

HOLE No. 1
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DRILL HOLE LOG
ARJAY KIRKER RESOURCES LTD.
NORDENSKIÖLD COAL AREA

COORDINATES 22,321,783.19N ; -190,435.16E
ELEVATION 2,186.3
DIP -50°
AZIMUTH 040°
SCALE 1.5 ins. = 10.0 ft.

CORE SIZE HQ 0-600 FT
HOLE STARTED 14 SEPTEMBER, 1972
HOLE COMPLETED 21, SEPTEMBER, 1972
LOGGED BY M.P. PHILLIPS

DIP

OVERBURDEN - GLACIAL TILL &
WEATHERED BEDROCK

12.0

SHALE - PURPLE, MASSIVE, ARENACEOUS

LABERGE SERIES

15.8-70° ---

SANDSTONE - FINE GRAINED, LIGHTLY BANDED

18.0-70° ---

SHALE - PURPLE, MASSIVE, ARENACEOUS
LIGHT COLORED, LAMINATIONS

21.5 ---

SANDSTONE - GREY, MASSIVE, FINE-MEDIUM
GRAINED

31.0-70° ---

SHALE - BLACK, HIGHLY BROKEN

32.3 - CONTACT LOST

HUTSHI GROUP - ANDESITE - PALE
GREEN, APHANITIC, SCATTERED UP TO
5 MM QUARTZ FILLED AMYGDALAE, HIGHLY
WEATHERED

38.7 - 18° ORIENTATION?

SHALE - BLACK, MASSIVE, 0.3 FT SANDSTONE
ON BOTTOM CONTACT

LABERGE SERIES

41.0 ---

COAL - SHALE COMMON IN UPPER SECTION

42.3 ---

SANDSTONE - STRONGLY ARGILLACEOUS WITH
BANDS OF PURPLE SHALE

44.8-70° ---

SANDSTONE

46.0 ---

SHALE - BLACK MASSIVE

47.5 ---

SANDSTONE

52.0 ---

COAL SHINY, BLACK, 13 FT RECOVERY

57.0-70° ---

SANDSTONE - FINE-MEDIUM GRAINED WITH NARROW
BANDS

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LABERGE SERIES

61.0 — SANDSTONE - COARSE GRAINED - GRITTY
MASSIVE - SLIGHTLY BANDED

74.5-78

COAL

79.5 - CONTACT LOST

SHALE - BLACK MASSIVE WITH COAL PARTINGS

81.0 — SHALE - DARK, STRONGLY ARENACEOUS WITH
NARROW BANDS OF SANDSTONE

84.0 - GRADATIONAL

SHALE - BLACK MASSIVE, OCCASIONAL ARENACEOUS PARTINGS
AND COAL PARTING COMMON

87.0 —

SANDSTONE - FINE - MEDIUM GRAINED WITH DARK NARROW
ARGILLACEOUS BANDS

88.7 —

SHALE - BLACK, MASSIVE, COAL AND SANDSTONE PARTINGS

90.5 —

SANDSTONE - MEDIUM - COARSE, FAINT ARGILLACEOUS BANDS

92.3 —

SHALE - ARENACEOUS, WEAKLY LAMINATED

95.0 —

SANDSTONE

97.0 —

SHALE - ARENACEOUS, WEAKLY LAMINATED, BANDED

98.7-100

SANDSTONE - COARSE GRAINED

100.7 —

COAL

102.6 —

SANDSTONE & SHALE - ALTERNATING BANDS, PARTING UP
TO 1.0 FT, AVERAGE 0.3 FT.

108.2-110

COAL

109.6 —

SHALE - ARENACEOUS, WEAKLY LAMINATED

113.3 —

COAL - 0.3 FT.
SANDSTONE

119.4 —

COAL - 0.4' SHALE

DIP

70°

70°

70°

80°

70°

70°

70°

65°

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121.0 - 55° - SANDSTONE - 0.3 FT.

SHALE - LAMINATED ARENACEOUS, OCCASIONAL COAL PARTING,
 OFTEN LIGHT COLORED, STRONGLY ARENACEOUS BANDS

126.0 - SANDSTONE - 0.3 FT.

134.1

COAL

136.5 - SHALE - 0.5'

137.5

142.6 - 65°

SANDSTONE - MEDIUM - COARSE GRAINED, WEAKLY
 BANDED

147.0

SHALE - ARENACEOUS, MODERATE - STRONGLY BANDED

154.5

SANDSTONE - STRONG X-BEDDING, BANDED

157.0

SHALE - ARENACEOUS, WEAKLY LAMINATED

161.0

SANDSTONE - FINE GRAINED, OFTEN TO
 ARENACEOUS SHALE

166.5

169.5

SANDSTONE - FINE GRAINED, OFTEN
 GRADING TO MARGOL
 BANDS OF STRONGLY
 ARENACEOUS SHALE

173.5

179.0

SANDSTONE

DIP

50°

70°

70°

70°

65°

70°

60°

70°

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		DIP
183.7	<u>SANDSTONE</u> - GREY, FINE-MEDIUM GRAINED WEAK - MODERATELY ARGILLACEOUS WITH OCCASIONAL NARROW BANDS - PARTINGS OF SHALE	45°
	<u>SHALE</u> - WEAK-MODERATELY ARENACEOUS LAMINATED WITH UP TO 0.3 FT BANDS AND PARTING OF COAL	60°
181.1	<u>SANDSTONE</u> - GREY, MEDIUM GRAINED	10°
194.1	<u>SHALE</u> - ARENACEOUS, LAMINATED, WITH NARROW BANDS OF COAL & SANDSTONE	70°
197.0	<u>SANDSTONE</u>	
198.0	<u>SHALE</u> - BLACK, MASSIVE, IN PLACES WEAKLY ARENACEOUS, LAMINATED	70°
200.8	<u>SANDSTONE</u>	
202.5	PARTING & NARROW <u>SHALE</u> - ARENACEOUS LAMINATED, OFTEN BANDS OF COAL STRONGLY ARENACEOUS	
205		
211.7	<u>SANDSTONE</u> - DARK, STRONGLY ARGILLACEOUS	75°
212.6	<u>SHALE</u> - ARENACEOUS, LAMINATED - 0.5 FT COAL, TOP CONTACT	70°
213.7	<u>SANDSTONE</u>	
214.5	<u>SHALE</u> - LAMINATED, ARENACEOUS	
215.8	<u>SANDSTONE</u> - BROWN, MODERATELY ARGILLACEOUS	75°
217.8	<u>SHALE</u> - ARGILLACEOUS, WEAK - MODERATELY ARGILLACEOUS WEAK - MODERATELY LAMINATED, RARE PARTING OF COAL	60°
224.8	<u>SANDSTONE</u> - GRITTY	
228.3		65°
237.0	STRONGLY ARENACEOUS	75°

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		LABERGE SERIES	DIP
240.0	SANDSTONE - WEAKLY ARGILLACEOUS BANDED		60°
242.0	SHALE - WEAK - STRONGLY ARENACEOUS LAMINATED		
245.6	SANDSTONE - PARTINGS SHALE COMMON		
247.8	SHALE - ARENACEOUS, WEAKLY LAMINATED MINOR NARROW BANDS OF SANDSTONE		55°
255.2	SANDSTONE - LIGHT GREY, MEDIUM GREY MINOR PARTINGS & BANDS OF SHALE		10°
259.5	SHALE - ARENACEOUS, GRADING TO ARGILLACEOUS SANDSTONE, WEAKLY LAMINATED		
262.0	SANDSTONE - GREY, WEAK - STRONGLY ARGILLACEOUS MINOR SHALE BANDS		
266.8	SHALE - LIGHT COLORED, STRONGLY ARENACEOUS GRADING INTO ARENACEOUS LAMINATED		70°
269.0	SANDSTONE - GREY, COARSE GRAINED - GRITTY WITH ARGILLACEOUS BANDS & NARROW BANDS & PARTINGS OF COAL		70°
276.3	SHALE - ARENACEOUS, LAMINATED		70°
279.0	SANDSTONE - ARGILLACEOUS, PARTING OF SHALE & COAL		
282.9	SHALE - BLACK, PARTINGS OF COAL		
283.8			
285.4	SHALE - ARENACEOUS, LAMINATED, OCCASIONAL PARTINGS OF SANDSTONE		70°
287.0			
288.5	SHALE - ARENACEOUS, LAMINATED		
290.0	PARTING OF ARENACEOUS SHALE COMMON		70°
293.8	SHALE - ARENACEOUS, WEAKLY LAMINATED		
296.8	SANDSTONE - LIGHT GREY, GRITTY		

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			DIP
	<u>SANDSTONE</u>	<u>LABERGE SERIES</u>	
301.3	<u>SHALE</u> - DARK, ARENACEOUS, MASSIVE GRADING TO LIGHT STRONGLY ARENACEOUS LAMINATED, OCCASIONAL NARROW BANDS OF SANDSTONE PARTING OF COAL COMMON.		65°
311.4	<u>SANDSTONE</u>		70°
312.6	<u>SHALE</u> - MASSIVE, ARENACEOUS, BLACK, WHITE SPECKLING		70°
314.6			
322.0	<u>SHALE</u> - ARENACEOUS, MASSIVE - WEAKLY LAMINATED, COAL PARTINGS COMMON.		70°
325.9	<u>SANDSTONE</u> - COARSE GRAINED, GRADATION FINE GRAINED ARGILLACEOUS TOWARDS BOTTOM		70°
329.8	<u>SHALE</u> - DARK COLORED, WEAK TO LIGHT STRONGLY ARENACEOUS, LAMINATED OCCASIONAL COAL PARTINGS & IRREGULAR NARROW SANDSTONE BANDS		70°
339.5	<u>SANDSTONE</u> - BLACK SHALE PARTINGS, COMMON		65°
340.1			
346.0	<u>SANDSTONE</u> - LIGHT GREY, FINE GRAINED.		70°
347.7	<u>SHALE</u> - LIGHT STRONGLY ARENACEOUS - DARK WEAK ARENACEOUS, LAMINATED		70°

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	<u>SHALE - SEE PAGE 6</u>	<u>LABERGE SERIES</u>	DIP
362.0	SANDSTONE - LIGHT GRAY, FINE - MEDIUM GRAINED		70°
367.8	<u>SHALE</u> - BLACK SLIGHTLY ARENACEOUS TO LIGHT COLORED, STRONGLY ARENACEOUS LAMINATED SHALE WITH PARTINGS OF SANDSTONE OCC. LEADING TO IRREGULAR		65°
371.3	<u>SANDSTONE</u> - GREY, FINE GRAINED	ARENACEOUS SANDSTONE BANDS	70°
372.5			
375.6 - 70°	<u>SANDSTONE</u>		70°
377.0			
380.8	<u>SANDSTONE</u> - LIGHT GRAY, MEDIUM GRAINED COAL PARTINGS COMMON		
396.3 - 50°	<u>SHALE</u> - BLACK MASSIVE WITH COAL PARTINGS		65°
397.5 - GRADATIONAL	<u>SHALE</u> - ARENACEOUS, WEAKLY LAMINATED - MASSIVE.		65°
406.7	<u>SANDSTONE</u> - MEDIUM - COARSE GRAINED WITH SHALE PARTINGS		65°
411.3	<u>SHALE</u> - MASSIVE WEAKLY ARENACEOUS TO STRONGLY ARENACEOUS MASSIVE TO WEAKLY LAMINATED		65°

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SHALE -	LABERGE SERIES	DIP
423.8 - SANDSTONE - MASSIVE, MEDIUM - COARSE GRAINED, OCCASIONAL SHALE PARTINGS		70°
434.3 - TRANSITION - FINE GRAINED, ARGILLACEOUS SANDSTONE		
435.7 - SHALE - DARK MODERATE - STRONGLY ARENACEOUS LAMINATED SHALE		65°
445.5 - SANDSTONE - WEAK - STRONGLY ARGILLACEOUS LAMINATED. WITH NARROW BANDS OF BLACK SHALE		70°
457.0 - SHALE - DARK MASSIVE SLIGHTLY ARENACEOUS WITH IRREGULAR BANDS OF LAMINATED, STRONGLY ARENACEOUS SHALE LEADING TO ARGILLACEOUS SANDSTONE.		70°
460.3 SANDSTONE		70°
462.7 -		70°
475.0 - SANDSTONE - FINE - MEDIUM GRAINED WEAKLY BANDED		70°
478.4 - SHALE - MASSIVE ARENACEOUS		70°

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		DIP
	<u>SANDSTONE</u> - DARK, MASSIVE, STRONGLY ARGILLACEOUS	
	<u>LABERGE SERIES</u>	
186.0 -	<u>SANDSTONE</u> - LIGHT GREY, MEDIUM GRAINED	
487.0 -	<u>SHALE</u> - ARENACEOUS, LAMINATED	60°
489.5 -	<u>SANDSTONE</u> - ARGILLACEOUS BANDING, HIGHLY WEATHERED 492.0 - 496.0 FT.	
496.0 -	<u>SHALE</u> - ARENACEOUS WEAKLY LAMINATED WITH COAL PARTING, GRADING TO MASSIVE TOWARDS BOTTOM CONTACT	60°
500.5 -	GRADATIONAL, <u>SANDSTONE</u> - LIGHT GREY FINE-MEDIUM GRAINED WITH ARGILLACEOUS BANDING IN UPPER SECTION. OCCASIONAL SHALE & COAL PARTINGS	
513.0 -	<u>SHALE</u> - DARK-LIGHT, ARENACEOUS, WEAK-STRONGLY LAMINATED WITH COAL PARTINGS.	80°
518.5 -	<u>SANDSTONE</u> - LIGHT GREY, OCCASIONAL SHALE - COAL PARTING	70°
522.0 -	<u>SHALE</u> - MASSIVE, SLIGHTLY ARENACEOUS	
523.3 -	<u>SANDSTONE</u> - GREY, MASSIVE WITH ARGILLACEOUS BANDING TOWARDS BOTTOM CONTACT.	
527.0 -	<u>SHALE</u> - MASSIVE, ARENACEOUS	
530.0 -	<u>SHALE</u> - MASSIVE, ARENACEOUS	
531.0 -	<u>SANDSTONE</u> - STRONGLY ARGILLACEOUS, LAMINATED	
532.0 -	<u>SHALE</u> - ARENACEOUS, WEAKLY LAMINATED, MASSIVE TOWARDS BOTTOM CONTACT WITH COAL PARTINGS.	70°
539.0 -	GRADATIONAL <u>SANDSTONE</u>	

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SANDSTONE - GREY COARSE GRAINED WITH ARGILLACEOUS BANDS & PARTINGS COMMON	LABERGE SERIES	DIP 70°
SANDSTONE - COARSE GRAINED - CRITTY HIGHLY WEATHERED ALONG FRACTURES		
559.4 - SHALE - ARENACEOUS LAMINATED		60°
563.2 - SANDSTONE - DARK WITH BLACK SHALE SPECKLING		
565.7 - SHALE - BLACK, ARENACEOUS		
566.0 - SANDSTONE - FINE - MEDIUM GRAINED ARGILLACEOUS & BLACK SPECKLED 567.3 - SHALE - BLACK ARENACEOUS, MASSIVE		
570.0 - SANDSTONE - DARK, FINE GRAINED, ARGILLACEOUS		
571.7 - SHALE - BLACK, ARENACEOUS, MASSIVE OCCASIONALLY WEAKLY LAMINATED		60°
577.2 - SANDSTONE - DARK CHERRY, BLACK SHALE SPECKLED 578.0 - SANDSTONE - DARK CHERRY, BLACK SHALE SPECKLED		
581.2 - 70° CHILLED CONTACT	MUTSHI GROUP - ANDESITE PALE GREEN BORDER, DARK GREEN CHLORITE SPECKLED WITH NUMEROUS CARBONATE FILLED FRACTURES	
600.0 END OF HOLE		