Corehole Log

Metro Geological Services Ltd.

Date:	Nov 7/09
Hole No:	09-01

UNITS: (___)	Lat. _____°/_____'/_____" N Long. _____°/_____'/_____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_) Box	Cut	From	To	Totl.	Recoverd Sec.	Totl.	Description: Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	Orientation (deg TCA) No.	Joints	Bedding	RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
1	1	2.5	5.5	3.0		2.3							77	
					0.12		Mudstone: chunky broken fragments. medium brown, med. hard and waxy.							
					0.45		Siltstone: blocky to chunky fragments. Top 10 cm is very soft broken fragments. It's grey, medium soft							
					0.19		Sandstone: blocky to chunky broken grey (light) fgr medium soft							
					0.45		Siltstone: blocky, grey, medium soft to soft. Massive				57.8			
					0.07		Bentonite: light grey — blocky, soft, waxy ~~Firm~~							
					0.16		Mudstone: grey blocky, soft, bentonitic							
					0.12		Bentonite: as above							
					0.73		Silty mudstone: grey, blocky, medium hard massive	1	32	90				
1	2	5.5	8.5	3.0		3.0							100	
					0.45		Mudstone: grey, blocky, medium hard, waxy, Massive							
					0.11		Carbonacious mudstone: dark brown, blocky, waxy, med hard				59			
					0.24		Mudstone: medium hard, blocky As above							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 = % ; Rec.Coal / Total Coal x 100 = %				Total Drill Depth: 0.0 ; Total Log Depth: 0.0			

Comments:

3C2

Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					0.15		Carbonacious mudstone: dark brown, blocky, as above				59			
					0.08		Mudstone: grey as above							
					0.25		Sandstone: grey, block, med hard, fine to medium grain							
					0.43		Siltstone: blocky, grey, med hard, bottom 14 cm colour changed to a grey brown colour.				88			
					1.29		Sandstone: light grey, blocky, with medium hard to hard paent banding, its fine grain	1	30					
2	3	8.5	11.5	3		1.47							49	
					0.31		Sandstone: blocky, light grey as above							
					0.13		Siltstone: light grey brown blocky, medium hard, fine grain coal fragments near base							
					0.3		Mudstone: medium to dark brown, blocky, chunky broken fragments, med soft, waxy				24			
					0.44		Carbonacious mudstone: dark brown, blocky, medium soft, waxy and coal fragments throughout.							
					.29		Mudstone: grey, blocky, silty, med soft							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:		0.0			
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:		0.0			

Comments:

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Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____ °/____ '/____ " N Long. ____ °/____ '/____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness.	No.	Joints	Bedding				
3	4	11.5	14.5	3		1.82							60	
					0.43		brown Siltstone; light grey with ~~darker~~ carbonaceous band near base (the bottom 23 cm) blocky medium hard							
					0.29		Sandstone: light grey with brown silty bands throughout, alternating bands of course or finer grain sands, Med hard, blocky				53			
					0.31		Mudstone: grey brown, bottom 10 cm is darker brown and carbonaceous, blocky, med soft, waxy							
							Sandstone: light to medium grey, upper 35 cm is med grey; med to coarse grain sand, loosely consolidated, friable, blocky							
					0.79		~~soft~~ medium hard to soft unconsolidated zones							
4	5	14.5	17.5	3		2.24							75	
					0.2		Sandstone - light grey, very coarse grain, blocky, medium soft, friable.							
					0.34		Mudstone - light grey, brown, with darker coloured banding, blocky; medium soft				68			
					0.36		Silty mudstone, light grey, brown, ~~brown~~ alternating bands of lighter grey silt and darker muds.							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:				0.0	
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:				0.0	

Comments:

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Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____ °/____ ' /____ " N Long. ____ °/____ ' /____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
							blocky, medium soft							
					0.55 ~~0.49~~		Sandstone: light grey, blocky coarse grain, medium hard							
					0.16		Mudstone: med to dark grey, blocky, med hard and waxy				68			
					0.3		Siltstone: light grey brown — banded at the base, blocky medium ~~hard~~ soft							
					0.33		Mudstone: grey-darker grey brown, blocky, med soft, wavy							
4	6	17.5	20.5			2.96								
					.15		Mudstone: grey brown, blocky As above							
					.25		Siltstone: light grey brown banded; blocky, med hard				100			
					.22		Mudstone: med grey with lighter grey brown bands, blocky, medium hard							
5	6				0.77		Silty mud: grey brown with interbanded layers of silt and darker muds, blocky, med hard			90	93			
					0.46		Mudstone: grey brown, blocky med hard, massive			80	100			
					~~0.37~~		~~Silty mudstone: grey brown, blocky med hard, fining upward massive~~							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:					0.0
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:					0.0

Comments:

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Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					.47		Silty mudstone: grey brown, blocky med hard, massive, near vert. fracture.				100			
					.64		Mudstone: grey brown, blocky med hard, massive			85	75			
5	7	20.5	23.5	3		2.6							87	
					0.17		Mudstone: as above							
					0.19		Siltstone: grey brown, blocky, medium hard, massive.							
					0.28		Sandstone: light grey brown blocky, med hard, fine grain							
					0.08		Siltstone: grey brown, blocky as above.							
					0.25		Mudstone: grey brown with some carby bands and coal class in lower half blocky med soft, waxy, massive							
					0.16		Mudstone: grey brown blocky As Above							
					0.47		Siltstone: light grey brown, with carby bands toward the base, blocky, soft crumbly, friable.							

Total:			0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
						Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

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Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
6	8	23.5	26.5	3		2.75							92	
					1.83		Sandstone: light grey with some darker ~~silt bands~~ carby bands scattered randomly throughout, blocky med hard to hard very coarse grain in the lower half. (Conglomeratic) very coarse sand.							
					0.17		Siltstone: L/Grey-brown with brown silty bands, blocky hard,							
					0.75		Sandstone: light grey with occasional brown silt band med to very coarse grain. (Conglomeratic) blocky medium hard to hard							
7	9	26.5	29.5	3.0		3.0							100	
					0.72		Sandstone: coarse grained, conglomeratic, as above.							
					0.17		Siltstone: light grey brown band, blocky, medium hard,							
					0.07		Mudstone: brown, blocky, med soft, waxy							
					0.23		Sandstone: light grey, blocky coarse grain. As above							
					1.15		Siltstone: lg-grey brown, blocky ~~banded~~ faint banded throughout, blocky, med hard							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:				0.0	
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:				0.0	

Comments:

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Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01
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UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					0.12		Mudstone: more brown - med. brown colour, blocky, med-soft, waxy							
					0.23		Siltstone: blocky as above							
					0.53		Sandstone: light-grey with carbonaceous band throughout; Blocky, med-soft							
					0.28		Sandstone: light-grey blocky med. hard and fine ~~med~~ to med-grain							
8	10	29.5	325	3		1.7								
~~8~~ ~~10~~					0.8		Sandstone: light grey with some fine darker silt bands, blocky soft and crumbly at base (bottom 15cm) - Remainder is med hard						57	
					0.9		Sandstone - coarse grained, light grey, s and p, very soft crumbly (Core loss)							
9	11	32.5	355	3		2.6+							89	
					0.7		Sandstone: light grey; very coarse grained, conglomeratic medium hard to soft							
					0.09		Carbonaceous mudstone: dark brown, blocky, soft, waxy				0.14			
					0.08		Bentonitic siltstone - light grey/brown, blocky, med. soft, waxy							36.3

3C2

3C2 / 3C1

Total:			0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
						Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Corehole Log

Metro Geological Services Inc.

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____ °/____ '/____ " N Long. ____ °/____ '/____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					~~0.15~~ .44		Mudstone: Grey brown with carby bands, at top and base blocky, medium hard and waxy			75				
					0.36		Siltstone: light greybrown, blocky, med soft, Bentonitic, massive				94			
					0.22		Coal: blocky, hard, dull and shinny banded, brittle, gradational floor contact (bony at base)							
					0.18		Mudstone: ~~Grey~~ light brown blocky, waxy, med hard							
					0.15		Coal: blocky ~~at~~ dull banded vertical fractured, broken-up							
					0.19		Carbonacious mud/bone: dark brown, too black mud bands, hard and bony at the base.							
					0.04		Bentonite: Pale greyish green, soft, waxy							
10	12	355.5	385	3		255							85	
					0.09		Bentonite - as above							
					0.15		Bentonitic siltstone: grey-brown, banded, med soft, waxy sandstone lenses							
Total:				0.0		0.0								

Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

3C1

Corehole Log

Metro Geological Services Ltd.

Date:	Nov 8
Hole No:	09-01
Page:	9 of 32

UNITS: (___)	Lat. ____° /____' /____" N Long. ____° /____' /____" W	DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting: Northing: Elevation:						

Box	Cut	From	To	Totl.	Sec.	Totl.	Description (Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness)	No.	Joints	Bedding	RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
					~~[illegible]~~ .4		Sandstone: blocky, broken fragments, iron-stained, coarse grain, hard				~~[illegible]~~			
					0.22		Siltstone: grey-blocky, med soft, massive, ~~mudstone~~							
					1.25		Mudstone: grey brown to a brown colour, blocky, massive med-hard, waxy				100			
					0.44		Siltstone: grey-brown, blocky med-hard, ~~[illegible] bands at~~ brown-banded at bottom 10 cm.							
11	13	385	415	3		2.98							100	
					1.66		Siltstone: light grey brown, faint banding at base. (fine silt and sand inter-banded thin layers of sand fining upward) Blocky, med-hard				~~[illegible]~~			
					.69		Sandstone: light grey, blocky, hard, fining upward							40
					.19		Carbonaceous mudstone: dark brown, blocky, waxy, med hard							2.

3CL
3b10

Total:		0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
					Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Corehole Log

Date: Nov 8
Hole No: 09-01

UNITS: (___)	Lat. ___ ° / ___ ' / ___ " N Long. ___ ° / ___ ' / ___ " W	DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting: Northing: Elevation:						

Box	Cut	From	To	Totl.	Sec.	Totl.	Description: Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	Orientation (deg TCA) No.	Joints	Bedding	RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
12	13													
					0.2		Mudstone: brown blocky, medium hard, waxy, massive							
					.05		Bentonite: light brown, soft waxy							
					.19		Mudstone: As above	1	45	85				
12	14	41.5	44.5	3.0		2.92							97	
					2.02		Mudstone: medium to dark brown with Carby band, faint banding, blocky; med hard, waxy			90	67			
					.06		Bentonite: grey, blocky, soft waxy							
					.65		Mudstone: brown banded, blocky to ~~Flaggy~~ flaggy, minor facility medium hard							
					.06		Bentonite: grey, soft, waxy as above							
					.13		Mudstone: light brown, blocky med hard,							
13	15	44.5	49.5	5.0		4.07							82	
					3.08		Shaly mudstone: med to dark brown banded. Blocky to flaggy fragments. Slightly fissile throughout. Soft to med hard with some crush broken zones. Thin 1cm bentonite bands at 2.08m from the top.			85	29			
Total:				0.0		0.0	Rec.Total / Cored Total x 100 = % ; Rec.Coal / Total Coal x 100 = %				Total Drill Depth: 0.0 ; Total Log Depth: 0.0			

Comments:

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Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01

UNITS: ( )	Lat. ° / ' / " N Long. ° / ' / " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Box	Cut	From	To	Totl.	Recoverd Sec.	Recoverd Totl.	Description: Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	Orientation (deg TCA) No.	Joints	Bedding	RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
					.76		Mudstone: chaly, brown block to chunky broken fragments. Bottom half is broken. Med. hard, thin bentonite bands waxy streak.				29			47.2
					.23		Silty Mudstone: blocky to chunky broken fragments. Brown to medium hard ~~and~~							
14	16	44.5	52.7	3.2		3.2							100	
					3.2 ~~.5~~		Mudstone: brown, light to dark brown banded, blocky to fragments, medium hard to softer shaly bands throughout. Bottom .45 cm is silty			80	28			
15	17	52.7	54.8	2.1		1.35							64	
					.09		Silty mudstone: brown blocky, med hard as above.							
					.06		Bentonite: light grey brown blocky, silty, soft, clay, waxy ~~[illegible]~~							
					.33		Carbonaceous siltstone: medium to dark brown, blocky to chunky broken fragments, med hard							
					.67		Mudstone: blocky to flaggy broken fragments, silty bands thin bentonite bands, shaly in the middle, medium to dark brown, ~~medium hard~~ soft to medium hard.							
					.2		Mudstone: dark brown, carby, broken chunky fragments, some thin bentonite							

3b10 / 3b9

Total:		0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
					Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-D1

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UNITS: (___)	Lat. ____ °/____ '/____ " N Long. ____ °/____ '/____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
							bands, soft and waxy							
16	18	548	565	1.7		1.4							82	
					1.12		Silty mudstone: medium to dark brown color, hard, blocky medium hard, ~~[illegible]~~ silty							
					.28		Carbonaceous mudstone: dark brown, blocky to crumbly broken fragments, then bentonite band at 3 cm from top, its soft, crumbly (core loss)							
16	19	565	577	1.2		1.0							83	
					.13		Mudstone: brown, blocky broken medium hard							
					.03		Bentonite: brown colour soft, milled, plyable wet.				16 ~~15~~			
					.2		Mudstone: as above blocky med. to dark brown as above							
					.64		Mudstone: medium to dark brown with coaly bands, silty at base, blocky, med hard.							
17	20	577	591	1.4		.84							60	
					.05		Mudstone: brown blocky broken as above				0			
					.02		Bentonite: light grey, soft waxy, sharp contact							

Total:		0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
					Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

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Corehole Log

Metro Geological Services

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					.48		Mudstone: dark brown, blocky to flaggy fragments, bottom half is shaly and fissile medium hard							
					.08		Bentonite: light brown, ~~.08~~ ~~thickness~~ soft, waxy, crumbly							
					.21		Mudstone: dark brown, medium hard, blocky as above							
17	21	59.1	61.9	2.8		1.1							39	
					1.1		Mudstone: blocky to crush muddy fragments. Med. to dark brown. Slightly carbonaceous med. hard ~~to~~ soft.			85-90	0			
18	22	61.9	62.5	0.6		0.6							100	
					.2		Mud: oozy light brown, oozy mud soft milled rock							
					.4		Mudstone: medium to dark brown banded, blocky to flaggy, fissile fragments, medium hard.							
19	23	62.5	65.5	3		3	~~Mudstone: 1.13~~						100	
					~~1.73~~ 1.13		Mudstone: ~~dg~~ medium to dark brown, banded, blocky to flaggy fragments, minor calcite, medium hard, waxy, silty bands			80				
					.06		Bentonite: light grey brown, soft waxy, sharp contacts							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%		Total Drill Depth:			0.0	
							Rec.Coal / Total Coal x 100 =	%		Total Log Depth:			0.0	

Comments:

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Corehole Log

Metro Geological Services Inc.

Date:	Nov 8
Hole No:	09-01

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UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					1.60		Mudstone: blocky, clayey medium hard, brown/banded as above, 2 cm grey bentonite band, 8cm above the base.			80				
					.09		Chert: chunky broken fragments light brown hard, conchoidal fractures							
					.12		Mudstone: as above dark brown blocky							
19	24	65.5	68.5	3.0		2.99								
					1.7		Mudstone: med to dark brown banded, blocky, medium hard silty bands in bottom 45 cm			80				3b9
					0.11		Mudstone: ~~med~~-dk brown, blocky, silty, massive							
					0.02		Bentonite: brown, soft, waxy							
					1.16		Silty Mudstone: med-dk brown, blocky, hd, silty bands, massive, slightly carbonaceous vertical fractures			81	68			
20	25	68.5	71.5	3.0		2.9							96	
					~~.7~~ 2.2		Silty mudstone: dark brown blocky, silty bands throughout. As above, ~~Bentonitic~~ mud bands at 57-74 cm from top.			80				
					.08		Bentonite: light grey brown, blocky soft waxy				41			
					.23		Mudstone: dark brown, blocky medium hard to medium soft							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%		Total Drill Depth:				0.0
							Rec.Coal / Total Coal x 100 =	%		Total Log Depth:				0.0

Comments:

Corehole Log

Metro Geological Services

Date:	NW 8
Hole No:	09-01

UNITS: ( )	Lat. ° / ' / " N Long. ° / ' / " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Box	Cut	From	To	Totl.	Sec.	Totl.	Description (Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness)	No.	Joints	Bedding	RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
							bottom contact is bentonitic + graditional.							
					.05		Bentonitic mudstone: dark brown soft, crumbly				41			
					.34		Silty mudstone: blocky, dark brown medium hard, massive							
21	26	71.5	74.25	2.75		2.52							92	
					2.33		Silty Mudstone: dk brown, blocky bd, as above, massive			81				
					.05		Carbonacious mud ~~parts~~: dark grey brown, soft, waxy				24			
					.14		Mudstone: dk brown ~~to chunky~~ blocky to chunky broken fragments Broken at the base, med-Hard							
22	27	74.25	76.2	1.95		1.54							79	
					.09		Bentonite: light brown, blocky to chunky broken, soft, waxy							
					.14		Mudstone: blocky, dark brown Bentonite upper contact, gradational!							
					.43		Silty mudstone: med brown, blocky hard, massive				35			
					.13		Coal: dull and bright banded blocky, hard, graditional floor contact							74.2
														74.7
Total:				0.0		0.0	Rec.Total / Cored Total x 100 = % / Rec.Coal / Total Coal x 100 = %				Total Drill Depth: 0.0 / Total Log Depth: 0.0			

Comments:

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368

Corehole Log

Metro Geological Services

Date:	Nov 8 /09
Hole No:	09 -01

Page: 15 of 32

UNITS: (___)	Lat. ____ °/____ '/____ " N Long. ____ °/____ '/____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					.08		Bentonitic mud, dark grey mud, blocky, soft, carbonaceous upper contact with coal							
					.1		Bentonite: light brown, blocky soft and waxy.							
					.24		Coal: dull banded blocky hard brittle							
					.13		Siltstone: light grey with carby bands - blocky and hard.							
					.13		Coal: blocky, dull banded hard							
					.07		Siltstone: light grey brown, blocky med-hard							
23	28	76.2	77.5	1.3		1.2							92	
					0.17		Siltstone: gray-brown, blocky, hd, carby bands,			85-90				
					0.09		Carbonaceous Siltstone: dk brown, chunky broken fragments, hd, dull,							
					0.37		Siltstone: gray-brown blocky hd, faint banding, thin bentonite at base				56			
					0.04		Bone: dull, hd, thin carby stringer,							
					0.33		Siltstone: lt gray blocky hd, fining upward, (f.gr. sandstone at base)							
Total:				0.0		0.0								

Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

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Metro Geological Services Ltd.

Corehole Log

Date: Nov 9/09
Hole No: 09-01

UNITS: ( )	Lat. ° / ' / " N Long. ° / ' / " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Box	Cut	From	To	Totl.	Sec.	Totl.	Description (Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness)	No.	Joints	Bedding	RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
					0.03		Bone: dull thin bone coal band,				56			
					0.17		Bentonitic Siltstone: gray, blocky, carby contacts, med hd, bentonitic							
23	29	77.5	80.35	2.85		1.45							51	77.2
					0.17		Coal: blocky hd, dull & shiny banded, boney at base,							
					0.03		Silt Parting: lt brown, gradational contacts							
					0.04		Bone: dull, hd, gradational,							
					0.17		Siltstone: gray, blocky, carby bands hd							
					0.19		Coal: blocky to chunky, broken hd, dull banded, thin gray silt band at 6cm from top,					26736 Section 6		
					0.1		Bone: dull blacky, blocky, hd, gradational contact,							78.8
					0.68		Bentonite: lt gray-brown blocky, soft, broken at top, waxy,							79.5
					0.07		Carbonaceous ~~Mudstone~~ Siltstone: brown, block, hd							
23	30	80.35	83.5	3.15		~~1.55~~ 1.44							46	
					0.18		Carbonaceous Mudstone: dk gray-brown, blocky, soft, waxy,							
					0.16		Boney Shaly / Coal: dull dk brown-black, blocky to floggy fissile fragments,					Section 5		79.8
					0.28		Coal: blocky, dull & shiny banded, hd, brittle,							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 = % / Rec.Coal / Total Coal x 100 = %				Total Drill Depth: 0.0 / Total Log Depth: 0.0			

Comments:

Margin notes: 368; 367; Bentonite

Section 5 { Cmd .16

C .28 + .64 + .15 + .30 + .11 + 1.48
bone .2 + .06 + .06 .32
b .12 .12

Metro Geological Services Ltd.

Corehole Log

Date:	Nov 9/09
Hole No:	09-01

UNITS: (___) Lat. _____ ° / _____ ' / _____ " N Long. _____ ° / _____ ' / _____ " W

DLS	Lsd	Sec	Twp	Rge	Mer

UTM NAD83 Easting: Northing: Elevation:

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
23	30				~~0.55~~ 0.64		Boney Coal: dk brown-black, dull banded, hd, gradational floor contact,							
					0.18		Siltstone: gray-brown, blocky, hd, gradational contact w/coal,							
					0.12		Bentonitic Mud/: gray-brown soft, milled, broken fragments.							
24	31	83.5	86.5	3.0		1.32							44.	
					0.15		Coal: chunky broken fragment, dull & bright banded, hd, brittle,				26 / 31 / 5 Bedding			
					0.2		Bone: dull dk brown-black, hd,							
					0.3		Coal: blocky to chunky fragments, hd, bright banded, silty at base, hackly cleat,							
					0.06		Bone: dull dk brown, blocky, hd,							
					0.11		Coal: blocky to chunky, broken, hd, shiny bright bands, gradational at base,							
					0.06		Bone: dk brown-black, hd, gradational contact,							84.2
					0.22		Siltstone: brown, blocky, hd, carbonaceous bands & coaly fragments							84.6
					0.05		Carbonaceous Mud: dull black, soft,							
					0.17		Coal: blocky, bright band, hd, brittle,							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 = %		Total Drill Depth:					0.0
							Rec.Coal / Total Coal x 100 = %		Total Log Depth:					0.0

Comments:

Corehole Log

Metro Geological Services

Date:	Nov 9 / 09
Hole No:	09-01

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UNITS: (___)	Lat. ___°/___'/___" N Long. ___°/___'/___" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
25	32	86.5	88.7	2.2		1.46							66	
					.06		Bone: dark brown to black, blocky to hard					26738 Section 4		
					0.1		Carbonaceous Siltstone: med to dark grey, blocky hard, gradational contact with coal							
					0.3		Coal: blocky, hard, dull + shiny bands, brittle, bony contacts							
					.23		Bentonitic Silt Stone: light ~~grey~~ to medium grey, blocky, medium soft, waxy.							
					.08		Bentonite: light greyish brown, soft, waxy, silty							
					.3		Bony Coal: dull, with some shiny bands in upper half. Bottom 15 cm is bony and dull. Upper Contact is shaley.							86.5
					.13		Carbonaceous mudstone: dark brown, blocky, medium hard + waxy							
					.06		Bentonite: grey brown, soft broken fragments, waxy							
					.13		Carbonaceous Siltstone: medium to dark grey, blocky, hard							
					.07		Carbonaceous mud: dark brown to black, crumbly broken fragments					26739 Section 3		

Total:			0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
						Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Section 4

crud	.05	.05
C	0.17 + .3	0.47
Silts	0.1	0.1
bone	0.06	0.06
b	0.23 + .08	0.31

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09/01

UNITS: (___)	Lat. ____ °/____ '/____ " N Long. ____ °/____ '/____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				(m)
25	33	88.7	91.8	3.1		1.4							45	
					.24		Boney Coal: blocky to flaggy fragments, hard, dull with some shiney bands. Gradational floor contact							
					.22		Carbonaceous mudstone: dark grey brown. blocky to flaggy dull, waxy, medium soft.							
					.22		Coal: blocky, hard, dull + shiny banded, brittle							
					.2		Carbonaceous Siltstone: dark grey brown, blocky hard some coaly bands at the bottom contact.							
					.3		Siltstone: grey brown, blocky to chunky broken fragments grey-sand lenses at the base at the bottom half medium hard to soft and crumbly at the bottom							
					.04		Bentonite: pale grey, soft waxy							
					.06		Bone: dull dark brown, blocky hard, silty							90.0
					.12		Boney Coal							

Section 2

Total:			0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
						Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Section 3

C	0.3 + 0.04 + 0.22	0.76
cmd	0.13 + 0.07 + 0.22	0.42
csft	0.13 + 0.2	0.33
b	0.06 + 0.04	0.1

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09/01

Page: 20 of 32

UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
26	34	91.8	93	1.2		.51							46	
					.1		Coal: blocky to flaggy broken fragments, dull banded bony at the base				26		40	
												Section 2		
					.15		Siltstone: medium to dark grey carbonaceous band throughout blocky hard							
					.07		Bony Coal: chunky broken fragments, dull, hard							93.8
					.15		Siltstone: light grey brown, blocky hard							
					.04		Bentonitic siltstone: light grey brown, medium soft, waxy.							
26	35	93	95.5	2.5		.115							48	
					.11		Bentonitic siltstone: Blocky to chunky broken fragments, pale greenish brown, med. soft, waxy silty.							
					.13		Bone: dark brown to black, dull, silty bands, hard.							
					.15		Siltstone: light grey with some dark brown carby bands, blocky, hard							
					.1		Bone: dark brown, black, dull, hard,							94.0
					.02		Silt band: light grey							
					.2		Coal: blocky, hard, dull shinny banded					Section 1		
					.03		Siltstone parting: light grey as above							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%		Total Drill Depth:				0.0
							Rec.Coal / Total Coal x 100 =	%		Total Log Depth:				0.0

Comments:

Section 2 ~~bone~~/coal .12 + .1 + .07 = .29
bone .06 .06
silt .15 + .15 .3

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

Page: 20 of 32

UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					.27		Boney Coal: blocky to chunky frag-							
							ments, dull banded, boney gradit-							
							ional contacts.							
					.14		Siltstone: light grey brown, blocky				26	74		
							hard, some calcite veins.							
											Section 1			
26	36	95.5	98.05	2.55		1.1							43	
					.2		Shaly Coal: blocky to flaggy							
							fissile fragments, brittle, dull							
							with some shiney bands							
					.15		Carbonacious mudstone: dark grey							
							to black - ~~blocky~~ crumbly							
							broken fragments, soft, possible							
							thin coal bands that are crushed							
							and mixed							
					.14		Bone: dull dark-brown, blocky,							
							hard, gradational at the base							
														96.4
					.41		Siltstone: light grey, faint	1	35	90				
							banding, blocky, hard,							
					0.20		Siltstone: as above							
27	37	98.05	101.2	3.15		3.08							98	306
					1.12		Siltstone: med-gray-brown, banded,			85	65			
							blocky hd, low angle fractures							
							w/ bedding surfaces,							
					0.15		Sandstone: lt gray-green w/							
							brown bands, chunky broken							
							fragments, v. hd, silica cemented,							
														97.7
					1.81		Silty Mudstone: gray-brown, blocky,			85	65			
							hd, massive, lt gray silty bands,							
														305

Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

bone .1 + .14 0.24
c .2 + .27 + 0.47
cmd .2 + .15 0.35

Section 1

Corehole Log

Metro Geological Services Inc.

Date:	Nov 9/09
Hole No:	09-01

Page: 22 of 32

UNITS: (___)	Lat. ___ °/___ '/___ " N Long. ___ °/___ '/___ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
28	38	101.2	104.25	3.05		3.14								
					2.46		Silty Mudstone: blocky, hd grey-brown, massive, as above			86	61			3b5 102.5
					0.68		Siltstone: lt brown, blocky, v.hd, w/ chert bands,				62			
29	39	104.25	107.2	2.95		2.74							93	
					0.5		Siltstone: lt gray-brown, blocky, hd, faint banding, massive,				100			
					1.64		Siltstone/Chert: lt brown blocky to chunky broken fragment, ~~v.hd~~, chert bands, low angle hackly fractures, hd to v.hd				51			
					0.6		Siltstone: lt gray-brown, blocky hd, as above				93			3b4
30	40	107.2	110.05	2.85		2.5							88	
					1.3		Siltstone: lt ~~gray~~ med-brown, banded, blocky, hd, (distinctive coloration) occasional thin (1cm) bentonite,				62			
					0.06		Sandstone: lt gray, f gr., blocky, hd,			85				
					0.71		Siltstone: blocky, lt-med brown, banded, hd, as above w/ occ. bentonite band.							
					0.26		Silty Mudstone: med brown, blocky to chunky, broken fragments, hd,							
					0.17		Siltstone/Chert: lt brown blocky to chunky, v.hd, hackly-conchoidal breaks							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:					0.0
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:					0.0

Comments:

Corehole Log

Metro Geological Service

Date:	Nov 9/09
Hole No:	09-01

UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
31	41	110.05	113.1	3.05		3.04							100	
					0.53		Siltstone: lt gray-brown-med brown, banded, hd, blocky, calcite filled fractures,			80	72			
					0.90		Silty Mudstone: med-dk brown, blocky ~~banded~~ to chunky, banded, hd, low angle 'fractures'			87	37			
					0.27		Siltstone: lt brown, banded, blocky, hd,							
					0.09		Sandstone: gray, blocky, f.-c.gr., med soft & crumbly,				89			
					1.25		Siltstone: lt-med brown, banded, blocky, hd, low angle fractures,			78				
32	42	113.1	115.1	2.0		1.85							93	
					1.39		Siltstone: as above,			80	54			
					0.11		Mudstone: dk brown, blocky to crumbly at base, med hd ~~soft~~, soft clay band at base,							
					0.07		Siltstone: lt brown, blocky, hd,							
					0.28		Mudstone: dk brown, carbonaceous, med hd & waxy, blocky to chunky broken fragments,							
32	42	115.1	116.5	1.4		1.42							100	
					0.33		Siltstone: lt gray-brown, blocky to chunky, hd, brown banded,							
					0.18		Siltstone: as above							
Total:				0.0		0.0								

Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

3b4

113.7

3b 3

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

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UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
33	42				0.09		Bentonite: pale grey-green, soft, waxy, pliable, ~~sheared~~							
					0.82		Siltstone: lt med brown, blocky hd, massive, hackly low angle fractures,				95			
			118.5	2.0										
33	43	116.5	~~120.0~~	~~3.5~~		0.9							45	
					0.36		Siltstone: med-brown banded, blocky, hd, slightly carby at base.			76	78			
					0.60		Bentonitic Siltstone: pale grey-green w/ brown silty bands, med hd, waxy,							
					0.06		Bentonite: pale green, chunky broken fragment, soft of waxy.							
					0.38		Mudstone: dk brown, slightly carbonaceous, chunky broken fragments, silty,							
33	44	118.5	120.0	1.5		1.1							73	
					0.5		Silty Mudstone: med grey-brown, blocky to chunky broken fragments, hd, hackly surfaces,							
					0.44		Mudstone: med-dk brown, lower 30 cm carbonaceous broken to crushed fragments, med soft, waxy,							
					0.16		Siltstone: gray-brown, chunky, hd, broken fragments,							
34	~~33~~	45	120.0	122.5	2.5	2.08							84	
					0.14		Siltstone: grey-brown, blocky, hd, banded,							
					0.08		Carbonaceous Siltstone: dk grey, blocky hd,							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:				0.0	
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:				0.0	

Comments:

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Date:	Nov 9/09
Hole No:	09-01

Corehole Log

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UNITS: ( )	Lat. ___ ° / ___ ' / ___ " N Long. ___ ° / ___ ' / ___ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (M)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
34 ~~39~~	45				0.07		Coal: bright banded, hd, brittle, chunky broken fragments,							119.8
					0.03		Bone: dk brown, blocky, hd, gradational contact,							
					0.17		Siltstone: lt ~~gray~~ brown, blocky, hd, gradational contacts w/ coal,							
					0.08		Bone: dull dk brown-black, blocky, hd,							
					0.28		Boney Coal: blocky, dull banded w/ few shiny bands at top and base, dk brown-black, ~~boney in middle~~ ~~2.7~~ 2 cm brown silt band @ 10 cm above base,					26732 Section 3		
					0.17		Siltstone: lt brown, blocky, hd, coaly band in middle,							
					0.33		Carbonaceous Siltstone: med-dk brown, blocky, ~~interbanded silt and coal layers, hd~~, carbonaceous bands throughout,							
					0.19		Coal: blocky to chunky, dull & bright banded, hd, brittle, minor calcite/siderite on fractures,							
					0.1		Bone: dull dk brown, blocky, hd, gradational contact,							
					0.08		Siltstone: lt gray, blocky, gradational contacts,							
					0.09		Bone: dk brown, dull, blocky, hd							

Total:		0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
					Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Section 3

C 0.07 + .28 + .19 + .15 + .12 | 0.81
bone .03 + .08 + .1 + .09 | .3
slts .17 + .17 + .08 | .42

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

UNITS: (___)	Lat. ___°/___'/___" N Long. ___°/___'/___" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (..)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
33	45				0.15		Coal: crushed fragments, w/ dull & shiny bands,					Section 3		
					0.12		Bony Coal: dull dk brown-black, hd,							
34	46	122.5	124.7	2.2		1.8							82	
					0.05		Coal: chunky broken fragments,							122.4
					0.21		Silty Mudstone: lt-med brown, carbonaceous grad. contacts, blocky, hd, banded,			90				
					0.1		CarbMudstone/Bone: dk brown w/ few shiny coaly bands, dull, blocky,							
					0.12		Bentonite: pale gray-brown, soft, waxy,							
					0.2		Coal: blocky to chunky broken, dull & bright banded, hd, brittle,							
					0.12		Siltstone: med dk gray, ~~slightly~~ carbonaceous, blocky					Section 2		
					0.15		Bentonite: pale gray-brown, soft, waxy, as above,							
					0.12		Bone: dk brown-black, grad. contact, hd,							
					0.26		Coal: blocky to chunky, dull & shiny banded, few boney bands, broken at base							
					0.15		Bone: dk brown ~~soft black coal~~ - black, dull w/ few shiny bands, very gradational							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%		Total Drill Depth:				0.0
							Rec.Coal / Total Coal x 100 =	%		Total Log Depth:				0.0

Comments:

Section 2

C .05 + .12 + .26 + .25 .79
bone .12 + .15 .27
cmds .1 + .05 + .24 .42
mds .21 + .10 .31

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
34	46				0.08		Carbonaceous Mudstone: dk brown, blocky, med soft & waxy,				26	733		
					0.24		Shaly Coal: chunky to crumbly fragments, dull & shiny ~~bands~~ w/ thin mud and bentonite ~~layers~~ bands, fossile, soft,				Section 2			
35	47	124.7	126.6	1.9		1.43							75	
					0.28		Boney Coal: blocky, dull & shiny banded, hd, hackly, gradational at base,			80				
					0.3		Carbonaceous Siltstone: blocky dull, brown banded, coaly bands, ~~and soft bands~~ throughout, hd,							
					0.05		Coal: broken chunky fragments, dull w/ shiny bands, hd, brittle,							125.5
36	47													
					0.36		Boney Coal: blocky, hd, dull banded w/ boney bands throughout,							
					0.04		Bentonite: pale gray, soft, waxy, clastic wedge,							
					0.1		Bone: dull dk brown-black, hd,							
					0.03		Bentonite: as above				26	734		
					0.18		Coal: blocky to crushed, dull w/ some shiny ~~coal~~ fragments, boney,				Section 1			
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%		Total Drill Depth:				0.0
							Rec.Coal / Total Coal x 100 =	%		Total Log Depth:				0.0

Comments:

Section 1

C .05 + .36 + .18 + .32 + .12
bone .1 +
b .04 + .03 +
amds .09 + .36

1.01
.1
.07
.47

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
					0.09		Carbonaceous Mudstone: dk brown-black, crushed, muddy,							
36	48	126.6	128.1	1.5		1.0							67	
					0.03		Siltstone: gray-brown, hd,							
					0.32		Bony Coal: blocky, dk brown-black, dull banded, hd, few shiny bands, gradational contacts,					Section 1		127.2
					0.05		Carbonaceous Siltstone: dk gray, blocky, hd,							
					0.1		Siltstone: gray, blocky, hd,							
					0.12		Bony Coal: dull dk brown-black w/ shiny bands, hd, brittle, hackly cleats,							
					0.38		Shaly Coal/Bone: crushed shaly fragments, dull black, w/ some shiny fragment and dk brown bone/mud bands, muddy,							
36	49	128.1	128.5	0.4		0.37							93	127.5
					0.14		Silty Mudstone: gray-brown, blocky, med hd, carby bands,							
					0.08		Carb. Mudstone: dk brown, blocky, dull, wavy, med hd, gradational contact,							
					0.15		Bony Coal: blocky, dull banded, hd,							
36	50	128.5	131.5	3.0		2.83							94	
					0.08		Carbonaceous Siltstone: dk-~~med~~ gray-brown blocky to flaggy, hd, gradational,							
Total:				0.0		0.0								

Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

Page: 29 of 32

UNITS: (M)	Lat. ____ °/____ '/____ " N Long. ____ °/____ '/____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
36	50				0.21		Siltstone: lt-med grey-brown,							
					0.12		blocky, hd, banded,							
					0.45		Bentonite: lt gray, blocky silty bands, med soft & waxy, crumbly.							
					0.45		Mudstone: med-dk gray-brown blocky, turning carby downhole, carbonaceous gradational lower contact,							
					0.13		Bone: dull black, blocky to flaggy fragments, few shiny bands, hd, ~~brittle~~, brittle,							
					0.33		Carbonaceous Mudstone: dull dk ~~brn~~ gray-brown, blocky, waxy streaks, some shiny thin coal streaks/bands,							
					1.06		Siltstone: lt-med gray, blocky hd, massive, coal clasts & fragments,							
					0.21		Mudstone: gray, blocky, med hd, waxy, massive							
37	51	131.5	134.5	3.0		3.1							100	
					0.31		Mudstone: gray, blocky, as above,							
					0.47		Siltstone: lt ~~med~~ gray, blocky, hd fining upward, massive, sandy at base,							
					0.08		Bentonitic Siltstone: lt brown, blocky, med hd & waxy,							
Total:				0.0		0.0								

Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

Page: 30 of 32

UNITS: (___)	Lat. ___ °/___ '/___ " N Long. ___ °/___ '/___ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
39	51				0.16		Siltstone: lt gray, blocky, hd,							
							as above,							
					0.08		Bentonite: brown, blocky, waxy,							
							med soft & silty							
					0.22		Carbonaceous Mudstone: dk							
							brown ~~blocky~~ to black, w/							
							~~black~~ bentonitic mud bands,							
							med soft & waxy,							
					0.2		Bony Coal: dull dk brown-black,							
							gradational upper and lower contacts,							
							hd,							
					0.28		Mudstone: gray-brown, blocky,							
							med hd, waxy, massive,							
					1.3		Siltstone: gray-brown, blocky,							
							hd, massive,							
39	52	134.5	137.5	3.0		2.85							95	
					0.55		Siltstone: gray-brown, blocky			90	100			
							hd, clastic w/ pebble sized							
							gray silt and mud clasts,							
					0.28		Bentonitic Siltstone: lt gray-brown,							
							blocky, med soft & waxy,							
					0.17		Bentonite: gray, blocky, soft,							
							waxy,							
					1.75		Siltstone: gray, blocky, hd, massive			90				
											80			
					0.1		Mudstone: brown, blocky, med							
							hd. & waxy, massive,							
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:				0.0	
							Rec.Coal / Total Coal x 100 =	%	Total Log Depth:				0.0	

Comments:

		Date:	Nov 9/09
Corehole Log		Hole No:	09-09
		Page: 31 of 32	

UNITS: (___)	Lat. ____ ° / ____ ' / ____ " N Long. ____ ° / ____ ' / ____ " W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_) Box	Cut	From	To	Totl.	Recoverd Sec.	Totl.	Description: Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	Orientation (deg TCA) No.	Joints	Bedding	RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
40	53	137.5	140.5	3.0		3.09							100	
					2.99		Siltstone: gray-brown, blocky, hd, clastic w/ pebble to cobble clasts, massive.			90	91			
					0.1	1.15	Bone: dk brown, blocky hd, gradational contact, dull banded							
41	54	140.5	141.6	1.1		~~1.2~~							100	139.6
					0.34		Boney Coal: dull dk brown-black, blocky, hd, dull w/ few shiny bands,							
					0.05		Siltstone: brown, blocky, hd slightly carbonaceous, gradational contacts,				26735 Below Lower			
					0.66		Boney Coal: blocky, dull banded, hd, gradational ctr.							140.8
					0.1		Carbonaceous Mudstone: dk brown, blocky, med soft, lt brown bentonite bands, waxy.							
41	55	141.6	143.5	1.9		1.77							93	
					0.92		Bentonitic Siltstone: lt-med brown, banded, soft, crumbly.				66			
					0.53		Bentonitic Sandstone: lt gray-brown, blocky, med soft waxy, ~~fissile, upward~~, f.gr. massive.							
					0.25		Bentonitic Sandstone: as above							
					0.07	2.19	Bone: dull black, blocky, hd,							
42	56	143.5	145.5	2.0		~~2.3~~							100	
					0.1		Bone: dull black, blocky, hd, as above							

Total:		0.0		0.0	Rec.Total / Cored Total x 100 =	%	Total Drill Depth:	0.0
					Rec.Coal / Total Coal x 100 =	%	Total Log Depth:	0.0

Comments:

Corehole Log

Metro Geological Services

Date:	Nov 9/09
Hole No:	09-01

Page: 32 of 32

UNITS: (___)	Lat. ____°/____'/____" N Long. ____°/____'/____" W			DLS	Lsd	Sec	Twp	Rge	Mer
UTM NAD83	Easting:	Northing:	Elevation:						

Cored Interval - Units (_)					Recoverd		Description	Orientation (deg TCA)			RQD (%)	Sample ID	Rec. (%)	Log Depth (m)
Box	Cut	From	To	Totl.	Sec.	Totl.	Lithology, Color, Size, Texture, Hardness, Shearing, Contacts, Bedding Angle, Alteration, Wetness,	No.	Joints	Bedding				
42	56				0.015		Bentonite: gray, soft, waxy, milled							
					0.24		Boney Coal: blocky hd dull banded w/some shiny bands, bottom 5cm gradational boney contact							
					0.54		Siltstone: lt gray, blocky, faint banding, hd, fining upward,							
					0.64		Sandstone: lt gray blocky hd, f.gr., w/silty bands throughout,			90				
					0.48		Siltstone: lt-med gray-brown, blocky, hd, faint banding,				100			
					0.08		Carbonaceous Mudstone: dk brown, soft, clayey, waxy,							
					0.05		Coal: thin stringer, bright,							
					0.06		Carbonaceous Siltstone: dk brown, blocky, hd, gradational contact,							
43	57	145.5	146.5	1.0		0.7							70	
					0.7		Siltstone: gray-brown, blocky, hd clastic w/granule to pebble size silt clasts and coaly fragments,				100			
Total:				0.0		0.0	Rec.Total / Cored Total x 100 =	%		Total Drill Depth:			0.0	
							Rec.Coal / Total Coal x 100 =	%		Total Log Depth:			0.0	

Comments:

Century WIRELINE SERVICES

COMPENSATED DENSITY GAMMA - CALIPER - RES. DH-09-01 THROUGH PIPE

COMPANY	MOOSE MOUNTAIN COAL
WELL	DH-09-01 THROUGH PIPE
FIELD	
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	N/A
TOWNSHIP	N/A
RANGE	N/A
LICENCE NO.	N/A
UNIQUE WELL ID.	N/A

OTHER SERVICES:
NEUTRON
DEV

PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	N/A
DATE	11/09/09	RIG NUMBER	FORACO
DEPTH DRILLER	146.50	LOGGER TD	145.50
BIT SIZE	76.20	ARRIVAL TIME	16:00
LOG TOP	2.52	DEPARTURE TIME	20:00
LOG BOTTOM	145.35	CIRC STOPPED	N/A
CASING LOGGER	7.00		
CASING DRILLER	7.00		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	1.00		
WITNESSED BY	C.PASEMKO		
RECORDED BY	K.HUDGEON		
REMARKS 1	60 DEGREES		
REMARKS 2	DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-01 THROUGH PIPE 11/09/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

MAIN LOG 1:100 DH-09-01 THROUGH PIPE 11/09/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

TOOL CALIBRATION DH-09-01 THROUGH PIPE 11/09/09 17:27
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAGE	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPERL	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPERL	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURRENT	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURRENT	258.200	[UA]	27562.000	[CPS]
8	Dec08,08	13:34:00	F	Default	[CPS]		
9	Dec08,08	13:34:00	X	Default	[CPS]		

Century WIRELINE SERVICES

GAMMA - NEUTRON
DH-09-01 THROUGH PIPE

OTHER SERVICES:
DENSITY

COMPANY	:MOOSE MOUNTAIN COAL		
WELL	:DH-09-01 THROUGH PIPE		
FIELD	:		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:		
SECTION	:N/A		
TOWNSHIP	:N/A		
RANGE	:N/A		
LICENCE NO.	:N/A		
UNIQUE WELL ID.	:N/A		
PERMANENT DATUM	:GL	ELEVATION KB	:N/A
LOG MEASURED FROM	:GL	ELEVATION DF	:N/A
DRL MEASURED FROM	:GL	ELEVATION GL	:N/A
DATE	:11/09/09	RIG NUMBER	:FORACO
DEPTH DRILLER	:146.50	LOGGER TD	:145.50
BIT SIZE	:76.20	ARRIVAL TIME	:16:00
LOG TOP	:-2.52	DEPARTURE TIME	:20:00
LOG BOTTOM	:145.35	CIRC STOPPED	:N/A
CASING LOGGER	:7.00		
CASING DRILLER	:7.00		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:WATER		
RM TEMPERATURE	:N/A		
MUD RES	:N/A		
MUD WEIGHT	:1.00		
WITNESSED BY	:C.PASEMKO		
RECORDED BY	:K.HUDGEON		
REMARKS 1	:60 DEGREES		
REMARKS 2	:DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-01 THROUGH PIPE 11/09/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

MAIN LOG 1:100 DH-09-01 THROUGH PIPE 11/09/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

TOOL CALIBRATION DH-09-01 THROUGH PIPE 11/09/09 17:27
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAG	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPER	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPER	200.000	[CM]	229720.000	[CPS]

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
DH-09-02 THROUGH PIPE

COMPANY	MOOSE MOUNTAIN COAL		
WELL	DH-09-02 THROUGH PIPE		
FIELD			
COUNTRY	CANADA		
PROVINCE	BRITISH COLUMBIA		
LOCATION			
SECTION	N/A		
TOWNSHIP	N/A		
RANGE	N/A		
LICENCE NO.	N/A		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	N/A
DATE	11/07/09	RIG NUMBER	FORACO
DEPTH DRILLER	89.40	LOGGER TD	87.40
BIT SIZE	76.20	ARRIVAL TIME	23:00
LOG TOP	-2.27	DEPARTURE TIME	01:00
LOG BOTTOM	87.62	CIRC STOPPED	N/A
CASING LOGGER	7.00		
CASING DRILLER	7.00		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	1.00		
WITNESSED BY	C PASEMKO		
RECORDED BY	K.HUDGEON		
REMARKS 1	80 DEGREES		
REMARKS 2	DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

OTHER SERVICES:
NEUTRON
DEV

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-02 THROUGH PIPE 11/07/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

MAIN LOG 1:100 DH-09-02 THROUGH PIPE 11/07/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

TOOL CALIBRATION DH-09-02 THROUGH PIPE 11/07/09 00:01
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAGE	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPERL	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPERL	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURRENT	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURRENT	258.200	[UA]	27562.000	[CPS]
8	Dec08,08	13:34:00	F	Default	[CPS]		
9	Dec08,08	13:34:00	X	Default	[CPS]		

GAMMA - NEUTRON

DH-09-02 THROUGH PIPE

Century WIRELINE SERVICES

COMPANY	:MOOSE MOUNTAIN COAL	OTHER SERVICES: DENSITY	
WELL	:DH-09-02 THROUGH PIPE		
FIELD	:		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:		
SECTION	:N/A		
TOWNSHIP	:N/A		
RANGE	:N/A		
LICENCE NO.	:N/A		
UNIQUE WELL ID.	:N/A		
PERMANENT DATUM	:GL	ELEVATION KB	:N/A
LOG MEASURED FROM	:GL	ELEVATION DF	:N/A
DRL MEASURED FROM	:GL	ELEVATION GL	:N/A
DATE	:11/07/09	RIG NUMBER	:FORACO
DEPTH DRILLER	:89.40	LOGGER TD	:87.40
BIT SIZE	:76.20	ARRIVAL TIME	:23:00
LOG TOP	:-2.27	DEPARTURE TIME	:01:00
LOG BOTTOM	:87.62	CIRC STOPPED	:N/A
CASING LOGGER	:7.00		
CASING DRILLER	:7.00		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:WATER		
RM TEMPERATURE	:N/A		
MUD RES	:N/A		
MUD WEIGHT	:1.00		
WITNESSED BY	:C.PASEMKO		
RECORDED BY	:K.HUDGEON		
REMARKS 1	:80 DEGREES		
REMARKS 2	:DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-02 THROUGH PIPE 11/07/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

MAIN LOG 1:100 DH-09-02 THROUGH PIPE 11/07/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

TOOL CALIBRATION DH-09-02 THROUGH PIPE 11/07/09 00:01
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAG	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPER	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPER	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURREN	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURREN	258.200	[UA]	27562.000	[CPS]

Century WIRELINE SERVICES

GAMMA - NEUTRON
DH-09-03 THROUGH PIPE

OTHER SERVICES:
DENSITY

COMPANY	MOOSE MOUNTAIN COAL
WELL	DH-09-03 THROUGH PIPE
FIELD	
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	N/A
TOWNSHIP	N/A
RANGE	N/A
LICENCE NO.	N/A
UNIQUE WELL ID.	N/A

PERMANENT DATUM :GL
LOG MEASURED FROM :GL
DRL MEASURED FROM :GL

ELEVATION KB :N/A
ELEVATION DF :N/A
ELEVATION GL :N/A

DATE	:11/05/09	RIG NUMBER	:FORACO
DEPTH DRILLER	:128.50	LOGGER TD	:127.50
BIT SIZE	:76.20	ARRIVAL TIME	:13:00
LOG TOP	:-1.77	DEPARTURE TIME	:16:00
LOG BOTTOM	:127.38	CIRC STOPPED	:N/A
CASING LOGGER	:7.00		
CASING DRILLER	:7.00		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:WATER		
RM TEMPERATURE	:N/A		
MUD RES	:N/A		
MUD WEIGHT	:1.00		
WITNESSED BY	:C.PASEMKO		
RECORDED BY	:K.HUDGEON		
REMARKS 1	:60 DEGREES		
REMARKS 2	:DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-03 THROUGH PIPE 11/05/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 | ELECT. CUTOFF : 99999 | BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 | VERSION = 3.64HR

SANG (0 DEG 20) / GAMMA (0 API-GR 250)	METERS	NEUTRON (1000 API-N 2000) / NEUTRON (0 API-N 1000)

GAMMA (0 API-GR 250) / SANG (0 DEG 20)	METERS	NEUTRON (0 API-N 1000) / NEUTRON (1000 API-N 2000)

MAIN LOG 1:100 DH-09-03 THROUGH PIPE 11/05/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 | ELECT. CUTOFF : 99999 | BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 | VERSION = 3.64HR

TOOL CALIBRATION DH-09-03 THROUGH PIPE 11/05/09 13:15
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAG	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPER	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPER	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURRENT	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURREN	258.200	[UA]	27562.000	[CPS]

Century WIRELINE SERVICES

GAMMA - NEUTRON

DH-09-04 THROUGH PIPE

COMPANY	MOOSE MOUNTAIN COAL	OTHER SERVICES:	DENSITY, DEV
WELL	DH-09-04 THROUGH PIPE		
FIELD			
COUNTRY	CANADA		
PROVINCE	BRITISH COLUMBIA		
LOCATION			
SECTION	N/A		
TOWNSHIP	N/A		
RANGE	N/A		
LICENCE NO.	N/A		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	N/A
DATE	10/27/09	RIG NUMBER	FERACO
DEPTH DRILLER	164.50	LOGGER TD	164.00
BIT SIZE	76.20	ARRIVAL TIME	05:00
LOG TOP	-0.66	DEPARTURE TIME	10:30
LOG BOTTOM	164.26	CIRC STOPPED	N/A
CASING LOGGER	7.00		
CASING DRILLER	7.00		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	1.00		
WITNESSED BY	C.PASEMKO		
RECORDED BY	K.HUDGEON		
REMARKS 1	60 DEGREES		
REMARKS 2	DENSITY/NEUTRON MESUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-04 THROUGH PIPE 10/27/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

MAIN LOG 1:100 DH-09-04 THROUGH PIPE 10/27/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

TOOL CALIBRATION DH-09-04 THROUGH PIPE 10/27/09 06:42
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGI	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAG	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPER	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPER	200.000	[CM]	229720.000	[CPS]

Century WIRELINE SERVICES

GAMMA - NEUTRON
DH-09-05 THROUGH PIPE

COMPANY	MOOSE MOUNTAIN COAL
WELL	DH-09-05 THROUGH PIPE
FIELD	
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	N/A
TOWNSHIP	N/A
RANGE	N/A
LICENCE NO.	N/A
UNIQUE WELL ID.	N/A

OTHER SERVICES: DENSITY

PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	N/A
DATE	10/29/09	RIG NUMBER	FOROCO
DEPTH DRILLER	176.50	LOGGER TD	176.00
BIT SIZE	76.20	ARRIVAL TIME	20:00
LOG TOP	-1.41	DEPARTURE TIME	11:00
LOG BOTTOM	173.57	CIRC STOPPED	N/A
CASING LOGGER	7.00		
CASING DRILLER	7.00		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	1.00		
WITNESSED BY	C.PASEMKO		
RECORDED BY	K.HUDGEON		
REMARKS 1	80 DEGREES		
REMARKS 2	DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-05 THROUGH PIPE 10/29/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20

PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

MAIN LOG 1:100 DH-09-05 THROUGH PIPE 10/29/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20

PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 VERSION = 3.64HR

TOOL CALIBRATION DH-09-05 THROUGH PIPE 10/29/09 22:18
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAG	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPER	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPER	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURREN	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURREN	258.200	[UA]	27562.000	[CPS]

Century WIRELINE SERVICES

COMPENSATED DENSITY GAMMA - CALIPER - RES. DH-09-05 THROUGH PIPE

COMPANY	MOOSE MOUNTAIN COAL		
WELL	DH-09-05 THROUGH PIPE		
FIELD			
COUNTRY	CANADA		
PROVINCE	BRITISH COLUMBIA		
LOCATION		OTHER SERVICES	NEUTRON, DEV
SECTION	N/A		
TOWNSHIP	N/A		
RANGE	N/A		
LICENCE NO.	N/A		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	N/A
DATE	10/29/09	RIG NUMBER	FOROCO
DEPTH DRILLER	176.50	LOGGER TD	176.00
BIT SIZE	76.20	ARRIVAL TIME	20:00
LOG TOP	1.41	DEPARTURE TIME	[illegible]
LOG BOTTOM	173.57	CIRC STOPPED	[illegible]
CASING LOGGER	7.00		
CASING DRILLER	7.00		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	1.00		
WITNESSED BY	C.PASEMKO		
RECORDED BY	K.HUDGEON		
REMARKS 1	80 DEGREES		
REMARKS 2	DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-05 THROUGH PIPE 10/29/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

MAIN LOG 1:100 DH-09-05 THROUGH PIPE 10/29/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

TOOL CALIBRATION DH-09-05 THROUGH PIPE 10/29/09 22:18
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAGE	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPERL	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPERL	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURRENT	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURRENT	258.200	[UA]	27562.000	[CPS]
8	Dec08,08	13:34:00	F	Default	[CPS]		
9	Dec08,08	13:34:00	X	Default	[CPS]		

GAMMA - NEUTRON

DH-09-06 THROUGH PIPE

Century Wireline Services

COMPANY	MOOSE MOUNTAIN COAL		
WELL	DH-09-06 THROUGH PIPE		
FIELD			
COUNTRY	CANADA		
PROVINCE	BRITISH COLUMBIA	OTHER SERVICES:	DENSITY
LOCATION			
SECTION	N/A		
TOWNSHIP	N/A		
RANGE	N/A		
LICENCE NO.	N/A		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	N/A
DATE	11/01/09	RIG NUMBER	FORACO
DEPTH DRILLER	178.25	LOGGER TD	176.00
BIT SIZE	76.20	ARRIVAL TIME	16:00
LOG TOP	-1.75	DEPARTURE TIME	20:00
LOG BOTTOM	175.85	CIRC STOPPED	N/A
CASING LOGGER	7.00		
CASING DRILLER	7.00		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	1.00		
WITNESSED BY	C.PASEMKO		
RECORDED BY	K.HUDGEON		
REMARKS 1	80 DEGREES		
REMARKS 2	DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-06 THROUGH PIPE 11/01/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL. : 16.51 | ELECT. CUTOFF : 99999 | BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 | VERSION = 3.64HR

MAIN LOG 1:100 DH-09-06 THROUGH PIPE 11/01/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL. : 16.51 | ELECT. CUTOFF : 99999 | BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9057 NEUTRON IN PIPE MOOSE.0 10/28/2009 | VERSION = 3.64HR

TOOL CALIBRATION DH-09-06 THROUGH PIPE 11/01/09 20:58
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGI	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAG	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPER	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPER	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURREN	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURREN	258.200	[UA]	27562.000	[CPS]

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
DH-09-06 THROUGH PIPE

COMPANY	MOOSE MOUNTAIN COAL		
WELL	DH-09-06 THROUGH PIPE		
FIELD			
COUNTRY	CANADA		
PROVINCE	BRITISH COLUMBIA		
LOCATION			
SECTION	N/A		
TOWNSHIP	N/A		
RANGE	N/A		
LICENCE NO.	N/A		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	N/A
DATE	11/01/09	RIG NUMBER	FORACO
DEPTH DRILLER	178.25	LOGGER TD	176.00
BIT SIZE	76.20	ARRIVAL TIME	16:00
LOG TOP	-1.75	DEPARTURE TIME	20:00
LOG BOTTOM	175.85	CIRC STOPPED	N/A
CASING LOGGER	7.00		
CASING DRILLER	7.00		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	1.00		
WITNESSED BY	C.PASEMKO		
RECORDED BY	K.HUDGEON		
REMARKS 1	80 DEGREES		
REMARKS 2	DENSITY/NEUTRON MEASUREMENTS AFFECTED BY PIPE IN HOLE.		

OTHER SERVICES:
NEUTRON
DEV

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

MAIN LOG 1:100 DH-09-06 THROUGH PIPE 11/01/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

CALIPER	METERS	DEN(CDL)
0 MM 300		1 G/CC 3
GAMMA		
0 API-GR 250		

0 API-GR 250		
GAMMA		
0 MM 300		1 G/CC 3
CALIPER	METERS	DEN(CDL)

MAIN LOG 1:100 DH-09-06 THROUGH PIPE 11/01/09

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 16.51 ELECT. CUTOFF : 99999 BIT SIZE : 76.20
PRESENTATION NAME/DATE = 9139C DENSITY IN PIPE MOOSE.0 10/27/2009 VERSION = 3.64HR

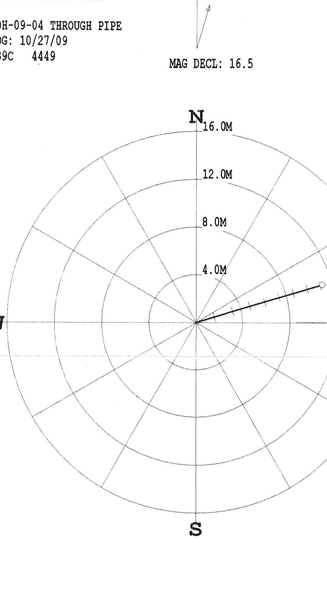
TOOL CALIBRATION DH-09-06 THROUGH PIPE 11/01/09 20:58
TOOL 9239C TM VERSION 2021
SERIAL NUMBER 4449

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Jul30,09	14:21:01	GAMMA	1.000	[API-GR]	4.000	[CPS]
	Jul30,09	14:21:01	GAMMA	320.000	[API-GR]	331.000	[CPS]
2	Oct21,09	13:44:52	VOLTAGE	28.200	[MV]	8590.000	[CPS]
	Oct21,09	13:44:52	VOLTAGE	258.200	[MV]	39186.000	[CPS]
3	Oct22,09	08:38:22	CALIPER	76.200	[CM]	124595.000	[CPS]
	Oct22,09	08:38:22	CALIPER	127.000	[CM]	225004.000	[CPS]
4	Oct21,09	11:39:29	DEN(LS)	1.000	[G/CC]	35262.000	[CPS]
	Oct21,09	11:39:29	DEN(LS)	2.323	[G/CC]	3369.000	[CPS]
5	Oct21,09	11:39:45	DEN(SS)	1.000	[G/CC]	71310.000	[CPS]
	Oct21,09	11:39:45	DEN(SS)	2.323	[G/CC]	24479.000	[CPS]
6	Jul30,09	14:14:47	CALIPERL	100.000	[CM]	122567.500	[CPS]
	Jul30,09	14:14:47	CALIPERL	200.000	[CM]	229720.000	[CPS]
7	Oct21,09	13:44:56	CURRENT	28.200	[UA]	7872.000	[CPS]
	Oct21,09	13:44:56	CURRENT	258.200	[UA]	27562.000	[CPS]
8	Dec08,08	13:34:00	F	Default	[CPS]		
9	Dec08,08	13:34:00	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: MOOSE MOUNTAIN COAL
LOCATION:
HOLE ID: DH-09-04 THROUGH PIPE
DATE OF LOG: 10/27/09
PROBE: 9239C 4449

SCALE: 2 M/CM
TRUE DEPTH: 163.86 M
AZIMUTH: 73.6
DISTANCE: 11.2 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : MOOSE MOUNTAIN COAL
FIELD OFFICE : CENTURY GEO
DATA FROM : N/A
MAG. DECL. : 16.510
HOLE ID. : DH-09-04 THRO
DATE OF LOG : 10/27/09
PROBE : 9239C , 4449
DEPTH UNITS : METERS
LOG: DH-09-04THROUGHPIPE_10-27-09_06-42_9239C_.02_-0.66_164.26_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
0.00	0.00	0.00	0.00	0.0	0.0	0.0	-42201683186052844000000000
1.00	1.00	0.00	0.00	0.0	0.0	0.0	-42201683186052844000000000
2.00	2.00	0.00	0.01	0.0	73.6	4.1	-42201683186052844000000000
3.00	3.00	0.02	0.08	0.1	73.6	5.1	-42201683186052844000000000
4.00	3.99	0.05	0.16	0.2	73.6	5.1	-42201683186052844000000000
5.00	4.99	0.07	0.25	0.3	73.6	5.4	-42201683186052844000000000
6.00	5.98	0.10	0.34	0.4	73.6	5.4	-42201683186052844000000000
7.00	6.98	0.13	0.43	0.4	73.6	5.4	-42201683186052844000000000
8.00	7.98	0.15	0.52	0.5	73.6	5.5	-42201683186052844000000000
9.00	8.97	0.18	0.61	0.6	73.6	5.4	-42201683186052844000000000
10.00	9.97	0.21	0.70	0.7	73.6	5.7	-42201683186052844000000000
11.00	10.96	0.23	0.78	0.8	73.6	5.3	-42201683186052844000000000
12.00	11.96	0.26	0.87	0.9	73.6	5.1	-42201683186052844000000000
13.00	12.95	0.28	0.96	1.0	73.6	5.2	-42201683186052844000000000
14.00	13.95	0.31	1.04	1.1	73.6	5.1	-42201683186052844000000000
15.00	14.95	0.33	1.13	1.2	73.6	5.1	-42201683186052844000000000
16.00	15.94	0.36	1.21	1.3	73.6	4.9	-42201683186052844000000000
17.00	16.94	0.38	1.29	1.3	73.6	4.8	-42201683186052844000000000
18.00	17.94	0.40	1.37	1.4	73.6	4.9	-42201683186052844000000000
19.00	18.93	0.43	1.45	1.5	73.6	4.8	-42201683186052844000000000
20.00	19.93	0.45	1.53	1.6	73.6	4.8	-42201683186052844000000000
21.00	20.93	0.47	1.61	1.7	73.6	4.7	-42201683186052844000000000
22.00	21.92	0.50	1.69	1.8	73.6	4.6	-42201683186052844000000000
23.00	22.92	0.52	1.77	1.8	73.6	5.0	-42201683186052844000000000
24.00	23.91	0.55	1.85	1.9	73.6	5.0	-42201683186052844000000000
25.00	24.91	0.57	1.94	2.0	73.6	5.0	-42201683186052844000000000
26.00	25.91	0.59	2.02	2.1	73.6	4.8	-42201683186052844000000000
27.00	26.90	0.62	2.10	2.2	73.6	4.9	-42201683186052844000000000
28.00	27.90	0.64	2.18	2.3	73.6	4.9	-42201683186052844000000000
29.00	28.90	0.67	2.26	2.4	73.6	4.9	-42201683186052844000000000
30.00	29.89	0.69	2.35	2.4	73.6	4.8	-42201683186052844000000000
31.00	30.89	0.71	2.43	2.5	73.6	4.9	-42201683186052844000000000
32.00	31.89	0.74	2.51	2.6	73.6	4.7	-42201683186052844000000000
33.00	32.88	0.76	2.59	2.7	73.6	4.8	-42201683186052844000000000
34.00	33.88	0.78	2.66	2.8	73.6	4.7	-42201683186052844000000000
35.00	34.88	0.81	2.74	2.9	73.6	4.5	-42201683186052844000000000
36.00	35.87	0.83	2.82	2.9	73.6	4.6	-42201683186052844000000000
37.00	36.87	0.85	2.90	3.0	73.6	4.6	-42201683186052844000000000
38.00	37.87	0.87	2.97	3.1	73.6	2.9	-42201683186052844000000000
39.00	38.86	0.90	3.04	3.2	73.6	4.3	-42201683186052844000000000
40.00	39.86	0.92	3.11	3.2	73.6	4.3	-42201683186052844000000000
41.00	40.86	0.94	3.19	3.3	73.6	4.4	-42201683186052844000000000
42.00	41.86	0.96	3.26	3.4	73.6	4.3	-42201683186052844000000000
43.00	42.85	0.98	3.33	3.5	73.6	4.6	-42201683186052844000000000
44.00	43.85	1.00	3.41	3.6	73.6	4.6	-42201683186052844000000000
45.00	44.85	1.03	3.49	3.6	73.6	4.6	-42201683186052844000000000
46.00	45.84	1.05	3.56	3.7	73.6	4.7	-42201683186052844000000000
47.00	46.84	1.07	3.64	3.8	73.6	4.7	-42201683186052844000000000
48.00	47.84	1.10	3.72	3.9	73.6	4.8	-42201683186052844000000000
49.00	48.83	1.12	3.80	4.0	73.6	5.2	-42201683186052844000000000
50.00	49.83	1.14	3.88	4.0	73.6	4.3	-42201683186052844000000000
51.00	50.83	1.16	3.95	4.1	73.6	4.2	-42201683186052844000000000
52.00	51.82	1.18	4.02	4.2	73.6	4.2	-42201683186052844000000000
53.00	52.82	1.20	4.09	4.3	73.6	4.1	-42201683186052844000000000
54.00	53.82	1.22	4.16	4.3	73.6	4.0	-42201683186052844000000000
55.00	54.82	1.24	4.22	4.4	73.6	4.0	-42201683186052844000000000
56.00	55.81	1.26	4.29	4.5	73.6	4.0	-42201683186052844000000000
57.00	56.81	1.28	4.36	4.5	73.6	3.9	-42201683186052844000000000
58.00	57.81	1.30	4.42	4.6	73.6	3.8	-42201683186052844000000000
59.00	58.81	1.32	4.48	4.7	73.6	3.8	-42201683186052844000000000
60.00	59.80	1.34	4.55	4.7	73.6	3.8	-42201683186052844000000000
61.00	60.80	1.36	4.61	4.8	73.6	3.8	-42201683186052844000000000
62.00	61.80	1.38	4.67	4.9	73.6	3.7	-42201683186052844000000000
63.00	62.80	1.40	4.74	4.9	73.6	4.1	-42201683186052844000000000
64.00	63.80	1.42	4.81	5.0	73.6	4.1	-42201683186052844000000000
65.00	64.79	1.44	4.88	5.1	73.6	4.0	-42201683186052844000000000
66.00	65.79	1.46	4.94	5.2	73.6	3.9	-42201683186052844000000000
67.00	66.79	1.47	5.01	5.2	73.6	3.8	-42201683186052844000000000
68.00	67.79	1.49	5.07	5.3	73.6	4.0	-42201683186052844000000000
69.00	68.78	1.51	5.14	5.4	73.6	4.0	-42201683186052844000000000
70.00	69.78	1.53	5.21	5.4	73.6	4.0	-42201683186052844000000000
71.00	70.78	1.55	5.27	5.5	73.6	3.9	-42201683186052844000000000
72.00	71.78	1.57	5.34	5.6	73.6	3.8	-42201683186052844000000000
73.00	72.77	1.59	5.40	5.6	73.6	3.7	-42201683186052844000000000
74.00	73.77	1.61	5.46	5.7	73.6	3.7	-42201683186052844000000000
75.00	74.77	1.63	5.52	5.8	73.6	3.8	-42201683186052844000000000
76.00	75.77	1.64	5.58	5.8	73.6	3.6	-42201683186052844000000000
77.00	76.77	1.66	5.64	5.9	73.6	3.5	-42201683186052844000000000
78.00	77.76	1.68	5.70	5.9	73.6	3.4	-42201683186052844000000000
79.00	78.76	1.70	5.76	6.0	73.6	3.6	-42201683186052844000000000
80.00	79.76	1.71	5.82	6.1	73.6	3.8	-42201683186052844000000000
81.00	80.76	1.73	5.88	6.1	73.6	3.9	-42201683186052844000000000
82.00	81.76	1.75	5.95	6.2	73.6	4.0	-42201683186052844000000000
83.00	82.75	1.77	6.01	6.3	73.6	3.8	-42201683186052844000000000
84.00	83.75	1.79	6.08	6.3	73.6	3.7	-42201683186052844000000000
85.00	84.75	1.81	6.14	6.4	73.6	3.4	-42201683186052844000000000
86.00	85.75	1.83	6.20	6.5	73.6	3.6	-42201683186052844000000000
87.00	86.75	1.84	6.26	6.5	73.6	3.6	-42201683186052844000000000
88.00	87.74	1.86	6.32	6.6	73.6	3.6	-42201683186052844000000000
89.00	88.74	1.88	6.38	6.6	73.6	3.6	-42201683186052844000000000
90.00	89.74	1.90	6.44	6.7	73.6	3.5	-42201683186052844000000000
91.00	90.74	1.91	6.50	6.8	73.6	3.6	-42201683186052844000000000
92.00	91.74	1.93	6.56	6.8	73.6	3.5	-42201683186052844000000000
93.00	92.73	1.95	6.61	6.9	73.6	3.4	-42201683186052844000000000
94.00	93.73	1.96	6.67	7.0	73.6	3.3	-42201683186052844000000000
95.00	94.73	1.98	6.73	7.0	73.6	3.7	-42201683186052844000000000
96.00	95.73	2.00	6.79	7.1	73.6	3.7	-42201683186052844000000000
97.00	96.73	2.02	6.85	7.1	73.6	3.7	-42201683186052844000000000
98.00	97.72	2.04	6.91	7.2	73.6	3.7	-42201683186052844000000000
99.00	98.72	2.05	6.97	7.3	73.6	3.6	-42201683186052844000000000
100.00	99.72	2.07	7.03	7.3	73.6	3.8	-42201683186052844000000000
101.00	100.72	2.09	7.10	7.4	73.6	3.8	-42201683186052844000000000
102.00	101.72	2.11	7.16	7.5	73.6	4.2	-42201683186052844000000000
103.00	102.71	2.13	7.22	7.5	73.6	3.7	-42201683186052844000000000
104.00	103.71	2.15	7.28	7.6	73.6	3.7	-42201683186052844000000000
105.00	104.71	2.16	7.35	7.7	73.6	3.4	-42201683186052844000000000
106.00	105.71	2.18	7.40	7.7	73.6	3.4	-42201683186052844000000000
107.00	106.71	2.20	7.46	7.8	73.6	3.3	-42201683186052844000000000
108.00	107.70	2.21	7.52	7.8	73.6	3.3	-42201683186052844000000000
109.00	108.70	2.23	7.57	7.9	73.6	3.3	-42201683186052844000000000
110.00	109.70	2.25	7.63	8.0	73.6	3.6	-42201683186052844000000000
111.00	110.70	2.27	7.69	8.0	73.6	3.7	-42201683186052844000000000
112.00	111.70	2.28	7.75	8.1	73.6	3.7	-42201683186052844000000000
113.00	112.69	2.30	7.82	8.1	73.6	5.2	-42201683186052844000000000
114.00	113.69	2.32	7.88	8.2	73.6	3.6	-42201683186052844000000000
115.00	114.69	2.34	7.94	8.3	73.6	3.5	-42201683186052844000000000
116.00	115.69	2.36	8.00	8.3	73.6	3.7	-42201683186052844000000000
117.00	116.69	2.37	8.06	8.4	73.6	3.5	-42201683186052844000000000
118.00	117.68	2.39	8.12	8.5	73.6	3.3	-42201683186052844000000000
119.00	118.68	2.41	8.18	8.5	73.6	3.3	-42201683186052844000000000
120.00	119.68	2.42	8.23	8.6	73.6	3.3	-42201683186052844000000000
121.00	120.68	2.44	8.29	8.6	73.6	3.7	-42201683186052844000000000
122.00	121.68	2.46	8.35	8.7	73.6	3.7	-42201683186052844000000000
123.00	122.67	2.48	8.41	8.8	73.6	3.7	-42201683186052844000000000
124.00	123.67	2.50	8.47	8.8	73.6	3.7	-42201683186052844000000000
125.00	124.67	2.51	8.54	8.9	73.6	3.7	-42201683186052844000000000
126.00	125.67	2.53	8.60	9.0	73.6	3.7	-42201683186052844000000000
127.00	126.67	2.55	8.66	9.0	73.6	3.7	-42201683186052844000000000
128.00	127.66	2.57	8.72	9.1	73.6	3.6	-42201683186052844000000000
129.00	128.66	2.59	8.78	9.2	73.6	3.6	-42201683186052844000000000
130.00	129.66	2.60	8.84	9.2	73.6	3.6	-42201683186052844000000000
131.00	130.66	2.62	8.90	9.3	73.6	3.5	-42201683186052844000000000
132.00	131.66	2.64	8.96	9.3	73.6	3.4	-42201683186052844000000000
133.00	132.66	2.65	9.01	9.4	73.6	3.4	-42201683186052844000000000
134.00	133.65	2.67	9.07	9.5	73.6	3.5	-42201683186052844000000000
135.00	134.65	2.69	9.13	9.5	73.6	3.5	-42201683186052844000000000
136.00	135.65	2.71	9.19	9.6	73.6	3.4	-42201683186052844000000000
137.00	136.65	2.72	9.24	9.6	73.6	3.3	-42201683186052844000000000
138.00	137.65	2.74	9.30	9.7	73.6	3.3	-42201683186052844000000000
139.00	138.64	2.75	9.35	9.7	73.6	3.3	-42201683186052844000000000
140.00	139.64	2.77	9.41	9.8	73.6	3.3	-42201683186052844000000000
141.00	140.64	2.79	9.46	9.9	73.6	3.3	-42201683186052844000000000
142.00	141.64	2.80	9.52	9.9	73.6	3.4	-42201683186052844000000000
143.00	142.64	2.82	9.57	10.0	73.6	3.5	-42201683186052844000000000
144.00	143.64	2.84	9.63	10.0	73.6	3.8	-42201683186052844000000000
145.00	144.63	2.86	9.70	10.1	73.6	3.7	-42201683186052844000000000
146.00	145.63	2.87	9.76	10.2	73.6	3.7	-42201683186052844000000000
147.00	146.63	2.89	9.82	10.2	73.6	2.7	-42201683186052844000000000
148.00	147.63	2.91	9.88	10.3	73.6	3.3	-42201683186052844000000000
149.00	148.63	2.92	9.93	10.4	73.6	3.3	-42201683186052844000000000
150.00	149.62	2.94	9.98	10.4	73.6	3.2	-42201683186052844000000000
151.00	150.62	2.96	10.04	10.5	73.6	3.2	-42201683186052844000000000
152.00	151.62	2.97	10.09	10.5	73.6	3.1	-42201683186052844000000000
153.00	152.62	2.99	10.14	10.6	73.6	3.1	-42201683186052844000000000
154.00	153.62	3.00	10.19	10.6	73.6	3.1	-42201683186052844000000000
155.00	154.62	3.02	10.25	10.7	73.6	3.1	-42201683186052844000000000
156.00	155.62	3.03	10.30	10.7	73.6	3.2	-42201683186052844000000000
157.00	156.61	3.05	10.35	10.8	73.6	3.0	-42201683186052844000000000
158.00	157.61	3.06	10.40	10.8	73.6	3.0	-42201683186052844000000000
159.00	158.61	3.08	10.45	10.9	73.6	3.0	-42201683186052844000000000
160.00	159.61	3.09	10.50	10.9	73.6	3.1	-42201683186052844000000000
161.00	160.61	3.11	10.55	11.0	73.6	3.0	-42201683186052844000000000
162.00	161.61	3.12	10.60	11.1	73.6	3.0	-42201683186052844000000000
163.00	162.61	3.14	10.65	11.1	73.6	2.9	-42201683186052844000000000
164.00	163.60	3.15	10.70	11.2	73.6	2.9	-42201683186052844000000000
164.26	163.82	3.15	10.71	11.2	73.6	2.9	-42201683186052844000000000

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CERTIFICATE OF ANALYSIS

CLIENT: JAMESON BASIN COAL

SAMPLE ID: DH 09-05

LAB#: 94295-94316

REPORT DATE: November 25, 2009

Samples crushed to 3/4" and representative 1/8th sample split out via Rotary Sample Divider

HEAD RAW ANLAYSIS, air dried basis										
LAB #	SAMPLE ID:	ADM%	MOIST%	ASH%	VOL%	F.C.%	S%	Cal/g	BASIS	
94295	DH 09-05	4.48	2.69	44.17	24.80	28.34	0.34	3801	adb	
	#26601		7.05	42.19	23.69	27.07	0.32	3631	arb	
	80.1-80.5			45.39	25.49	29.12	0.35	3906	db	
94296	DH 09-05	7.07	1.66	50.55	27.50	20.29	0.74	3277	adb	*
	#26603		8.61	46.98	25.56	18.86	0.69	3045	arb	
	82.1-83.9			51.40	27.96	20.63	0.75	3332	db	
94297	DH 09-05	5.05	1.54	56.22	20.69	21.55	1.36	3191	adb	**
	#26605		6.51	53.38	19.65	20.46	1.29	3030	arb	
	84.23-84.5			57.10	21.01	21.89	1.38	3241	db	
94298	DH 09-05	5.31	3.44	24.10	31.03	41.43	1.29	5490	adb	*
	#26606		8.57	22.82	29.38	39.23	1.22	5198	arb	
	134.8-134.98			24.96	32.14	42.91	1.34	5686	db	
94299	DH 09-05	6.20	3.06	29.57	30.79	36.58	1.21	5036	adb	
	#26607		9.07	27.74	28.88	34.31	1.13	4724	arb	
	135.45-136.1			30.50	31.76	37.73	1.25	5195	db	
94300	DH 09-05	4.82	3.05	31.67	29.38	35.90	2.48	4940	adb	
	#26608		7.72	30.14	27.96	34.17	2.36	4702	arb	
	136.5-136.8			32.67	30.30	37.03	2.56	5095	db	
94301	DH 09-05	6.12	2.61	29.45	30.14	37.80	3.07	5055	adb	
	#26609		8.57	27.65	28.30	35.49	2.88	4746	arb	
	137.0-137.22			30.24	30.95	38.81	3.15	5190	db	
94302	DH 09-05	6.46	2.84	29.49	29.57	38.10	1.61	5083	adb	
	#26610		9.12	27.58	27.66	35.64	1.51	4755	arb	
	137.75-138.0			30.35	30.43	39.21	1.66	5232	db	
94303	DH 09-05	4.87	4.09	32.30	27.32	36.29	0.61	4626	adb	
	#26611		8.76	30.73	25.99	34.52	0.58	4401	arb	
	138.7-139.0			33.68	28.49	37.84	0.64	4823	db	
94304	DH 09-05	4.77	3.23	33.29	29.24	34.24	1.32	4713	adb	
	#26612		7.85	31.70	27.85	32.61	1.26	4488	arb	
	139.25-139.75			34.40	30.22	35.38	1.36	4870	db	
94305	DH 09-05	6.27	1.78	54.48	24.10	19.64	1.28	3061	adb	*
	#26613		7.94	51.06	22.59	18.41	1.20	2869	arb	
	140.1-~~140.8~~ 141			55.47	24.54	20.00	1.30	3116	db	
94306	DH 09-05	6.63	3.02	37.91	27.29	31.78	1.04	4391	adb	
	#26614		9.45	35.40	25.48	29.67	0.97	4100	arb	
	141.2-142.3			39.09	28.14	32.77	1.07	4528	db	
94307	DH 09-05	6.86	2.51	44.07	25.16	28.26	0.57	3997	adb	
	#26615		9.20	41.05	23.43	26.32	0.53	3723	arb	
	143.2-143.8			45.20	25.81	28.99	0.58	4100	db	

*Vol was checked
**Cal/g was checked

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An official signed "Certificate of Analysis" will follow in the mail.

We accept no responsibility for the origin of the sample, nor for any deviation between the sample and the bulk of the material it purports to represent.

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Heather Dexter
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CERTIFICATE OF ANALYSIS

CLIENT: JAMESON BASIN COAL

SAMPLE ID: DH 09-05

LAB#: 94295-94316

REPORT DATE: November 25, 2009

Samples crushed to 3/4" and representative 1/8th sample split out via Rotary Sample Divider

HEAD RAW ANLAYSIS, air dried basis									
LAB #	SAMPLE ID:	ADM%	MOIST%	ASH%	VOL%	F.C.%	S%	Cal/g	BASIS
94308	DH 09-05	6.87	1.97	34.86	28.54	34.63	0.88	4748	adb
	#26616		8.70	32.47	26.58	32.25	0.82	4422	arb
	145.8-146.0			35.56	29.11	35.33	0.90	4843	db
94309	DH 09-05	5.16	2.51	33.04	29.88	34.57	3.20	4760	adb
	#26617		7.54	31.34	28.34	32.79	3.03	4514	arb
	97.0-97.3			33.89	30.65	35.46	3.28	4883	db
94310	DH 09-05	3.53	2.15	51.85	22.74	23.26	4.56	3268	adb
	#26618		5.60	50.02	21.94	22.44	4.40	3153	arb
	97.8-98.0			52.99	23.24	23.77	4.66	3340	db
94311	DH 09-05	3.69	2.54	48.49	24.67	24.30	2.92	3481	adb
	#26619		6.14	46.70	23.76	23.40	2.81	3353	arb
	98.6-98.9			49.75	25.31	24.93	3.00	3572	db
94312	DH 09-05	3.46	1.55	56.99	28.04	13.42	0.90	2656	adb *
	#26620		4.96	55.02	27.07	12.96	0.87	2564	arb **
	99.0-99.3			57.89	28.48	13.63	0.91	2698	db
94313	DH 09-05	4.34	2.56	35.58	27.87	33.99	1.77	4721	adb
	#26621		6.79	34.04	26.66	32.51	1.69	4516	arb
	100.0-100.8			36.51	28.60	34.88	1.82	4845	db
94314	DH 09-05	4.74	2.80	23.11	36.59	37.50	4.55	5484	adb *
	#26622		7.41	22.01	34.86	35.72	4.33	5224	arb
	101.0-101.2			23.78	37.64	38.58	4.68	5642	db
94315	DH 09-05	4.72	1.68	45.11	25.63	27.58	5.72	3973	adb
	#26623		6.32	42.98	24.42	26.28	5.45	3785	arb
	102.2-102.4			45.88	26.07	28.05	5.82	4041	db
94316	DH 09-05	11.54	2.58	21.18	33.56	42.68	0.91	5676	adb
	#26624		13.82	18.74	29.69	37.75	0.80	5021	arb
	105.3-106.0			21.74	34.45	43.81	0.93	5826	db

small sample, 1/4 split taken and 3/4 retained

*Volatile was checked
**Cal/g was checked

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