APPENDIX B

Geological and Geotechnical

Drill Logs 1-44 - Volume 1 of 3

Noranda Minerals Wisconsin Corp.

LYNNE PROJECT

4

(PG 211 - 280)

ROCK QUALITY:

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

DRILL HOLE: LYN90-19

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	50	R3	b	30	1												
				b														
				b														
											Rt	^^ 360.0 439.2 Rhyolite Tuff						
362.00																		
	80	0	R3	a	20	2												
363.00					40													
	100	80	R3	a	20	2												
365.00					30					-70								
	100	100	R4	a	20	2												
				b	50													
				b														
373.00				b														
	100	75	R4	c	10	1					Rc	Note: @ 375.2 409.7 Rhyolite Crystal Tuff						
				c						-60								
				c	10	2												
377.00				b	30					-45	Rc*	Note: @ 377.3-388.7 Bleaching, alteration along fractures						
	100	90	R4	b														
										-60								
383.00																		
	100	75	R3	b	10	2												
				a	30													
388.00				a						-30								
	100	90	R3	a	10	3												
				a	30													
				a	60													
396.00				a														
	100	90	R3	a	20	2												
399.00				b	60													
	100	95	R3	c	30	2												
				b	50													
404.00				c														
	100	95	R3	b	30	2												
408.00				b	60					-90								
	100	90	R3	a	30	2					gR	Note: @ 409.7 439.2 Granophyric Rhyolite bleached						
				b	50													
				b														
				a														
				a							pRd	Note: @ 415.0 432.2 Rhyolite Porphyry						

ROCK QUALITY:

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

DRILL HOLE: LYN90-19

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
418.00												Dike Swarm						
	100	90	R3	a	20	2												
				a	60													
				b														
				b														
428.00				b														
	100	100	R4	b	10	2												
				b	30													
				a														
				a														
438.00				a						-50								
	100	75	R4	a	20	2												
439.00					40						Rc	^^ 439.2 507.0 Rhyolite Crystal Tuff						
	100	75	R3	a	20	2												
442.00				a	40													
442.50	100	50	R3	b	10	2												
					40													
	100	90	R3	b	10	2					Rl	Note: @ 444.2 457.6 Rhyolite Crystal Tuff, with lapilli						
446.00				b	20													
	100	50	R3	a	10	2												
449.00				b	40													
	100	100	R3	c	10	2												
				c	40													
454.50				c														
	100	100	R3	c	10	3												
				c	20						Rt*	Note: @ 457.6 462.6 Rhyolite Tuff, fine-grained, diopside alteration ?						
				a														
461.00				a	40													
	100	90	R4	a	2	2					Rlb	^^ 462.6 465.0 Rhyolite Lapilli Tuff Breccia	b	5	2			
				c	20													
				c														
				c							Rl	^^ 465.0 469.0 Rhyolite Lapilli Tuff, bleached						
										-90								
470.00											Rt	^^ 469.0 470.9 Rhyolite Tuff, fine-grained						
	100	90	R4	c	2	2												
				c	20													
				c							Rlb	^^ 470.9 471.7 Rhyolite Lapilli Tuff Breccia	b	5	2			
				c														

ROCK QUALITY:

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

DRILL HOLE: LYN90-19

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
				a							Rl*	^^ 471.7 476.4 Rhyolite Lapilli Tuff, altered						
											Rl	^^ 476.4 507.5 Rhyolite Lapilli Tuff						
											pRd	^^ 478.5 480.0 Rhyolite Porphyry Dike						
480.00																		
	100	70	R3	b	10	1												
				c														
486.00				d														
	100	95	R3	d	30	1												
490.00				d														
	100	100	R3	c	10	1												
493.00				c														
	100	90	R3	c	10	1												
496.00				c														
	99	50	R3	b	10	1												
499.00				b														
	99	50	R3	b	10	2												
501.00					40													
	99	0	R3	b	10	1				-75								
503.50																		
	99	40	R3	a	10	2												
507.00				a	40						Rt	** 507.5 541.5 Rhyolite Tuff, Fine-grained						
	100	85	R3	a	10	3					Rc	^^ 510.0 514.2 Rhyolite Crystal Tuff						
511.00				b	30					-20								
					50					-20								
	100	90	R3	a	10	2												
				a	40													
				a														
518.00				a								Note: Bleached, altered high-angle fractures from 518.0-526.0						
	100	85	R3	a	10	2												
521.50				a	40					-70								
	100	100	R3	a	2	3												
				a	20													
				b	40													

ROCK QUALITY:

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

DRILL HOLE: LYN90-19

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														
531.50				b														
	100	90	R3	a	2	3				-35	Rt*,p	^^ 534.0 535.5 Rhyolite Tuff, altered						
				a	20					-40		fine-grained with minor bedded	a					2
				a	40							pyrrhotite						
				a														
541.00				a						-50	Rc	>>< 541.5 550.5 Rhyolite Crystal Tuff,						
	100	75	R2	a	20	2				-60		sheared						
				a	50													
547.00				a														
	50	0	R2	a														
548.00																		
	75	50	R3	a	10	3					Rca*	>>< 550.5 577.2 Rhyolite Tuff, calcareous	a	2	1			
				a	30					-55		with diopside alteration						
					70													
												^^ 550.5 551.0 Clay Gouge						
551.00																		
	100	100	R3	a	2	3												
				a	20													
				b	60								a					
				b														
561.00				b														
	100	100	R3	b	40	1				-75								
				b														
				b														
				b														
571.00				b														
	100	95	R3	c	40	1				-35								
				c														
				c							Xcaz	>>< 577.2 584.7 Tuffite, calcareous tuff	c	15	1	5		
				c								with disseminated Sp, Cp	c	15	1	5		
581.00				c									c	15	1	5		
	100	90	R3	c	40	1				-35	Rtz,t	>>< 584.7 597.0 Rhyolite Tuff, talcose	c	15	1	5		
				c								with stringer sulfides	c	15	1	5		
				c														
				c														
591.00				c														
	100	90	R3	c	10	2				-50								
				b	30													
				c						-60	Rt*,t	>>< 597.0 600.0 Tuff, altered, talcose						

ROCK QUALITY:

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

DRILL HOLE: LYN90-19

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														
				b							QD	⋇ 600.0 651.0 Quartz Diorite						
											gQD	~~ 600.0 607.5 Granophyre						
601.00																		
	100	100	R3	b	10	2												
				c	30													
				c														
610.00				c														
	100	100	R3	c	60	1												
611.00												Note: Sheared epidote altered quartz diorite with minor pyrrhotite, shear angle 10-30 degrees to core axis @ 611.0-651.00						
	100	100	R3	c	60	1												
				c														
				c														
				c														
621.00				c														2
	100	100	R3	c	10	3												
				c	25													
				a	40													
				a														
631.00				b														
	100	100	R3	c	10	3												
				b	20													
				a	40													
				b														
641.00				b														
	100	100	R3	b	20	2												
				b	40													
				c														
				c														
651.00				c								E.O.H. 651' (total depth)						

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	176.9	-63.6
100'	175.6	-64.0
250'	175.9	-64.4
400'	177.0	-64.5
550'	178.4	-64.3
700'	179.3	-64.4
850'	180.0	-64.9
968'	179.4	-65.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-13-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-20 (WDNR #163)

DATE: 7-18-91
PAGE 1 OF 14

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-25-90

BEARING: S176.9E INCLINATION: -63.6 T.D: 968'
COORDINATES: L10200 E, 11400 N
ELEV: 1570.2' 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 72.0	(not recovered)			
72.0 79.5	(HQ core)			
67.0 86.5		LW	** 67.0 86.5 LITHIC WACKE	
86.5 90.0		pR	** 86.5 90.0 RHYOLITE PORPHYRY	
90.0 127.0		D	** 90.0 127.0 DACITE	
127.0 157.5		R	** 127.0 157.5 RHYOLITE, OR INTRUSIVE RHYOLITE	
157.5 177.5		D	** 157.5 177.5 DACITE	
177.5 199.5		W	** 177.5 199.5 WACKE, Laminated	
179.0 184.0		pRd	^^ 179.0 184.0 Rhyolite Porphyry Dike	
199.5 215.0		D	** 199.5 215.0 DACITE, Plag-phyric	
202.0 215.0		pD	^^ 202.0 215.0 Plag-phyric Dacite	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	176.9	-63.6
100'	175.6	-64.0
250'	175.9	-64.4
400'	177.0	-64.5
550'	178.4	-64.3
700'	179.3	-64.4
850'	180.0	-64.9
968'	179.4	-65.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-13-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-20 (WDNR #163)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-25-90

BEARING: S176.9E INCLINATION: -63.6 T.D: 968'
COORDINATES: L10200 E, 11400 N
ELEV: 1570.2' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91
PAGE 1 OF 14

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
215.0 238.8		SL	** 215.0 238.8 SILTSTONE	
238.8 243.5		LW	** 238.8 243.5 LYNNE WACKE, Calcsilicate Altered	
243.5 247.2		SL	** 243.5 247.2 SILTSTONE, Laminated	
247.2 254.7		W	** 247.2 254.7 LYNNE WACKE, Calcsilicate Altered	
254.7 269.0		SL	** 254.7 269.0 SILTSTONE, Altered	
269.0 290.0		LW	** 269.0 290.0 LYNNE WACKE	
290.0 347.0		Rt	** 290.0 347.7 DIKE SWARM	
303.7 308.8		pRd	^^ 303.7 308.8 Rhyolite Porphyry Dike	
321.5 330.2		pRd	^^ 321.5 330.2 Rhyolite Porphyry Dike	
330.2 339.0		pD	^^ 330.2 339.0 Plag-phyric Dacite	
339.0 347.7		Rc	^^ 339.0 347.7 Rhyolite Crystal Tuff, With Lapilli base	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	176.9	-63.6
100'	175.6	-64.0
250'	175.9	-64.4
400'	177.0	-64.5
550'	178.4	-64.3
700'	179.3	-64.4
850'	180.0	-64.9
968'	179.4	-65.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-13-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-20 (WDNR #163)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-25-90

BEARING: S176.9E INCLINATION: -63.6 T.D: 968'
COORDINATES: L10200 E, 11400 N
ELEV: 1570.2' SEC: 15 TWP: 37N RANGE: 4E

DATE: 7-18-91

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
347.7 353.0		D	** 347.7 353.0 DACITE	
353.0 379.5		SL	** 353.0 379.5 SILTSTONE, Laminated	
379.5 391.0		pD	** 379.5 391.0 DACITE, Plag-phyric	
391.0 413.5		Rc	** 391.0 413.5 RHYOLITE CRYSTAL TUFF	
413.5 461.3		Rc	** 413.5 461.3 RHYOLITE CRYSTAL TUFF	
425.6 441.4		Rc	^^ 425.6 441.4 Rhyolite Crystal Tuff, Diopside Alteration	
447.0 451.1		pMd	^^ 447.0 451.1 Plag-Phyric Basalt	
461.3 469.6		ChC*	** 461.3 469.6 INTERBEDDED CHERT, Altered	
469.6 482.3		ChC*	** 469.6 482.3 INTERBEDDED CHERT/TUFF, Talcose, Altered, Stringer Su	
482.3 492.9		Rc	** 482.3 492.9 RHYOLITE CRYSTAL TUFF	
492.9 500.0		ChC*	** 492.9 500.0 INTERBEDDED CHERTY TUFF	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	176.9	-63.6
100'	175.6	-64.0
250'	175.9	-64.4
400'	177.0	-64.5
550'	178.4	-64.3
700'	179.3	-64.4
850'	180.0	-64.9
968'	179.4	-65.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-13-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-20 (WDNR #163)

DATE: 7-18-91
PAGE 1 OF 14

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-25-90

BEARING: S176.9E INCLINATION: -63.6 T.D: 968'
COORDINATES: L10200 E, 11400 N
ELEV: 1570.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
495.0 499.0		pMd	^^ 495.0 499.0 Plag-phyric Basalt Dike	
500.0 517.0		LW	** 500.0 517.0 LITHIC WACKE	
517.0 529.4		Rt,l	** 517.0 529.4 RHYOLITE TUFF, Laminated	
529.4 563.8		*R	** 529.4 563.8 SPHERULITIC TUFF	
563.8 567.5		Rc,t	** 563.8 567.5 RHYOLITE CRYSTAL TUFF, Talcose	
567.5 574.2		BM,l	** 567.5 574.2 BEDDED MAGNETITE TUFF, Laminated	
574.2 661.7		Rl,t	** 574.2 661.7 RHYOLITE LAPILLI TUFF, Talcose	
623.5 628.0		Rl*,t	^^ 623.5 628.0 Altered	
632.0 644.0		BM,lt	^^ 632.0 644.0 Bedded Magnetite Tuff, Laminated, Talcose	
655.6 661.7		BM,lt	^^ 655.6 661.7 Bedded Magnetite Tuff, Laminated, Talcose	
661.7 690.0		Xz,t	** 661.7 690.0 TUFFITE, Talcose, Stringer Sulfides	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	176.9	-63.6
100'	175.6	-64.0
250'	175.9	-64.4
400'	177.0	-64.5
550'	178.4	-64.3
700'	179.3	-64.4
850'	180.0	-64.9
968'	179.4	-65.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-13-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-20 (WDNR #163)

DATE: 7-18-91
PAGE 1 OF 14

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-25-90

BEARING: S176.9E INCLINATION: -63.6 T.D: 968'
COORDINATES: L10200 E, 11400 N
ELEV: 1570.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
690.0 733.5		Rc,t	** 690.0 733.5 RHYOLITE CRYSTAL TUFF, Talcose	
733.5 747.0		Cht	** 733.5 747.0 CHERTY TUFF	
747.0 750.5		Rt,t	** 747.0 750.5 RHYOLITE TUFF, Talcose	
750.5 780.6		Xz,t	** 750.5 780.6 TUFFITE, Talcose, Stringer Sulfides	
780.6 803.0		MS	** 780.6 803.0 MASSIVE SULFIDE	
789.0 791.0		Xz,t	^^ 789.0 791.0 TUFFITE, Talcose, Stringer Sulfides	
795.0 797.0		Rt	^^ 795.0 797.0 Rhyolite Tuff	
803.0 816.0		Xtz,t	** 803.0 816.0 TUFFITE, Tuffaceous, Talcose, Stringer Sulfides	
816.0 832.0		sRlb,s	** 816.0 832.0 RHYOLITE LAPILLI TUFF BRECCIA, Sheared, with Sulfides	
826.0 829.0		QD	^^ 826.0 829.0 Quartz Diorite	
832.0 968.0		QD	** 832.0 968.0 QUARTZ DIORITE	
832.0 837.0		gQD	^^ 832.0 837.0 Granophyre	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	176.9	-63.6
100'	175.6	-64.0
250'	175.9	-64.4
400'	177.0	-64.5
550'	178.4	-64.3
700'	179.3	-64.4
850'	180.0	-64.9
968'	179.4	-65.0

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-13-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-20 (WDNR #163)

DATE: 7-18-91
PAGE 1 OF 14

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-25-90

BEARING: S176.9E INCLINATION: -63.6 T.D: 968'
COORDINATES: L10200 E, 11400 N
ELEV: 1570.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
			E.O.H. 968' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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 67.0												** 0.0 67.0 Overburden						
												^^ 0.0 20.0 Sand, soft						
												^^ 20.0 50.0 Sand						
												^^ 50.0 60.0 Sand, silty, sticky						
												^^ 60.0 67.0 Sand and gravel (pea-sized)						
											LW	** 67.0 86.5 Lithic Wacke, lt. grey fine-grained matrix with chert (?) and rhyolite porphyry fragments (0.1"-2.0")						
72.00																		
	100	50	R4	a	10	3												
				a	30													
79.00				a	60													
	90	100	R4	a	10	3												
81.50					30							Note: @ 82.5-88.0 Core fractured						
					60													
	99	50	R4	a	10	2												
83.00					45													
	99	0	R4	a	10	2												
86.00				a	45						pR	** 86.5 90.0 Rhyolite Porphyry						
	50	0		a	10	2												
87.00					45													
	100	100	R3	a	10	2												
88.00					45													
	100	95	R3	a	10	2					D	** 90.0 127.0 Dacite, dark grey, fine-grained, patchy alteration						
				a	40													
93.50				a														
										-25F								
	99	50	R3	a	10	2				-5F	FZ	^^ 96.0 105.0 Fault Zone, core fractured @ 5-25 degrees to axis						
				a	35					-10F								
				a						-30F								
101.00				a								Note: @ 100.0-102.0 Distinctive orange-red patches (clasts ?) in sheared matrix, possible fault breccia						
	100	75	R2	a	10	2												
				a	30													
				a														

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
109.00				b														
	100	90	R3	a	10	3												
				b	40													
115.00				b	60													
	95	85	R3	b	15	2												
				b	50													
				b														
124.00				a														
	100	50	R3	a	20	1												
125.50																		
	100	90	R3	b	15	2					R	** 127.0 132.0 Rhyolite, fine-grained, beige, ashy top						
129.00				a	60													
	50	0	R3	a	15	2												
130.00					60													
	75	0	R3	a	20	2												
131.50					50						R	** 132.0 157.5 Rhyolite, pinkish, plagphyric clumps						
	100	90	R4	a	10	3												
				a	50													
				a	70													
				a														
140.00				b														
	100	100	R3	c	10	2												
				a	50													
146.00				b														
	100	100	R3	b	10	2												
				b	30													
151.50				c														
	100	100	R3	c	10	2												
				b	30													
157.00				c							D	** 157.5 177.5 Dacite, medium to dark grey, fine-grained, coarsening downward						
	100	95	R3	c	20	1				-55B								
				c														
162.00				b								Note: @ 160.6 (3") chert interbed with epidote alteration						
	100	100	R4	c	20	1												
164.00																		
	100	100	R4	b	10	1												
				c														
				c								Note: @ 170.0-184.0 Core fractured @ 10-20 degrees to core axis						
172.00				c														
	100	90	R4	c	10	1												

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
175.00				c														
	100	100	R4	c	10	1					W	** 177.5 199.5 Wacke, laminated						
				c														
				b						-20C								
				c														
184.00				b						-20C								
	100	95	R4	c	20	1												
				d														
				c														
192.00				c														
	100	100	R4	c	10	2												
				b	25													
				c														
200.50				b							pD	** 199.5 215.0 Dacite, plag-phyric						
	99	90	R3	b	20	2												
				c	40						pDs	^^ 202.0 215.0 Plag-phyric Dacite Sill, or coarse-grained crystal tuff, contacts vague						
				c														
				b														
209.00																		
	100	85	R4	b	20	2												
				b	40													
215.50				a							SL	** 215.0 238.8 Siltstone						
	100	80	R4	b	10	2				-50B								
				c	30													
220.00				b														
	100	100	R4	c	20	1												
				c														
				c														
				c														
229.50				c						-50B								
	100	100	R4	c	20	1												
				c														
234.80				b														
	100	75	R3	a	20	2												
				a	40					-40B	LW	** 238.8 243.5 Wacke, altered, patchy green (epidote) alteration						
239.20																		
	100	100	R3	b	20	1												
				b						-50B	SL	** 243.5 247.2 Siltstone, fine-grained, laminated lower contact gradational,						
244.00				b						-60B								

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
												alternating dk. grey, lt. grey pink layers						
	100	100	R3	b	20	1					W	** 247.2 254.7 Wacke, altered, pervasive, green (epidote) alteration						
				b														
				c														
				c														
254.00				b							SL	** 254.7 269.0 Siltstone, medium-grey, patchy alteration, with scattered pyrite along fractures toward base						
	100	95	R3	b	25	1												
				b														
				b														
261.00				b														
	100	95	R3	b	20	2												
				a	30													
				a														
				b						-40C	LR	** 269.0 290.0 Lynne Rhyolite, granophyric, pervasive pinkish alteration, jointed @ 5-20 degrees to core axis						
271.00				a														
	100	100	R3	a	10	2												
272.00					40													
	75	100	R3	b	5	2												
276.00				a	20													
	100	90	R3	a	5	2						Note: @ 278.0-283.0 Core broken, with carbonate-filled fractures, possible fault						
280.60				a	20													
	100	95	R3	a	20	2												
				a	45													
				a														
288.00				a														
	99	70	R3	a	5	2				-40C	DZ	** 290.0 347.7 Dike Swarm						
291.30				a	25						pR	^^ 290.0 303.7 Rhyolite Porphyry, dark-grey, possibly hornfelsed, with red alteration along fractures, plagphyric intervals						
	99	65	R3	a	20	1												
295.00				a														
	99	90	R3	a	20	1												
298.00				a														
	100	100	R3	a	10	2												
302.60				a	30													
	100	100	R3	a	10	2					pRd	^^ 303.7 308.8 Rhyolite Porphyry granophyric						
				a	40													
308.80				a														
	100	90	R2	a	10	3					pD	^^ 308.8 321.5 Porphyritic Dacite						

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
				a	30													
				a	60													
				a														
				a														
318.80																		
	100	100	R3	a	10	3												
				a	30						pRd	^^ 321.5 330.2 Rhyolite Porphyry						
323.30				a	60													
	100	50	R3	a	5	2												
327.50				a	20													
	100	90	R3	a	10	3												
330.00					20						pD	^^ 330.2 339.0 Plag-phyric Dacite						
					50													
	100	50	R3	a	5	3												
332.00					30													
					50													
	100	85	R3	a	5	3												
				a	30													
338.50				a	50													
	100	85	R3	a	5	3					Rc	^^ 339.0 347.7 Rhyolite Crystal Tuff, with lapilli @ base, big round clasts at base, plag crystals						
				b	20													
				a	50													
345.70				a														
	100	100	R3	a	10	3					D	** 347.7 353.0 Dacite						
				a	30													
				a	60							Note: Medium-grained, patchy alteration scattered sulfides, scattered plag						
353.00				a														
	100	100	R3	a	10	2												
				a	40						SL	** 353.0 379.5 Siltstone, fine-grained, laminated						
				a														
				a														
				a														
363.40																		
	85	80	R3	a	10	2												
				a	30													
370.00				a														
	100	95	R3	a	10	1												
				a														
				a														

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
				a														
379.00				a						-60C	D	** 379.5 391.0 Dacite, plag-phyric-carb filled veinlets						
	100	100	R3	a	10	2												
				a	50													
				a														
				a														
389.00				a						-55F								
	100	95	R3	a	20	2					Rc	** 391.5 413.5 Rhyolite Crystal Tuff, dark grey matrix with quartz and feldspar-rich clasts (0.5-1.0") and blue quartz eyes (0.1-0.2") sheared upper contact						
				a	60													
				b														
				a														
398.50				b						-70B								
	100	100	R2	d	60	1												
401.00																		
	100	100	R2	c	30	2												
				c	60													
				d														
				d														
411.00				b						-65B								
	100	100	R3	b	10	2				-50C	Rc/ChC#	** 413.5 425.6 Interbedded Rhyolite Crystal Tuff/Chert, brownish matrix with chert, spherulitic beds, with blue quartz eyes	b	5	3		2	
				c	30								b	5	3		2	
				c									b	5	3		2	
													b	5	3		2	
													b	5	3		2	
											Rl,#s	^^ 415.5 418.0 Altered, Bedded Sulfides	b	5	3		2	
417.00													b	5	3		2	
	99	65	R3	c	15	1												
				b														
424.00				b						-80C								
	100	100	R3	b	30	2					Rc#	** 425.6 441.4 Rhyolite Crystal Tuff, greenish-grey (diopside) alteration and disseminated pyrite						
				c	60													
				c														
432.00				c														
	100	95	R3	c	20	2												
				b	40													
				b														
				c						-80C	Rc	** 441.6 461.3 Rhyolite Crystal Tuff, lt. grey patches in brownish matrix with abundent blue quartz eyes, spherulitic patches						
442.00				c														
	100	80	R3	b	10	2												
				a	30													

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
447.60				a														
	100	100	R3	c	10	3				-15C -30C	pMd	^^ 447.0 451.1 Plag-phyric Basalt Dike, with disseminated pyrite						
451.60				a	50													
					65													
	100	100	R2	a	20	2												
				c	40													
				c														
				c														
461.60				c						-60C	ChC*	** 461.3 469.6 Chert, altered chert fragments in altered (diopside ?) matrix, with disseminated pyrite						
	100	95	R3	c	15	1												
				c														
				b														
				a						-60C	ChC*	** 469.6 482.3 Interbedded Chert, altered talcose, with stringery sulfides, greyish with green chemical sediment interbeds and diopside alteration sheared, cherty lower contact						
471.60				b														
	100	95	R3	b	10	2												
				a	50													
				a														
				a														
481.60				a						-50C	Rc	** 482.3 492.9 Rhyolite Crystal Tuff, lt. grey patches, with brown matrix and blue quartz eyes						
	99	40	R2	a	30	1												
484.60				a														
	100	50	R2	b	30	1												
486.00																		
	99	50	R2	c	30	1												
487.50																		
	100	85	R2	c	30	1												
491.50				c						-60C	ChC*	** 492.9 500.0 Interbedded Cherty Tuff, black cherty & green (diopside?) altered tuff						
	100	75	R3	c	10	3												
				a	40													
				a	60					-15C								
				a							pMd	^^ 495.5 499.0 Plag-phyric Basalt Dike, with high angle fractures & green alteration along fractures						
				a														
										-10C	LW	** 500.0 517.0 Lithic Wacke, bedded, dark-grey fine-grained matrix, white and grey cherty fragments or interbeds						
501.50																		
	100	100	R3	b	30	1				-75B								
				b														

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
				c														
				c						-65B	R1,#s	^^ 505.2 515.8 Altered Diopside and						
				b						-60B		carbonate alteration with scattered						
										-60B		sulfides and chert interbeds						
511.50																		
	99	85	R3	a	10	2												
				b	50													
				b						-55B	Rt,l	** 517.0 529.4 Rhyolite Tuff, laminated,						
				a						-50B		dark-grey and bluish-brown laminations,						
521.50				a						-40B		with scattered sulfides						
	99	70	R2	a	30	2				-45B		Note: Fluctuating bedding angles, broken						
				a	50					-70B		core @ 518.0, @ 523.0-525.0 minor offsets						
526.00				a						-35B		along 30 degree fractures						
	100	90	R2	a	30	2				-65B								
				c	60					-60B	*R	** 529.4 563.8 Spherulitic Tuff with						
532.60				b						-60C		chert interbeds, lt. brown beds with						
	99	70	R2	a	20	2						white spherulites in carbonate matrix						
535.50				b	50							alternating with greyish white chert						
	99	80	R2	a	20	2						beds and dark grey lapilli tuff						
539.50				b	45													
	100	50	R2	a	45	1												
542.00				b														
	99	80	R3	a	30	2												
				a	50													
				a														
				a														
551.00				a														
	99	50	R3	a	30	2												
				a	50					-50B								
557.00				a														
	98	0		a	30	2												
558.50					50													
	100	70	R3	a	30	2												
560.00					50													
	100	85	R3	a	30	2												
563.50				a	50						Rc,t	** 563.8 567.5 Rhyolite Crystal Tuff,						
	98	10	R2	a	30	2						talcose, dark grey, broken						
				a	50													
567.00										-60B	BM,l	** 567.5 574.2 Bedded Magnetite Tuff,						
	99	70	R3	a	10	2				-60B		laminated. Minor offset along						

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
				a	50					-40B		fractures @ 10 degrees to core axis						
573.00				a														
	100	50	R3	a	20	2				-40B	R1,t	** 574.2 661.7 Rhyolite Lapilli Tuff,						
575.00					50							talcose, with scattered sulfides						
	100	65	R2	a	20	2												
579.00				b	50							Note: Broken core @ 574.0-590.0						
	100	50	R2	b	30	2												
583.50				b	60													
	99	85	R2	c	50	1												
588.00				c														
	100	75	R2	c	10	2												
				c	30													
				d														
				c														
598.00				c														
	100	50	R2	b	10	2												
				c	30													
				c														
606.00				c														
	100	70	R2	b	30	2												
				a	50													
611.50				c														
	99	75	R2	c	30	1												
				b														
				c														
620.00				a														
	99	80	R2	a	30	1												
				c							R1*,t	^^ 623.5 628.0 Epidote-carbonate						
				c								alteration						
				d														
629.30				c								Note: Broken core @ 627.0-632.0						
	99	70	R2	c	30	1												
632.50				c							BM,lt	^^ 632.0 644.0 Rhyolite Tuff, laminated,						
	100	70	R2	b	20	2						with bedded magnetite, talcose						
				a	50													
637.50				b														
	100	70	R2	c	40	1												
641.30				c														
	99	20	R2	b	10	2												
645.50				a	30													

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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	75	R2	b	10	2												
647.00					30													
	100	45	R3	b	30	1												
650.00				c														
	100	100	R2	c	30	1												
653.00				c														
	100	50	R2	c	10	3												
				a	30						BM,lt	^^ 655.6 661.7 Rhyolite Tuff, laminated, with bedded magnetite talcose						
658.70				a	50													
	100	100	R2	b	30	1												
				c							Xz,t	** 661.7 690.0 Tuffite, talcose with stringer sulfides	c	4	2	6		5
				c									c	4	2	6		5
				c									c	4	2	6		5
				c									c	4	2	6		5
669.00				c									c	4	2	6		5
	100	90	R2	c	30	1												
				c														
				c														
				c														
679.00				c														
	100	80	R2	c	35	1												
				c														
				c														
				c														
689.00				c							Rc,t	** 690.0 733.5 Rhyolite Crystal Tuff, talcose, with stringer sulfides						
	100	70	R2	c	10	2												
				c	50													
				a														
696.00				b														
	100	70	R2	b	40	1												
				c														
702.00				c														
	100	80	R2	b	10	3												
				c	40													
				c	60													
				a														
711.00				a														
	100	80	R2	a	10	3												
				a	40													
				a	60													

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
				a														
721.00				a														
	100	70	R2	a	30	2												
				a	50													
728.00				a														
	100	90	R2	b	30	1												
				a														
734.00				a							Cht	** 733.5 747.0 Cherty Tuff						
	100	60	R3	a	10	2												
				a	40													
739.00				a														
	100	90	R2	a	40	2												
				a	70													
				b														
				a						-50B	Rt,t	** 747.0 750.5 Rhyolite Tuff, talcose						
				b														
749.00											Xz,t	** 750.5 780.6 Tuffite, talcose,						
	100	100	R2	b	20	2						stringery sulfides, lt. grey, with	c	18		3		1
				b	50							sphalerite and chalcopyrite as laminae	c	18		3		1
754.00				c									c	18		3		1
	100	90	R2	d	50	1							c	18		3		1
				d									c	18		3		1
				d									c	18		3		1
				d									c	18		3		1
764.00				c									d	25	1	3		1
	100	80	R2	c	60	1							d	25	1	3		1
				b									d	25	1	3		1
				c									d	25	1	3		1
772.30				c						-50B			d	25	1	3		1
	99	50	R3	a	40	2							d	25	1	3		1
774.80					60								d	25	1	3		1
	100	85	R2	a	40	1							d	25	1	3		1
				b									d	25	1	3		1
				c						-90C	MS	** 780.6 803.0 Massive Sulfide, bedded	d	25	1	3		1
				c								maroon and amber sphalerite, with	d	25	1	3		1
												chalcopyrite	f	60				
784.80				b									f	60				
	100	90	R2	c	30	1				-60B			f	60	5			
				d									f	60	5			
				d						-60B	Xz,t	^^ 789.0 791.0 Tuffite, talcose,	f	60	5			

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
				d								stringery, lt. grey, patchy Sp & Ga	d	25	2	2		
				c									d	25		3		
													d	25		3		
795.00				c						-70C			d	25		3		
	100	95	R3	b	30	1					Rt	^^ 795.0 797.0 Rhyolite Tuff (?),	d	25				
				c						-40C		unaltered, unmineralized	d	25				
				c									d	25				
				c						-60B	Xtz,t	** 803.0 816.0 Tuffite, tuffaceous,	d	25				
805.00				c								talcose, stringery	d	25	1	2		
	100	90	R3	c	50	1							d	25	1	2		
				c									d	25	1	2		
				c								Note: Massive Sulfide @ 815.0-816.0	d	25	1	2		
				b									d	25	1	2		
815.00				a							sRlb,s	** 816.0 832.0 Lapilli Tuff Breccia,	d	25	1	2		
												sheared, with sulfides	c	4	3	2	1	
	99	60	R2	a	10	2							c	4	3	2	1	
				a	40								c	4	3	2	1	
				a									c	4	3	2	1	
823.00				a									c	4	3	2	1	
	99	30	R2	a	10	2							c	4	3	2	1	
825.00					30						QD	^^ 826.0 829.0 Quartz Diorite	c	4	3	2	1	
	100	90	R3	b	10	3												
				a	30													
				b	50						QD	** 832.0 968.0 Quartz Diorite						
				b														
				b							gQD	^^ 832.0 837.0 Granophyre						
835.00																		
	100	100	R3	b	20	2												
				a	30													
				a								Note: Quartz Diorite is foliated to						
844.00				a								moderately sheared to end of hole with						
	100	90	R3	b	10	2						blue quartz eyes and a yellow-green cast						
				c	50													
849.00				c														
	100	95	R3	c	10	2												
				b	40													
				c														
				c														
859.20				c														

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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	15	2												
				c	30													
				c														
				c														
869.20				b														
	100	100	R3	b	15	2												
				b	30													
				a														
				c														
879.20				c														
	100	100	R3	b	10	2												
				c	20													
				c														
				c														
889.00				c														
	100	100	R3	c	20	1												
				c														
				c														
897.00				c														
	100	90	R3	c	20	2												
				c	55													
				c														
				c														
907.00				c														
	100	100	R3	c	40	1												
911.00				c														
	100	100	R3	c	10	2												
				b	40													
				b														
				b														
921.00				c														
	99	75	R3	b	15	2												
925.60				a	40													
	100	95	R3	c	30	2												
				b	50													
				b						-25C	Md	^^ 932.3 964.0 Basalt Dike						
				a														
935.70				a														
	100	100	R4	a	10	3												
				a	30													

ROCK QUALITY:

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

DRILL HOLE: LYN90-20

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
				a	70													
944.00				a														
	100	100	R4	a	10	3												
				a	40													
				a	60													
				a														
954.00				b														
	100	100	R4	b	5	2												
				a	30													
				a														
				a														
964.00				a						-20C								
	100	100	R3	d	10	1												
968.00				d								E.O.H. 968' (total depth)						

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	182.3	-60.2
100'	182.3	-59.8
200'	182.0	-60.2
300'	182.1	-60.4
400'	182.4	-60.5
515'	182.7	-59.9

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: D. Stevens
DATE COLLARED: 9-14-90
REMARKS:
CORE SIZE: NQ/HQ

HOLE NO: LYN90-21 (WDNR #158)

DATE: 1-8-92
PAGE 1 OF 8

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-24-90

BEARING: S182.3E INCLINATION: -60.2 T.D: 515'
COORDINATES: L9600 E, 11400 N
ELEV: 1579.5' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 71.0			** 0.0 71.0 OVERBURDEN	
71.0 76.0	(not recovered)			
76.0 79.0	(HQ core)			
71.0 90.8		pRb	** 71.0 90.8 RHYOLITE BRECCIA, Porphyritic	
90.8 94.5		pRd	** 90.8 94.5 RHYOLITE PORPHYRY DIKE	
94.5 305.5		Rt,Rc	** 94.5 305.5 INTERBEDDED RHYOLITE TUFF, CRYSTAL TUFF	
204.0 222.0		pRd	^^ 204.0 222.0 Rhyolite Porphyry Dike	
222.0 230.0		R1	^^ 222.0 230.0 Rhyolite Lapilli Tuff	
305.5 351.3		Sk	** 305.5 351.3 RHYOLITE TUFF, Calc-silicate Alteration	305.0 351.3 Epidote
340.0 343.0		BPM	^^ 340.0 343.0 Bedded Pyrrhotite-Magnetite	
345.4 351.3		R1,p	^^ 345.4 351.3 Lapilli Tuff with Disseminated Pyrrhotite	345.4 351.3 Chlorite & Magnetite
351.0 460.0		Rt	** 351.3 460.0 RHYOLITE TUFF, Fine-grained	
357.5 363.4		IR	^^ 357.5 363.4 Intrusive Rhyolite	
376.5 382.5		R1,p	^^ 376.5 382.5 Lapilli Tuff Breccia	
412.0 425.0			412.0 425.0 Fracturing/shattering at high angles (<10 degrees) to core axis	412.0 425.0 Epidote
443.0 450.2		Rc	^^ 443.0 450.2 Rhyolite Crystal Tuff	
450.2 452.0		Rc*	^^ 450.2 452.0 Rhyolite Crystal Tuff, Altered	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	182.3	-60.2
100'	182.3	-59.8
200'	182.0	-60.2
300'	182.1	-60.4
400'	182.4	-60.5
515'	182.7	-59.9

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: D. Stevens
DATE COLLARED: 9-14-90
REMARKS:
CORE SIZE: NQ/HQ

HOLE NO: LYN90-21 (WDNR #158)

DATE: 1-8-92
PAGE 1 OF 8

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-24-90

BEARING: S182.3E INCLINATION: -60.2 T.D: 515'
COORDINATES: L9600 E, 11400 N
ELEV: 1579.5' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
460.0 465.5		Rt,t	xx 460.0 465.5 RHYOLITE TUFF, Talcose	
465.5 515.0		QD	xx 465.5 515.0 QUARTZ DIORITE	
465.5 489.0		sgQD	^^ 465.5 489.0 Granophyre	
471.0 474.0		gQD	^^ 471.0 474.0 Granophyre, reddish, fractured with minor Pyrrhotite on fractures	
			E.O.H. 515' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN90-21

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 71.0 Overburden						
											pRb	** 71.0 90.8 Rhyolite Breccia, Porphyritic						
76.00																		
	100	100	R3	a	10	2												
78.00					50													
	100	100	R3	a	20	2												
79.00					70													
	100	90	R3	b	10	2												
				b	40					-65								
84.00				b														
	100	90	R3	a	10	3												
				b	20					-65								
				b	40						pRd	** 90.8 94.5 Rhyolite Poryphyry Dike with minor pyrrhotite	a					1
91.00				b									a					1
													a					1
	100	85	R3	a	20	2					Rt,Rc	** 94.5 305.5 Interbedded Rhyolite Tuff, Crystal Tuff	a					1
95.00				a	60													
	100	100	R3	a	20	2												
97.00					70													
	100	75	R3	a	20	2												
98.00					70													
	100	95	R3	a	10	2												
100.00					60													
	100	90	R3	a	10	2				-30								
				a	60													
106.00				a						-45								
	100	90	R3	a	10	2					Rt	^^ 107.0 108.2 Rhyolite Tuff, Fine-grained, epidote altered						
				a	30													
				c														
114.00				c														
	100	90	R4	c	10	2						Note: Fracture 1-2" from core axis	a					1
				c	30								a					1
				c							Rt	^^ 121.0 145.3 Rhyolite Tuff, Fine-grained with high angle fracture 0-12 degrees from core axis with minor pyrrhotite	a					1
				c									a					1
124.00				c									a					1
	100	95	R3	c	10	2							a					1
				c	30								a					1
				c									a					1

ROCK QUALITY:

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

DRILL HOLE: LYN90-21

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									a					1
134.00				a									a					1
	100	90	R3	a	15	2				-25			a					1
				a	50								a					1
				a									a					1
141.00				a									a					1
	100	100	R3	a	20	1							a					1
143.00										-40		Note: Fractures 1-2 degrees from core axis	a					1
	100	85	R3	a	10	2					Rt	^^ 145.3 147.1 Rhyolite Tuff, Fine-grained	a					1
				a	20								a					1
				b									a					1
149.00											Rt,Rc	^^ 147.1 157.0 Rhyolite Tuff, Fine-grained with crystal tuff interbeds						
	100	100	R3	a	10	2												
151.00					55													
	100	100	R3	b	20	2												
154.00				b	50													
	100	50	R3	b	20	2												
158.00				c	50						Rc	^^ 157.0 174.2 Rhyolite Crystal Tuff						
	100	50	R3	b	10	1												
160.00																		
	100	90	R3	a	20	1												
164.00				b														
	99	75	R3	b	10	2												
				a	50													
				b														
172.00				a														
	100	100	R3	a	30	2												
174.00					50						Rt	^^ 174.2 205.1 Rhyolite Tuff, Fine-grained						
	100	70	R3	a	10	2												
177.00				a	30													
	99	50	R3	a	10	2												
179.00					30													
	100	80	R3	a	30	2					Rt	^^ 181.0 186.0 Rhyolite Tuff, Fine-grained, bleached and iron-stained, most intense 1.0 cm from fracture						
				a														
184.00												Note: High angle fracture 10 degrees						

DRILL HOLE: LYN90-21

ROCK QUALITY:

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

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	75	R3	a	10	3						offset by high angle fracture at 25 degrees @ 183.0						
				a	20													
				a	40													
192.00				a														
	90	90	R3	a	20	2												
				a	35													
				a														
199.00				a														
	99	25	R3	a	20	2												
201.00				a	40													
	100	100	R3	a	20	2												
202.00					40													
	98	75	R3	a	20	2												
203.00					40													
	99	75	R3	a	30	2					pRd	^^ 204.0 222.0 Rhyolite Dike, orange color, high angle fractures at 10 degrees						
205.00					60													
	100	90	R3	b	10	2												
				c	30													
				b														
212.00				b														
	100	100	R3	b	10	2												
				c	30													
				c														
				c														
222.00				b														
	100	100	R4	b	20	2					Rl	^^ 222.0 230.0 Rhyolite Lapilli Tuff, bleached						
				b	50													
				b														
				c														
232.00				c														
	100	100	R5	b	30	2												
				b	50													
238.00				c														
	100	90	R5	c	20	2												
				c	50													
243.50				c														
	95	30	R3	c	2	2					Rt,ch,l	^^ 246.0 265.5 Rhyolite Tuff, Fine-grained, laminated, cherty						
				c	40													
				a						-50								
				a														

ROCK QUALITY:

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

DRILL HOLE: LYN90-21

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
253.00				a														
	100	90	R3	a	2	3												
				b	20													
				a	50					-40								
				c						-55								
264.00				c														
	100	100	R3	a	10	3					Rc,Rl	^^ 265.5 295.5 Rhyolite Crystal/Lapilli Tuff, epidote altered						
267.00				a	40					-50								
					60													
	100	95	R4	a	45	2												
271.00				a	60						Rc,Rl	^^ 272.0 274.5 Rhyolite Crystal/Lapilli Tuff, bleached with iron stain on fractures						
	99	80	R4	a	30	2												
				a	60					-50								
276.00				a														
	100	75	R5	a	10	2												
280.00				a	50													
	100	100	R4	a	15	2												
283.00				a	40													
	100	100	R4	a	30	2												
286.00				b	50													
	99	80	R4	b	20	2												
				b	40													
292.00				a														
	100	95	R3	a	10	3												
				a	40													
				a	60													
				a														
302.00				b														
	100	90	R3	c	10	2												
				c	40						Sk	^^ 305.5 351.3 Rhyolite Tuff, Fine-grained calc-silicate alteration						
				b														
310.00				b														
	100	95	R3	a	10	2												
				a	40													
				a														
				a														
320.00				a														
	100	85	R3	a	10	2												
324.00				a	55						Rl	^^ 324.5 346.5 Rhyolite Lapilli Tuff, epidote altered						
	100	90	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: LYN90-21

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
				a	60													
				a														
				b														
334.00				b														
	100	75	R3	b	10	2												
				c	40													
339.00				c							BPM	^^ 340.0 343.0 Bedded Pyrrhotite, Magnetite						
	100	75	R3	c	10	2												
				c	50													
				b							R1,p	^^ 345.4 351.3 Rhyolite Lapilli Tuff with 5% pyrrhotite	a			1	4
				b									a			1	4
349.00				c									a			1	4
	100	90	R4	c	10	2				-50	Rc,R1	** 351.3 460.0 Rhyolite Tuff, Fine-grained	a			1	4
				c	30													
				b														
				a							pIR	^^ 357.5 363.4 Intrusive Rhyolite with fragments, epidote altered, blue quartz eyes						
359.00				a														
	100	85	R3	b	10	2												
361.00					40													
	90	85	R3	a	10	2												
363.00					40													
	100	100	R3	a	10	2												
				a	40													
				b														
370.50				b														
	100	100	R3	b	10	3												
372.00					20													
					40													
	100	100	R3	b	10	2												
				b	45						R1p	^^ 376.5 382.5 Rhyolite Lapilli Tuff, grey from 376.5-378.0, then dark grey-black with 5% pyrrhotite				1	5
				b												1	5
				c												1	5
382.50				c												1	5
	100	100	R3	b	10	2					R1	^^ 384.0 385.0 Lapilli Tuff						
				a	40													
				a														
				a								Note: @ 389.0 altered zone 1.0 cm offset by fractures at 0 degrees to core axis						
392.50				a														
	100	95	R3	a	10	2												
				a	30													

ROCK QUALITY:

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

DRILL HOLE: LYN90-21

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
				a								^^ 397.0 398.0 Epidote Altered Fracture zone						
				a														
402.00				a														
	100	90	R3	a	10	2												
				b	30													
				a														
				a														
412.00				a								^^ 412.0 425.0 Shattered zone, <10 degrees to core axis						
	75	25	R3	a	10	2												
414.00					30													
	100	90	R3	a	10	2												
				a	30													
				a														
422.00				a														
	98	0	R3	a	10	2												
424.50					60													
	99	65	R3	a	10	2												
428.00				a	30													
	100	100	R3	a	10	2												
430.00					30													
	100	100	R3	a	10	3												
434.50				a	25													
					60													
	100	100	R3	a	10	3												
				a	30													
				a	50													
441.00				a														
	100	70	R3	a	10	3					Rc	^^ 443.0 450.2 Rhyolite Crystal Tuff sheared at 35 degrees to core axis						
443.00					30													
					50													
	100	95	R3	a	10	3												
				a	20													
449.00				a	35						Rz	^^ 450.2 452.0 Rhyolite Crystal Tuff sheared epidote alteration, stringery pyrrhotite	a					2
	100	95	R3	a	10	2							a					2
				a	40													
				a														
				a														
459.00				a							Rt,t	>>< 460.0 465.5 Rhyolite Tuff, Sheared talcose, with minor pyrrhotite, chalcopyrite	a					2
	90	0	R3	a	10	2							a					2
461.00					40								a					2

ROCK QUALITY:

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

DRILL HOLE: LYN90-21

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	50	R3	a	10	2							a					
464.00				a	40								a					
	98	0	R3	a							sQD	** 465.5 515.0 Quartz Diorite						
465.00																		
	100	50	R3	a	10	2					sgQD	^^ 465.5 489.0 Granophyre, Sheared at 40 degrees to core axis						
				a	40						gQD	^^ 471.0 484.0 Granophyre, reddish fractured with minor pyrrhotite on fractures	a					1
472.00				a									a					1
	100	20	R3	a	30	2							a					1
474.00					50								a					1
	90	50	R3	a	20	2							a					1
476.00					60								a					1
	100	50	R3	a	20	2						Note: Apparent shearing @ 40 degrees to core axis	a					1
477.00					60								a					1
	100	60	R3	a	10	3							a					1
				a	25								a					1
482.00				a	60								a					1
	100	95	R3	a	25	2							a					1
				a	60													
				a														
490.00				a														
	100	100	R3	a	30	1												
491.50																		
	100	95	R4	a	30	1												
495.00				a														
	100	100	R4	a	5	2												
				a	30													
				a														
504.00				a														
	100	100	R3	a	5	2												
				a	30													
				a														
				b														
513.50				b														
	100	100	R3	a	30	1												
515.00												E.O.H. 515' (total depth)						

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	175.9	-60.3
100'	177.1	-59.7
200'	178.4	-59.9
300'	179.1	-59.6
324'	179.3	-59.5

PROJECT: LYNNE P.O. 1876
CONTRACTOR: Longyear
LOGGED BY: D. Stevens
DATE COLLARED: 9-24-90
REMARKS:
CORE SIZE: NQ/HQ

HOLE NO: LYN90-22 (WDNR #168)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-26-90

BEARING: S180E INCLINATION: -61 T.D: 324'
COORDINATES: L10200 E, 10605 N
ELEV: 1569.5' SEC: 15 TWP: 37N RANGE: 4E

DATE: 10-26-90
PAGE 1 OF 5

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 60.0			** 0.0 60.0 OVERBURDEN	
60.0 66.0	(not recovered)			
66.0 80.0	(HQ core)			
60.0 98.8		pRd	** 60.0 98.8 PORPHYRITIC RHYOLITE DIKE	
98.8 133.3		CT,BMp	** 98.8 133.3 TUFA & BEDDED/MASSIVE MAGNETITE	
98.8 104.5		BM,p	^^ 98.8 104.5 Bedded to Massive Magnetite Tuff, Disseminated Pyrrhotite	
104.5 111.7		CT	^^ 104.5 111.7 Tufa: Carbonate-Altered Tuff	
111.7 118.3		BMsk	^^ 111.7 118.3 Massive Magnetite, Calc-Silicate (Altered Tuff)	
118.3 122.8		CTp,tch	^^ 118.3 122.8 Tufa: Minor Talc, Pyrrhotite, and Chert Laminae	
122.8 127.7		BMp,l	^^ 122.8 127.7 Bedded Magnetite Tuff; Laminated, Pyrrhotite	
127.7 131.2		CTp	^^ 127.7 131.2 Tufa: Pyrrhotite Laminae, Minor Magnetite	
131.2 133.3		BMP,tca	^^ 131.2 133.3 Bedded Magnetite-Pyrrhotite Tuff; Talc, Calcareous	
133.3 197.5		Sk,Rzm	^^ 133.3 197.5 Calc-Silicate Altered Tuff And Massive to Stringer Magnetite Tuff	
133.3 157.0		Skz,m	** 133.3 157.0 CALC-SILICATE-ALTERED TUFF, With Stringery to Massive Magnetite	
151.0 157.0		Skz,mp	^^ 151.0 157.0 Pyrrhotite Stringers	
157.0 167.5		Rz,skc	** 157.0 167.5 RHYOLITE TUFF With Stringer Calc-Silicate & Chloritic Alteration	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	175.9	-60.3
100'	177.1	-59.7
200'	178.4	-59.9
300'	179.1	-59.6
324'	179.3	-59.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: D. Stevens
DATE COLLARED: 9-24-90
REMARKS:
CORE SIZE: NQ/HQ

HOLE NO: LYN90-22 (WDNR #168)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-26-90

BEARING: S180E INCLINATION: -61 T.D: 324'
COORDINATES: L10200 E, 10605 N
ELEV: 1569.5' SEC: 15 TWP: 37N RANGE: 4E

DATE: 10-26-90
PAGE 1 OF 5

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
167.5 185.0		Sk,gt	** 167.5 185.0 GARNET CALC-SILICATE (Altered Tuff)	
185.0 197.5		BM/Skm	** 185.0 197.5 MASSIVE TO STRINGER MAGNETITE TUFF, CALC-SILICATE?	
197.5 203.0		Rzt,p	SULFIDE UNIT A: 197.5-254.1 INTERBEDDED CHERT & TALCOSE TUFF ** 197.5 203.0 RHYOLITE TUFF, Talcose, with Stringer Pyrite, Minor Sulfides	
203.0 217.3		Xch/Xzt	** 203.0 217.3 TUFFITE, Cherty and Talcose	
203.0 212.8		Xz,t	^^ 203.0 212.8 Tuffite, Talcose with Stringer Sphalerite	
212.8 217.3		Xch	^^ 212.8 217.3 Tuffite, Chert with Disseminated to Bedded Sulfides	
217.3 225.0		Chs,p	** 217.3 225.0 CHERT, Cherty Tuff with Sulfides	
225.0 242.5		Xzt/Xch	** 225.0 242.5 TUFFITE, Cherty and Talcose	
225.0 233.5		Xz,tp	^^ 225.0 233.5 Tuffite, Talcose, Stringer Sulfides 225.0 225.4 Massive Sphalerite and Galena 232.0 232.7 Semi-Massive Sphalerite, Pyrrhotite, Galena, and Chalcopyrite	225.0 225.4 70% Sp, 8% Ga
233.5 242.5		Xch,zp	^^ 233.5 242.5 Tuffite, Chert, with Stringer Sulfides 234.3 235.1 Talcose Tuff Bed 236.9 238.0 Talcose Tuff Bed 241.7 242.1 Massive Sphalerite	
242.5 254.1		Chz,s	** 242.5 254.1 CHERT, Cherty Tuff With Stringer Sulfides	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	175.9	-60.3
100'	177.1	-59.7
200'	178.4	-59.9
300'	179.1	-59.6
324'	179.3	-59.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: D. Stevens
DATE COLLARED: 9-24-90
REMARKS:
CORE SIZE: NQ/HQ

HOLE NO: LYN90-22 (WONR #168)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 9-26-90

BEARING: S180E INCLINATION: -61 T.D: 324'
COORDINATES: L10200 E, 10605 N
ELEV: 1569.5' SEC: 15 TWP: 37N RANGE: 4E

DATE: 10-26-90
PAGE 1 OF 5

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
254.1 324.0		OD	** 254.1 324.0 QUARTZ DIORITE	
254.1 259.0		sOD	^^ 254.1 259.0 Sheared Quartz Diorite	
259.0 264.8		Rt,t	^^ 259.0 264.8 Rhyolite Tuff, Talcose	
264.8 268.0		sOD	^^ 264.8 268.0 Sheared Quartz Diorite	
281.0 286.0		sgOD	^^ 281.0 286.0 Sheared Granophyre, 15 Degrees to Core Axis	
			E.O.H. 324' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN90-22

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						
											pRd	** 60.0 98.8 Porphyritic Rhyolite Dike						
66.00																		
	98	0	R3	a	30	2												
68.40					60													
	98	10	R3	a	15	3												
71.00				a	40													
					60													
	99	20	R3	a	10	3												
73.00					30													
					50													
	99	0	R3	a	10	3												
74.00					40													
					60													
	99	85	R3	a	10	3												
77.50				a	30							^^ 77.8 84.0 Faulted, altered zone with chlorite veinlets						
					60													
	100	100	R3	a	10	3												
80.00					40													
					60													
	100	100	R3	a	10	2												
83.00				a	40													
	99	0	R3	a	10	2												
84.00					40													
	99	75	R3	a	10	3												
				a	30													
89.00				a	50													
	100	80	R3	a	30	2												
92.00				a	55													
	100	65	R3	a	10	2												
94.00					35													
	90	50	R3	b	15	2												
95.00					30													
	98	0	R3	a	10	2												
96.50					30													
	90	0	R3	a	10	2												
97.50					35													

ROCK QUALITY:

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

DRILL HOLE: LYN90-22

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	0	R3	a	10	2					CT,BMp	** 98.8 133.3 Interbedded Tufa and	a					8
					35							massive (to bedded) magnetite tuff	a					8
													a					8
99.00											BM,p	^^ 98.8 104.5 Bedded to Massive	a					8
	100	65	R2	a	30	2						Magnetite Tuff with disseminated	a					2
				b	50							Pyrrhotite	a					2
104.00				b									a					2
	100	85	R2	b	30	1					CT	^^ 104.5 111.7 Carbonate-altered Tuff,	a					2
108.00				c								pale green alteration, (Diopside?),	a					2
	90	0	R2	a	15	2						contorted to laminated bedding	a					2
109.00					60								a					2
	99	75	R2	c	30	2							a					8
111.50					60								a					8
	98	45	R2	c	30	2					BMsk	^^ 111.7 118.3 Massive Magnetite and	a					8
115.50				b	60							Calc-silicate altered tuff	a					8
	90	0	R2	b	30	2							a					8
117.00					60								a					1
	100	90	R2	b	30	1					CT	^^ 118.3 122.8 Tufa, 6-10% Pyrrhotite	b	1				1
				b								and minor talc, chert laminae	a					6
123.00				b									a					6
	90	0	R2	crushed							BMp,l	^^ 122.8 127.7 Massive to bedded	a					6
125.00												Magnetite, in part finely laminated	a					8
	90	50	R2	a	10	2							a					8
128.00				a	30								a					8
	100	80	R2	b	20	2					CT,p	^^ 127.7 131.2 Tufa, with Pyrrhotite	a					6
				b	40								b					6
				b							BMP,tca	^^ 131.2 133.3 Bedded Magnetite &	b					6
												Pyrrhotite, calcareous, minor talc	b					6
													b					12
133.00													b					12
											Skz,m	** 133.3 157.0 Calcsilicate-altered	b					5
												Tuff, with stringery to massive	a					2
												Magnetite	a					2
	100	95	R3	a	40	1							a					2
				a									a					2
139.00				a									a					2
	100	100	R3	b	40	1							a					2
141.50													a					2
	100	95	R3	b	40	1							b					2
				b									b					2

ROCK QUALITY:

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

DRILL HOLE: LYN90-22

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
147.50				b									b					2
	100	100	R2	a	30	2							b	2				5
				a	60						Skz,mp	^^ 151.0 157.0 Pyrrhotite Stringers	b	2				5
154.00				b									b	2				5
	100	85	R3	b	30	2							b	2				5
				a	60						Rz,skc	** 157.0 167.5 Rhyolite Tuff with stringer calc-silicate & chlorite alteration	b	2				5
160.00				a														
	100	95	R3	a	10	2												
162.50					30													
	100	85	R3	a	10	2												
				a	60													
				b							Sk,gt	** 167.5 185.0 Garnet Calc-silicate (altered tuff)						
				b														
172.00				b														
	99	90	R3	b	20	2												
175.00				a	40													
	99	85	R3	a	20	2												
180.00				a	40													
	85	100	R3	b	20	2												
181.50					50													
	100	100	R3	c	20	2												
183.00					40													
	100	85	R3	c	40	1												
				a							Skm	** 185.0 197.5 Massive to Stringer Magnetite tuff, calc-silicate?						
188.00				c														
	100	75	R3	c	20	2												
				b	40													
194.00				b														
	100	100	R3	b	20	2												
195.00					40							SULFIDE UNIT A: 197.5-254.1						
	98	50	R3	a	20	2					Rzt,p	** 197.5 203.0 Rhyolite Tuff, Talcose, with stringer pyrite, minor sulfides	a					
199.00				a	40								b				5	2
	100	85	R2	b	20	1							b				5	2
				c									b				5	2
204.00				c									b	8		1	5	2
											Xch/Xzt	** 203.0 217.3 Tuffite, Cherty and talcose	b	8		1	5	2
													b	8		3	5	3
													b	8		3	5	3
											Xz,t	^^ 203.0 212.8 Tuffite, Talcose with stringer sphalerite	b	8		1	3	3
	100	85	R2	c	20	2							b	8		2	3	3

ROCK QUALITY:

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

DRILL HOLE: LYN90-22

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
				c	40								b	8	1	2	3	3
				c									b	8	1	2	3	3
212.00				b							Xch	^^ 212.8 217.3 Tuffite, Chert with	c	12	3		3	8
	90	70	R3	b	50	1						disseminated to bedded sulfides	c	12	3		5	10
				b									c	30	1		3	10
				b							Chs,p	** 217.3 225.0 Chert, Cherty Tuff	c	8	2	2		
219.00				b								with sulfides	c	8	2	2		
	99	80	R3	b	50	1							c	4	2	1		
222.00				b									c	3	2	1		
	100	85	R2	b	20	2							c	3	1	1		
				a	50						Xzt/Xch	** 225.0 242.5 Tuffite, Cherty & Talcose	c	3	1	1		
				b									c	3	1	1		
				c							Xz,tp	^^ 225.0 233.5 Tuffite, Talcose,		3				
				c								stringer Sp-Ga-Po	e	30				5
												225.0 225.4 Massive Sp(70%), Ga(8%)	c	10		1		10
231.00												232.0 232.7 Semi-massive Sp,Po,Ga,Cp	c	8		1		10
	100	100	R2	c	50	1							c	10		1		10
232.00													c	20		1		10
	100	90	R3	c	10	3					Xch,zp	^^ 233.5 242.5 Tuffite, Chert, with	c	20		1		10
				b	30							stringer sulfides	c	15	1	1		8
				a	60							234.3 235.1 Talcose Tuff Bed	c	15	1	1		8
				b								236.9 238.0 Talcose Tuff Bed	c	8	1	1		8
				b								241.7 242.1 Massive Sphalerite	c	25	1	1		8
242.00											Chz,s	** 242.5 254.1 Chert, Cherty Tuff,	c	8	1	2		8
	100	95	R3	a	10	3						with stringer sulfides	b	5	1	5		8
				a	30								b	5	1	8		6
248.00				a	50								b	5	1	1		6
	100	95	R3	a	20	2							b	4	1	1		6
				a	50								b	4	1			6
254.00				a							QD	** 254.1 324.0 Quartz Diorite	b					6
													b					1
											sQD	^^ 254.1 259.0 Sheared	b					1
	100	70	R3	a	30	2												1
258.00				b	50								a				1	1
	100	70	R@	a	15	2					Rt,t	^^ 259.0 264.8 Rhyolite Tuff, Talcose	a				1	1
261.00				a	60								a				1	1
	90	0	R1	a	crushed								a				1	1
264.00				a							sQD	^^ 264.8 268.0 Sheared Quartz Diorite	a				1	1
	100	50	R3	a	25	2												

ROCK QUALITY:

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

DRILL HOLE: LYN90-22

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
268.00				a	50													
	100	70	R3	a	30	2												
272.00				a	60													
	100	90	R3	b	30	2												
				b	50													
				a														
279.00				a														
	100	80	R3	a	20	2												
282.00				a	50						sgOD	^^ 281.0 286.0 Sheared Granophyre						
	100	50	R3	a	20	2						15 degrees to core axis						
284.00					40							Note: 282.5 Fault Breccia						
	100	75	R3	a	20	2												
285.50					40													
	100	85	R3	a	20	2												
288.60				b	40													
	100	100	R3	b	10	3												
				a	40													
294.00				b	60													
	100	100	R3	b	20	2												
				b	40													
299.00				b														
	100	100	R3	a	10	3												
301.00					30													
					50													
	100	100	R3	a	20	2												
303.00					40													
	100	95	R3	a	20	2												
				a	40													
				b														
				b														
314.00				a														
	100	100	R3	a	10	3												
				b	20													
319.00				b	45													
	100	100	R3	b	10	2												
324.00				b	30							E.O.H. 324' (total depth)						

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	179.2	-64.0
100'	180.7	-63.9
250'	180.8	-64.1
400'	180.7	-64.6
550'	181.3	-65.1
700'	181.9	-65.7
824'	182.9	-65.6

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-26-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-23 (WDNR #166)

DATE: 1-8-92
PAGE 1 OF 12

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 10-5-90

BEARING: S179.2E INCLINATION: -64 T.D: 824'
COORDINATES: L10400 E, 11400 N
ELEV: 1568.2' 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 67.0	(not recovered)			
67.0 74.0	(HQ core)			
61.0 78.0		pRb	** 61.0 78.0 RHYOLITE BRECCIA, Porphyritic	
78.0 93.8		Rc	** 78.0 93.8 RHYOLITE CRYSTAL TUFF	
93.8 107.3		pRb	** 93.8 107.3 RHYOLITE BRECCIA, Porphyritic	
107.3 246.9		Rc	** 107.3 246.9 RHYOLITE CRYSTAL TUFF	
112.0 120.0		D	^^ 112.0 120.0 Dacite	
125.0 144.0		SL	^^ 125.0 144.0 Siltstone	
144.0 149.0		W1	^^ 144.0 149.0 Lapilli Wacke	
163.8 169.0		W1	^^ 163.8 169.0 Lapilli Wacke	
185.0 188.0		R1	^^ 185.0 188.0 Rhyolite Lapilli Tuff	
196.0 198.5		R1	^^ 196.0 198.5 Rhyolite Lapilli Tuff	
225.2 237.5		R1	^^ 225.2 237.5 Rhyolite Lapilli Tuff	
246.9 269.5		pR	** 246.9 269.5 RHYOLITE PORPHYRY	
269.5 330.0		Rc1	** 269.5 330.0 RHYOLITE CRYSTAL LAPILLI TUFF	
283.5 311.5		SL,W1	^^ 283.5 311.5 Interbedded Siltstone, Lapilli Wacke	
311.5 330.0		R1c#	^^ 311.5 330.0 Rhyolite Lapilli Crystal Tuff, Altered	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	179.2	-64.0
100'	180.7	-63.9
250'	180.8	-64.1
400'	180.7	-64.6
550'	181.3	-65.1
700'	181.9	-65.7
824'	182.9	-65.6

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-26-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-23 (WDNR #166)

DATE: 1-8-92
PAGE 1 OF 12

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 10-5-90

BEARING: S179.2E INCLINATION: -64 T.D: 824'
COORDINATES: L10400 E, 11400 N
ELEV: 1568.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
330.0 348.5		SL	330.0 348.5 SILTSTONE, Laminated	
348.5 390.0		Rc	348.5 390.0 RHYOLITE CRYSTAL TUFF	
367.0 370.5		ChC#	367.0 370.5 Diopside Altered Chert	
373.7 378.0		Rc	373.7 378.0 Rhyolite Crystal Tuff	
390.0 413.5		ChT	390.0 413.5 CHERTY TUFF	
413.5 449.4		Rlc	413.5 449.4 RHYOLITE LAPILLI CRYSTAL TUFF	
443.5 449.4		Rlb	443.5 449.4 Rhyolite Lapilli Tuff Breccia	
449.4 451.0		Xch#	449.4 451.0 TUFFITE, Altered, Cherty	449.4 451.0 10% Sp, 5% Ga
451.5 458.3		Wl	451.5 458.3 LAPILLI WACKE	
458.3 462.5		SL,l,p	458.3 462.5 SILTSTONE, Laminated, with Pyrrhotite	
462.5 465.3		Wl	462.5 465.3 LAPILLI WACKE, With Pyrrhotite	
465.3 482.0		Wl	465.3 482.0 LAPILLI WACKE, Cherty	
482.0 498.0		Wl	482.0 498.0 LAPILLI WACKE	
498.0 509.1		ChC#	498.0 509.1 DIOPSIDE ALTERED CHERT	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	179.2	-64.0
100'	180.7	-63.9
250'	180.8	-64.1
400'	180.7	-64.6
550'	181.3	-65.1
700'	181.9	-65.7
824'	182.9	-65.6

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 9-26-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-23 (WDNR #166)

DATE: 1-8-92
PAGE 1 OF 12

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 10-5-90

BEARING: S179.2E INCLINATION: -64 T.D: 824'
COORDINATES: L10400 E, 11400 N
ELEV: 1568.2' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
509.1 533.0		W1	** 509.1 533.0 LAPILLI WACKE, With Quartz	
533.0 570.0		SL	** 533.0 570.0 SILTSTONE	
548.5 570.8		xR	^^ 548.5 570.8 Spherulitic Rhyolite	
570.8 641.5		ChT	** 570.8 641.5 CHERTY TUFF	
575.0 587.3		ChT,lp	^^ 575.0 587.3 Banded, with Pyrrhotite	
594.0 597.0		Rt,tp	^^ 594.0 597.0 Talcose, With Pyrrhotite And Sulfides	591.0 597.0 12% Zn
613.0 617.0		Rt,tp	^^ 613.0 617.0 Rhyolite Tuff, Talcose, With Pyrrhotite	
641.5 660.0		R1	** 641.5 720.3 RHYOLITE LAPILLI TUFF	
646.0 661.0		xR,t	^^ 646.0 661.0 Spherulitic Rhyolite Interbeds, Talcose	
696.0 720.3			^^ 696.0 720.3 Hornfelsed Tuff	
720.3 824.0		QD	** 720.3 824.0 QUARTZ DIORITE	
720.3 728.0		gQD	^^ 720.3 728.0 Granophyric Quartz Diorite	
			E.O.H. 824' (total depth)	

ROCK QUALITY:

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

LYN90-23

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 61.0											** 0.0 61.0 OVERBURDEN						
											^^ 0.0 20.0 Sand						
											^^ 20.0 40.0 Sand, silty						
											^^ 40.0 50.0 Sand and gravel						
											Note: Lost circulation						
											^^ 50.0 61.0 Sand, gravel, and cobbles						
										pRb	** 61.0 78.0 Rhyolite Breccia, Porphyritic, breccia with coarse-grained, dark grey matrix and pinkish-white fragments (0.2"-2.0")						
67.00																	
	100	85	R3	c	60	1											
70.00				b													
	100	75	R3	c	10	1											
74.00				c													
	99	85	R3	c	10	1											
78.20				c						Rc	** 78.0 93.8 Rhyolite Crystal Tuff, grey, medium-grained, with epidote alteration in patches and along fractures						
	100	85	R3	b	20	2											
				b	60												
84.00				b													
	100	90	R3	a	20	2											
				b	40												
				b													
				b													
94.00				c						pRb	** 93.8 107.3 Rhyolite Breccia, Porphyritic, pinkish-white fragments in coarse-grained grey matrix						
	100	90	R3	c	40	2											
				a	70												
99.00				c													
	100	95	R3	b	10	2											
				c	70												
				c													
107.00				c						Rc	** 107.3 246.9 Rhyolite Crystal Tuff						
	100	50	R3	b	25	2											
109.30					60												
	100	75	R3	a	20	2											
111.30					60					D	^^ 112.0 120.0 Dacite, or plag-phyric basalt (?), coarse-grained, contacts gradational						
	100	90	R3	c	20	2											
114.00				a	60												
	99	85	R3	a	5	3											
				a	30												
				a	60												
121.80				a													
	90	0	R3	a	5	3											
122.60					30						Note: Broken core 122.0-130.0						
					60												

ROCK QUALITY:

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

LYN90-23

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

Run	%	RQD	Rf	ABCDE		Jn	Jrc	Ja	Sp6	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po
	99	20	R3	a	10	3												
				a	30						SL	^^ 125.0 144.0 Siltstone						
127.70				a	50													
	60	0	R3	a	10	2												
129.60					30													
	99	75	R3	a	20	2												
132.80				a	40													
	99	85	R3	b	40	1												
134.00																		
	99	50	R3	b	20	1												
				b														
139.50				b														
	100	100	R3	b	10	2												
140.00					40													
	90	0	R3	a	10	2												
142.00					40													
	90	0	R3	a	10	2												
144.00					40						W1	^^ 144.0 149.0 Lapilli Wacke,						
	95	85	R3	b	20	1						red-orange 0.1" fragments, high-angle						
146.50												lower contact, oxidized, with carbonate						
	99	75	R3	b	30	1						interbeds along contact						
148.50																		
	100	0	R3	a	10	2												
150.00					30					-30								
	100	80	R3	a	20	2												
154.00				b	40							Note: Cherty interbeds @ 151.0-154.0						
	100	90	R3	c	10	2												
				b	20													
				b														
				b														
164.00				c							W1	^^ 163.8 169.0 Lapilli Wacke, oxidized						
	100	85	R3	c	10	2						lower contact, bedded carbonate						
				b	30							along contact						
				b						-30								
				b														
174.00				c														
	100	95	R3	c	10	3												
				b	30													
				c	50													
				b														
184.00				b														
	100	100	R3	c	10	2					R1	^^ 185.0 188.0 Rhyolite Lapilli Tuff,						
				c	30							coarsening downward						
				c														
				b								Note: @ 188.0-196.0 Interbedded medium						
194.00				b								& fine-grained crystal tuff						
	100	100	R4	c	10	2					R1	^^ 196.0 198.5 Rhyolite Lapilli Tuff,						
				b	30							lt. grey with epidote bleaching of						
				a								matrix and fragments						
201.00				b														
	99	90	R4	a	20	1												
				b														
				c														

ROCK QUALITY:

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

LYN90-23

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	Sp6	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po
				c														
210.50				c														
	100	100	R4	c	10	2												
214.00				b	20							Note: Core Orientation						
	100	100	R4	c	10	3												
				b	35													
				c	70													
				a														
				b														
225.30											R1	^^ 225.2 237.5 Rhyolite Lapilli Tuff,						
	100	90	R4	b	10	2						medium-grained, lt. grey, epidote-						
				b	50							bleaching of lapilli, and reddish						
				b								alteration along fractures						
				c														
235.80				c														
	100	100	R4	b	10	2					Rc	^^ 237.5 246.9 Rhyolite Crystal Tuff,						
239.70				b	75							interbedded fine & medium-grained,						
	100	90	R4	b	40	1						with alteration along bedding planes						
				c														
				c							pRd	** 246.9 269.5 Rhyolite Porphyry Dike,						
247.00				b								medium grey matrix, white plag						
	100	90	R3	b	20	1						crystals, pinkish alteration						
				c														
252.00				c														
	100	90	R3	b	10	2												
256.40				a	30													
	100	100	R3	a	30	2												
				b	50													
261.00																		
	100	100	R3	b	10	2												
264.00				a	25													
	100	90	R3	a	10	3												
267.00				a	40													
					65						Rcl	** 269.5 330.0 Rhyolite Crystal Lapilli						
	100	85	R2	a	10	3						Tuff						
				a	25													
274.00				b	70													
	100	95	R2	b	10	2												
				b	40													
				c														
				c														
284.00				c							SL,Wl	^^ 283.5 311.5 Interbedded Siltstone,						
	100	90	R3	b	60	1						Lapilli Wacke, with lapilli intervals,						
287.50				c								laminated intervals, and scattered						
	100	100	R3	c	20	1						pyrrhotite						
291.50				c														
	100	90	R3	a	10	3												
				a	25													
				a	40							Note: 297.0-305.0 Scattered Pyrrhotite	b					5
				b									b					5
301.50				b									b					5
	100	85	R3	b	10	2							b					5
304.00					25								b					5
	100	75	R3	a	30	3							b					5

ROCK QUALITY:

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

LYN90-23

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
				a	50							Note: 307.0-312.0 Highly fractured						5
				a	70							"shattered"						
311.00				a							Rlc	^^ 311.5 330.0 Rhyolite Lapilli Crystal						
	100	70	R3	a	20	2						Tuff, with patchy epidote alteration						
				b	50													
317.00				b														
	100	100	R3	b	10	2												
				c	50													
322.30				c														
	100	100	R3	a	10	3												
324.00					30													
					50													
	100	100	R4	a	10	3												
				a	30													
				a	50						SL	** 330.0 348.5 Siltstone, fine-						
				a								grained, with laminated intervals						
333.00				a														
	100	85	R4	a	10	3												
335.00					30													
					50													
	100	90	R5	a	30	2												
337.80					50													
	100	90	R4	a	10	3												
				a	30													
344.00				a	60													
	100	100	R4	a	10	3												
345.50					30													
					60													
	100	85	R3	b	10	3					Rc	** 348.5 390.0 Rhyolite Crystal Tuff,						
				b	30							medium grey, with cherty or ashy inter-						
351.00				a	50							vals, scattered pyrite, pyrrhotite						
	100	95	R4	a	10	3												
				a	30													
				a	50													
358.50				b														
	100	60	R4	a	10	3												
				a	30													
364.00				a	50					-40C								
	99	85	R3	a	10	3						Note: @ 365.8 370.0 Bleaching & reddish						
				a	30							alteration						
				b	50													
				b							ChC#	^^ 367.0 370.5 Interbedded Chert and						
				a								Diopside, altered	a				1	
													a				1	
374.00											Rc	^^ 373.7 378.0 Rhyolite Crystal Tuff,	a				1	
	100	25	R4	b	30	2						coarser-grained						
376.50					60													
	100	100	R4	b	25	2												
				a	60					-50B								
381.50				a														
	100	90	R4	b	10	2												
				b	40													
				b						-55B								

ROCK QUALITY:

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

LYN90-23

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	Sp6	Fol	CODE	Lithology	Total%	Sp	Cp	6a	Py	Po
390.00				a						-40F	ChT	** 390.0 413.5 Cherty Tuff, bleached	a				1	
												grey, with scattered sulfides	a				1	
													a				1	
	100	100	R3	a	10	2						Note: @ 392.0-413.5 Core highly	a				1	
				a	30							fractured	a				1	
395.00				a									a				1	
	100	85	R3	a	20	2							a				1	
				a	40								a				1	
				a						-30F			a				1	
401.50				a									a				1	
	99	75	R3	a	20	2				-24F			a				1	
406.00				a	40					-18F			a				1	
	100	95	R3	a	20	2				-20F			a				1	
409.60				a	40					-70B								
	100	90	R3	a	20	2				-52B								
				a	40						Rlc	** 413.5 449.4 Rhyolite Lapilli Crystal						
				a								Tuff, medium to coarse-grained, grey						
				a								with blue quartz eyes						
419.50				a														
	100	100	R3	a	20	2												
				a	40													
				b														
				c														
429.50				b														
	100	100	R3	b	10	2												
				c	50													
				c														
				c														
439.50				c														
	100	85	R3	c	10	2												
				b	30						Rlb	^^ 443.5 449.4 Rhyolite Lapilli Tuff						
				b								Breccia						
				b														
				b														
449.00											Xch	** 449.4 451.5 Tuffite, cherty	c	10	1	5		4
													c	10	1	5		4
	100	100	R3	c	40	1					Wl	** 451.5 458.3 Lapilli Wacke,	c	10	1	5		4
453.30				c								coarse-grained lapilli tuff, with blue						
	100	85	R3	b	15	2						quartz eyes, with 1" chert interbeds						
				b	70							and 1' cherty base						
				a									a					3
				a							SL	** 458.3 462.5 Siltstone, laminated	a					3
												with pyrrhotite	a					3
													a					3
462.00											Wl	** 462.5 465.3 Lapilli Wacke, with	a					3
	99	75	R3	a	20	1						pyrrhotite	b					5
				a														
				a							Wl	** 465.3 482.0 Lapilli Wacke, coarse-						
467.00												grained lapilli tuff, with (0.5'-1.0')						
	99	75	R3	a	15	2						cherty beds						
469.50				a	40													
	100	90	R3	a	15	2												
474.00				a	40													

ROCK QUALITY:

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

LYN90-23

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	75	R3	a	20	2												
				a	40													
				a														
482.00				a							W1	** 482.0 498.0 Lapilli Wacke, greyish						
	100	100	R3	a	5	3						beige (bleached) crystal-rich matrix						
483.00					20							with (0.2-0.8") lapilli						
	99	85	R3	a	65													
				b	10	2												
				a	30													
				a														
492.50				a														
	100	100	R3	a	20	2												
				b	50					-65C			a				3	
498.00				b						-70B	ChC#	** 498.0 509.1 Diopside Altered Chert,	a				3	
	100	85	R3	a	30	2				-70B		fine-grained, altered	a				3	
				a	70								a				3	
				a								Note: Pale-green (diopside ?) alter-	a				3	
				a								ation, scattered pyrite @ 498.0-505.0	a				3	
				a														
				a								Note: Reddish alteration @ 502.5-504.0						
509.00											W1	** 509.1 533.0 Lapilli Wacke, with						
	99	50	R3	a	10	3						quartz						
512.40				a	30													
					70													
	99	25	R3	a	10	3												
514.00					30													
					68							Note: Spherulitic interbeds @						
	99	25	R3	a	10	3						515.0-517.0						
516.00					30													
					60													
	98	0	R3	a	10	3												
517.00					30													
					60													
	99	70	R3	a	10	3												
520.00				a	30					-30F		Note: @ 510.0-525.0 Core sheared/broken						
					60													
	99	50	R3	a	10	3												
523.00				a	30													
					70													
	99	20	R3	a	20	2												
525.50				a	40													
	100	80	R3	a	20	2												
530.00				a	50													
	100	70	R3	a	10	3												
				a	30						SL	** 533.0 548.5 Siltstone						
				a	70													
536.50											Rt#	^^ 533.0 537.0 Rhyolite Tuff, altered						
	100	100	R3	b	10	3					Rt,l	^^ 537.0 545.0 Rhyolite Tuff, laminated						
				b	30													
542.00				a	70													
	99	80	R3	a	10	3												
545.50				a	30						Rt	^^ 545.0 548.5 Rhyolite Tuff, with						

ROCK QUALITY:

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

LYN90-23

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
					50							pyrrhotite						
	100	95	R3	a	15	2												
				a	40					-60B	*R	^^ 548.5 570.8 Spherulitic Rhyolite,						
				b						-60B		brownish-white spherulites						
552.00												Note: @ 552.0-556.0 core broken,						
	99	50	R3	a	20	2				-50B		@ 558.0-560.0 core broken along fracture						
553.50					50							@ 10 degrees to axis						
	98	70	R3	a	5	3												
				a	20													
560.00				a	55													
	98	0	R3	a	5	3												
563.00				a	40													
					70													
	98	40	R3	a	5	3												
568.00				a	20													
					60													
	98	0	R3	a	10	3												
570.50				a	30						ChT	** 570.8 641.5 Cherty Tuff	a					5
					60								a					5
	100	90	R3	a	10	2							a					5
				b	30						ChT,lp	^^ 575.3 587.3 Cherty Tuff, banded, with	a					5
				a								bedded pyrrhotite	c					15
578.00				b									c					15
	100	75	R3	b	5	3							c					15
				b	30								c					15
				c	70								c					15
				c									c					15
587.00				b									c					15
	100	75	R3	a	25	2												
591.50				a	55								c	7				5
	100	90	R2	a	30	3						^^ 591.0 597.0 Talcose, with pyrrhotite	c	7				5
				b	55							and sulfides	c	7				5
				a	70								c	7				5
				a									a					2
601.50				a									a					2
	100	90	R3	a	20	2							a					2
				a	55								a					2
				a									a					2
				a									a					2
611.50				a									a					2
	90	75	R2	a	20	2					Rt,tp	^^ 613.0 617.0 Rhyolite Tuff, talcose,	a					2
				a	60							with pyrrhotite	b					8
617.50				a									b					8
	90	35	R3	a	20	2							b					8
620.50					60													
	100	90	R3	a	10	3				-50B		Note: @ 621.0-642.0 Numerous quartz-						
				a	40							sulfide fractures and white quartz						
				a	60							interbeds						
				a														
630.00				a														
	100	85	R3	a	5	3												
				a	20					-30B								
				a	65													

ROCK QUALITY:

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

LYN90-23

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
637.30				a														
	100	70	R3	a	10	3												
				a	40													
				a	70						R1	** 641.5 720.3 Rhyolite Lapilli Tuff						
644.00				b														
	99	70	R3	a	30	2					*R,t	^^ 646.0 661.0 Talcose, with spherulitic						
647.60				a	50							interbeds						
	99	70	R2	a	30	2												
651,00				a	50													
	100	75	R2	b	20	2												
653.00					40							Note: Core Orientation						
	99	75	R2	b	30	2												
				b	60													
				c														
				b														
664.00				b														
	99	0	R3	a	20	2												
665.00					40													
	99	20	R3	b	20	2												
666.70					50													
	99	75	R3	b	10	2												
669.30					30													
	99	25	R3	a	30	2												
673.00				a	50													
	98	20	R3	a	15	3												
678.00				a	30													
					50													
	99	25	R3	b	15	3												
682.00				a	30													
					50													
	99	0	R3	a	15	3												
684.00					30													
					50													
	99	50	R3	a	10	3												
687.00				b	30													
					50													
	100	20	R3	b	10	3												
				a	30													
692.00				a	50													
	100	85	R2	a	10	2												
696.00				b	40							^^ 696.0 720.3 Rhyolite Lapilli Tuff,						
	99	60	R2	b	10	3						hornfelsed						
				a	30													
				b	50													
704.00				a														
	100	90	R3	a	20	2												
707.00				a	70													
	100	95	R3	c	10	2												
				b	70													
713.50				b														
	100	100	R3	b	10	3												
717.30				a	20													
					70													
	100	85	R3	b	20	3					QD	** 720.3 824.0 Quartz Diorite						

ROCK QUALITY:

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

LYN90-23

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	50						gQD	~~ 720.3 728.0 Granophyric Quartz Diorite						
				b	70													
725.80				b														
	100	100	R3	b	10	2												
				c	70													
				d														
				d														
735.80				d														
	100	100	R3	c	50	2												
				c	70													
				c														
				c														
746.00				c														
	100	100	R3	b	15	2												
				c	30													
				c														
				b														
756.20				c														
	100	100	R3	c	20	1												
				c														
				c														
				c														
766.40				c														
	100	100	R3	b	20	1												
				c														
771.00				c														
	100	100	R3	c	20	1												
				c														
				c														
				c														
781.00				c														
	100	100	R3	c	20	2												
				c	40													
				b														
				c														
791.00				d														
	100	100	R3	e		0												
				e														
				e														
				e														
801.40				e														
	100	100	R3	e	50	1												
				e														
				e														
				e														
811.60				e														
	100	100	R3	e	50	1												
				e														
				e														
				e														
822.00				c														
	100	100	R3	d	50	1												
824.00												E.O.H. 824' (total depth)						

Noranda Exploration Inc.
Eastern Division

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	178.8	-57.6
100'	176.8	-57.3
250'	176.6	-57.7
400'	175.2	-57.9
550'	175.9	-57.9
614'	176.6	-57.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding
DATE COLLARED: 9-26-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-24 (WDNP # 156)

DATE: 7-18-91
PAGE 1 OF 9

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 10-3-90

BEARING: S178.8E INCLINATION: -57.6 T.D: 614'
COORDINATES: L9800 E, 11425 N
ELEV: 1562.0' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 52.0			** 0.0 52.0 OVERBURDEN	
52.0 58.0	(not recovered)			
57.0 61.0	(HQ core)			
52.0 89.0		R	** 52.0 89.0 RHYOLITE	
89.0 142.0		D	** 89.0 142.0 DACITE	
142.0 162.5		R	** 142.0 162.5 RHYOLITE	
162.5 177.0		SL	** 162.5 177.0 SILTSTONE	
177.0 216.0		Rc	** 177.0 216.0 RHYOLITE	
216.0 311.8		SL/SS	** 216.0 311.8 SILTSTONE, SANDSTONE	
311.8 348.8		IR	** 311.8 348.8 RHYOLITE	
348.8 361.5		D	** 348.8 361.5 DACITE	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	178.8	-57.6
100'	176.8	-57.3
250'	176.6	-57.7
400'	175.2	-57.9
550'	175.9	-57.9
614'	176.6	-57.5

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding
DATE COLLARED: 9-26-90
REMARKS:
CORE SIZE: HQ/NQ

HOLE NO: LYN90-24 (WDNR # 156)

CO./STATE: Oneida, WI
SCALE: 1"=10'
DATE COMPLETED: 10-3-90

BEARING: S178.8E INCLINATION: -57.6 T.D: 6
COORDINATES: L9800 E, 11425 N
ELEV: 1562.0' SEC: 15 TWP: 37N RANGE:

DATE: 7-1
PAGE 1 OF

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
361.5 399.5		R	** 361.5 399.5 RHYOLITE	
399.5 416.4		VCS	** 399.5 416.4 VOLCANICLASTIC SEDIMENT	
416.4 490.3		R	** 416.4 490.3 RHYOLITE	
490.3 514.8		SL/SS	** 490.3 514.8 SILTSTONE/SANDSTONE	
514.8 526.8		Xca	** 514.8 526.8 TUFFITE, Calcareous	514.8 526.8 8% Sp, .5% Cp, 5% Po
526.8 536.0		pIR	** 526.8 536.0 PORPHYRITIC RHYOLITE SILL	
536.0 614.0		QD	** 536.0 614.0 QUARTZ DIORITE	
			E.O.H. 614' (total depth)	

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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 52.0												** 0.0 52.0 Overburden						
											R1	** 52.0 89.0 Rhyolite Lapilli Tuff, fragmental						
58.00																		
	90	0	R3	b	20	2												
59.00					40													
	100	100	R3	b	20	2												
60.00					40													
	100	100	R3	c	20	2												
61.00					40													
	90	90	R3	c	20	1												
64.00				c														
	100	90	R3	c	10	2												
				c	45													
70.00				b														
	99	0	R3															
70.50																		
	98	0	R3	b	10	2												
72.00					30													
	100	95	R2	b	10	3					D	^^ 74.0 75.0 Dacite						
				a	30													
				a	60					-50	gR	^^ 75.0 83.5 Granophyric Rhyolite						
78.00																		
	100	90	R3	a	10	3												
				a	40													
83.00				a	60						R	^^ 83.5 89.0 Rhyolite Flow, pinkish grey, with dark clasts						
	100	85	R3	a	10	2												
86.00				a	30													
	100	85	R3	b	10	2												
88.00					40													
	100	80	R3	b	10	3					D	** 89.0 142.0 Dacite, fine-grained						
91.00				a	25													
					60													
	100	85	R3	a	10	3												
94.00				a	30													
					50							Note: Limonite (?) on fractures @ 96'						
	90	85	R3	b	30	1												
96.00																		

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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	b	10	2												
				b	40						Rcl	^^ 100.0 105.5 Rhyolite Crystal Lapilli Tuff						
101.00				a														
	100	95	R3	a	10	2												
				a	30													
106.00				a														
	100	100	R3	c	50	1												
108.00																		
	100	100	R3	c	20	2												
109.60					60													
	100	100	R3	c	30	1												
				c														
				c														
				c														
119.50				c														
	100	100	R3	a	10	2												
122.50				a	30													
	100	100	R3	a	10	2												
				b	30													
127.50				b														
	100	100	R4	b	15	2												
131.50				b	50													
	100	100	R4	c	20	1												
134.00				c														
	100	90	R4	c	20	1												
136.00																		
	100	100	R4	c	30	2												
138.00					60													
	99	50	R4	b	30	1												
140.50																		
	90	80	R3	c	30	2				-60	Rcl	^^ 142.0 162.5 Rhyolite Crystal Lapilli Tuff						
				c	55													
				b														
				c														
				c														
				c														
153.00				c														
	100	100	R3	c	25	1												
155.00																		
	100	100	R3	c	30	1												

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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
159.00				c														
	100	100	R3	c	25	1												
161.00											SL	** 162.5 177.0 Siltstone, laminated						
	100	100	R3	c	30	1												
163.00										-55								
	100	100	R4	a	30	2												
				c	45													
169.00				c														
	100	100	R4	c	20	2												
173.50				b	60													
	100	100	R4	c	20	2				-60								
177.00				b	45					-50	Rc	** 177.0 216.0 Rhyolite Crystal Tuff, altered, feldspar crystal rich, clasts toward base						
	100	95	R3	b	20	2												
				b	45													
183.50				b														
	100	90	R3	b	20	2												
				a	40													
				a														
				c														
194.00				c														
	100	100	R3	c	20	2												
196.00					50													
	100	90	R3	c	20	2												
				c	40													
				c														
203.00				c														
	90	75	R3	c	20	2												
				b	40													
209.00				c														
	100	90	R3	c	30	1												
				c														
				c														
				c							SL/SS	** 216.0 311.8 Siltstone, Sandstone						
											SLch	^^ 216.0 230.0 Siltstone, cherty, laminated						
218.00																		
	100	100	R3	c	10	1												
219.00																		
	100	100	R3	b	30	1												

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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
222.00				b														
	99	75	R3	b	20	2				-54								
				a	50													
				a														
229.60				a								Note: @ 229.5-251.0 Minor Pyrrhotite						
	100	75	R3	b	30	2						(1%) on fractures	a					1
234.00				a	60								a					1
	100	85	R3	a	10	2							a					1
				a	35								a					1
				b									a					1
				b									a					1
244.00				b									a					1
	100	95	R3	b	10	2							a					1
247.60				a	30													
	100	75	R3	a	30	1												
249.00																		
	100	75	R3	a	10	2												
253.00				b	60													
	100	90	R4	b	10	2												
				b	50													
				c														
				c														>1
263.00				b														>1
	100	100	R3	a	20	2												>1
				b	40													>1
268.00				b														>1
	100	100	R3	a	15	2												>1
				b	40													>1
				c														>1
276.00				b														
	100	100	R3	c	30	1												
280.00				c														
	100	100	R3	b	30	1												
282.00																		
	100	85	R3	a	30	1												
283.50																		
	100	85	R3	a	15	3												
				b	30													
				a	50													
				a														

DRILL HOLE: LYN90-24

ROCK QUALITY:

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

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
				c														
				c						-80								
				c														
				c						-90C	pIR	^^ 299.2 303.2 Porphyritic Rhyolite Sill (?) , pink matrix, with blue quartz eyes						
				b						-90								
303.50				b														
	100	90	R4	a	30	2												
				b	50													
				b														
				b						-90	IR	** 311.8 348.8 Intrusive Rhyolite, (sill ?, flow?), pinkish grey, rounded blue quartz eyes, broken lower contact						
313.50				b														
	95	85	R3	a	15	2												
318.00				a	40													
	100	95	R3	b	10	3												
				b	30													
324.00				c	50													
	100	95	R3	b	10	3												
				b	30													
				c	50													
				b														
334.50				b														
	100	80	R4	c	10	3												
				b	25													
340.00				a	50													
	100	50	R3	a	10	2												
343.00				a	25													
	100	90	R3	b	15	2												
346.00				a	30													
	99	50	R3	a	10	3				-70	D	** 348.8 361.5 Dacite, glassy, dark fragments, no obvious quartz, probably dacitic or basaltic						
349.50				a	20													
					40													
	100	85	R3	a	5	3												
353.00				a	20													
					50													
	99	85	R4	a	5	3												
354.00					20													
					50													
	100	85	R4	a	20	2												
357.00				a	40													
	99	0	R3	a	20	2												

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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
359.00					60													
	100	100	R3	a	5	3												
360.00					20													
					60													
	100	85	R3	a	20	2												
362.00					50						gR	** 361.5 399.5 RHYOLITE, Granophyric,						
	100	100	R4	a	20	2						grey, glassy plag phyric, rare free						
365.50				a	50							quartz. @ 370.5 color contrast at						
	100	100	R4	a	30	2						relative high angle (40 degree)						
				a	55							possible bedding contact. Apparent						
372.00				b								alignment of plag-crystals @ 55						
	100	100	R4	b	5	3						degrees to axis, @ 368.0-370.0 some						
375.00				a	20							carbonate along fractures but sulfides						
					60							are rare (<0.25%)						
	100	85	R4	a	5	3												
				a	20													
380.00				a	60													
	100	100	R3	b	5	3												
384.00				a	20						Rt,Rc	^^ 383.0 385.0 Bleaching Along Fault/						
					50							Fracture						
	99	60	R3	b	5	2												
385.00					20													
	99	85	R3	b	5	2												
388.50				b	20													
	100	90	R3	b	10	2												
				c	30													
				b														
				a														
398.00				a						-70								
	100	50	R3	a	20	2					D	** 399.5 416.4 RHYODACITE, dark fine-	a				3	3
401.50				a	40							grained matrix, with plag phenos and	a				3	3
	100	50	R4	a	5	2						rare blue quartz. Quartz increases	a				3	3
405.50				a	45							toward base, tend to be rounded,	a				3	3
	100	100	R4	b	10	2						possible vesicles ? @ 416.5 embayed	a				3	3
				b	45							contact @ 60 degrees, dark above, lt.	a				3	3
411.00				b								beige below	a				3	3
	100	85	R4	b	30	2				-75			a				3	3
415.00				b	50						R	** 416.4 490.5 Rhyolite, feldspar	a				3	3
	100	75	R4	a	5	3						phyric ?	a				3	3
				b	30								a				3	3

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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	50						gP	^^ 416.4 449.5 Granophyric Rhyolite, pinkish-grey, plag-phyric	a				3	3
													a				3	3
420.00																		
	100	80	R4	b	5	3												
				b	20													
				a	40													
				a														
429.00				a														
	100	50	R4	a	5	2												
433.50				a	40													
	100	95	R4	a	10	2												
				a	30													
				a														
				b														
443.00				b														
	100	100	R4	a	40	2												
445.00					60													
	98	90	R3	a	10	2												
				a	30						Wlf	^^ 449.5 463.7 Interbedded Lapilli Wacke, Feldspar and Sandstone, disseminated po, py, ep alteration	a				1	
				a									a				1	
454.00				a									a				1	
	100	100	R3	b	10	2							a				1	
456.00					30								a				1	
	100	100	R3	b	10	2							a				1	
				c	30								a				1	
				b									a				1	
464.00				a							Rcl	^^ 463.7 490.3 Rhyolite Crystal Lapilli Tuff, chlorite-epidote alteration, in places reworked	a				1	
	100	100	R3	a	10	3												
				b	30													
				a	50													
				a														
474.00				b														
	100	100	R4	b	30	2												
				b	60													
				b														
				b														
483.50				a						-45								
	100	95	R4	b	30	2												
				b	50						Rl	** 487.1 490.3 Rhyolite Feldspar Lapilli Tuff						
				c														

ORIGINAL

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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						-45								
				a														
											VCS	** 490.3 514.8 Volcaniclastic Sediment, minor chert, laminated						
											TS	^^ 490.3 495.2 Talcose Sediment						
										-65								
493.00																		
	99	75	R4	b	30	2					SS	^^ 495.2 514.8 Sandstone, minor talc @ 501.0-502.8 clastic-rich interval						
				a	50													
				a														
499.00																		
	99	30	R4	a	5	3												
				a	30													
					50													
502.00													a					1
													a					1
	99	60	R4	a	5	3							a					1
				a	30								a					1
507.50				a	50								a					1
	99	0	R3	a	5	3							a					1
509.00					30								a					1
					50								a					1
	99	20	R3	a	5	3							a					1
512.00				a	30													
					60					-30	Xca	** 514.8 526.8 Tuffite, Calcareous, laminated, occasional bleb of magnetite	b	8				5
	100	75	R2	a	30	2							b	8				5
				b	60								b	8				5
				b						-30			b	8	5			5
				a						0			b	8	5			5
522.00				b						-60			b	8	5			5
	100	85	R2	c	30	2							b	8	5			5
				c	60					-60	pR	** 526.8 536.0 Porphyritic Rhyolite Sill, Feldspar-phyric, with 1.5 cm blue quartz eyes, dark groundmasses	b	8	5			5
				b						-50								
530.00				c														
	100	100	R3	c	30	2												
				c	60					-50								
				c							QD	** 536.0 614.0 Quartz Diorite						

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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

Run	%	RQD	Rf	ABCDE	Jn	Jrc	Ja	SpG	Fol	CODE	Lithology	Total%	Sp	Cp	Ga	Py	Po
				c													
537.00																	
	100	100	R3	b													
				a													
				b													
544.00				b													
	100	100	R3	a	20	2											
548.50				b	45												
	100	100	R3	b	20	2											
				a	40												
553.50				a						gQD	^^ 553.0 571.0 Quartz Diorite, Granophyric						
	100	100	R3	b	30	2											
				a	45												
				a													
				a													
563.00				a					-65								
	99	45	R3	a	10	2					^^ 565.0 566.0 Fracture Zone, 60 degrees to core axis						
				a	55												
570.00				a					-45								
	100	85	R3	b	40	2											
574.00				b	60												
	100	100	R3	b	10	3											
				c	30												
				b	50												
				a					-40								
584.00				b													
	100	100	R3	b	10	2											
				b	30												
				b													
				a													
594.00				a					-35								
	100	100	R3	a	10	2											
				a	30												
				a													
				a													
604.00				a					-35								
	100	100	R3	a	10	2											
				a	30												
				a													

ROCK QUALITY:

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

DRILL HOLE: LYN90-24

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
				a													
				a													
614.00				a							E.O.H. 614' (total depth)						

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	177.5	-57.1
100'	177.3	-56.2
250'	177.7	-56.8
400'	178.8	-57.1
550'	179.8	-57.0
801'	179.5	-56.7

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 10-3-90
REMARKS:
CORE SIZE: HQ\NQ Twin of LYN90-20

HOLE NO: LYN90-25 (WDNR #170)

DATE: 1-8-92
PAGE 1 OF 12

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

BEARING: S177.5E INCLINATION: -57.1 T.D: 811'
COORDINATES: L10200 E, 11395 N
ELEV: 1569.8' SEC: 15 TWP: 37N RANGE: 4E

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
0.0 72.0			** 0.0 72.0 OVERBURDEN	
72.0 75.0	(not recovered)			
75.0 79.0	(HQ core)			
71.0 92.0		W1	** 71.0 92.0 LITHIC WACKE	
92.0 94.2		pRd	** 92.0 94.2 RHYOLITE PORPHYRY DIKE	
94.2 131.5		D	** 94.2 131.5 DACITE	
131.5 160.0		W1	** 131.5 160.0 LITHIC WACKE	
160.0 177.0		D	** 160.0 177.0 DACITE	
177.0 220.0		W	** 177.0 220.0 WACKE	
182.5 190.5		R1#	^^ 182.5 190.5 Rhyolite Lapilli Tuff, Bleached	
182.5 190.5		SL	^^ 217.0 220.0 Siltstone	
220.0 251.0		pD	** 220.0 251.0 PORPHYRITIC DACITE	
251.0 258.5		W1	** 251.0 258.5 LITHIC WACKE	
258.5 273.5		SL	** 258.5 273.5 SILTSTONE	262.8 270.7 Gt-Ep Alteration

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	177.5	-57.1
100'	177.3	-56.2
250'	177.7	-56.8
400'	178.8	-57.1
550'	179.8	-57.0
801'	179.5	-56.7

PROJECT: LYNNE P.D. 1876
CONTRACTOR: Longyear
LOGGED BY: T. Harding/ L. Kennedy
DATE COLLARED: 10-3-90
REMARKS:
CORE SIZE: HQ\NQ Twin of LYN90-20

HOLE NO: LYN90-25 (WDNR #170)

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

BEARING: S177.5E INCLINATION: -57.1 T.D: 811'
COORDINATES: L10200 E, 11395 N
ELEV: 1569.8' SEC: 15 TWP: 37N RANGE: 4E

DATE: 1-8-92
PAGE 1 OF 12

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
273.5 524.5		R	273.5 524.5 RHYOLITE	
273.5 326.0		IR	273.5 326.0 Intrusive Rhyolite	
326.0 338.0		pD	326.0 338.0 Porphyritic Dacite Or Rhyolite, Hornfelsed	
338.0 358.5		FZ	338.0 358.5 Fault Zone	
358.0 396.5		Rc	358.5 396.5 Rhyolite Crystal Tuff	
396.5 398.0		Rt#,p	396.5 398.0 Rhyolite Tuff, Altered, With Pyrrhotite	
398.0 419.0		R1b	398.0 419.0 Rhyolite Lapilli Breccia	
419.0 422.7		Rc	419.0 422.7 Rhyolite Crystal Tuff	
422.7 439.0		Rc	422.7 439.0 Rhyolite Crystal Tuff	
439.0 441.4		pDd	439.0 441.4 Plag-phyric Dacite Dike	
441.4 501.6		R1,Ch	441.4 501.6 Interbedded Rhyolite Lapilli Tuff & Chert	
501.6 515.0		R1#	501.6 515.0 Rhyolite Lapilli Tuff, Altered	
515.0 524.5		R1	515.0 524.5 Rhyolite Lapilli Tuff	
524.5 540.5		Xz#,t	524.5 540.5 TUFFITE, Talcose, Altered, Stringery Sulfides	
540.5 572.7		Rch#	540.5 572.7 RHYOLITE TUFF, Cherty, Altered	
540.5 545.0		Rch#,p	540.5 545.0 Rhyolite Tuff, Cherty, Altered with Pyrrhotite	
563.0 572.7		Rch#,p	563.0 572.7 Rhyolite Tuff, Cherty, Altered with Pyrrhotite	
572.7 576.0		Rt,tsp	572.7 576.0 RHYOLITE TUFF, Talcose, With Sulfides & Pyrrhotite	573.0 578.0 5% Sp, 3% Ga
576.0 578.5		BP	576.0 578.5 BEDDED PYRRHOTITE	
578.5 582.0		Xtz	578.5 582.0 TUFFITE, Talcose, Stringery	578.0 583.0 10% Sp
582.0 594.8		Rt#,t	582.0 594.8 RHYOLITE TUFF, Altered, Talcose	

Noranda Exploration Inc.
Eastern Divison

HOLE SURVEY DATA

Footage	Bearing	Inclination
0'	177.5	-57.1
100'	177.3	-56.2
250'	177.7	-56.8
400'	178.8	-57.1
550'	179.8	-57.0
801'	179.5	-56.7

PROJECT: LYNNE P.D. 1876
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PAGE 1 OF 12

DRILL HOLE SUMMARY

FOOTAGE	ROCK QUALITY	CODE	GEOLOGIC UNITS	MINERALIZATION & ALTERATION
594.8 604.2		Xl#,t	** 594.8 604.2 TUFFITE, Talcose	594.8 616.5 12% Sp, 1% Cp
604.2 609.0		Xch,z	** 604.2 609.0 TUFFITE, Charty, Stringery	616.5 634.5 5% Sp
609.0 627.0		Xl#,zt	** 609.0 627.0 TUFFITE, Lapilli-rich, Talcose	
627.0 634.5		Rt,tz	** 627.0 634.5 RHYOLITE TUFF, Talcose, with Stringery Sulfides	
634.5 643.7		Xca,z	** 634.5 643.7 TUFFITE, CALCAREOUS, Stringery Sulfides	634.5 643.7 15% Sp, 5% Ga
643.7 679.0		CT	** 643.7 679.0 CALCAREOUS TUFF/TUFA	643.7 669.0 5% Sp
649.5 650.5		Xca	^^ 649.5 650.5 Tuffite, Calcareous	
671.0 674.0		Xca#	^^ 671.0 674.0 Tuffite, Calcareous, Diopside Alteration	
674.0 679.0		CTs	^^ 674.0 679.0 Calcareous Tuff, with Sulfides	
679.0 697.5		Xlz	** 679.0 697.5 TUFFITE, LAPILLI-RICH, Stringery	669.0 679.0 20% Sp 679.0 697.5 15% Sp, 3% Ga
697.5 701.0		MS	** 697.5 701.0 MASSIVE SULFIDE	697.5 702.0 50% Sp, 8% Ga
701.0 731.0		Xlz	** 701.0 731.0 TUFFITE, LAPILLI-RICH, Stringery	702.0 731.0 18% Sp
731.0 739.7		Rt	** 731.0 739.7 RHYOLITE TUFF	
733.5 734.0		MS	^^ 733.5 734.0 Massive Sulfide	733.5 764.0 50% Sp
739.2 739.7		MS	^^ 739.2 739.7 Massive Sulfide	739.2 739.7 50% Sp