																
				c																
336.00				c																
	99	95	R2	c	60	1					BP	^^ 338.5 357.0 Bedded Pyrrhotite	c					10		10
				c									c					10		10
				c									c					10		10
				c									c					10		10
346.00				c									c					10		10
	100	95	R2	c	10	2							c					10		10
				c	30								c					10		10
				c									c					10		10
				c									c					10		10
356.00				c									c					10		10
	100	95	R2	c	10	2					TS,l	^^ 357.0364.0 Talcose Sediment, laminated	c					10		10
				c	30															
				c																
				c																
366.00				c																
	100	95	R3	c	10	2														
370.00				c	40						TSp	^^ 370.0 390.3 Talcose Sediment, with pyrrhotite	b					8		8
	100	100	R2	c	10	2							b					8		8
				c	40								b					8		8
376.00				c									b					8		8
	100	100	R2	c	10	2							b					8		8
				c	40								b					8		8
				c									b					8		8
				c									b					8		8
386.00				c									b					8		8
													b					8		8
										-60C	Rt	** 390.3 399.0 RHYOLITE TUFF, horn-felsed, with granophyric patches	b					8		8
										-65C	gQD	** 399.0 450.0 QUARTZ DIORITE, Granophyric								

ROCK QUALITY:

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

DRILL HOLE: LYN91-77

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
											E.O.H. 450' (total depth)								

Noranda Explo n Inc.
Eastern Divison

DATE: 7-18-91
PAGE 1 OF 15

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	179.5	-61.4
400'	180.4	-61.4
600'	182.3	-61.3
800'	183.1	-60.7
1000'	185.2	-60.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED:2-6-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-78 (WDNR #197)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-12 91

BEARING: S180.5E INCLINATION: -61.8 T.D: 1000.0'
COORDINATES: L10100 E, 11605 N
ELEV: 1561' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 67.0			** 0.0 67.0 OVERBURDEN	
67.0 70.0	(not recovered)			
67.0 126.0		Ag	** 67.0 126.0 AGGLOMERATE	
91.0 98.0		SS	^^ 91.0 98.0 Sandstone	
126.0 151.0		SS	** 126.0 151.0 SANDSTONE	
138.7 142.0		Wl	^^ 138.7 142.0 Lapilli Wacke	
151.0 188.4		Wq	** 151.0 188.4 QUARTZ WACKE	
188.4 291.0		SS	** 188.4 291.0 SANDSTONE	
254.0 264.0		D	^^ 254.0 264.0 Dacite Dike	
291.0 303.0		Wl	** 291.0 303.0 LAPILLI WACKE	
303.0 343.5		gR	** 303.0 343.5 RHYOLITE, Granophyric	
343.5 382.0		Wl	** 343.5 382.0 LAPILLI WACKE	
382.0 418.0		gR	** 382.0 418.0 RHYOLITE, Granophyric	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	179.5	-61.4
400'	180.4	-61.4
600'	182.3	-61.3
800'	183.1	-61.0
1000'	185.2	-61.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 2-6-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-78 (WDNR #197)

DATE: 5-14-91
PAGE 1 OF 15

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-12 91

BEARING: S180E INCLINATION: -61.5 T.D: 1000.0'
COORDINATES: L10100 E, 11605 N
ELEV: 1564' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
418.0 487.6		Wl	** 418.0 487.6 LAPILLI WACKE	
460.3 468.8		Ra	^^ 460.3 468.8 Rhyolite (flow)	
473.5 475.0		IR	^^ 473.5 475.0 Intrusive Rhyolite Dike	
487.6 492.2		IR	** 487.6 492.2 INTRUSIVE RHYOLITE DIKE	
492.2 527.9		Wl	** 492.2 527.9 LAPILLI WACKE	
525.0 526.5		Md	^^ 525.0 526.5 Mafic Dike	
527.9 579.0		Rd	** 527.9 579.0 RHYOLITE DIKE	
579.0 613.7		Wlch	** 579.0 613.7 LAPILLI WACKE	
613.7 629.2		Ch	** 613.7 629.2 CHERT	
629.2 646.0		CS	** 629.2 646.0 CALCAREOUS SEDIMENT	
646.0 654.6		W	** 646.0 654.6 WACKE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	179.5	-61.4
400'	180.4	-61.4
600'	182.3	-61.3
800'	183.1	-61.0
1000'	185.2	-61.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 2-6-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-78 (WDNR #197)

DATE: 5-14-91
PAGE 1 OF 15

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-12 91

BEARING: S180E INCLINATION: -61.5 T.D: 1000.0'
COORDINATES: L10100 E, 11605 N
ELEV: 1564' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
654.6 662.0		Ch	** 654.6 662.0 CHERT	
662.0 701.0		xR	** 662.0 701.0 SPHERULITIC RHYOLITE	
673.0 676.0		SS	^^ 673.0 676.0 Sandstone	
685.0 687.0		Wch	^^ 685.0 687.0 Cherty Wacke	
687.0 695.3		SL	^^ 687.0 695.3 Siltstone	
699.4 701.0		Ch	^^ 699.4 701.0 Chert	
701.0 720.0		TS	** 701.0 720.0 TALC SEDIMENT	
720.0 732.5		SS	** 720.0 732.5 SANDSTONE	
732.5 788.5		Xsk	** 732.5 788.5 TUFFITE	
748.0 753.0		MS	^^ 748.0 753.0 Massive Sulfide	
775.0 788.5		MS	^^ 775.0 788.5 Massive Sulfide	
788.5 821.1		TS	** 788.5 821.1 TALC SEDIMENT	
821.1 854.5		SS	** 821.1 854.5 SANDSTONE	
842.3 843.0		Qd	^^ 842.3 843.0 Quartz Rhyolite Dike	
854.5 861.0		gQD	** 854.5 861.0 GRANOPHYRIC QUARTZ DIORITE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	179.5	-61.4
400'	180.4	-61.4
600'	182.3	-61.3
800'	183.1	-61.0
1000'	185.2	-61.0

PROJECT: LYNNE P.O. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: J. Schaff
DATE COLLARED: 2-6-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-78 (WDNR #197)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-12 91

BEARING: S180E INCLINATION: -61.5 T.D: 1000.0'
COORDINATES: L10100 E, 11605 N
ELEV: 1564' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
861.0 1000.0		QD	** 861.0 1000.0 QUARTZ DIORITE	
			E.O.H. 1000' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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 67.0 OVERBURDEN								
										AG	** 67.0 126.0 AGGLOMERATE RHYOLITE, incomposition, 2-3" orange (silicic) clasts, rounded, subhedral feldspar phenocrysts in matrix								
										SS	^^ 91.0 98.0 Sandstone, black to dark green, fine to medium-grained								
											note: @ 112.0 126.0 Rhyolite becoming darker and has a more ashy, and cherty component (similar to a cherty lapilli wacke)								
										SS	** 126.0 151.0 SANDSTONE, black to dark green, fine to medium-grained								
										WI	^^ 138.7 142.0 Lapilli Wacke								

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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
										W	>> 151.0 188.4 WACKE, Quartz, and Feldspar rich								
											note: @ 159.0 161.0 .5" quartz vein with strong epidote alteration along the wallrock								
										WF	^^ 171.0 188.4 Feldspathic Wacke, medium to coarse-grained								
										SS	>> 188.4 291.0 SANDSTONE, greenish black very fine-grained, minor calcite veinlets								

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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
									-20C	D	^^ 254.0 264.0 Plag-Phyric Dacite Dike								
									-20C										
										WL	>< 291.0 303.0 LAPILLI WACKE (or tuff), abundent chlorite altered ash								

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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	gR	** 303.0 343.5 RHYOLITE, granophyric, gradational contact or chilled margin @ 343.5								
										W1	** 343.5 382.0 LAPILLI WACKE, occasional agglomerate sized clast, chlorite altered pumice fragments or ash, coarse-grained								
									-35	gR	** 382.0 418.0 RHYOLITE, Granophyric or								

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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
									-40		Dacite (?), granophyric, subhedral to euhedral feldspars, gradational contact @ 418.0								
										W1	** 418.0 487.6 LAPILLI WACKE TO AGGLOMERATE, minor chlorite altered ash, clasts cherty to rhyolite in composition								
											Note: @ 455.0 Gravel, possible contamination from a bit change								
									-70F	Ra	^^ 460.3 468.8 Rhyolite Flow, plag-								

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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
									-30C		phyric, similar composition to surrounding lapilli wacke and swamp rhyolite, banded zones of chlorite altered with ash or pumice								
									-30C										
										Rd	^^ 473.5 475.0 Rhyolite Dike, feldspar rich with minor blue quartz eyes								
									-25C	IR	×× 487.6 492.2 INTRUSIVE RHYOLITE DIKE, aphanitic, tan to black, minor patchy light green epidote								
									-60C										
										Wl	×× 492.2 527.9 LAPILLI WACKE, abundant chlorite altered ash, weak flow texture (bedded)								
										Md	^^ 525.0 526.5 Mafic Dike or strongly chloritized zone, chilled margins								
									-37C	IR	×× 527.9 579.0 RHYOLITE OR DACITE (?)								

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

DRILL HOLE: LYN91-78

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
											DIKE, plag-phyric, black anhedral phenocrysts								
											note: @ 575.0 579.0 Minor wacke development, also moderate epidote alteration								
										Wlch	** 579.0 613.7 LAPILLI WACKE, cherty coarse-grained, minor ash, very crude bedding								
605.00	100	100	R3	b	30	2													

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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	60															
				b																
				c						-55B	Ch	** 613.7 629.2 CHERT with interbedded volaniclastics (?), well bedded to weakly contorted, possible soft sediment deformation similar to zone in Lyn91-70 @ 562.0 597.0								
615.00				b																
	100	95	R3	b	10	3														
				b	30															
				b	60															
				b																
625.00				b																
	100	100	R3	b	10	3														
				b	30															
				a	65						CS	** 629.2 646.0 CALCAREOUS SEDIMENT, grey to green, moderate to strong diopside alteration, crude bedding								
				a																
635.00				a																
	100	100	R2	a	5	4														
				b	20															
				c	40															
				c	60															
645.00				b																
	100	100	R2	c	5	4					W	** 646.0 654.6 WACKE,coarse grained, sheared or elongated phenocrysts, possible lapilli sized clasts								
				c	20															
				c	40															
				c																
655.00											Ch	** 654.6 662.0 CHERT, grey to green grey, fractured, minor bedding (green color is possibly interbedded ash, or diopside alteration)								
	100	100	R2	b	5	4														
				a	25					-55B										
					40															
658.00					60															
	100	100	R2	a	5	3														
				a	30						*R	** 662.0 701.0 SPHERLURITIC RHYOLITE, green, anhedral fedlspars or spherulites								
				a	60															
665.00				b																
	100	100	R3	b	5	4														
				b	25															
				c	50															
				c	70															
675.00											SS	** 673.0 676.0 SANDSTONE, black, very fine grained, weak laminations								
				a																
	100	90	R3	b	5	3														
				b	50															

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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															
				b																
685.00				b																
	100	95	R2	a	20	2					Wch	^^ 685.0 687.0 Cherty Wacke								
				a	60						SL	^^ 687.0 695.3 Siltstone, black, well laminated, laminations offset by numerous fratures, occasional cherty zones								
				b																
				b																
695.00				b																
	99	90	R3	c	15	3														
				c	50															
				a	70						Ch	^^ 699.4 701.0 Chert, grey, fractured								
				b									a				1	1		2
701.00				c									a				1	1		2
	100	95	R2	c	40	2					TS	^^ 701.0 720.0 TALC SEDIMENT, weak talc and skarn development, crude bedding	a				1	1		2
705.00				c	70								a				1	1		2
	99	95	R3	c									a				1	1		3
				c									a	2			1	1		3
				b									a	2			1	1		3
				c									a	2			1	1		2
715.00				c									a				1	1		2
	99	95	R3	c	5	3							a				1	1		2
				b	20						SS	^^ 720.0 732.5 SANDSTONE, black, very fine-grained	a				1	1		2
				b	50															
				a																
725.00				b																
	100	90	R2	c	10	3														
				c	25															
				b	70						Xsk	^^ 732.5 788.5 TUFFITE, moderate to strong actinolite or tremolite (skarn) development	a				1	1		2
				b									a				1	1		2
				b									a				1	1		2
				c										c	12					12
				c										c	12					12
				c										c	12					12
				c										c	12					12
				c										c	12					12
745.00														c	12					12
	100	100	R2	c	5	3					MS	^^ 748.0 753.0 Massive Sulfide		c	12					12
				c	.20									c	12					12
				c	75										e	45				45
				c											e	45				45
755.00				c											e	45				45
														c		12				12

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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	R3	c	25	3							c	12						12
				c	50								c	12						12
				c	70								c	12						12
				c									c	12						12
765.00				c									c	12						12
	100	100	R2	c	5	2							c	12						12
				c	40								c	12						12
				c									c	12						12
				c									c	12						12
775.00				c							MS	^^ 775.0 788.5 Massive Sulfide, minor amber sphalerite	c	12						12
	100	100	R2	c	10	2							c	12						12
				c	30								e	50						50
				c									e	50						50
				c									e	50						50
785.00				c									e	50						50
	100	95	R2	c	15	2					TS	^^ 788.5 821.1 TALC SEDIMENT, strong fiberous talc development	e	50						50
				c	30								e	50						50
				c									e	50						50
				c								note: @ 793.0 Possible fault or shear zone, moderate serpentinite development								
795.00				c																
	100	100	R2	c	5	2														
				c	30															
				c																
				c																
805.00				c																
	100	100	R2	c	5	2														
				c	40															
				c																
				c																
815.00				c																
	100	100	R2	c	20	2						note: @ 820.0-821.1 Moderate to strong phlogopite mica development								
				c	50															
				c							SS	^^ 821.1 854.5 SANDSTONE, black, fine grained minor quartz veinlets								
				c																
825.00				c																

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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
									-30C	00	^^ 842.3 843.0 Quartz Diorite Dike, medium to coarse grained, chilled margins								
845.00											note: @ 854.5-855.0 Bull quartz vein								
855.00									-40V	g00	** 854.5 861.0 GRANOPHYRIC QUARTZ DIORITE								
										00	** 861.0 1000.0 QUARTZ DIORITE								

ROCK QUALITY:

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

DRILL HOLE: LYN91-78

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 1000' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	183.2	-59.5
200'	181.5	-59.5
300'	181.8	-59.2
400'	181.8	-58.9
540'	183.3	-58.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-7-91
REMARKS: Log checked against assay
CORE SIZE: NQ

HOLE NO: LYN91-79 (WDNR #234)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-9-91

BEARING: S182.0E INCLINATION: -60.0 T.D: 540'
COORDINATES: L10600 E, 10740 N
ELEV: 1560.0' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 61.0			0.0 61.0 OVERBURDEN	
61.0 65.0	(not recovered)			
61.0 95.0		R	61.0 95.0 RHYOLITE	
95.0 139.8		CS	95.0 139.8 CALCAREOUS SEDIMENT	
139.8 160.0		SL	139.8 160.0 SILTSTONE	
160.0 170.0		R	160.0 170.0 RHYOLITE	
170.0 219.0		CS	170.0 219.0 CALCAREOUS SEDIMENT	
219.0 239.0		Rc	219.0 239.0 RHYOLITE CRYSTAL TUFF	
239.0 246.0		SL	239.0 246.0 SILTSTONE	
246.0 304.0		Chp	246.0 304.0 CHERT, With Pyrrhotite	246.0 304.0 20% Po, Py
304.0 350.0		TSp	304.0 350.0 TALC SEDIMENT, With Pyrrhotite	304.0 350.0 5% Po, Py

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	183.2	-59.5
200'	181.5	-59.5
300'	181.8	-59.2
400'	181.8	-58.9
540'	183.3	-58.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-7-91
REMARKS: Log checked against assay
CORE SIZE: NQ

HOLE NO: LYN91-79 (WDNR #234)

DATE: 10-8-
PAGE 1 OF

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-9-91

BEARING: S182.0E INCLINATION: -60.0 T.D: 5
COORDINATES: L10600 E, 10740 N
ELEV: 1560.0' SEC: 15 TWP: 37N RANGE:

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
350.0 370.0		SS	><< 350.0 370.0 SANDSTONE	
370.0 373.0		TS	><< 370.0 373.0 TALC SEDIMENT	
373.0 384.4		SL	><< 373.0 384.4 SILTSTONE	
384.4 412.0		ChT	><< 384.4 412.0 CHERTY TUFF	
412.0 414.0		TS	><< 412.0 414.0 TALC SEDIMENT	
414.0 477.5		D	><< 414.0 477.5 DACITE	
477.5 540.0		QD	><< 477.5 540.0 QUARTZ DIORITE	
477.5 484.0		gQD	^^ 477.5 484.0 Granophyric Quartz Diorite	

E.O.H. 540' (total depth)

ROCK QUALITY:

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

LYN91-79

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 61.0											** 0.0 61.0 OVERBURDEN								
											^^ 0.0 3.0 Muskeg								
											^^ 3.0 30.0 Fine sand								
											^^ 30.0 38.0 Silty sand								
											^^ 38.0 50.0 Gravel and cobbles								
											^^ 50.0 61.0 Gravel, clay, and boulders								
										R	** 61.0 95.0 RHYOLITE, Porphyritic, granophyric at top								
										FZ	^^ 72.0 106.0 Fault Zone, high angle (10-30 degrees) carb alteration, brecciation, Fe-staining, core broken								
									-10F										
									-30F										
										CS	** 95.0 139.8 CALCAREOUS SEDIMENT, with diopside-carb altered patches or clasts and rhyolitic intervals. No obvious chert, not bedded, could be breccia related to overlying fault.								
									-30F										
									-15F										

ROCK QUALITY:

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

LYN91-79

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
120.00																				
	100	95	R3	b	5	2														
				b	40															
				b								Note: @ 125.0 127.0 Stringery Sphalerite,	b				2	5	7
				a								1-2%	b				2	5	7
				a									b				2	5	7
130.00													c	1		2		5	8
	100	95	R3	b	5	3							b				2	5	7
				b	20								b				2	5	7
				b	40								b				2	5	7
				b									b				2	5	7
140.00				b							SLsk	** 139.8 160.0 SILTSTONE, with skarn	b				2	5	7
	100	100	R3	c	30	1						(Gt, Mt) alteration @ 151.0-156.0 and	b				2	4	6
				b						-55B		possible talc at top.	b				2	4	6
145.00				b									b				2	4	6
	100	100	R3	b	5	2							b				2	4	6
				b	30								b				2	4	6
				b						-40B			b	1			2	2	5
				b									b	1			2	2	5
155.00				b									b	1			2	2	5
	100	100	R3	b	10	3							b	1			2	2	5
				b	30					-75C	R	** 160.0 170.0 RHYOLITE, granophyric	b	1			2	2	5
				b	50							carbonate alteration toward base							
				b															
165.00				a															
	100	100	R2	b	10	3													
				b	30						CS	** 170.0 219.0 CALCAREOUS SEDIMENT,							
				b	50							with magnetite, calcite, diopside, minor							
				b								sulfides, contorted bedding, highly	a				3		3
175.00				b								fractured. Areas of high angle	a				3		3
	100	90	R2	c	10	3						fractures, graded rhyolite interbeds	a				3		3
				c	30							1-5' thick.	a				3		3
				c	60								a				3		3
				b							Rc	^^ 182.0 187.0 Rhyolite Crystal Tuff, Ep-	a				3		3

ROCK QUALITY:

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

LYN91-79

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								carbonate alteration								
185.00																				
	100	95	R3	b	10	3						^^ 187.0 190.0 patchy oval "oolitic" alteration								
				b	30															
				b	50															
				b							Rcl	^^ 190.0 198.0 Rhyolite Crystal Tuff								
				b																
195.00																				
	100	80	R3	b	10	3					Rca	^^ 198.0 219.0 Calcareous-altered Rhyolite, or calcareous sediment, carb-epidote (Di) alteration								
				b	30															
				b	50															
				b																
205.00				b																
	100	100	R2	c	5	3														
				c	30															
				b	60															
				c																
215.00				c																
	100	100	R2	b	5	2														
216.60					50															
	100	100	R2	b	5	3														
				b	30					-65C	Rc	** 219.0 239.0 RHYOLITE CRYSTAL TUFF, blue quartz eyes, chaotic, sericite alteration of martrix (brown), broken lower contact, carbonate alteration (fizzes)								
				b	50															
				b																
225.00				b																
	100	95	R3	a	10	3														
				b	30															
				c	50															
				b																
235.00				b																
	100	90	R3	b	5	3														
240.60				b	30						SL	** 239.0 246.0 SILTSTONE, medium-grey, faintly laminated, contorted intervals								
					50															
	100	95	R2	b	5	2														
				b	30															
245.00				b																
	100	75	R3	a	5	2					ChP	** 246.0 304.0 CHERT, with pyrrhotite, cherty, with laminated and disseminated pyrrhotite & pyrite	c				5	15		20
247.40					20					-20B			c				5	15		20
	100	100	R3	b	5	2							c				5	15		20

ROCK QUALITY:

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

LYN91-79

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	30								c				5	15		20
				b									c				5	15		20
255.00				b						-60B			c				5	15		20
	100	95	R2	c	5	2							c				5	15		20
				b	30					-65B			c				5	15		20
				b									c				5	15		20
				b							IR	^^ 263.0 275.0 Intrusive Rhyolite, lt.	c				5	15		20
265.00				b						-45C		grey, granophyric, high angle fractures,								
	100	100	R3	a	5	3						embayed upper contact, lower contact								
				a	30							broken-appears flat								
271.00				a	60															
	100	90	R3	a	5	3														
275.00				a	30								b				2	4		6
					50								b				2	4		6
	100	100	R2	b	20	2							b				2	4		6
				c	40								b				2	4		6
				c						-47B			b				2	4		6
				c									b				2	4		6
285.00				c									b				2	4		6
	100	100	R2	b	5	3							b				2	4		6
				b	20								b				2	4		6
				b	60					-78B			b				2	4		6
				b									b				1	5		6
295.00				b									b				1	5		6
	100	100	R2	b	5	3							b				1	5		6
				c	30					-58B			b				1	5		6
				c	60					-74B			b				1	5		6
				c							TSp	** 304.0 350.0 TALC SEDIMENT, with	b				1	4		5
305.00				b								pyrrhotite	b				1	4		5
	100	95	R2	b	10	3							b				1	4		5
				c	30								b				1	4		5
				b	60								b				1	4		5
				b									b				1	4		5
315.00				b									b				1	4		5
	100	95	R2	b	5	3							b				1	4		5
				b	20								b				1	4		5
				b	50								b				1	4		5
				b									b				1	4		5
325.00				b									b				1	4		5
	100	95	R2	b	10	3							b				1	4		5

ROCK QUALITY:

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

LYN91-79

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	40								b				1	4		5
				b	60								b				1	4		5
				b									b				1	4		5
335.00				b									b				1	4		5
	100	100	R2	b	5	2							b				1	4		5
				b	20								b				1	4		5
				b																
				c																
345.00				c																
											SS	>< 350.0 370.0 VOLCANICLASTIC SEDIMENT, "grainy"							
												Note: @ 354.0 Fractures near base, calcite fill							
											FZ	Note: @ 360.5 364.0 Fault Zone, contacts broken, severely fractured							
											TS	>< 370.0 373.0 TALC SEDIMENT, with patchy pyrite	a				1		1
													a				1		1
													a				1		1
											SL	>< 373.0 384.4 SILTSTONE, with spherulitic zones, cherty	a				1		1
											ChT	>< 384.4 412.0 CHERTY TUFF, dark, fine-grained, cherty, brecciated areas in chert matrix, containing pyrite and pyrrhotite (minor), some blue quartz eyes							
390.00																				
	100	95	R3	b	10	3							a			1	1			2
				b	30															
				b	60															
				b																
400.00				b																
	100	100	R3	b	5	3														
				b	20															

ROCK QUALITY:

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

LYN91-79

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															
				b																
410.00				b																
	100	95	R2	b	10	3					TS	** 412.0 414.0 TALC SEDIMENT	a	1			1	1		3
				c	30								a	1			1	1		3
				b	60						D	** 414.0 477.5 DACITE OR VOLOCANICLASTIC SEDIMENT, medium to dark grey, grainy.	a	1			1	1		3
				b																
				b																
420.00																				
	100	100	R3	b	5	3														
				b	30															
				b	50															
				b																
430.00				b																
												Note: @ 432.0 466.0 Hornfelsed									
											QD	** 477.5 540.0 QUARTZ DIORITE								

ROCK QUALITY:

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

LYN91-79

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
										gQD	~~ 477.5 484.0 Quartz Diorite, granophyric								
											E.O.H. 540' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	176.8	-56.0
200'	176.4	-55.9
300'	177.3	-55.9
450'	178.5	-55.6

PROJECT: LYNNE P.O. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-8-91
REMARKS:
CORE SIZE: NQ/HQ

HOLE NO: LYN91-80 (WDNR #232)

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

BEARING: S180E INCLINATION: -56 T.D: 450'
COORDINATES: L9400 E, 11220 N
ELEV: 1560.4' SEC: 15 TWP: 37N RANGE: 4E

DATE: 5-14-91
PAGE 1 OF 7

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 50.0			** 0.0 50.0 OVERBURDEN	
50.0 54.5	(not recovered)			
54.5 57.0	(HQ core)			
50.0 259.0		R	** 50.0 259.0 RHYOLITE	
50.0 72.0		Rc	^^ 50.0 72.0 Rhyolite Crystal Tuff	
72.0 194.0		gR	^^ 72.0 194.0 Rhyolite Tuff, Granophyric To Cherty	
194.0 222.0		pR	^^ 194.0 222.0 Rhyolite Porphyry	
220.0 243.0		Wl	^^ 222.0 243.0 Lapilli Wacke	
243.0 251.0		Rcl	^^ 243.0 251.0 Rhyolite Crystal Lapilli Tuff	
251.0 259.0		Wl	^^ 251.0 259.0 Lapilli Wacke	
259.0 292.7		D	** 259.0 292.7 DACITE	
274.0 276.2		Wl	^^ 274.0 276.2 Lapilli Wacke	
292.7 305.0		D,ChT	** 292.7 305.0 INTERBEDDED DACITE/CHERTY TUFF	
305.0 318.0		ChT	** 305.0 318.0 CHERTY TUFF	
318.0 341.8		D	** 318.0 341.8 DACITE	
341.8 376.5		R	** 341.8 376.5 RHYOLITE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	176.8	-56.0
200'	176.4	-55.9
300'	177.3	-55.9
450'	178.5	-55.6

PROJECT: LYNNE P.O. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-8-91
REMARKS:
CORE SIZE: NQ/HQ

HOLE NO: LYN91-80 (WDNR #232)

DATE: 5-14-91
PAGE 1 OF 7

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

BEARING: S180E INCLINATION: -56 T.D: 450'
COORDINATES: L9400 E, 11220 N
ELEV: 1560.4' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
376.5 377.0		MS	** 376.5 377.0 MASSIVE SULFIDE	376.5 377.0 40% Sp
377.0 382.0		gR	** 377.0 382.0 GRANOPHYRIC RHYOLITE	
379.0 381.0		ChC#	^^ 379.0 381.0 Diopside-Altered Chert	
382.0 450.0		gDD	** 382.0 450.0 QUARTZ DIORITE, Granophyric	
			E.O.H. 450' (total depth)	

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

DRILL HOLE: LYN91-80

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 50.0											** 0.0 50.0 OVERBURDEN								
										R	** 50.0 259.0 RHYOLITE								
										Rc	^^ 50.0 72.0 Rhyolite Crystal Tuff, pinkish grey, granophyric matrix, with tiny quartz crystals								
										gR	^^ 72.0 89.5 Granophyric Rhyolite								
									-10F -10F		Note: @ 77.5-81.0 Fault with carb-chlorite along fractures and shearing @ margins								
										Rtch	^^ 89.5 194.0 Rhyolite Tuff, fine-grained, cherty, pinkish grey, numerous shatter fractures								

DRILL HOLE: LYN91-80

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
											Note: @ 124.5-164.0 Scattered grano-phyric rhyolite dikelets, @ high angle to core axis								
										pR	^^ 194.0 222.0 Rhyolite Porphyry, plag-phyric, with blue quartz eyes								

ROCK QUALITY:

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

DRILL HOLE: LYN91-80

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
											W1	^^ 222.0 243.4 Lapilli Wacke								
											Rcl	^^ 243.4 251.0 Rhyolite Crystal Lapilli Tuff								
											W1	^^ 251.0 259.0 Lapilli Wacke								
											D	** 259.0 292.7 DACITE, plag-phyric								
											W1	^^ 274.0 276.2 Lapilli Wacke								
275.00	100	95	R3	a b	5 20	3														

ROCK QUALITY:

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

DRILL HOLE: LYN91-80

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	60															
				a																
285.00				a																
	100	100	R3	a	5	3														
				a	20															
				a	60						D,ChT	** 292.7 305.0 INTERBEDDED DACITE, CHERTY TUFF, predominantly fine-grained dacite, with 1"-2" beds of altered cherty tuff with sulfides	a				1		1
				a									a					1		1
295.00				a									a					1		1
	100	100	R3	a	5	3							a					1		1
				a	20								a					1		1
				a	60								a					1		1
				a									a					1		1
305.00				a							ChT	** 305.0 318.0 CHERTY TUFF	a					1		1
	100	100	R3	a	5	3							a					1		1
				a	20							Note: @ 309.0-313.0 Fracturing zone								
				a	50															
				a																
315.00				a																
	99	90	R3	a	5	3					D	** 318.0 341.8 DACITE								
				a	20															
				a	50															
				a																
325.00				a																
											R	** 341.8 376.5 RHYOLITE								
											Rcl	^^ 341.8 351.0 Rhyolite Crystal Lapilli Tuff								
											gR	^^ 351.0 376.5 Granophyric Rhyolite								

ROCK QUALITY:

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

DRILL HOLE: LYN91-80

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
365.00																				
	100	95	R3	b	20	3														
				b	50															
				b	70															
				b																
375.00				b																
	100	90	R3	b	20	3					MS	** 376.5 377.0 MASSIVE SULFIDE								
				a	50						gR	** 377.0 382.0 GRANOPHYRIC RHYOLITE								
				a	70						ChC#	^^ 379.0 381.0 Rhyolite, diopside-altered chert								
				a																
				b																
											QD	** 382.0 450.0 QUARTZ DIORITE								
385.00											gQD	^^ 382.0 418.0 Granophyric Quartz Diorite								
												^^ 418.0 436.0 Mildly sheared, aplitic dikes, Fe-staining, coarser-grained								

DRILL HOLE: LYN91-80

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
										FZ	^^ 436.0 440.0 Fault zone								
										QD	^^ 440.0 450.0 Quartz Diorite, mildly sheared								
											E.O.H. 450' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	178.8	-60.1
200'	179.3	-60.1
300'	179.6	-30.2
400'	180.0	-60.2
500'	180.6	-60.4
630'	181.5	-60.4

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: A. Zielinski
DATE COLLARED: 2-8-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-81 (WDNR #204)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-11-91

BEARING: S179.5E INCLINATION: -60.8 T.D: 630'
COORDINATES: L10300 E, 11050 N
ELEV: 1559.6' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-9
PAGE 1 OF 9

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 48.0			0.0 48.0 OVERBURDEN	
48.0 52.0	(not recovered)			
48.0 62.8		Wl	48.0 62.8 LAPILLI WACKE	
62.8 78.0		Wq	62.8 78.0 QUARTZ WACKE	
78.0 130.0		IR	78.0 130.0 INTRUSIVE RHYOLITE	
130.0 210.0		SS,ch	130.0 210.0 SANDSTONE, Cherty	
175.0 179.0		SS,ca	175.0 179.0 Sandstone, Calcite Alteration	
210.0 225.2		SS*	210.0 225.2 SANDSTONE, Altered	
225.2 232.0		SSCh	225.2 232.0 INTERBEDDED SANDSTONES AND CHERT	
232.0 248.3		IR	232.0 248.3 INTRUSIVE RHYOLITE	
248.3 251.0		Sk	248.3 251.0 SKARN	
251.0 259.4		IR	251.0 259.4 INTRUSIVE RHYOLITE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	178.8	-60.1
200'	179.3	-60.1
300'	179.6	-30.2
400'	180.0	-60.2
500'	180.6	-60.4
630'	181.5	-60.4

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: A. Zielinski
DATE COLLARED: 2-8-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-81 (WDNR #204)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-11-91

BEARING: S179.5E INCLINATION: -60.8 T.D: 630'
COORDINATES: L10300 E, 11050 N
ELEV: 1559.6' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-9
PAGE 1 OF 9

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
259.4 288.8		IR	><< 259.4 288.8 INTRUSIVE RHYOLITE	
288.8 302.6		pR*	><< 288.8 302.6 PORPHYRITIC RHYOLITE TUFF, Altered	
302.6 335.0		Rl	><< 302.6 335.0 RHYOLITE LAPILLI TUFF	
335.0 344.0		Rd	><< 335.0 344.0 RHYOLITE DIKE	
344.0 401.5		Wl	><< 344.0 401.5 LAPILLI WACKE	
344.0 365.0		Wf*	^^ 344.0 365.0 Feldspathic Wacke, Altered	
401.5 411.4		Dd	><< 401.5 411.4 DACITE DIKE	
411.4 424.0		SL*	><< 411.4 424.0 SILTSTONE, Altered	
424.0 435.3		Sk,p,t	><< 424.0 435.3 SKARN, Pyrrhotite Rich, Talcose	
435.3 470.9		SL,Sk	><< 435.3 470.9 SILTSTONE, Skarn Alteration, Talcose	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
100'	178.8	-60.1
200'	179.3	-60.1
300'	179.6	-30.2
400'	180.0	-60.2
500'	180.6	-60.4
630'	181.5	-60.4

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: A. Zielinski
DATE COLLARED: 2-8-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-81 (WDNR #204)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-11-91

BEARING: S179.5E INCLINATION: -60.8 T.D: 630'
COORDINATES: L10300 E, 11050 N
ELEV: 1559.6' SEC: 15 TWP: 37N RANGE: 4

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
470.9 517.0		MS,p	470.9 517.0 MASSIVE SULFIDE, Pyrrhotite Rich	
517.0 533.3		X,p	517.0 533.3 TUFFITE, Pyrrhotite Rich	
533.0 542.8		Rt*	533.3 542.8 RHYOLITE TUFF, Altered	
542.8 578.5		D	542.8 578.5 DACITE	
578.5 630.0		QD	578.5 630.0 QUARTZ DIORITE	
			E.O.H. 630' (total depth)	

ROCK QUALITY:

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

LYN91-81

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												** 0.0 48.0 OVERBURDEN								
												^^ 0.0 35.0 Sand								
												^^ 35.0 48.0 Sand, gravel, and cobbles								
												Note: @ 42.0-46.0 Lost circulation								
											WI	** 48.0 62.8 INTERMIXED RHYOLITE & CRYSTAL TUFF, brecciated, fractured, clasts of feldspar and ash tuff								
52.00																				
	99	70	R3	b	10	2														
				b	45															
				b																
59.00				b																
	90	80	R3	b	10	3					Wq	** 62.8 78.0 QUARTZ WACKE, ash tuff at base, spherulitic quartz grading upward into quartz wacke								
				b	40															
				c	60															
67.00				c																
	100	90	R3	c	10	3														
				b	45															
72.00				c	60															
	100	90	R3	b	10	3														
				b	45															
77.00				b	60						IR	** 78.0 130.0 INTRUSIVE RHYOLITE, rhyolite grading from massive to porphyritic orange to dark red								
	100	90	R3	b	15	3														
				b	40															
				a	60															
84.00				b																
	100	100	R3	a	5	3														
				a	25															
87.00					40															
	100	95	R3	a	15	2														
				a	40															
				b																
95.00				b																
	100	80	R3	a	10	3														
				a	35															

ROCK QUALITY:

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

LYN91-81

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															
104.5				b																
	100	100	R3	b	5	3														
				b	25															
				b	50															
				b																
113.00				b																
	100	100	R3	b	5	3														
					55															
115.00					60															
	100	90	R3	b	5	3														
				a	30															
				b	60															
				b								Note: @ 130.0-135.0 Siliceous alter-								
125.00				b								teration, occasional rounded clasts								
	100	100	R3	c	10	3														
				b	30						SS,Ch	** 130.0 210.0 INTERBEDDED SILTSTONES,								
				b	50							CHERTS, SANDSTONES, finely laminated to								
				a								massive bedding								
135.00				a																
	100	85	R3	a	10	3														
				a	30															
				a	50															
				b																
145.00				b																
	100	95	R3	b	10	3														
				b	30															
				b	50															
				a																
155.00				a																
	100	90	R3	a	25	3														
				a	45															
				a	60															
				a																
165.00				a																
	99	80	R3	a	5	3														
				a	20															
				a	60															
				a																
175.00				a							SS,ca	~~ 175.0 179.0 Sandstone, calcite								

ROCK QUALITY:

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

LYN91-81

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	R3	a	25	2						alteration								
				a	60															
				a																
				a																
185.00				a																
	99	90	R3	a	5	3														
				a	30															
				a	60															
				a																
195.00				a																
	100	90	R3	b	5	3														
				a	20															
				b	60															
				c																
205.00				c																
	100	100	R3	c	5	3														
				c	20						SS#	** 210.0 225.2 SANDSTONE, altered, calcite, bleached, coarsely bedded								
				b	50															
				a																
215.00				a																
	100	100	R3	b	5	3														
				b	20															
				b	40															
				a																
225.00				b							SSCh	** 225.2 232.0 SANDSTONE/CHERT								
	100	100	R3	a	5	3														
				a	20															
				a	40						IR	** 232.0 248.3 INTRUSIVE RHYOLITE								
				a																
235.00				a																
	100	100	R3	a	15	2														
				c	30															
				b																
				c																
245.00				c																
	100	100	R3	b	20	2				-50C	Sk	** 248.3 251.0 SKARN, diopside/chert								
				b	50															
				a							pIR	** 251.0 259.4 INTRUSIVE RHYOLITE, black, porphyritic								
				a																
255.00				b																

ROCK QUALITY:

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

LYN91-81

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	R3	b	5	3				-35C										
				b	20						IR*	>< 259.4 288.8 INTRUSIVE RHYOLITE,								
				a	60							altered, above and below								
				a																
265.00				b								Note: @ 259.4-264.8 & @ 272.0-288.0 ,								
	100	100	R3	c	25	2						rhyolite porphyry, @ 264.8-272.0 crystal								
				c	50							tuff. Alteration: diopside, feldspar,								
				c								and chert alternating green, pink and								
				c								chert bands								
275.00				b																
	100	100	R3	b	15	2														
				a	65															
				a																
				a																
285.00				a																
	100	100	R3	a	5	3					pR*	>< 288.8 302.6 PORPHYRITIC RHYOLITE								
				a	20							TUFF, altered, feldspar laths, (dacite)								
				b	55							1-2 mm patches of epidote alteration.								
				b								Calcite filled fractures.								
295.00				a																
	100	90	R3	a	20	3														
				a	40															
				a	65						R1	>< 302.6 385.0 RHYOLITE CRYSTAL LAPILLI								
				c								TUFF								
305.00				c																
	100	95	R3	c	20	2						Note: @ 302.6-305.7 Epidote, chert								
				b	50							alteration, calcite, chert filled								
				c								fractures								
				b																
315.00				b																
	100	100	R3	c	15	3														
				c	30															
				b	65															
				b																
325.00				c																
	100	90	R3	c	5	3														
				b	20															
				c	65															
				c																
335.00				b							Rd	>< 335.0 344.0 INTRUSIVE RHYOLITE DIKE,								

ROCK QUALITY:

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

LYN91-81

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	R3	a	10	3						alternating massive quartz/feldspar								
				b	30							and quartz porphyry								
				a	50															
				a							WI	** 344.0 401.5 LAPILLI WACKE								
				b																
											Wf*	^^ 344.0 365.0 Altered Feldspathic Wacke,								
345.00				b								calcite filled fractures, bleached,								
	100	100	R3	b	10	3						clasts of quartz (blue, black, green)								
				b	40							tuff, and ashy layers fining upwards.								
				a	60							Blue quartz eyes at base.								
				b																
355.00				b																
	100	100	R3	a	10	3														
				c	30															
				c	70															
				c																
365.00				c																
	100	100	R3	c	30	2														
				c	65															
				c																
				c																
375.00				c																
	100	100	R3	c	30	2														
				c	65															
				c																
				c																
385.00				c																
	100	100	R3	c	15	3														
				c	30															
				b	50															
				c																
395.00				c																
	100	100	R3	c	20	3														
				c	50															
				b	70					-20C	Dd	** 401.5 411.4 FELDSPATHIC DACITE DIKE,								
				b								2-3 mm feldspar laths, calcite filled								
405.00				a								fractures								
	100	100	R3	b	20	3														
				b	45															
				a	70						SL*	** 411.4 424.0 ALTERED SILTSTONES,								

ROCK QUALITY:

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

LYN91-81

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								calcite filled fractures, minor								
415.00				a								brecciation								
	100	100	R3	b	30	3														
				a	60															
				a	80															
				b							Sk,p,t	** 424.0 435.3 SKARN, garnet, epidote,	b	2	1		3	2		8
425.00				b								serpentine, minor sphalerite,	b	2	1		3	2		8
	100	95	R2	b	20	2						pyrrhotite, and talcose	b	2	1		3	2		8
				b	50								b	2	1		3	2		8
				b									b	2	1		3	2		8
				c									b	2	1		3	2		8
435.00				c							SL,Sk,t	** 435.3 470.9 SILTSTONE, skarn alter-	b	2	1		3	2		8
	98	85	R2	c	25	2						ation, minor sulfides, talcose. Dis-	b	2	1		1	2		6
				c	45							seminated pyrrhotite and sphalerite,	b	2	1		1	2		6
				c								chalcopyrite and calcite in fractures	b	2	1		1	2		6
				c									b	2	1		1	2		6
445.00				c									b	2	1		1	2		6
	99	95	R2	c	30	2							b	2	1		1	2		6
				b	60								b	2	1		1	2		6
				c									b	2	1		1	2		6
463.00				c									b	2	1		1	2		6
	100	100	R2	c	40	2							b	2	1		1	2		6
465.00					70								b	2	1		1	2		6
	100	95	R2	c	40	2							b	2	1		1	2		6
				c	70						MS,p	** 470.9 517.0 MASSIVE SULFIDE,	b	2	1		1	2		6
				c								chalcopyrite, pyrrhotite, disseminated	e		31	2		17		50
				c								to bedded	e		31	2		17		50
475.00				c									e		31	2		17		50
	100	100	R3	c	10	2							e		31	2		17		50
				c	40							Note: @ 480.4-481.8 Barren zone, skarn	e		31	2		17		50
				c								containing (tetrahedrite) ?, silver	e		31	2		17		50
				c								rich	e		31	2		17		50
485.00				c									e		31	2		17		50
	100	100	R3	c	10	2							e		31	2		17		50
				c	40								e		31	2		17		50
				c									e		31	2		17		50
				c									e		31	2		17		50
495.00				a									e		31	2		17		50
	100	100	R3	b	10	2							e		31	2		17		50
				b	40								e		31	2		17		50

ROCK QUALITY:

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

LYN91-81

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									e		31	2		17		50
				b									e		31	2		17		50
505.00				c									e		31	2		17		50
	100	100	R3	c	40	1							e		31	2		17		50
				c									e		31	2		17		50
				c									e		31	2		17		50
				c									e		31	2		17		50
515.00				c									e		31	2		17		50
	100	100	R3	c	40	1					X,p	** 517.0 533.3 TUFFITE, pyrrhotite rich, disseminated chalcopyrite	e		31	2		17		50
				c									e		22	1		23		46
				c									e		22	1		23		46
				c									e		22	1		23		46
525.00				c									e		22	1		23		46
	100	100	R2	c	10	2							e		22	1		23		46
				c	30							Note: @ 530.0-532.4 Barren zone	e		22	1		23		46
				c									e		22	1		23		46
				c							Rt*	** 533.3 542.8 RHYOLITE TUFF, altered, bedded pyrrhotite, bleached, minor galena, chalcopyrite	e		22	1		23		46
535.00				c									b		3	1		3		7
	100	100	R2	c	10	2							b		3	1		3		7
				c	30								b		3	1		3		7
				c							D	** 542.8 578.5 DACITE, calcite filled fractures, feldspathic, quartz diorite intrusions at base	b		3	1		3		7
				c																
545.00				c																
											QD	** 578.5 630.0 QUARTZ DIORITE								

ROCK QUALITY:

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

LYN91-81

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

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
											E.O.H. 630' (total depth)								

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	179.9	-58.9
400'	182.4	-59.3
600'	184.4	-59.4
800'	187.2	-58.6
1050'	189.3	-57.9

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-9-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-82 (WDNR #242)

DATE: 12-5-91
PAGE 1 OF 16

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-15-91

BEARING: S179.6E INCLINATION: -58.9 T.D: 1050'
COORDINATES: L10000 E 11595 N
ELEV: 1559.2' 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 86.0		SS	60.0 86.0 SANDSTONE	
86.0 206.0		R	86.0 206.0 RHYOLITE	
206.0 226.0		D	206.0 226.0 DACITE	
226.0 337.0		SL	226.0 337.0 SILTSTONE	
337.0 347.5		R	337.0 347.5 RHYOLITE	
347.5 368.5		D	347.5 368.5 DACITE	
368.5 370.5		BP	368.5 370.5 BEDDED PYRRHOTITE	
370.5 372.2		SS	370.5 372.2 SANDSTONE	
372.2 533.0		R	372.2 533.0 RHYOLITE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
200'	179.9	-58.9
400'	182.4	-59.3
600'	184.4	-59.4
800'	187.2	-58.6
1050'	189.3	-57.9

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-9-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-82 (WDNR #242)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-15-91

BEARING: S179.6E INCLINATION: -58.9 T.D: 1050'
COORDINATES: L10000 E 11595 N
ELEV: 1559.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
533.0 541.7		SL	** 533.0 541.7 SILTSTONE	
541.7 611.5		R	** 541.7 611.5 RHYOLITE	
611.5 617.0		SLch	** 611.5 617.0 SILTSTONE, Cherty	
617.0 620.0		Chp	** 617.0 620.0 CHERT, With Pyrrhotite	
620.0 634.6		SLchp	** 620.0 634.6 SILTSTONE, Cherty, With Pyrrhotite	
634.6 640.0		Xt	** 634.6 640.0 TUFFITE, Tuffaceous	
640.0 676.3		Rc	** 640.0 676.3 RHYOLITE CRYSTAL TUFF	
676.3 695.0		TS	** 676.3 695.0 TALCOSE SEDIMENT	
695.0 723.4		Rc	** 695.0 723.4 RHYOLITE CRYSTAL TUFF	
723.4 730.0		TSs	** 723.4 730.0 TALC SEDIMENT, With Sulfides	
730.0 770.0		SS	** 730.0 770.0 SANDSTONE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

ootage	Bearing	Inclination
200'	179.9	-58.9
400'	182.4	-59.3
600'	184.4	-59.4
800'	187.2	-58.6
1050'	189.3	-57.9

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Midwest Drilling Co.
LOGGED BY: T. Harding
DATE COLLARED: 2-9-91
REMARKS:
CORE SIZE: NQ

HOLE NO: LYN91-82 (WDNR #242)

DATE: 11-11-91
PAGE 1 OF 16

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 2-15-91

BEARING: S179.6E INCLINATION: -58.9 T.D: 1050'
COORDINATES: L10000 E 11595 N
ELEV: 1559.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
770.0 832.8		TS	** 770.0 832.8 TALC SEDIMENT	
832.8 1049.6		QD	** 832.8 1049.6 QUARTZ DIORITE	
			E.O.H. 1049.6' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN91-82

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

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po	As	T
0.0 60.0											** 0.0 60.0 OVERBURDEN								
											^^ 0.0 30.0 Sand								
											^^ 30.0 40.0 Silty sand								
											^^ 40.0 55.0 Sand and gravel								
											^^ 55.0 60.0 Sand, gravel, and boulders								
											Note: @ 62.0 Lost circulation								
										SS	** 60.0 86.0 SANDSTONE, fine-grained, greenish-black, massive, minor patchy light green epidote alteration								
										R	** 86.0 206.0 RHYOLITE								
										Rf	^^ 86.0 122.0 Rhyolite Flow, lt. grey ashy matrix with banding and dark grey shards and clasts. Spherulitic interbeds becomes more crystal-rich toward base.								

ROCK QUALITY:

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

DRILL HOLE: LYN91-82

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
										Rl	^^ 122.0 137.0 Rhyolite Lapilli Tuff, lt. grey color with subangular cherty and pR clasts 0.5-2.0" in size								
										Rc	^^ 137.0 147.5 Rhyolite Crystal Tuff, lt. grey, glassy crystal-rich matrix, appears more welded								
										R	^^ 147.5 173.5 Rhyolite Tuff, fine-grained, medium grey matrix with plag and subtle quartz crystals in places, looks granophyric								
											Note: @ 149.0 164.0 Minor patchy zones of epidote alteration								
										Rc	^^ 173.5 202.0 Rhyolite Crystal Tuff, fine to medium-grained, medium grey matrix, with pR porphyroblasts.								

ROCK QUALITY:

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

DRILL HOLE: LYN91-82

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: @ 194.0 203.0 Cherty or altered zone								
										gR	^^ 202.0 206.0 Granophyric Rhyolite, medium grey, silicic glassy matrix, plag crystals								
										D	>< 206.0 226.0 DACITE, fine-grained, dark grey, patchy epidote alteration								
										SL	>< 226.0 337.0 SILTSTONE, weakly laminated								
										D	^^ 250.0 265.0 Dacite, black, fine-grained, minor crude laminations, massive								

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

DRILL HOLE: LYN91-82

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
									-50B										
									-55B	TS	^^ 283.4 284.5 Talc Sediment								
									-55B										
									-65B	SS	^^ 310.0 337.0 Sandstone, predominantly, green-grey, massive, scattered iron sulfides toward base								
									-90C	R	** 337.0 347.5 RHYOLITE	a a a				1 1 1	1 1 1		2 2 2
										glR	^^ 337.0 339.5 Intrusive Rhyolite Sill, granophyric	a				1	1		2
										Wl	^^ 339.5 347.5 Lapilli Wacke, to								

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

DRILL HOLE: LYN91-82

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
												crystal tuff at base								
										-60C	D	** 347.5 368.5 DACITE, black, fine-grained								
										-80C	pR	^^ 352.6 355.3 Porphyritic Rhyolite Sill, tan-orange, feldspar rich with minor blue quartz eyes								
365.00	100	100	R3	b	10	2					BP	** 368.5 370.5 BEDDED PYRRHOTITE	c					15		15
				c	50															
				c							SS	** 370.5 372.2 SANDSTONE								
											R	** 372.2 533.0 RHYOLITE								
				c							gR	^^ 372.2 423.0 Granophyric Rhyolite, lt. grey to pink silicic matrix with plag laths and scattered blue quartz eyes								
375.00																				
										-55C		Note: @ 397.2 423.0 Iron staining and epidote alteraton along high angle 0-10 degree fractures								

ROCK QUALITY:

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

DRILL HOLE: LYN91-82

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	^^ 423.0 523.5 Rhyolite Crystal Lapilli Tuff, dark matrix, predominantly feldspathic crystals and porphyroblasts, coarsens with depth to lapilli tuff							

ROCK QUALITY:

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

DRILL HOLE: LYN91-82

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#	^^ 510.6 512.1 Rhyolite Tuff, altered, dark green, very fine-grained, but with quartz and plag crystals, irregular contacts								
									-12C	Md	^^ 517.5 521.0 Mafic Dike, green black moderately plag-phyric								
									-12C	Rc	^^ 523.5 533.0 Rhyolite Crystal Tuff, plag-rich, occassional ash or chert clasts, brown matrix								
									-50C	SL	** 533.0 541.7 SILTSTONE, grey to black, very fine-grained, well laminated, cherty at top, more crystal-rich @ base.								
									-70B	R	** 541.7 611.5 RHYOLITE								
										gR	^^ 541.7 593.5 Rhyolite, granophyric, grey to tan								
									-5F		Note: @ 545.5 High angle fracture with epidote and sulfides	a				3			3

ROCK QUALITY:

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

DRILL HOLE: LYN91-82

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
											-10C	pMd	Note: @ 564.5 570.0 Mafic Dike, plag-phyric, black to dark green, hi-angle contacts								
														a				2			2
												pMd	Note: @ 591.0 593.5 Mafic Dike, plag-phyric, black, hi-angle contacts								
												Rc	^^ 593.5 611.5 Rhyolite Crystal Tuff, with occasional cherty lapilli, brownish matrix, blue quartz eyes								
605.00																					
		100	100	R3	b	10	3														
					b	30						SLch	** 611.5 617.0 SILTSTONE, Cherty, laminated, with chert interbeds, bedded iron sulfides	a				1	1	1
					b	60								a				1	1	1
					b									a				1	1	1
615.00					b									a				1	1	1
		100	100	R3	b	5	3					Chp	** 617.0 620.0 CHERT, With pyrrhotite, laminated at top, massive at base	b				2	5	7
					b	30								b				2	5	7
					c	60								b				2	10	12
					c							SLchp	** 620.0 634.6 SILTSTONE, cherty, with pyrrhotite	b				2	10	12
					c									b				2	5	7
														b				2	5	7
625.00														b				2	5	7
		100	100	R3	c	5	3							b				2	5	7
					b	30								b				2	5	7
					b	60								b				2	5	7
					b							X	** 634.6 640.0 TUFFITE, tuffaceous, massive, looks like replacement of a	c	12		1	2	3	18
635.00					b									c	12		1	2	3	18

ROCK QUALITY:

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

DRILL HOLE: LYN91-82

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	R3	b	10	3						crystal tuff, has crystal-rich matrix	c	12		1	2	3		18
				b	30								c	12		1	2	3		18
				b	60						Rc	** 640.0 676.3 RHYOLITE CRYSTAL TUFF,	b	5		1				6
				b								blue quartz eyes, brown matrix, bedded,	b	5		1				6
				b								disseminated sulfides	b	5		1				6
645.00																				
	100	100	R3	c	10	3														
				c	30															
				c	60															
				b																
655.00				b																
	100	100	R3	b	10	2														
				c	30															
				c																
				c																
665.00				c							Rt	^^ 666.0 676.0 Rhyolite Tuff, green to								
	100	100	R3	c	10	3						grey-black, very fine-grained, with								
				b	30							magnetite								
				a	60															
				a																
675.00				a							TS	** 676.3 695.0 Talcose Sediment	b	5						5
	100	95	R2	a	5	3							b	5						5
				a	30								b	5						5
				a	60								b	5						5
				b									b	5						5
685.00				b									b	5						5
	100	75	R2	a	30	2							b	5						5
				a	60															
				a																
				b																
695.00				b							Rc	** 695.0 723.4 RHYOLITE CRYSTAL TUFF,								
	100	100	R3	a	5	3						black, massive, with scattered white								
				a	30							quartz, not the same as above. Could								
				a	60							be reworked or hornfelsed								
				a																
				a							gQD	^^ 704.6 707.1 Granophyric Quartz Diorite								
705.00												Dike								
	100	100	R3	b	5	3														
				b	30															
				b	60															

DRILL HOLE: LYN91-82

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
				b																
715.00				a																
	100	100	R3	b	5	3														
				b	40															
				b	60															
				a																
725.00				a							TSs	** 723.4 730.0 TALC SEDIMENT, with sulfides								
											SS	** 730.0 770.0 SANDSTONE, possible reworked crystal tuff, talcose in places, grey, massive, with granophyric quartz diorite								
											TS	** 770.0 832.8 TALC SEDIMENT, dark to light green (diopside or serpentinite?)								
775.00																				
	100	100	R2	c	50	1														
				c																
				c																
				c																
785.00				c									a					1		1
	100	100	R2	c	20	2							a					1		1
				c	50								a					1		1
				c									a					1		1

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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	^^ 1351.0 1363.0	Rhyolite Porphyry								
										ChT	^^ 1363.0 1386.3	Cherty tuff								
									-25C	pRd	^^ 1386.3 1409.0	Rhyolite Porphyry Dike								

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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
									-75C	ChT	^^ 1409.0 1438.2 Cherty Tuff								
											^^ 1438.2 1521.0 Ashy Tuff, lt. grey, with spherulitic intervals and porcelainite patches								
											Note: @ 1453.0-1474.0 Granophyric								

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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
										W1	^^ 1521.0 1535.0 Lapilli Wacke, with pyrite along fractures and in lapilli								
										pR	^^ 1539.0 1542.5 Porphyritic Rhyolite								

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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	^^ 1601.0 1604.0 Porphyritic Rhyolite, with blue quartz eyes								
										W	^^ 1610.5 1617.0 Wacke								
										gR	^^ 1617.0 1695.0 Granophyric Rhyolite								

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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: @ 1656.0-1663.0 Core fractured @ 45 degrees to axis								
										Rt	^^ 1695.0 1758.7 Rhyolite Tuff, fragment, ashy								

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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
										Rc	^^ 1758.7 1842.0 Rhyolite Crystal Tuff, lt. grey, fragment, glassy matrix with blue quartz eyes, black chlorite on fractures							
											Note: @ 1787.5-1795.0 Bleached crystal tuff, white, mottled surface, with glassy, micaceous matrix							

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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	T
										Rc	^^ 1842.0 1846.0 Crystal Tuff, dark grey, moderately plag-phyric									
										gR	^^ 1846.0 1862.0 Granophyric Rhyolite									
										Rc	^^ 1862.0 1895.5 Rhyolite Crystal Tuff, lt. grey glassy matrix, with blue quartz eyes, black chlorite									

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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
									-20F		Note: @ 1891.0-1893.0 Fracturing								
										Rt	^^ 1895.5 1915.4 Rhyolite Tuff, fine-grained, medium grey								
											Note: @ 1908.0-1911.0 Rhyolite Porphyry								
											Note: @ 1911.0-1912.0 Lapilli Wacke								
										pR	^^ 1915.4 1949.0 Rhyolite Porphyry, lt. grey, crystal-rich matrix with blue quartz eyes								
										Rc	^^ 1949.0 2107.5 Rhyolite Crystal Tuff, medium to dark grey, blue quartz eyes, brownish alteration of matrix								

ROCK QUALITY:

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

DRILL HOLE: LYN91-72

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
											Note: @ 1980.0-2016.0 Matrix is dark grey								
											Note: @ 1996.0-2004.0 High angle foliations, 25 degrees to core axis, fault or fracture zone								
											Note: @ 2024.0-2054.0 Brownish orange mineral, not calcareous, in beds, also disseminated pyrite along bedding								