Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-1-A

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-1-A
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA

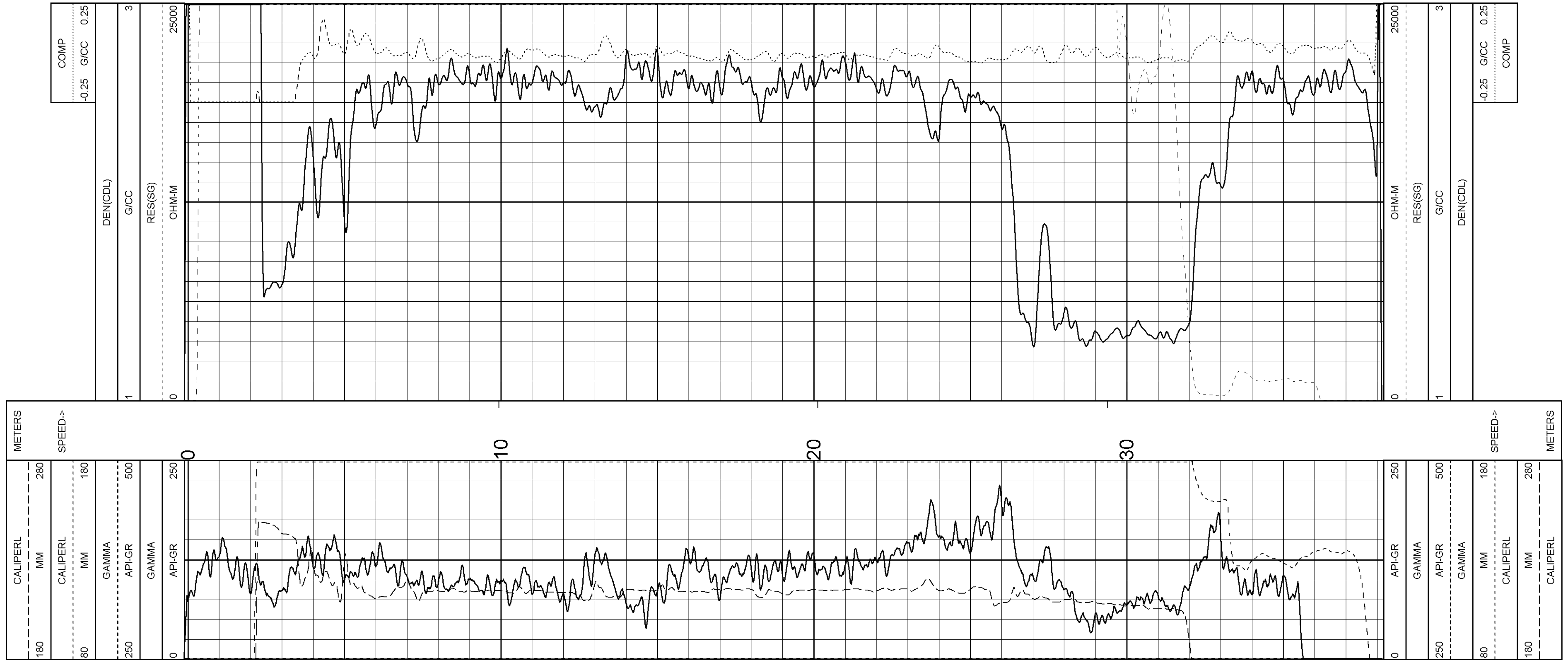
OTHER SERVICES:
DEV

LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A

DATE	:10/13/08
DEPTH DRILLER	:38.40M
BIT SIZE	:202MM
LOG TOP	:0.13
LOG BOTTOM	:38.15
CASING LOGGER	:3.5M
CASING DRILLER	:3.5M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL PILOT WELL
REMARKS 2	:

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION HB08-1-A 10/13/08 18:11
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05.08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30.08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30.08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27.08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27.08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05.08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05.08	13:54:59	DEN(LS)	2.320	[G/CC]	604.00	[CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000	[G/CC]	12485.10	[CPS]
	Oct05.08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30.08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30.08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29.08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29.08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29.08	10:49:47	F	Default	[CPS]		
9	May29.08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-1-A

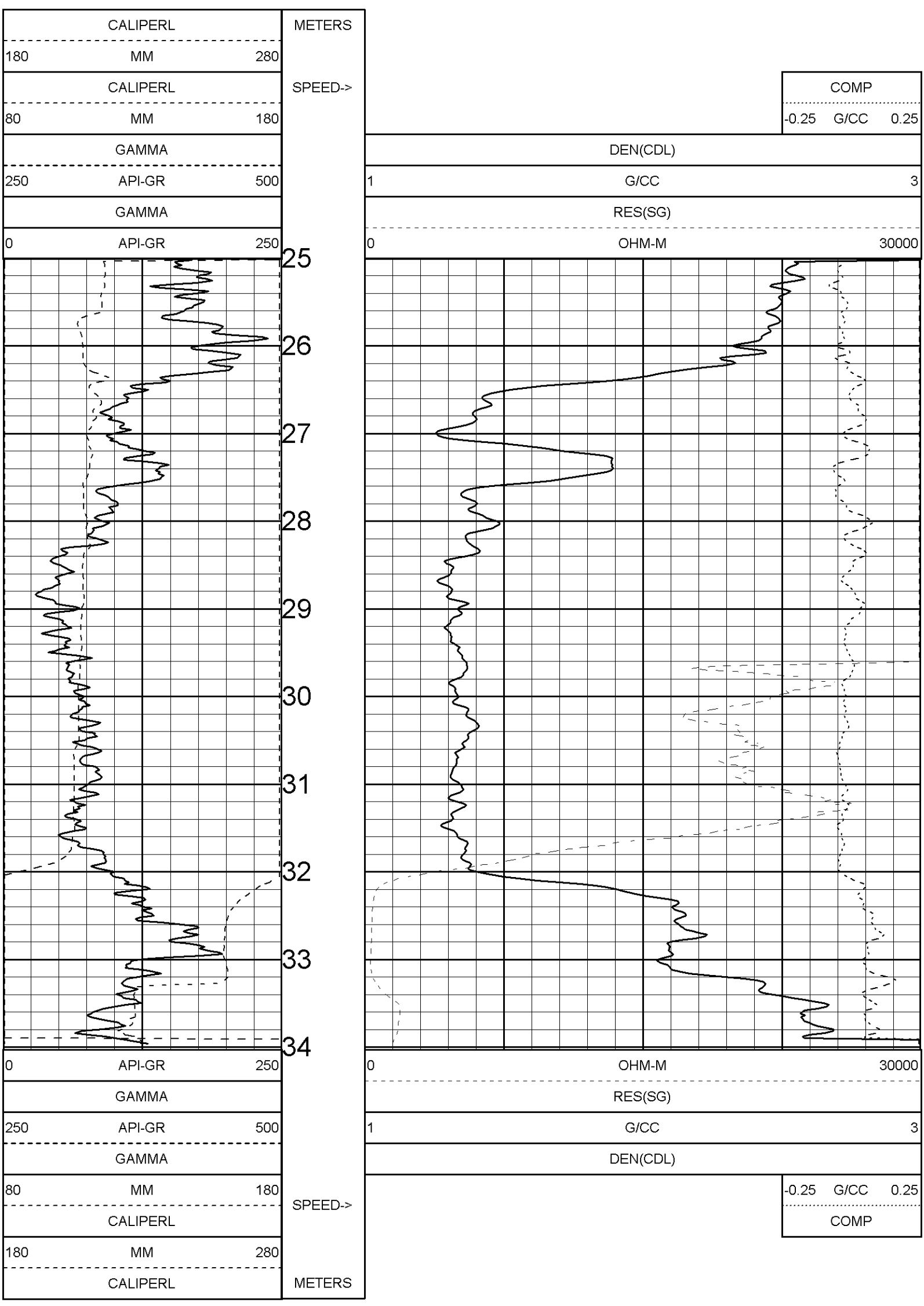
COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-1-A
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:
OTHER SERVICES:	DEV
PERMANENT DATUM	:G.L. ELEVATION KB :N/A
LOG MEASURED FROM	:G.L. ELEVATION DF :N/A
DRL MEASURED FROM	:G.L. ELEVATION GL :N/A
DATE	:10/13/08
DEPTH DRILLER	:38.40M
BIT SIZE	:202MM
LOG TOP	:-0.13
LOG BOTTOM	:38.15
CASING LOGGER	:3.5M
CASING DRILLER	:3.5M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL PILOT WELL
REMARKS 2	:

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 25M-34M HB08-1-A 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 25M-34M HB08-1-A 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008		VERSION = 3.64EK

TOOL CALIBRATION HB08-1-A 10/13/08 18:11
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HB08-1-A

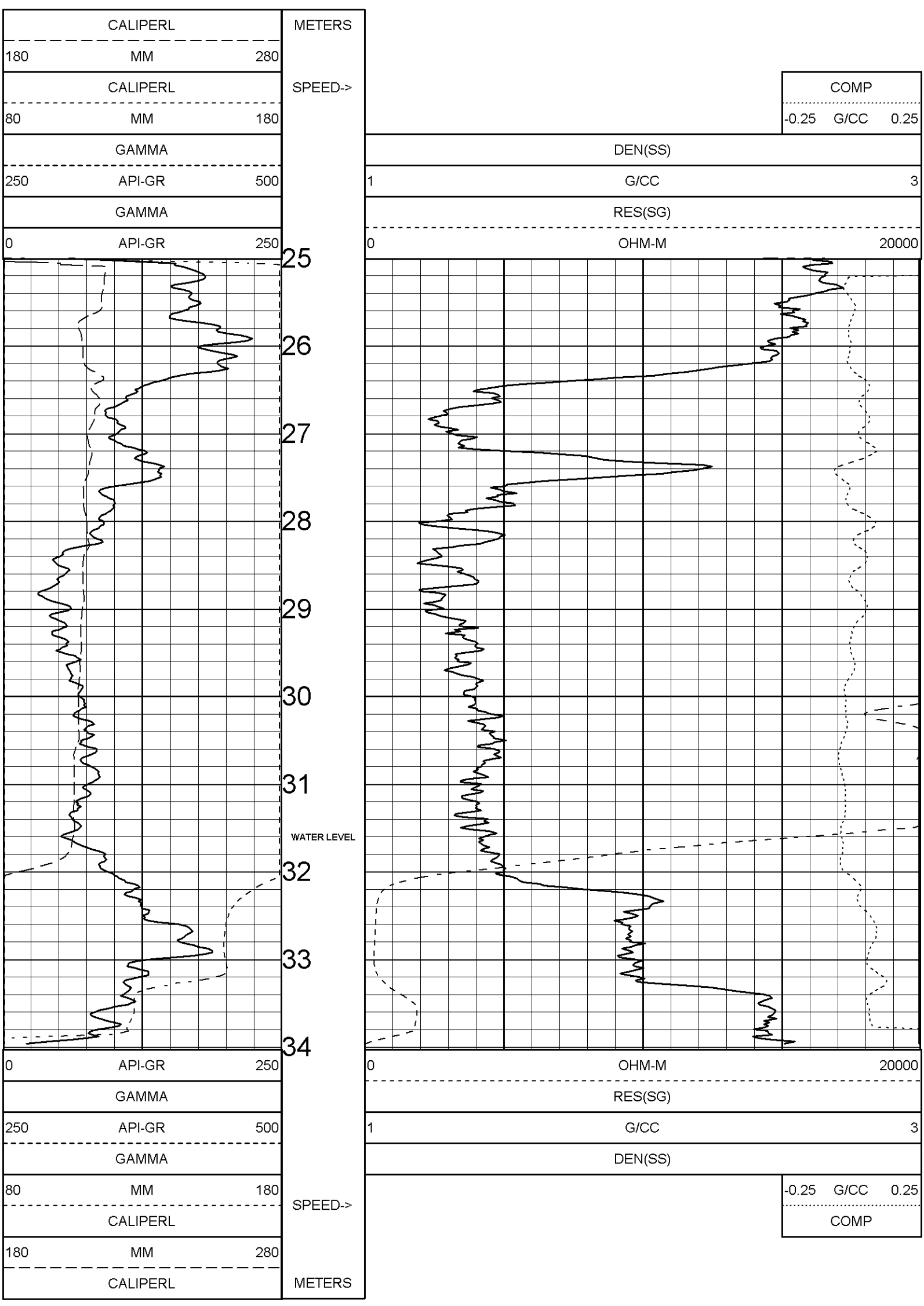
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-1-A		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	DEV
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/13/08		
DEPTH DRILLER	:38.40M		
BIT SIZE	:202MM		
LOG TOP	:-0.13		
LOG BOTTOM	:38.15		
CASING LOGGER	:4.2M		
CASING DRILLER	:4.2M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL PILOT WELL		
REMARKS 2	:WATER LEVEL 32M		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 25m to 34m HB08-1-A 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 34m HB08-1-A 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

TOOL CALIBRATION HB08-1-A 10/13/08 18:11
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

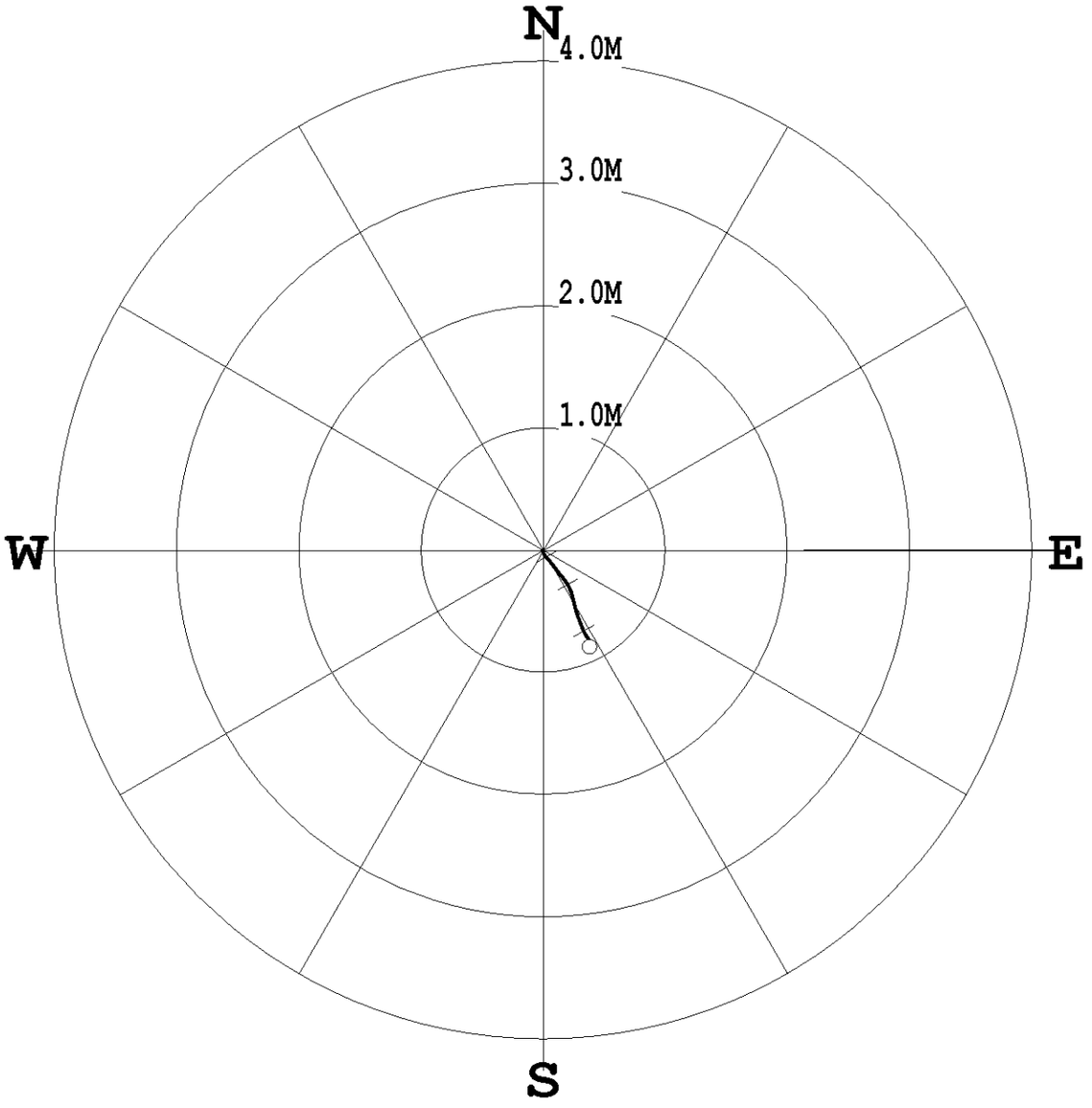
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-1-1A
DATE OF LOG: 10/13/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 32.81 M
AZIMUTH: 154.4
DISTANCE: 0.9 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-1-1A
DATE OF LOG : 10/13/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-1-1A_10-13-08_18-27_9057A_.02_-0.17_32.99_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
8.00	8.01	-0.03	0.00	0.0	174.2	0.8	166.2
10.00	10.01	-0.05	0.02	0.1	157.6	0.8	129.8
12.00	12.01	-0.08	0.05	0.1	150.5	0.9	119.7
14.00	14.01	-0.12	0.08	0.1	147.6	1.7	140.2
16.00	16.01	-0.17	0.11	0.2	146.0	1.9	141.1
18.00	18.01	-0.22	0.16	0.3	144.8	1.7	149.9
20.00	20.01	-0.28	0.20	0.3	144.7	2.0	152.6
22.00	22.00	-0.34	0.23	0.4	146.4	1.8	163.0
24.00	24.00	-0.41	0.24	0.5	149.2	2.2	165.9
26.00	26.00	-0.49	0.26	0.6	151.4	2.2	166.4
28.00	28.00	-0.56	0.29	0.6	152.7	2.8	155.2
30.00	30.00	-0.66	0.33	0.7	153.5	2.9	160.8
32.00	31.99	-0.75	0.37	0.8	153.5	2.8	170.5
32.82	32.81	-0.79	0.38	0.9	154.4	3.0	174.3

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-1-B

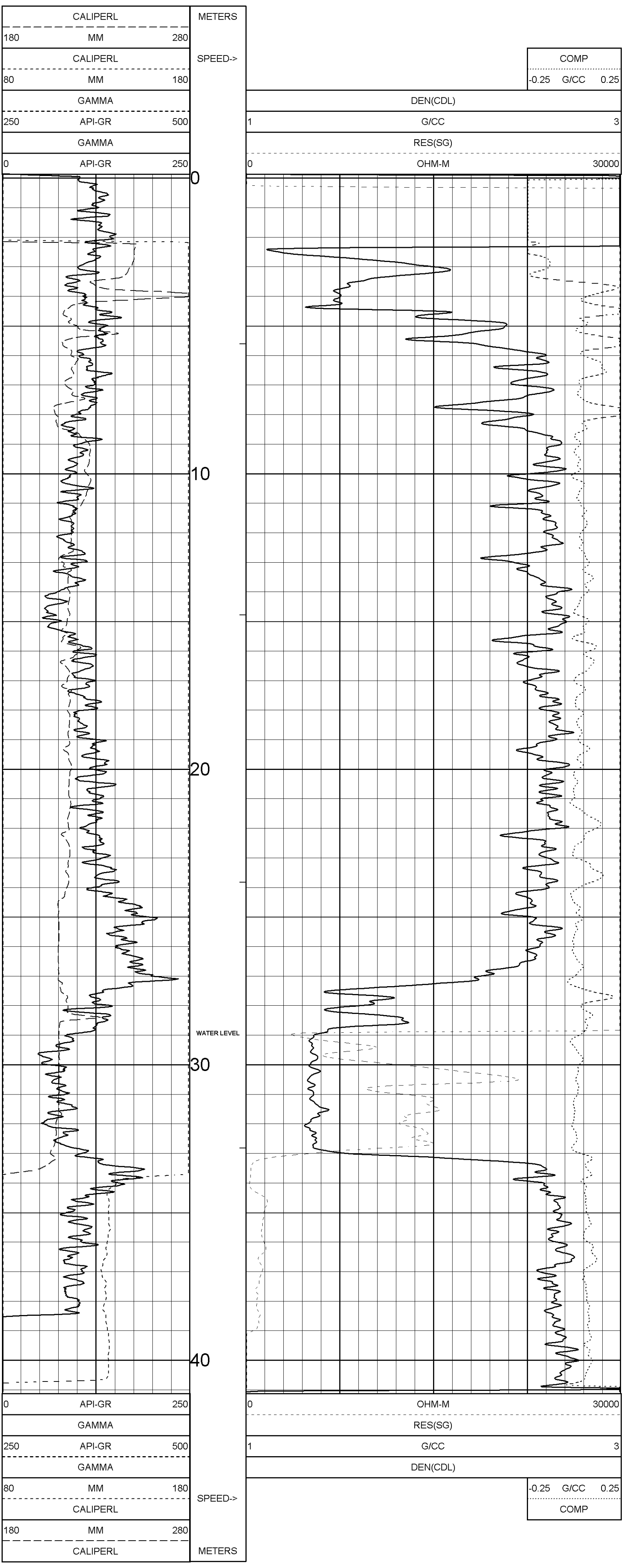
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-1-B	OTHER SERVICES:	
FIELD	:HUGUENOT	DEV	
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/16/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:20.20		
LOG TOP	:-0.15		
LOG BOTTOM	:41.07		
CASING LOGGER	:3.5M		
CASING DRILLER	:3.5M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL PILOT WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 DENSITY HB08-1-B 10/16/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 20.20
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK



1:100 DENSITY HB08-1-B 10/16/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 20.20
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK

TOOL CALIBRATION HB08-1-B 10/16/08 09:27
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct16,08	09:34:46	GAMMA	0.000	[API-GR]	11.00	[CPS]
	Oct16,08	09:34:46	GAMMA	250.000	[API-GR]	285.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-1-B

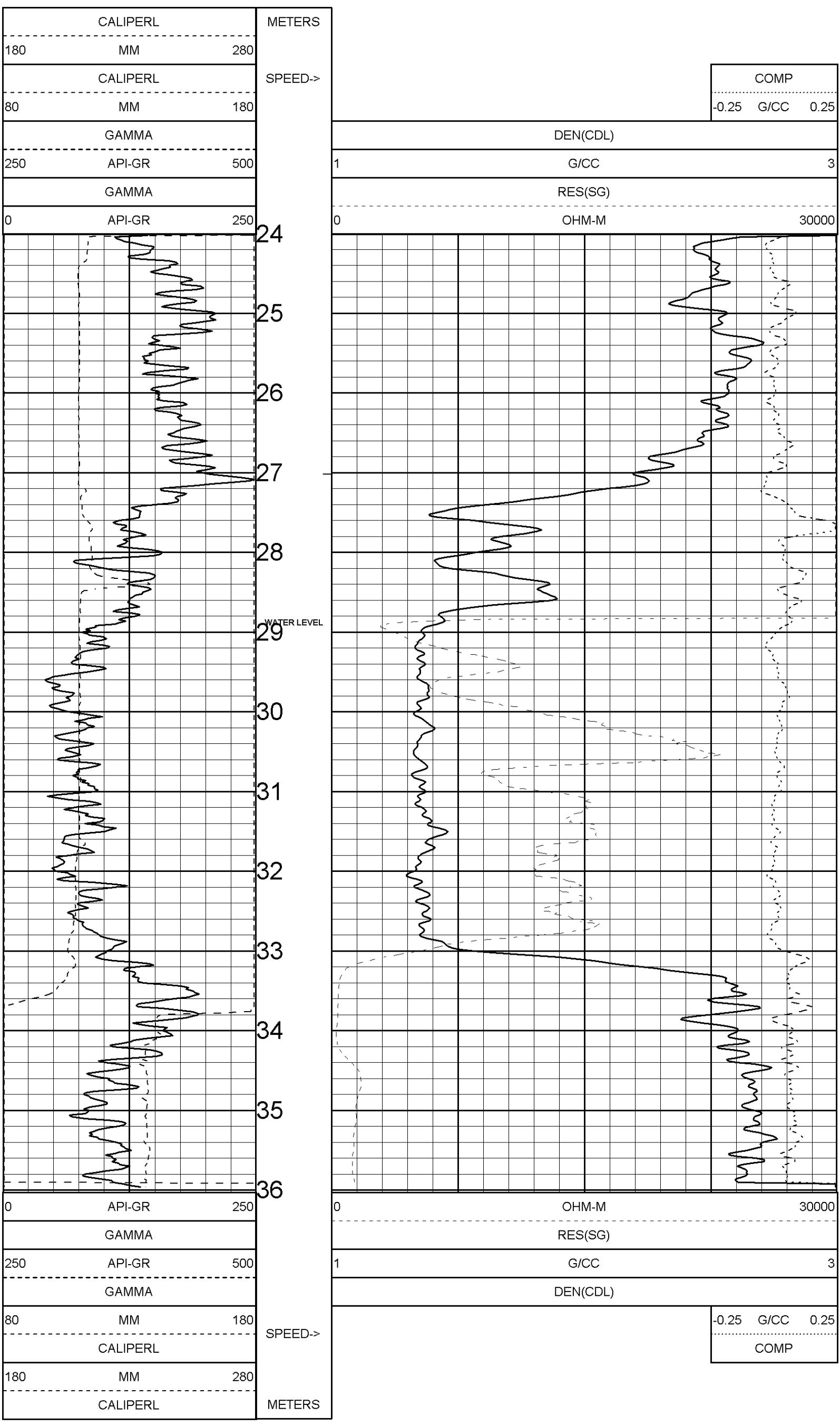
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-1-B	OTHER SERVICES:	
FIELD	:HUGUENOT	DEV	
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/16/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:20.20		
LOG TOP	:-0.15		
LOG BOTTOM	:41.07		
CASING LOGGER	:3.5M		
CASING DRILLER	:3.5M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL PILOT WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 24m to 36m HB08-1-B 10/16/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.20
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 24m to 36m HB08-1-B 10/16/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.20
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008 VERSION = 3.64EK

TOOL CALIBRATION HB08-1-B 10/16/08 09:27
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
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3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
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8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HB08-1-B

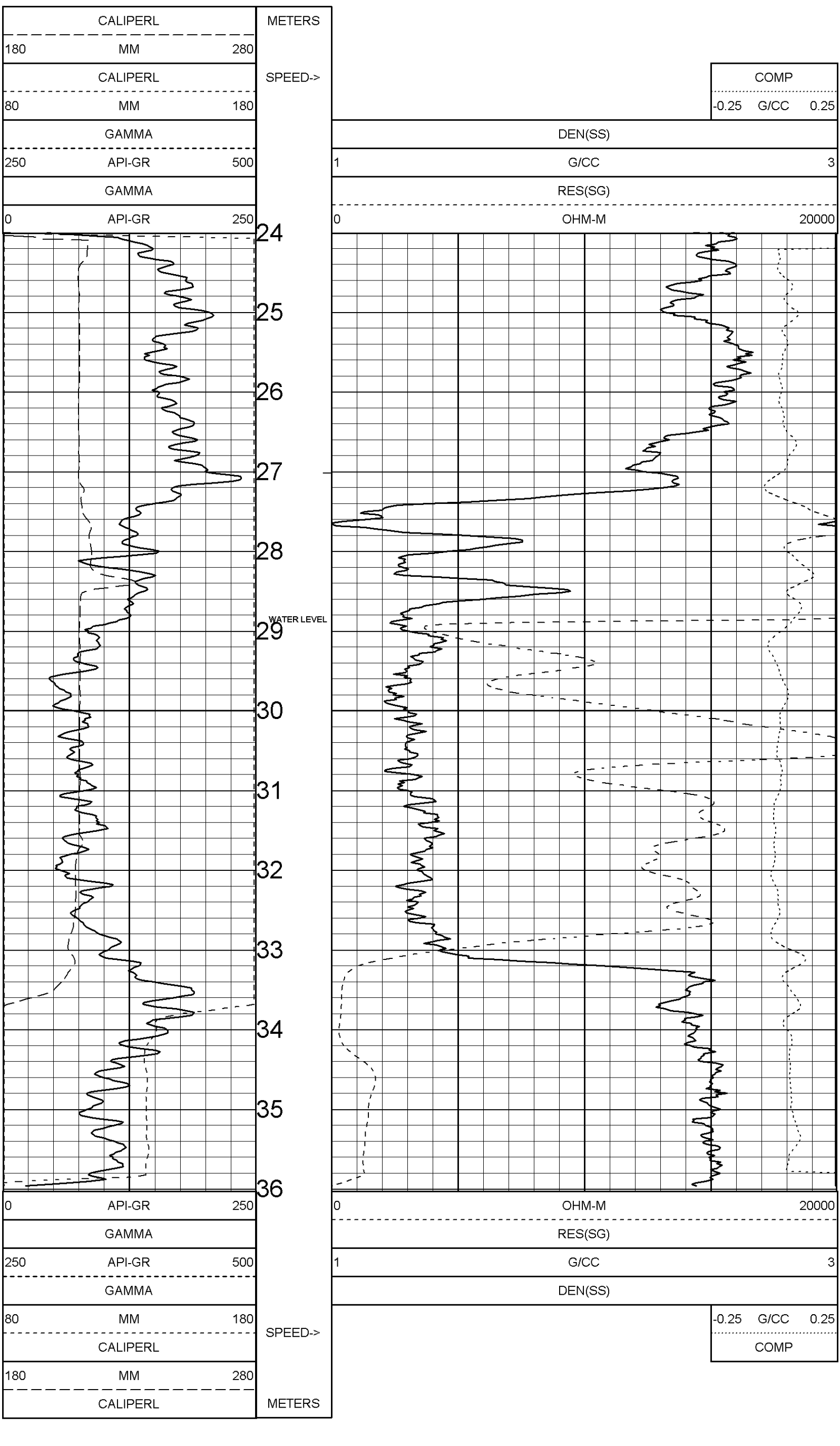
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-1-B		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	
SECTION	:	DEV	
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/16/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:202		
LOG TOP	:-0.15		
LOG BOTTOM	:41.07		
CASING LOGGER	:3.5M		
CASING DRILLER	:3.5M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL PILOT WELL		
REMARKS 2	:WATER LEVEL 29M		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 24m to 36m HB08-1-B 10/16/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 24m to 36m HB08-1-B 10/16/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

TOOL CALIBRATION HB08-1-B 10/16/08 09:27
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

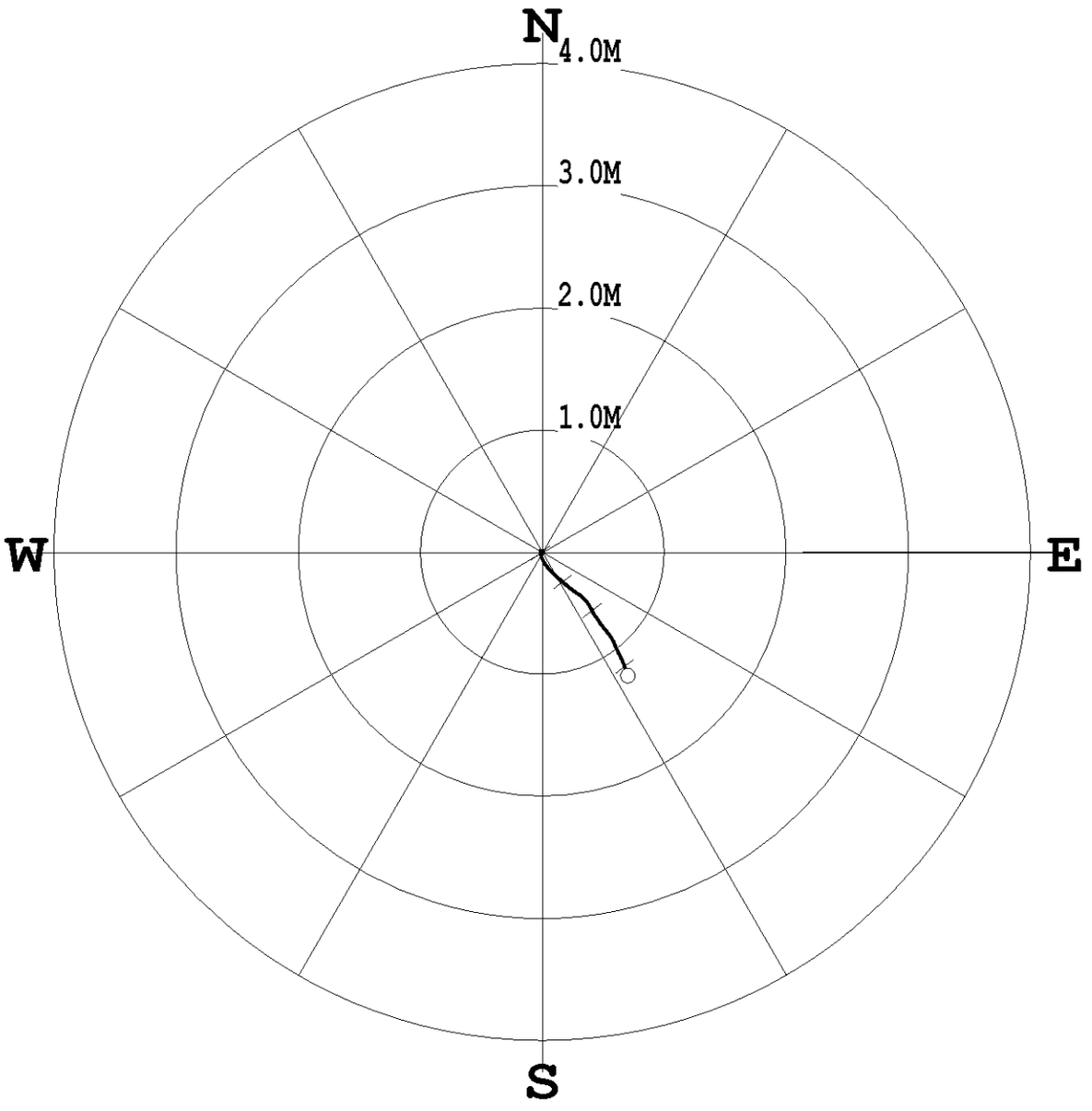
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Nov22,08	13:25:41	GAMMA	0.000	[API-GR]	11.00	[CPS]
	Nov22,08	13:25:41	GAMMA	250.000	[API-GR]	285.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-1-B
DATE OF LOG: 10/16/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 41.06 M
AZIMUTH: 145.2
DISTANCE: 1.2 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-1-B
DATE OF LOG : 10/16/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-1-B_10-16-08_09-02_9057A_.02_-0.21_41.25_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
1.66	1.67	0.00	-0.00	0.0	342.6	0.4	342.6
9.78	9.79	-0.00	-0.02	0.0	265.7	0.8	175.6
19.78	19.78	-0.23	0.16	0.3	146.2	2.7	127.8
29.78	29.78	-0.47	0.40	0.6	139.5	2.2	155.8
39.78	39.76	-0.92	0.66	1.1	144.1	4.2	157.5
41.08	41.06	-1.01	0.70	1.2	145.2	4.8	155.5

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-5-A

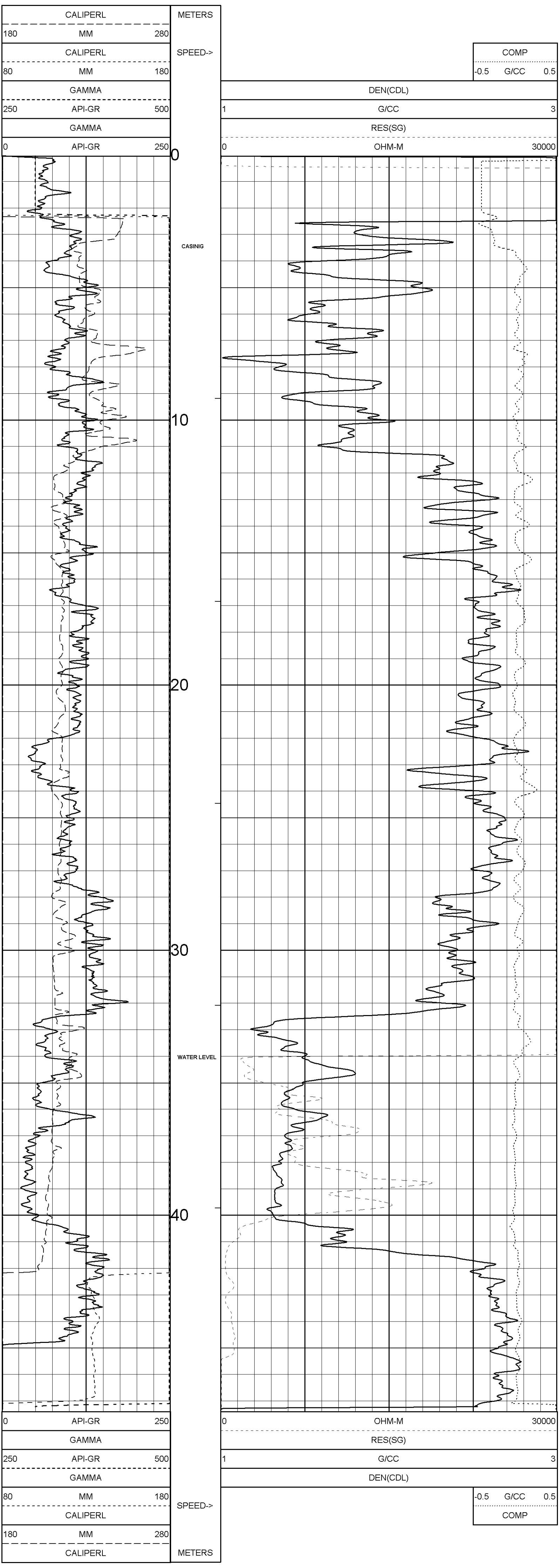
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-5-A		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA	OTHER SERVICES:	DEV
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/25/08	RIG NUMBER	:
DEPTH DRILLER	:48.76M	LOGGER TD	:
BIT SIZE	:15.24	ARRIVAL TIME	:
LOG TOP	:0.03	DEPARTURE TIME	:
LOG BOTTOM	:47.38	CIRC STOPPED	:N/A
CASING LOGGER	:3.6M		
CASING DRILLER	:3.6M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:J. ARCHER		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:NO WATER IN WELL, DENSITY RESPONSE AFFECTED		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 BULK DENSITY HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 15.24
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64HC



1:100 BULK DENSITY HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 15.24
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64HC

TOOL CALIBRATION HB08-5-A 10/25/08 10:01
TOOL 9239C1 TM VERSION 2019
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct16,08	10:59:39	GAMMA	0.000	[API-GR]	10.00	[CPS]
	Oct16,08	10:59:39	GAMMA	250.000	[API-GR]	285.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY DETAILED 1:50 SCALE HB08-5-A

COMPANY	COLONIAL COAL CORPORATION
WELL	HB08-5-A
FIELD	HUGUENOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

OTHER SERVICES: DEV

PERMANENT DATUM	G.L.	ELEVATION KB	N/A
LOG MEASURED FROM	G.L.	ELEVATION DF	N/A
DRL MEASURED FROM	G.L.	ELEVATION GL	N/A
DATE	10/25/08	RIG NUMBER	:
DEPTH DRILLER	48.76M	LOGGER TD	:
BIT SIZE	210 MM	ARRIVAL TIME	:
LOG TOP	0.03	DEPARTURE TIME	:
LOG BOTTOM	47.36	CIRC STOPPED	N/A
CASING LOGGER	3.6M		
CASING DRILLER	3.6M		
CASING TYPE	STEEL		
BOREHOLE FLUID	H20		
RM TEMPERATURE	N/A		
MUD RES	2.0		
MUD WEIGHT	1.01		
WITNESSED BY	D. LUCAS		
RECORDED BY	J. ARCHER		
REMARKS 1	VERTICAL WELL		
REMARKS 2	NO WATER IN WELL, DENSITY RESPONSE AFFECTED		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

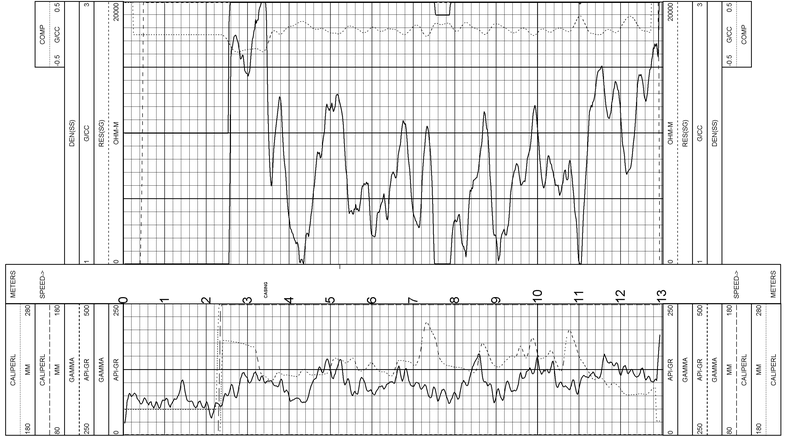
1:50 DETAILED DENSITY 0m to 13m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY 0

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 210 MM
11/22/2008 VERSION = 3.64HC



1:50 DETAILED DENSITY 0m to 13m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY 0

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 210 MM
11/22/2008 VERSION = 3.64HC

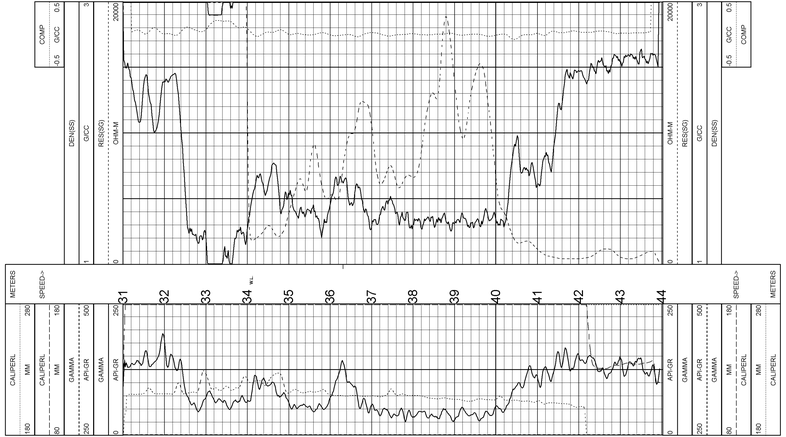
1:50 DETAILED DENSITY 31m to 44m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY 0

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 210 MM
11/22/2008 VERSION = 3.64HC



1:50 DETAILED DENSITY 31m to 44m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY 0

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 210 MM
11/22/2008 VERSION = 3.64HC

TOOL CALIBRATION HB08-5-A 10/25/08 10:01
TOOL TYPE : DENSITY 2013
SERIAL NUMBER : 388

	DATE	TIME	SENSOR	STANDARD	RESPONSE
			0.00	API-GR [ ]	10.00
1	Oct14.08	09:59:39	GAMMA	200.000	[CPS] 295.00
1	Oct15.08	10:59:39	GAMMA	200.000	[CPS] 295.00
2	Sep30.08	09:16:05	VOLTAGE	252.700	[V] 38860.02
2	Sep30.08	09:16:05	VOLTAGE	252.700	[V] 38860.02
3	Sep27.08	12:43:12	CALIPER	143.000	[MM] 122000.00
3	Sep27.08	12:43:12	CALIPER	143.000	[MM] 122000.00
4	Oct06.08	13:54:59	DENS.S)	2.300	[GCC] 664.00
4	Oct06.08	13:54:59	DENS.S)	2.300	[GCC] 664.00
5	Oct06.08	13:55:15	DENS(S)	1.000	[GCC] 12486.10
5	Oct06.08	13:55:15	DENS(S)	1.000	[GCC] 12486.10
6	Sep30.08	09:16:52	CALIPER1	76.200	[MM] 87390.10
6	Sep30.08	09:16:52	CALIPER1	76.200	[MM] 87390.10
7	Sep29.08	16:45:34	CURRENT	232.300	[UA] 4060.10
7	Sep29.08	16:45:34	CURRENT	232.300	[UA] 4060.10
8	May29.08	10:49:47	F, K	Default	[CPS] 23285.10
8	May29.08	10:49:47	F, K	Default	[CPS]

1:50 DETAILED DENSITY 31m to 44m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY 0

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 210 MM
11/22/2008 VERSION = 3.64HC

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-5-A

COMPANY	COLONIAL COAL CORPORATION
WELL	HB08-5-A
FIELD	HIGHLINIOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	
TOWNSHIP	
RANGE	
LICENCE NO.	
UNIQUE WELL ID	
PERMANENT DATUM G.L.	ELEVATION KB N/A
LOG MEASURED FROM G.L.	ELEVATION DF N/A
DRILL MEASURED FROM G.L.	ELEVATION GL N/A
DATE	10/15/2008
DEPTH DRILLER	48.79M
BIT SIZE	210
CASING DRILLER	48.79M
CASING LOGGER	3.8M
CASING TYPE	STEEL
CASING DRILLER	3.8M
LOG BOTTOM	47.38
LOG TOP	0.00
CREW STORETTE	N/A
OTHER SERVICES	GRV

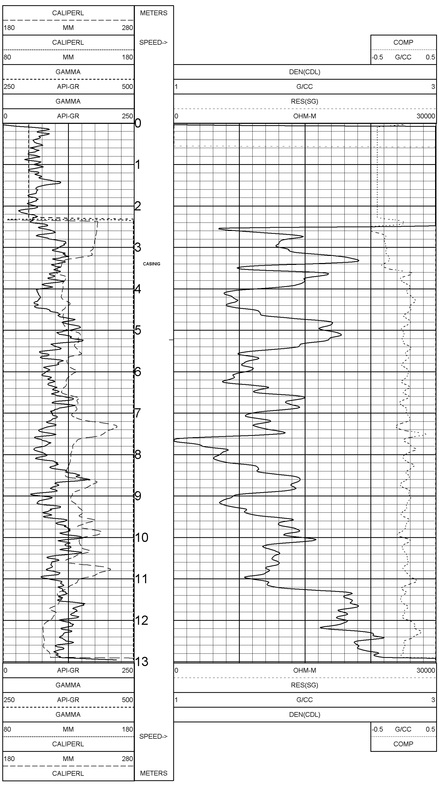
LOGGER TO	
ARRIVAL TIME	
TIME LOGGER ON BOTTOM	
TIE TO NUMBER	N/A
RUN NUMBER	ONE
MAX RECORDED TEMPERATURE	N/A
BOREHOLE FLUID	WATER
MUD RES	2.0
MUD WEIGHT	1.01
MUD VISCOSITY	50
MUD PH	7.0
FLUID LOSS	N/A
RM TEMPERATURE	20
RMF TEMPERATURE	N/A
RMC TEMPERATURE	N/A
MAX TEMPERATURE	N/A
EQUIPMENT NO.	1.01
RECORDED BY	J. ARCHER
WITNESSED BY	VERTICAL WELL
REMARKS 1	NO WATER IN WELL. DENSITY RESPONSE AFFECTED
REMARKS 2	

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 0m to 13m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 210
PRESENTATION NAME/DATE = 9239	DETAILS 1 TO 50.0 10/15/2008	VERSION = 3.64HC



1:50 DETAILED DENSITY 0m to 13m HB08-5-A 10/25/08

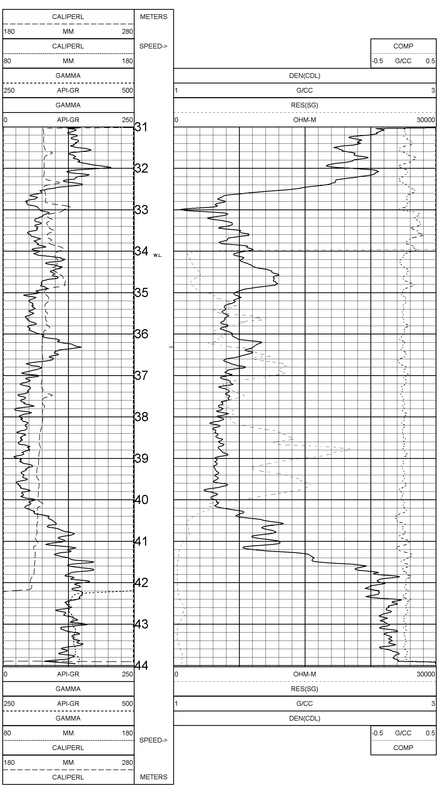
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 210
PRESENTATION NAME/DATE = 9239	DETAILS 1 TO 50.0 10/15/2008	VERSION = 3.64HC

1:50 DETAILED DENSITY 31m to 44m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 210 MM
PRESENTATION NAME/DATE = 9239	DETAILS 1 TO 50.0 12/08/2008	VERSION = 3.64HC



1:50 DETAILED DENSITY 31m to 44m HB08-5-A 10/25/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 210 MM
PRESENTATION NAME/DATE = 9239	DETAILS 1 TO 50.0 12/08/2008	VERSION = 3.64HC

TOOL CALIBRATION HB08-5-A 10/25/08 10:01
TOOL 9239C1 TM VERSION 2019
SERIAL NUMBER 368

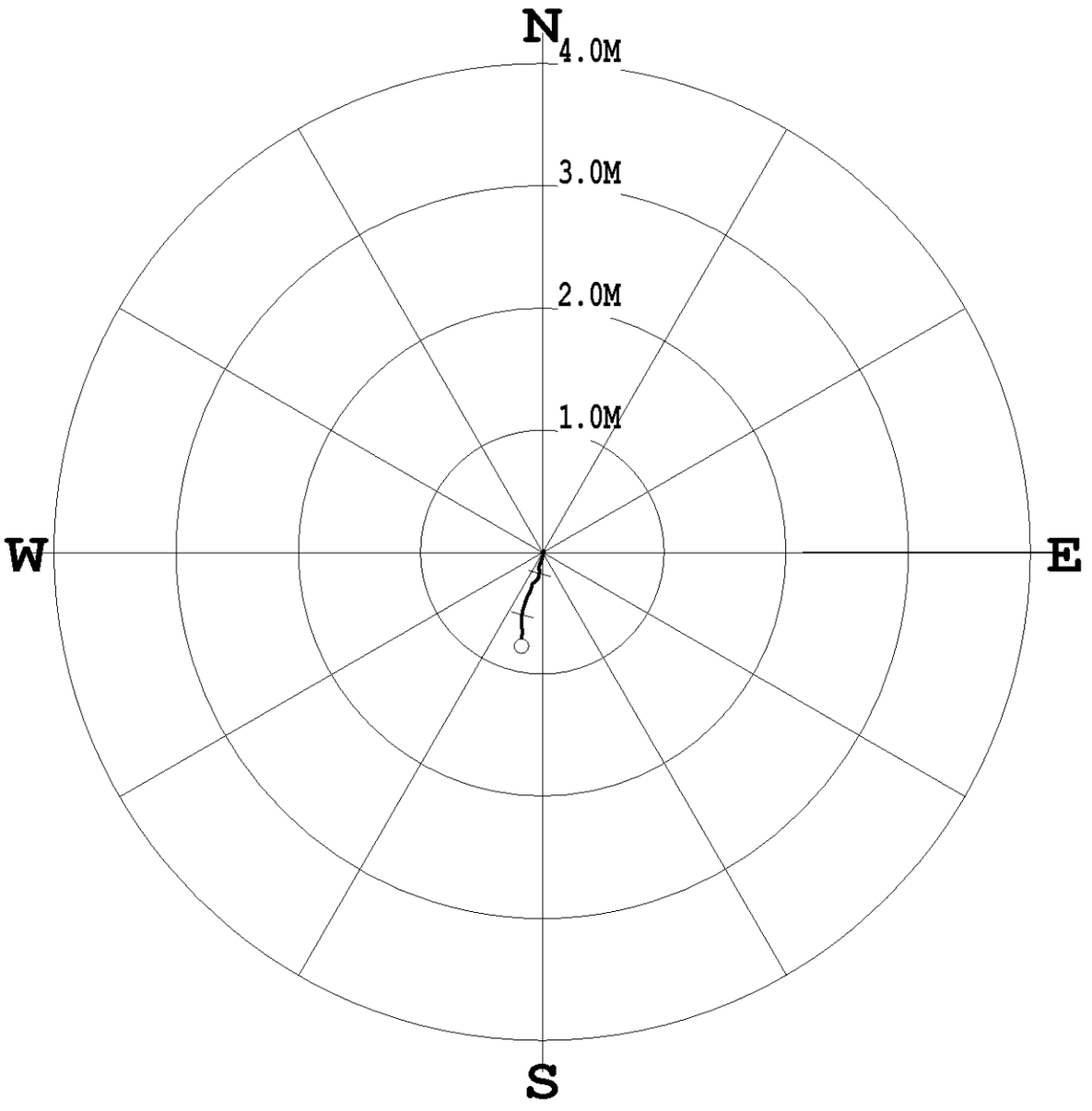
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct16,08	10:59:39	GAMMA	0.000	[API-GR]	10.00	[CPS]
	Oct16,08	10:59:39	GAMMA	250.000	[API-GR]	285.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	88.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	112900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-5-A
DATE OF LOG: 10/25/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 46.92 M
AZIMUTH: 192.4
DISTANCE: 0.8 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-5-A
DATE OF LOG : 10/25/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-5-A_10-25-08_10-25_9057A_.02_-0.03_47.10_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
1.82	1.83	0.00	0.00	0.0	57.0	0.4	57.0
9.96	9.97	-0.02	0.01	0.0	159.0	0.9	204.7
19.96	19.97	-0.17	-0.03	0.2	189.4	0.9	189.3
29.96	29.97	-0.28	-0.09	0.3	197.9	0.7	195.8
39.96	39.96	-0.51	-0.17	0.5	198.5	1.6	190.5
46.92	46.92	-0.77	-0.17	0.8	192.4	3.3	177.8

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-6A-A

Century WIRELINE SERVICES

COMPANY	COLONIAL COAL CORPORATION
WELL	HB08-6A-A
FIELD	HUGUENOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA

OTHER SERVICES: DEV

LOCATION	HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

PERMANENT DATUM	:G.L.	ELEVATION KB	N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	N/A
DATE	:10/22/08	RIG NUMBER	:
DEPTH DRILLER	:48.76M	LOGGER TD	:
BIT SIZE	:202MM	ARRIVAL TIME	:
LOG TOP	:0.13	DEPARTURE TIME	:
LOG BOTTOM	:47.08	CIRC STOPPED	N/A
CASING LOGGER	:3.3M		
CASING DRILLER	:3.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:J. ARCHER		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:WATER LEVEL 34.5M , DENSITY RESPONSE AFFECTED		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

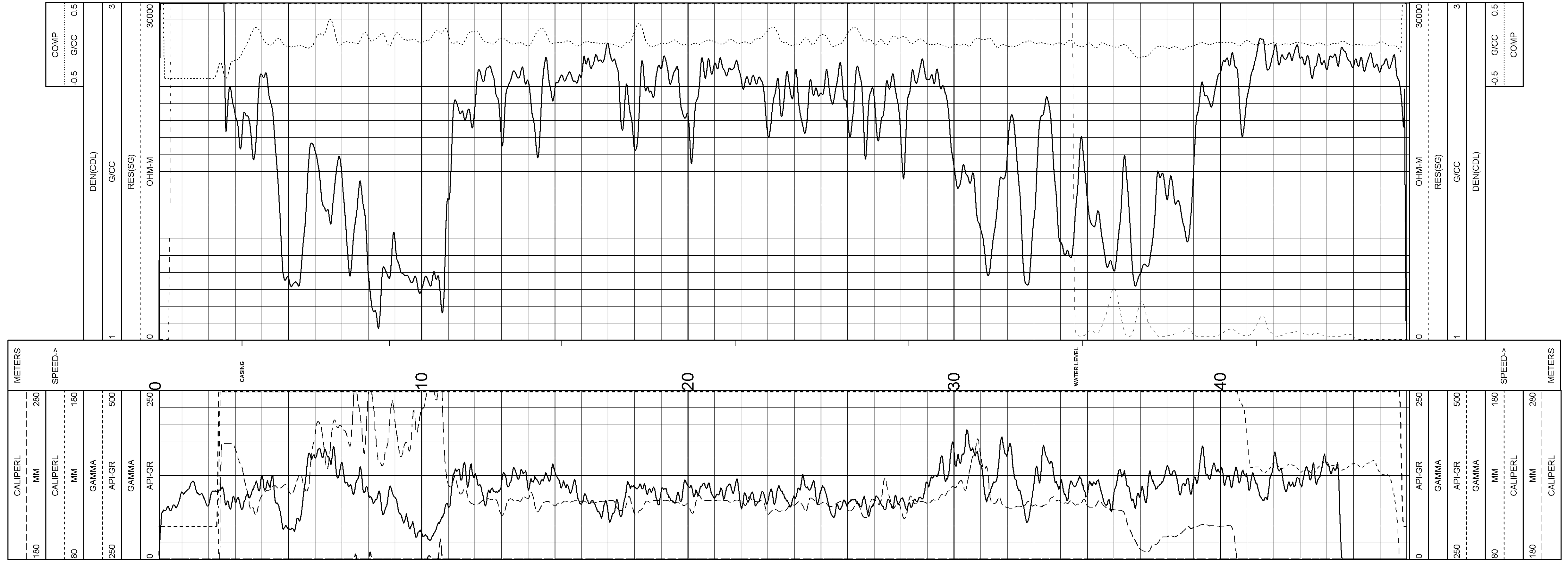
1:100 BULK DENSITY HB08-6A-A 10/22/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 12/09/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 202MM
VERSION = 3.64HC



1:100 BULK DENSITY HB08-6A-A 10/22/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 12/09/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 202MM
VERSION = 3.64HC

TOOL CALIBRATION HB08-6A-A 10/22/08 11:30
TOOL 9239C1
SERIAL NUMBER 569

	DATE	TIME	SENSOR	STANDARD	RESPONSE	
1	Oct16,08	10:59:39	GAMMA	0.000 [API-GR]	10.00	[CPS]
	Oct16,08	10:59:39	GAMMA	250.000 [API-GR]	285.00	[CPS]
2	Sep30,08	09:19:05	VOLTAGE	32.300 [MV]	9990.00	[CPS]
	Sep30,08	09:19:05	VOLTAGE	252.700 [MV]	98800.00	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000 [MM]	68200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000 [MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000 [G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(SS)	2.320 [G/CC]	7793.10	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000 [G/CC]	12488.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320 [G/CC]	5793.10	[CPS]
6	Sep30,08	09:18:52	CALIPERL	72.000 [MM]	6200.10	[CPS]
	Sep30,08	09:18:52	CALIPERL	114.300 [MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300 [UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700 [UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	1.000 [DIMENSIONLESS]		
9	May29,08	10:49:47	X	Default [CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-6A-A

COMPANY	COLONIAL COAL CORPORATION
WELL	HB08-6A-A
FIELD	HUGUENOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	HUGUENOT
LEGAL DESCRIPTION	
TOWNSHIP	
RANGE	
LICENCE NO.	
UNIQUE WELL ID.	
PERMANENT DATUM	G.L.
LOG MEASURED FROM G.L.	
DRL MEASURED FROM G.L.	
DATE	12/08/2008
DIFTH DRILLER	40.76M
BIT SIZE	202MM
LOG TOP	0.13
LOG BOTTOM	47.08
CASING DRILLER	3.3M
CASING LOGGER	3.3M
CASING TYPE	STEEL
CASING FLUID	WATER
MAX TEMPERATURE	N/A
MUD RES.	2.0
MUD WEIGHT	1.01
WITNESSED BY	D. LUCAS
RECORDED BY	J. ARCHER
REMARKS 1	VERTICAL WELL
REMARKS 2	WATER LEVEL 34.5M . DENSITY RESPONSE AFFECTED
ELEVATION KB	N/A
ELEVATION DF	N/A
ELEVATION GL	N/A
LOGGER TD	
ARRIVAL TIME	
DEPARTURE TIME	
CIRC STOPPED	N/A

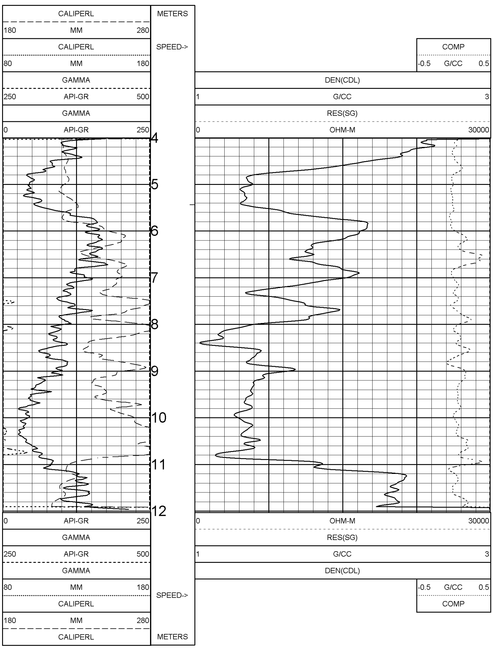
OTHER SERVICES: DEV

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 4m to 12m HB08-6A-A 10/22/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/08/2008 VERSION = 3.64HC



1:50 DETAILED DENSITY 4m to 12m HB08-6A-A 10/22/08

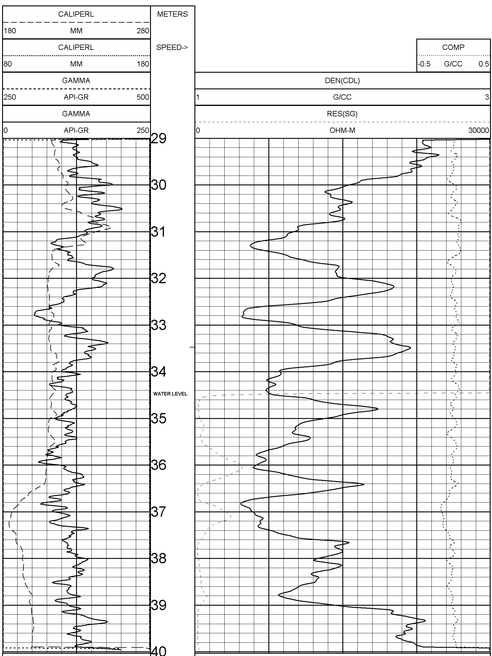
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/08/2008 VERSION = 3.64HC

1:50 DETAILED DENSITY 29m to 40m HB08-6A-A 10/22/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/08/2008 VERSION = 3.64HC



1:50 DETAILED DENSITY 29m to 40m HB08-6A-A 10/22/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/08/2008 VERSION = 3.64HC

TOOL CALIBRATION HB08-6A-A 10/22/08 11:30
TOOL 9239C1 TM VERSION 2019
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct16,08	10:59:39	GAMMA	0.000	[API-GR]	10.00	[CPS]
	Oct16,08	10:59:39	GAMMA	250.000	[API-GR]	285.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

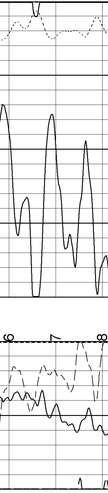
Century WIRELINE SERVICES

SHORT SPACED DENSITY GAMMA - CALIPER - RES. HB08-6A-A

COMPANY	COLONIAL COAL CORPORATION	OTHER SERVICES: DEV
WELL	HB08-6A-A	
FIELD	HUGUENOT	
COUNTRY	CANADA	
PROVINCE	BRITISH COLUMBIA	
LOCATION	HUGUENOT	
SECTION	:	
TOWNSHIP	:	
RANGE	:	
LICENCE NO.	:	
UNIQUE WELL ID.	:	

PERMANENT DATUM	G.L.	ELEVATION KB	N/A
LOG MEASURED FROM	G.L.	ELEVATION DF	N/A
DRL MEASURED FROM	G.L.	ELEVATION GL	N/A
DATE	10/22/08	R/G NUMBER	:
DEPTH DRILLER	46.78M	LOGGER TO	:
BIT SIZE	202MM	ARRIVAL TIME	:
LOG TOP	0.13	DEPARTURE TIME	:
LOG BOTTOM	47.08	CIRC STOPPED	N/A
CASING LOGGER	3.3M		
CASING DRILLER	3.3M		
CASING TYPE	STEEL		
BOREHOLE FLUID	H20		
RM TEMPERATURE	N/A		
MUD RES	2.0		
MUD WEIGHT	1.01		
WITNESSED BY	D. LUCAS		
RECORDED BY	J. ARCHER		
REMARKS 1	VERTICAL WELL		
REMARKS 2	NO WATER IN WELL, DENSITY RESPONSE AFFECTED		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION HB08-6A-A 10/22/08 11:30
TOOL 9239C1
SERIAL NUMBER TYPE

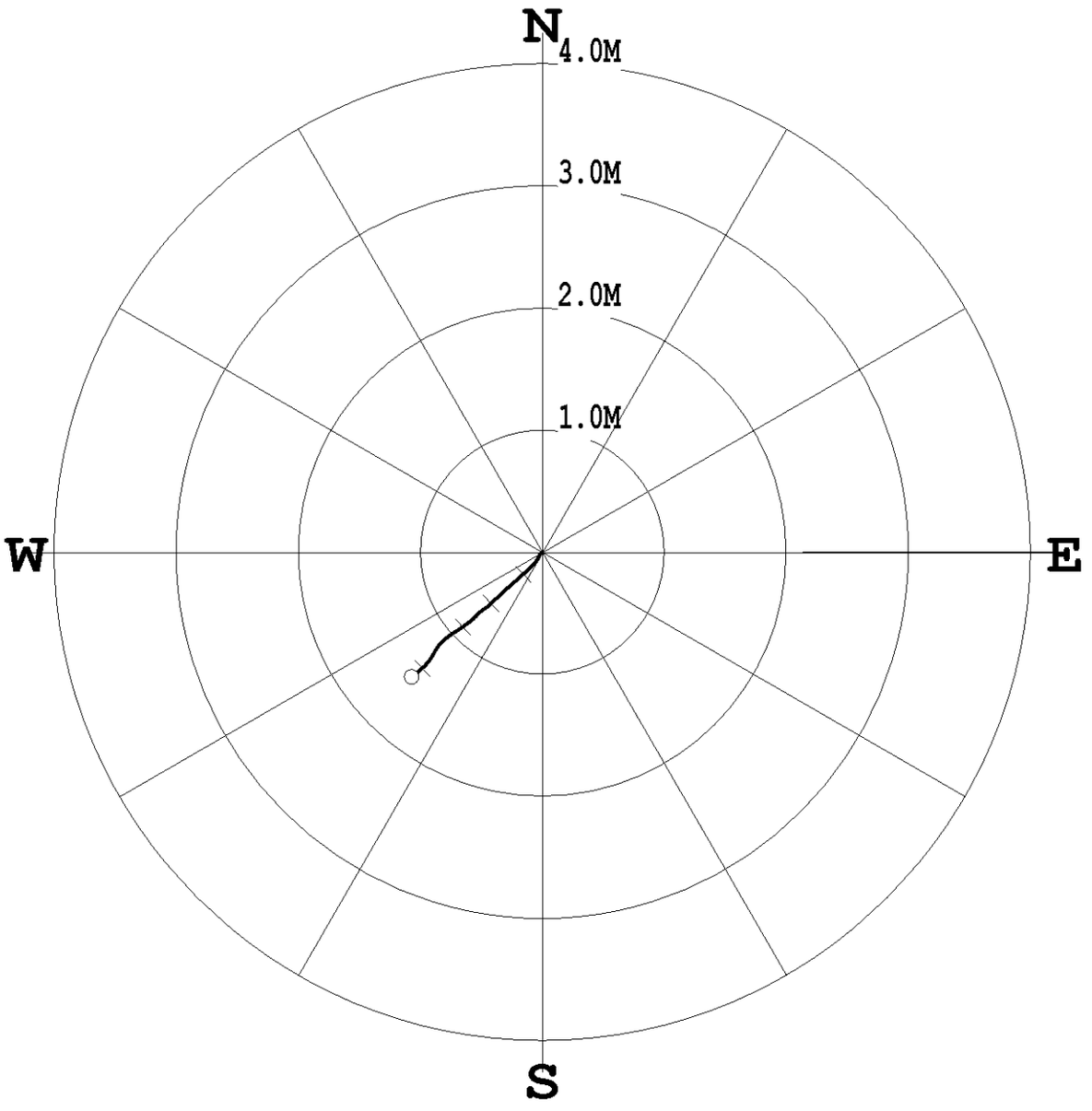
	DATE	TIME	SENSOR	STANDARD	RESPONSE	
			GAMMA	0.000	[API-GR]	10.00 [CPS]
1	Oct18.08	10:59:39	GAMMA	250.000	[API-GR]	2318.00 [CPS]
2	Sep30.08	09:18:05	VOLTAGE	32.300	[MV]	9660.00 [CPS]
	Sep30.08	09:18:05	VOLTAGE	252.700	[MV]	38860.02 [CPS]
3	Sep27.08	12:43:12	CALIPER	80.000	[MM]	48800.00 [CPS]
	Sep27.08	12:43:12	CALIPER	143.000	[MM]	122900.00 [CPS]
4	Oct05.08	13:54:59	DENS(S)	1.330	[GCC]	6984.00 [CPS]
	Oct05.08	13:54:59	DENS(S)	2.530	[GCC]	12469.10 [CPS]
5	Oct05.08	13:55:15	DENS(S)	1.000	[GCC]	12469.10 [CPS]
	Oct05.08	13:55:15	DENS(S)	2.530	[GCC]	12469.10 [CPS]
6	Sep30.08	09:18:52	CALIPER1	76.200	[MM]	87390.10 [CPS]
	Sep30.08	09:18:52	CALIPER1	114.300	[MM]	122500.10 [CPS]
7	Sep30.08	16:40:34	CURRENT	0.000	[uA]	0.00 [CPS]
	Sep30.08	16:40:34	CURRENT	252.700	[uA]	23235.10 [CPS]
8	May20.08	10:49:47	E	Default	[CPS]	
9	May20.08	10:49:47	K	Default	[CPS]	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-6A-A
DATE OF LOG: 10/22/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 42.00 M
AZIMUTH: 226.4
DISTANCE: 1.5 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-6A-A
DATE OF LOG : 10/22/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-6A-A_10-22-08_11-59_9057A_.02_-0.01_42.19_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
1.86	1.87	-0.00	-0.00	0.0	254.9	1.0	254.9
9.98	9.99	-0.18	-0.16	0.2	222.0	2.3	229.6
19.98	19.98	-0.42	-0.42	0.6	225.5	2.4	230.0
29.98	29.97	-0.61	-0.65	0.9	227.0	2.1	240.4
39.98	39.96	-0.95	-0.98	1.4	226.2	3.2	228.7
42.02	42.00	-1.02	-1.07	1.5	226.4	3.1	229.5

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-6C-A

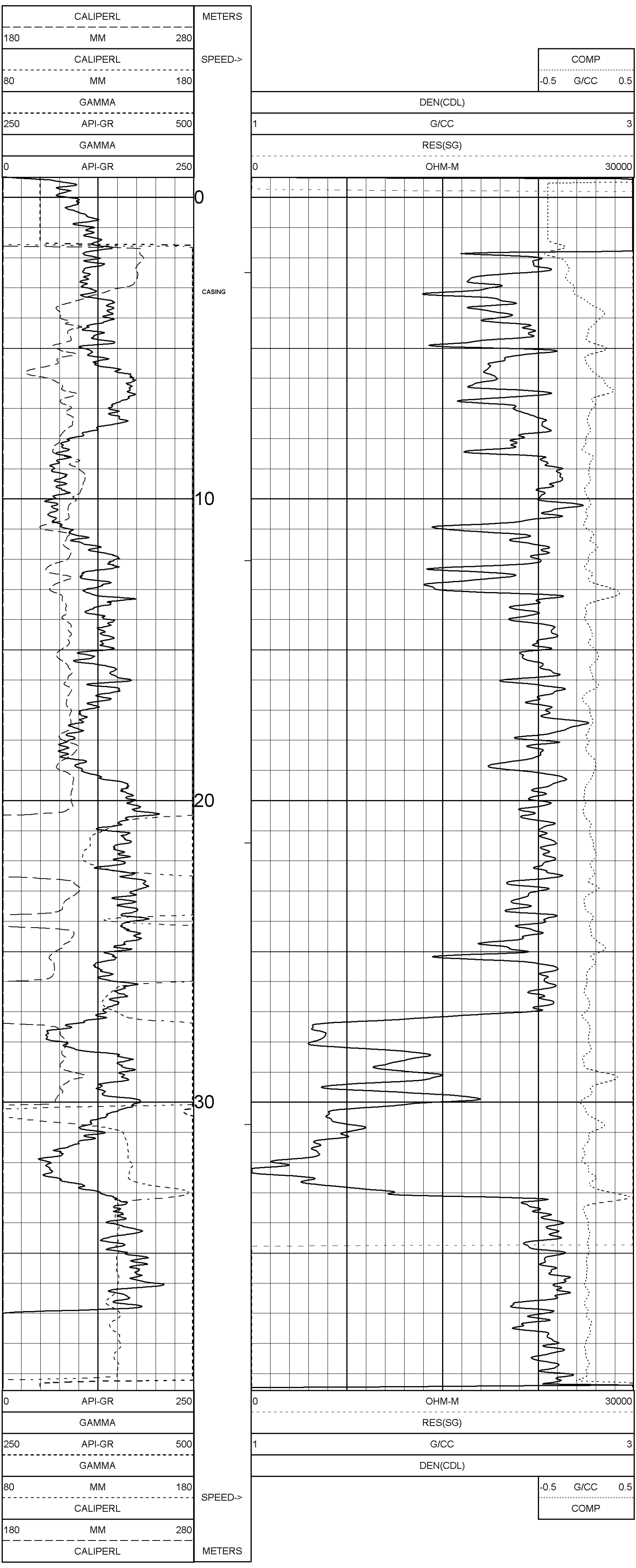
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-6C-A		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	DEV
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/18/08	RIG NUMBER	:
DEPTH DRILLER	:42.67M	LOGGER TD	:
BIT SIZE	:202MM	ARRIVAL TIME	:
LOG TOP	:-0.68	DEPARTURE TIME	:
LOG BOTTOM	:39.52	CIRC STOPPED	:N/A
CASING LOGGER	:3.2M		
CASING DRILLER	:3.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:NO WATER IN THIS VERTICAL WELL		
REMARKS 2	:MUD RINGS AFFECTED DENSITY RESPONSE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 BULK DENSITY HB08-6C-A 10/18/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239C1.0 12/09/2008		VERSION = 3.64HC



1:100 BULK DENSITY HB08-6C-A 10/18/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239C1.0 12/09/2008		VERSION = 3.64HC

TOOL CALIBRATION HB08-6C-A 10/18/08 11:29
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct18,08	11:20:06	GAMMA	3.000	[API-GR]	0.00	[CPS]
	Oct18,08	11:20:06	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-6C-A

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-6C-A
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

OTHER SERVICES: DEV

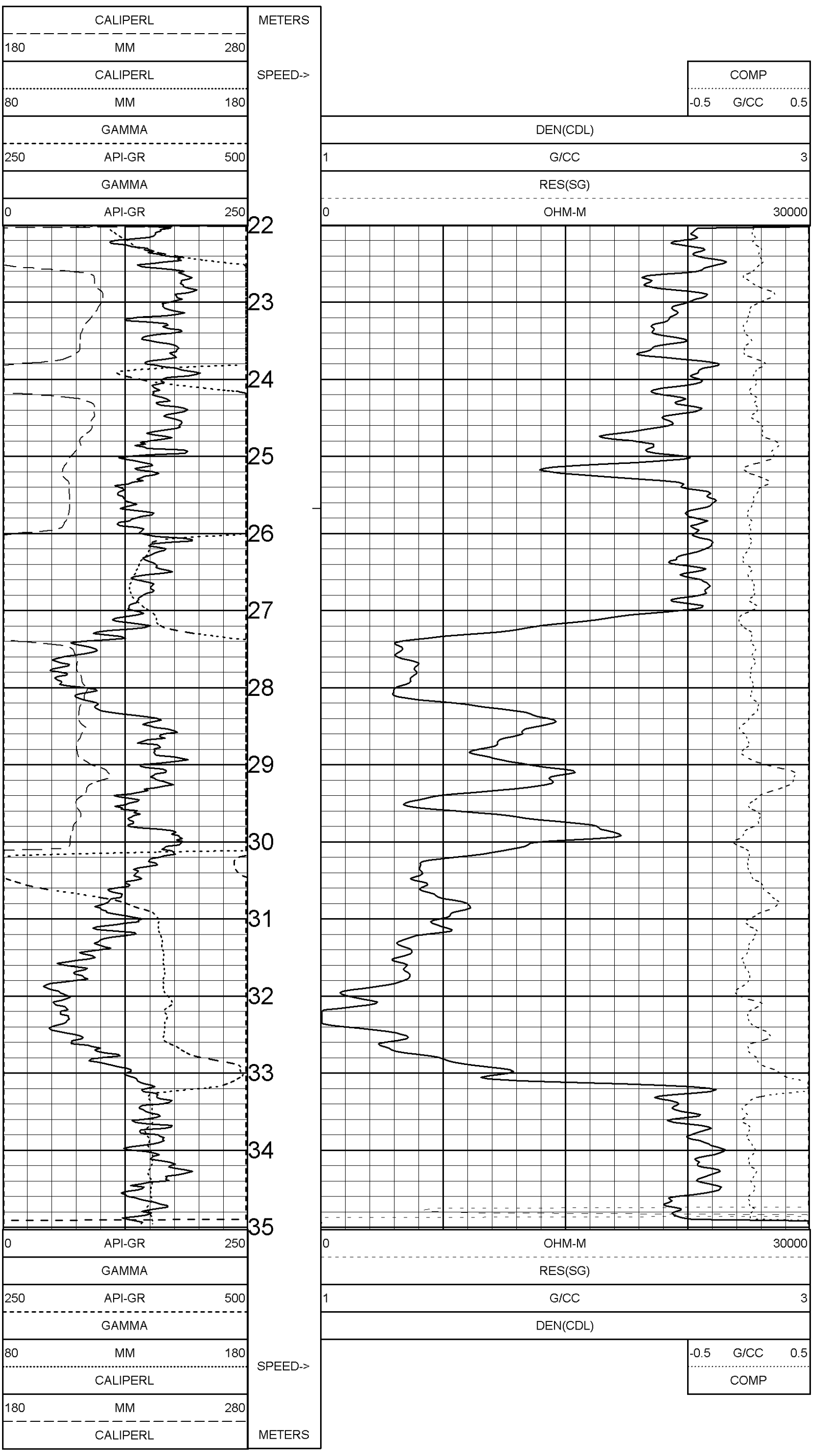
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/18/08	RIG NUMBER	:
DEPTH DRILLER	:42.67M	LOGGER TD	:
BIT SIZE	:202MM	ARRIVAL TIME	:
LOG TOP	:-0.68	DEPARTURE TIME	:
LOG BOTTOM	:39.52	CIRC STOPPED	:N/A
CASING LOGGER	:3.2M		
CASING DRILLER	:3.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:NO WATER IN THIS VERTICAL WELL		
REMARKS 2	:MUD RINGS AFFECTED DENSITY RESPONSE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 22m to 35m HB08-6C-A 10/18/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/08/2008		VERSION = 3.64HC



1:50 DETAILED DENSITY 22m to 35m HB08-6C-A 10/18/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/08/2008		VERSION = 3.64HC

TOOL CALIBRATION HB08-6C-A 10/18/08 11:29
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct18,08	11:20:06	GAMMA	3.000	[API-GR]	0.00	[CPS]
	Oct18,08	11:20:06	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HB08-6C-A

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-6C-A
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

OTHER SERVICES: DEV

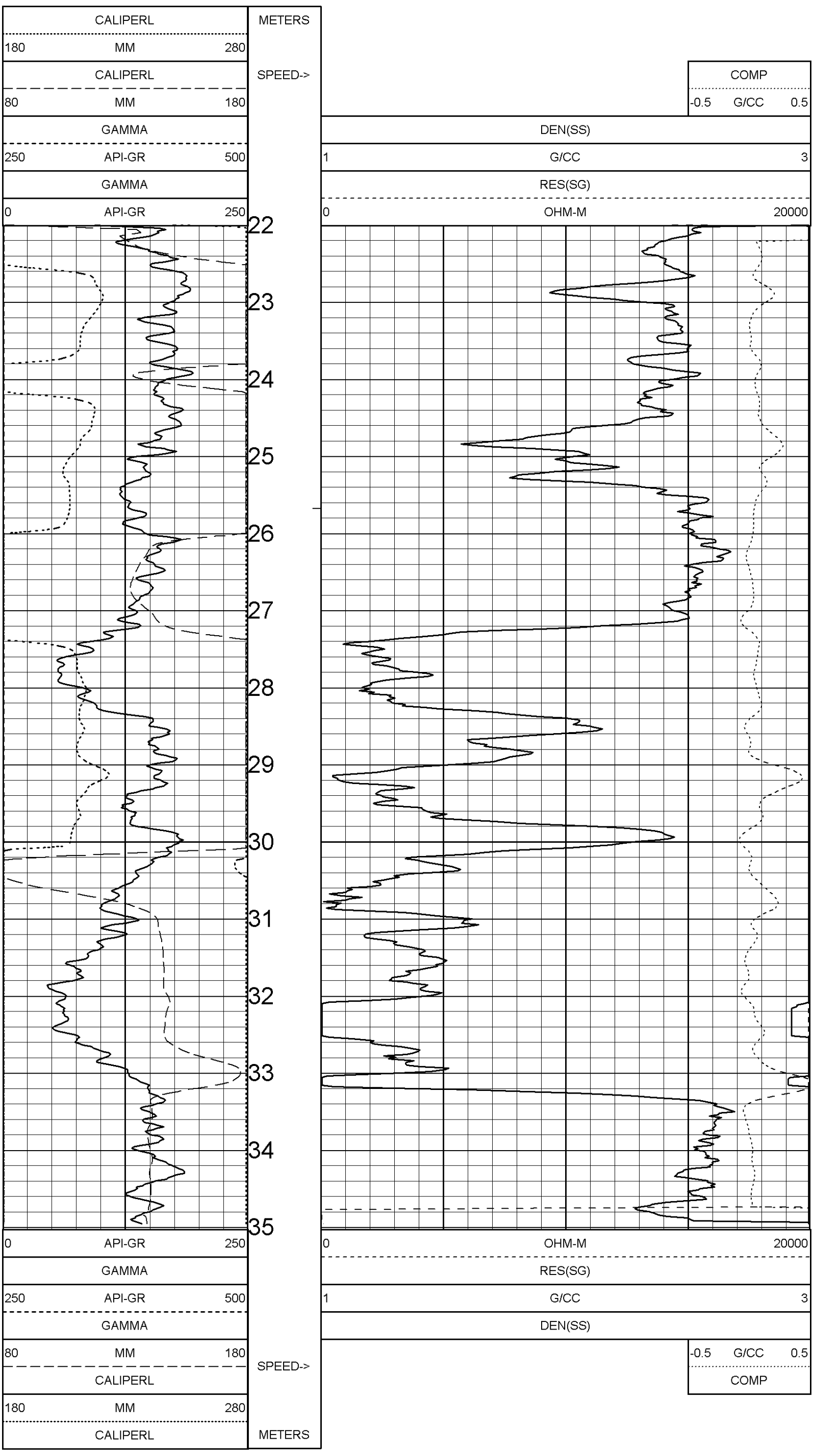
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/18/08	RIG NUMBER	:
DEPTH DRILLER	:42.67M	LOGGER TD	:
BIT SIZE	:202 MM	ARRIVAL TIME	:
LOG TOP	:-0.68	DEPARTURE TIME	:
LOG BOTTOM	:39.52	CIRC STOPPED	:N/A
CASING LOGGER	:3.3M		
CASING DRILLER	:3.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL. NO WATER IN WELL.		
REMARKS 2	:MUD RINGS & NO WATER AFFECTED DENSITY RESPONSE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 22m to 35m HB08-6C-A 10/18/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202 MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 12/08/2008 VERSION = 3.64HC



1:50 DETAILED DENSITY 22m to 35m HB08-6C-A 10/18/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202 MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 12/08/2008 VERSION = 3.64HC

TOOL CALIBRATION HB08-6C-A 10/18/08 11:29
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

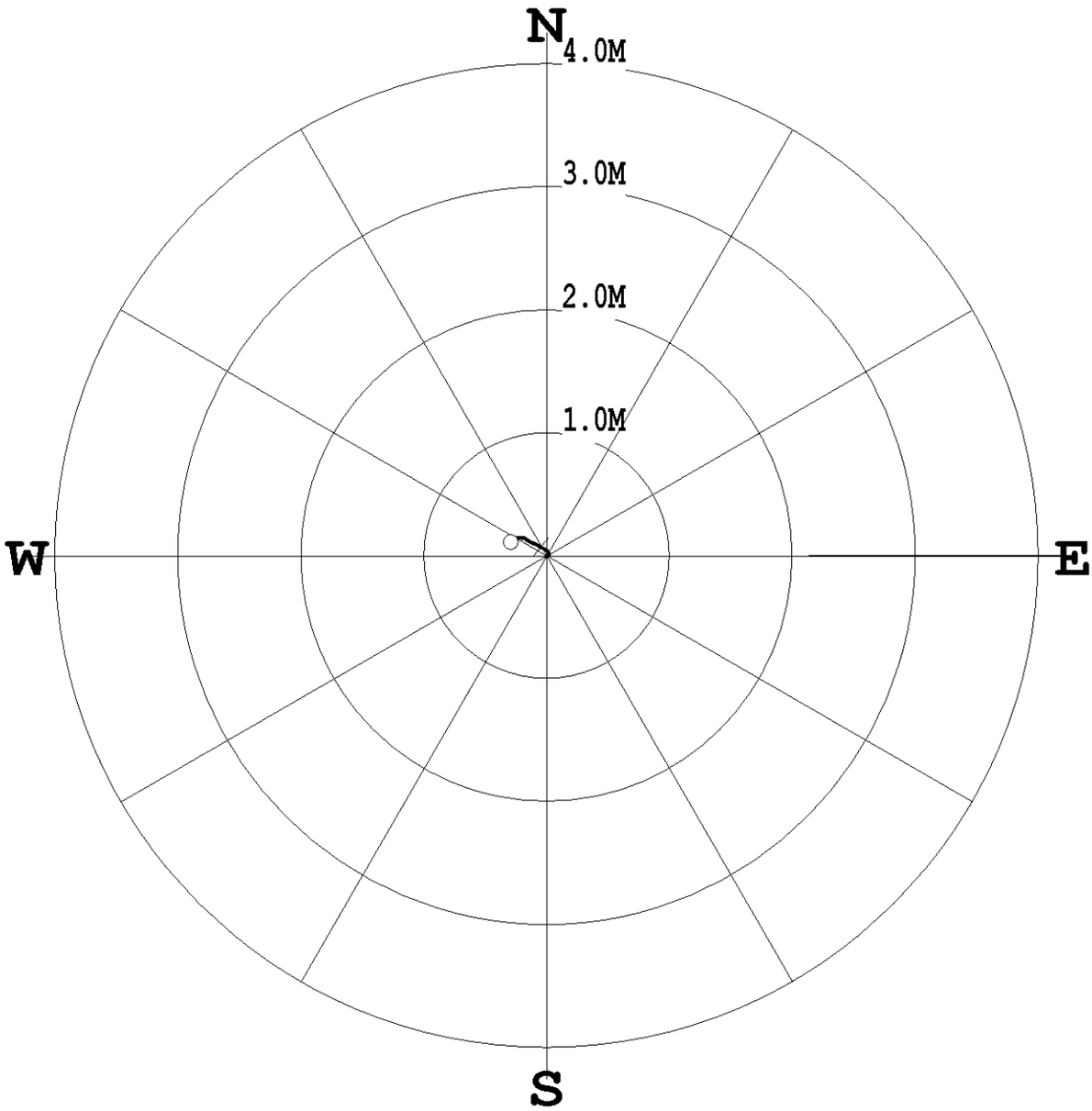
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct18,08	11:20:06	GAMMA	3.000	[API-GR]	0.00	[CPS]
	Oct18,08	11:20:06	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-6C-A
DATE OF LOG: 10/18/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 39.20 M
AZIMUTH: 290.6
DISTANCE: 0.3 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-6C-1A
DATE OF LOG : 10/18/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-6C-A_10-18-08_12-00_9057A_.02_-0.28_39.38_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
1.58	1.58	0.00	-0.00	0.0	335.4	0.3	335.4
9.72	9.72	0.01	0.02	0.0	64.5	0.3	358.6
19.72	19.72	0.07	-0.05	0.1	327.0	0.8	297.3
29.72	29.72	0.13	-0.17	0.2	308.6	0.6	302.7
39.20	39.20	0.11	-0.29	0.3	290.6	1.2	189.2

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-6C-B

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-6C-B
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA

OTHER SERVICES:
DEV

LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A

DATE	:10/20/08	RIG NUMBER	:
DEPTH DRILLER	:42.67M	LOGGER TD	:
BIT SIZE	:202 MM	ARRIVAL TIME	:
LOG TOP	:-0.31	DEPARTURE TIME	:
LOG BOTTOM	:38.27	CIRC STOPPED	:N/A
CASING LOGGER	:3.2M		
CASING DRILLER	:3.2M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:NO WATER IN WELL, DENSITY RESPONSE AFFECTED		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

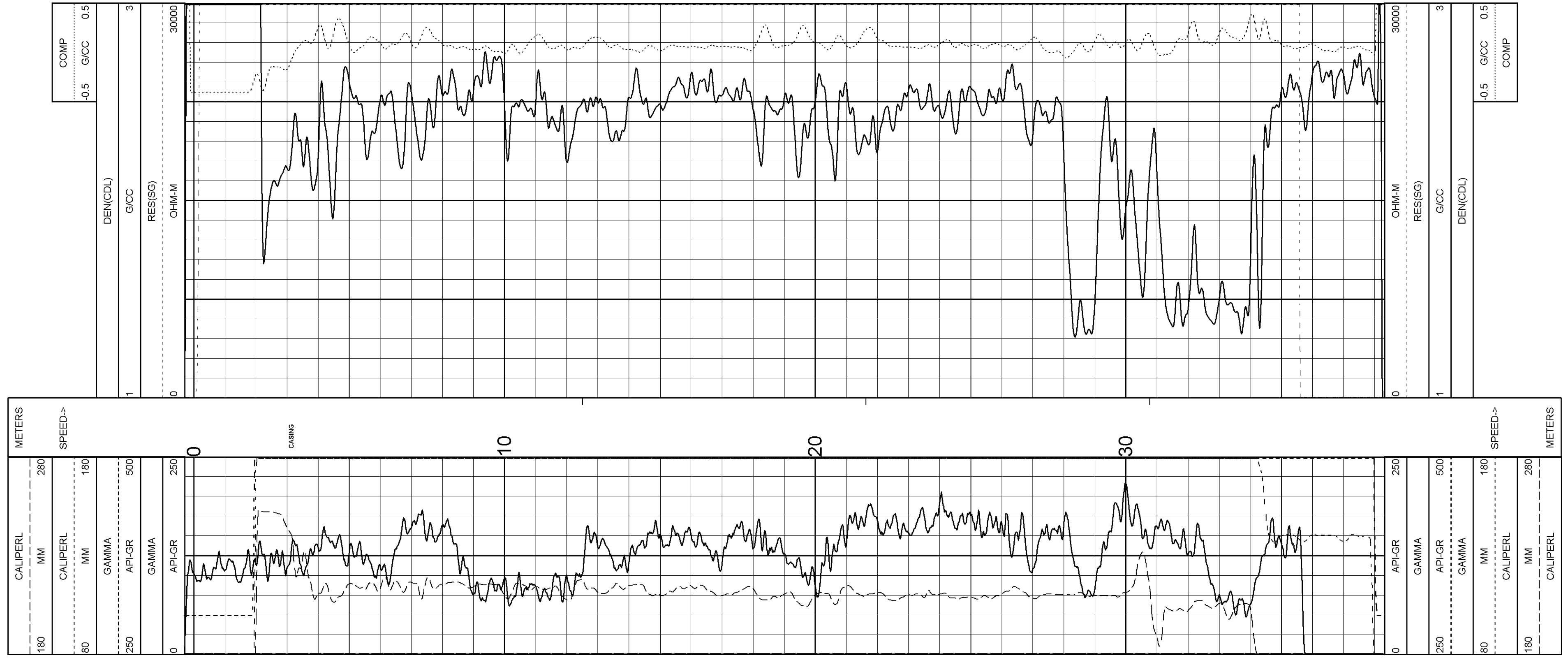
1:100 BULK DENSITY HB08-6C-B 10/20/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL : 20
PRESENTATION NAME/DATE = 9239C1.0 12/08/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 202 MM
VERSION = 3.64HC



1:100 BULK DENSITY HB08-6C-B 10/20/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL : 20
PRESENTATION NAME/DATE = 9239C1.0 12/08/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 202 MM
VERSION = 3.64HC

TOOL CALIBRATION: HB08-6C-B 10/20/08 09:58
TOOL: 6239C1 TN: VERSION 2.018
SERIAL NUMBER 388

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Oct18,08	11:20:06	GAMMA	3.000 [API-GR]	0.00 [CPS]
	Oct18,08	11:20:06	GAMMA	250.000 [API-GR]	265.00 [CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300 [MV]	9890.00 [CPS]
	Sep30,08	09:16:05	VOLTAGE	250.000 [MV]	98800.02 [CPS]
3	Sep27,08	12:43:12	CALIPER	280.000 [MM]	98800.02 [CPS]
	Sep27,08	12:43:12	CALIPER	143.000 [MM]	122900.00 [CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000 [G/CC]	6993.10 [CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320 [G/CC]	804.00 [CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000 [G/CC]	12498.10 [CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320 [G/CC]	5793.10 [CPS]
6	Sep30,08	09:16:52	CALIPER_	76.200 [MM]	87390.10 [CPS]
	Sep30,08	09:16:52	CALIPER_	114.300 [MM]	122552.10 [CPS]
7	Sep29,08	16:45:34	CURRENT	23.200 [UA]	4595.10 [CPS]
	Sep29,08	16:45:34	CURRENT	252.700 [UA]	20220.10 [CPS]
8	May29,08	10:49:47	F	Default [CPS]	
9	May29,08	10:49:47	X	Default [CPS]	

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-6C-B

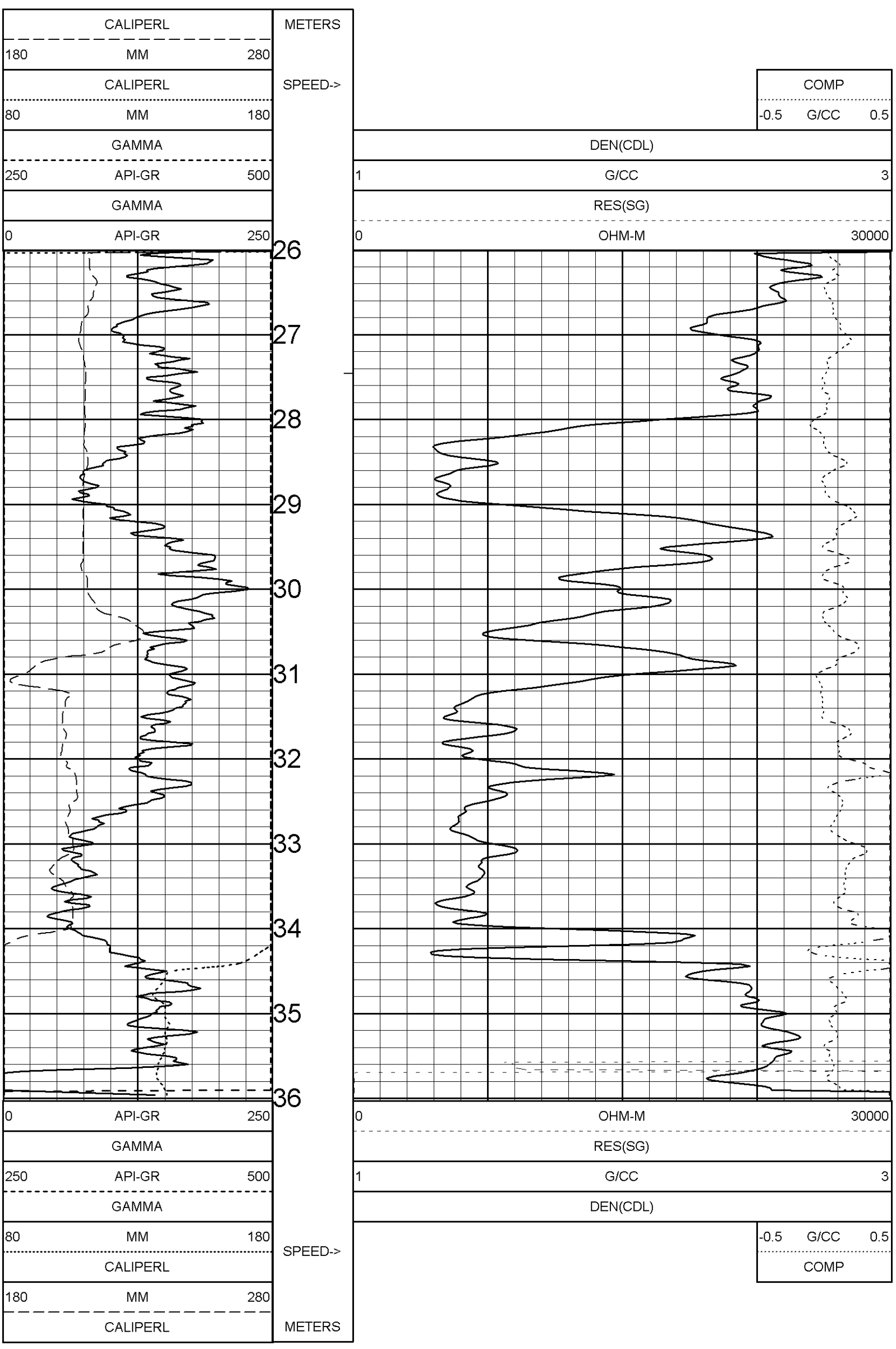
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-6C-B	OTHER SERVICES:	
FIELD	:HUGUENOT	DEV	
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/20/08	RIG NUMBER	:
DEPTH DRILLER	:42.67M	LOGGER TD	:
BIT SIZE	:202 MM	ARRIVAL TIME	:
LOG TOP	:-0.31	DEPARTURE TIME	:
LOG BOTTOM	:38.27	CIRC STOPPED	:N/A
CASING LOGGER	:3.2M		
CASING DRILLER	:3.2M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:NO WATER IN WELL, DENSITY RESPONSE AFFECTED		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 26m to 36m HB08-6C-B 10/20/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202 MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/09/2008 VERSION = 3.64HC



1:50 DETAILED DENSITY 26m to 36m HB08-6C-B 10/20/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202 MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 12/09/2008 VERSION = 3.64HC

TOOL CALIBRATION HB08-6C-B 10/20/08 09:58
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

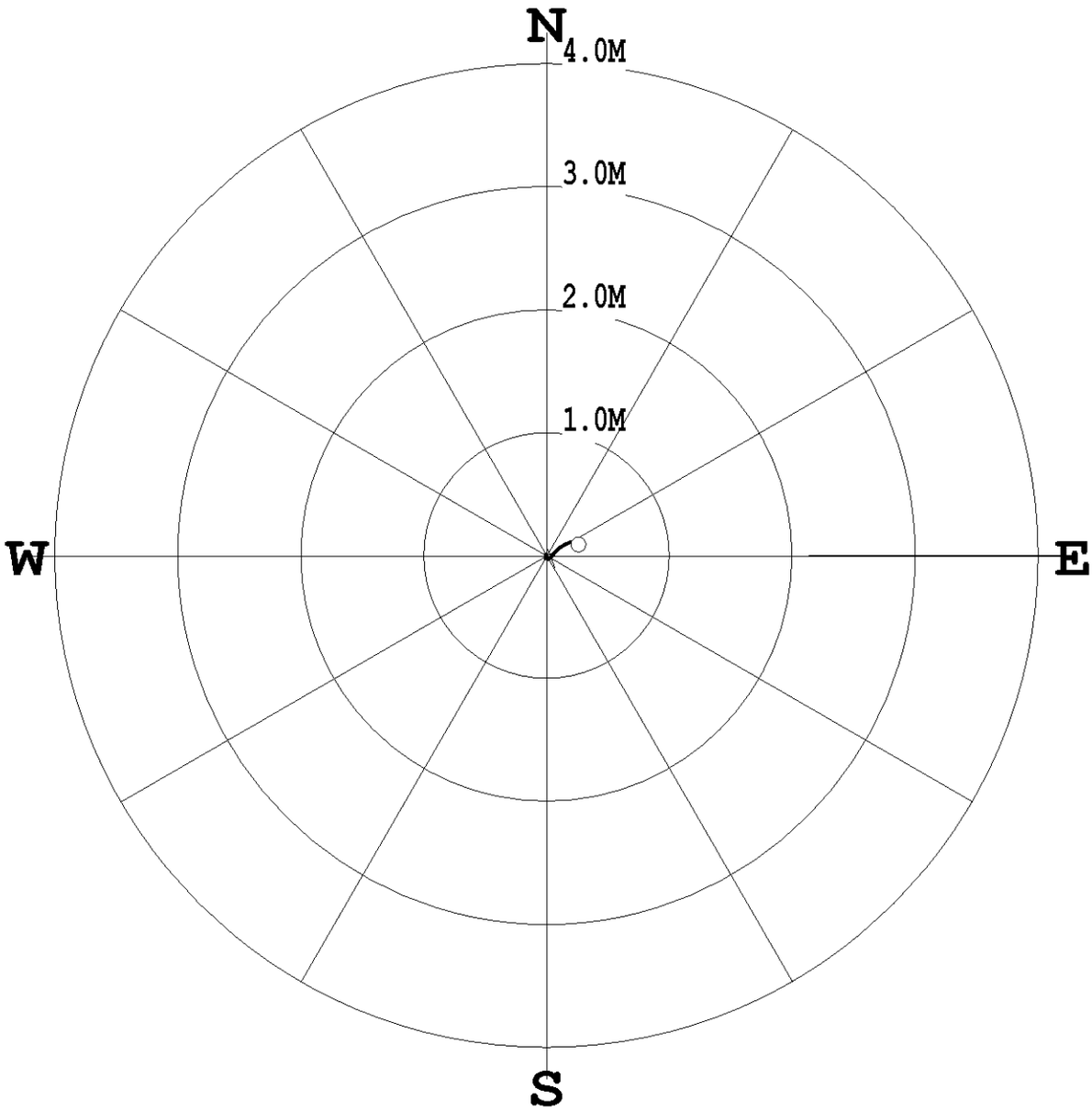
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct18,08	11:20:06	GAMMA	3.000	[API-GR]	0.00	[CPS]
	Oct18,08	11:20:06	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-6C-B
DATE OF LOG: 10/20/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 38.47 M
AZIMUTH: 69.8
DISTANCE: 0.3 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-6C-1B
DATE OF LOG : 10/20/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-6C-B_10-20-08_10-26_9057A_.02_-0.15_38.63_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
1.72	1.73	0.00	-0.00	0.0	349.4	0.4	349.4
9.84	9.85	-0.02	-0.01	0.0	207.5	0.3	124.0
19.84	19.85	-0.01	0.03	0.0	108.7	0.3	62.7
29.84	29.85	0.07	0.12	0.1	57.5	0.8	46.2
38.46	38.47	0.09	0.26	0.3	69.8	1.9	128.5

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-8-A

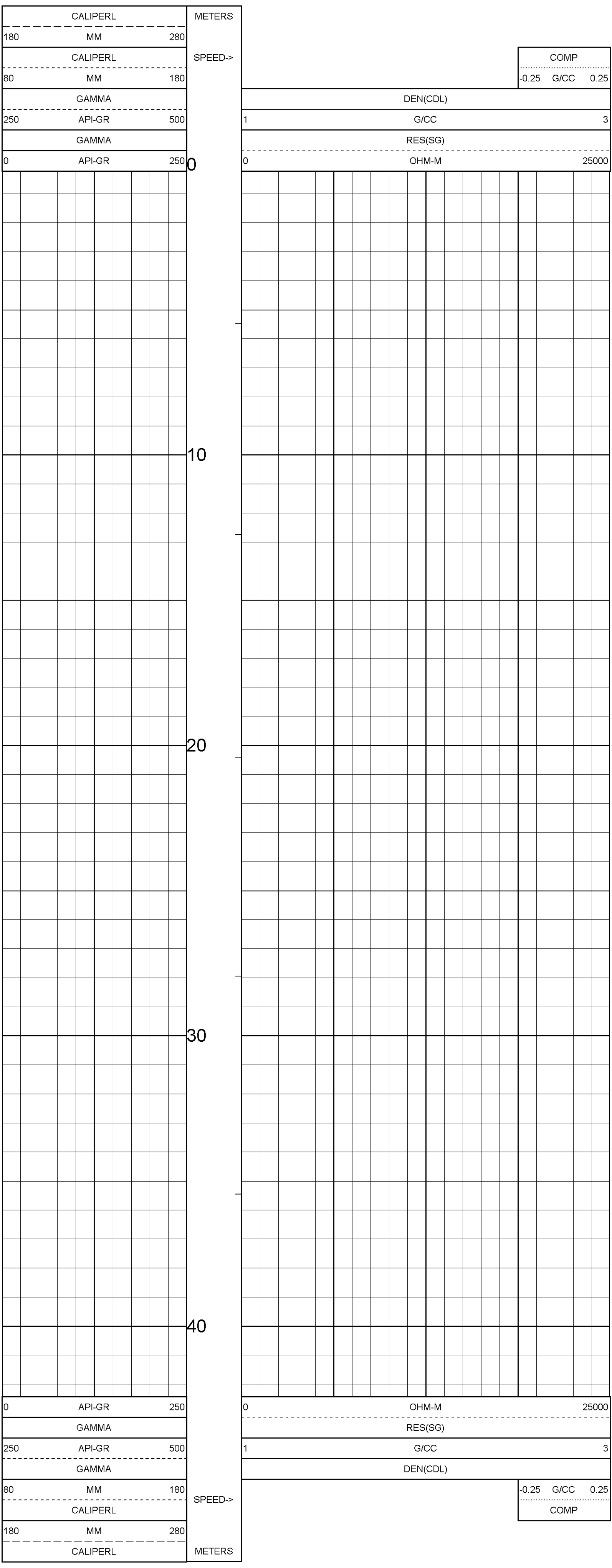
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-8-A	OTHER SERVICES:	
FIELD	:HUGUENOT	NEU	
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/07/08		
DEPTH DRILLER	:42.60M		
BIT SIZE	:20.30		
LOG TOP	:0.21		
LOG BOTTOM	:42.39		
CASING LOGGER	:4.1M		
CASING DRILLER	:4.1M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 BULK DENSITY HB08-8-A 10/07/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9239C1.0 09/30/2008		VERSION = 3.64EK



1:100 BULK DENSITY HB08-8-A 10/07/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9239C1.0 09/30/2008		VERSION = 3.64EK

TOOL CALIBRATION HB08-8-A 10/07/08 17:01
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-8-A

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-8-A
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:
PERMANENT DATUM	:G.L.
LOG MEASURED FROM	:G.L.
DRL MEASURED FROM	:G.L.
DATE	:10/07/08
DEPTH DRILLER	:42.60M
BIT SIZE	:20.30
LOG TOP	:0.21
LOG BOTTOM	:42.39
CASING LOGGER	:4.1M
CASING DRILLER	:4.1M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL WELL
REMARKS 2	:

OTHER SERVICES: NEU

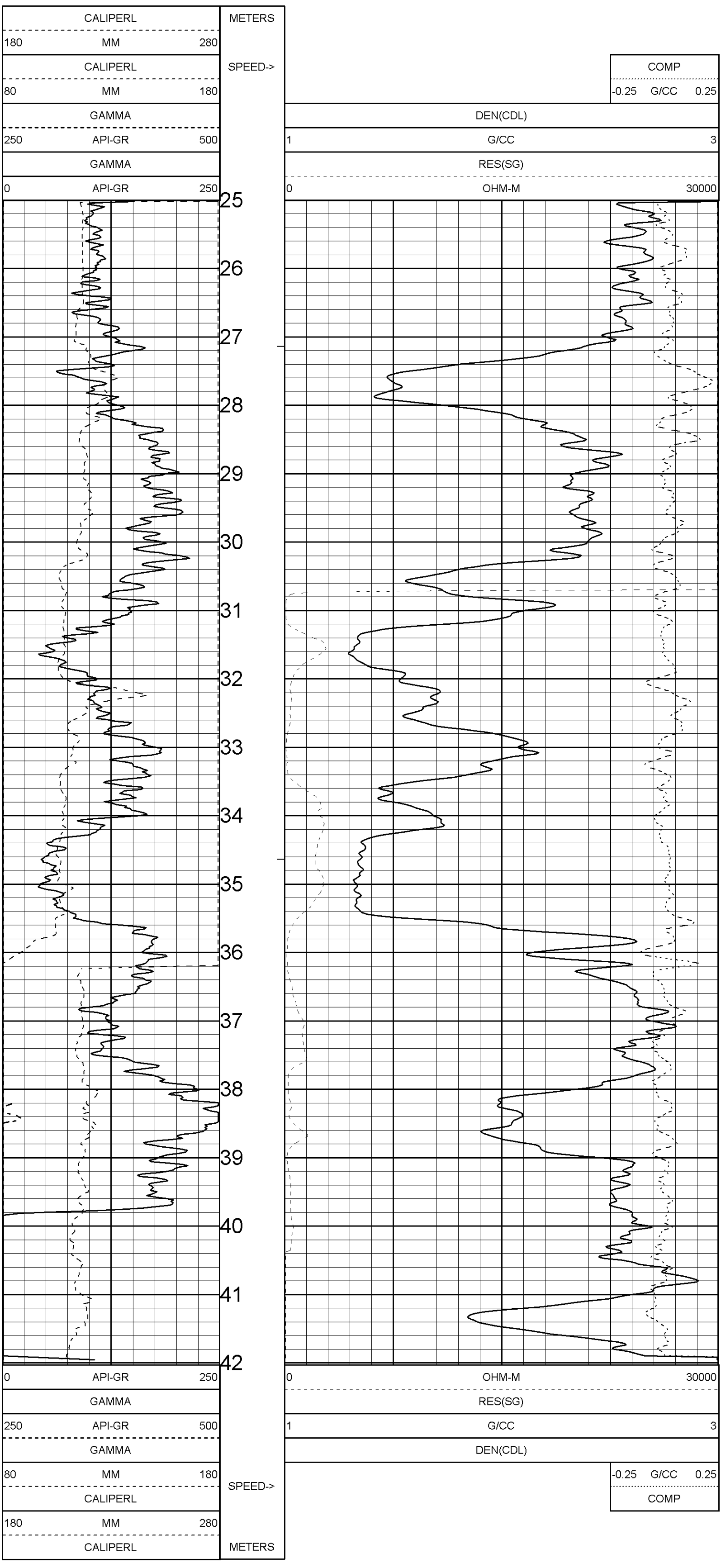
ELEVATION KB :N/A
ELEVATION DF :N/A
ELEVATION GL :N/A

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 25M-42M HB08-8-A 10/07/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25M-42M HB08-8-A 10/07/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008 VERSION = 3.64EK

TOOL CALIBRATION HB08-8-A 10/07/08 17:01
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

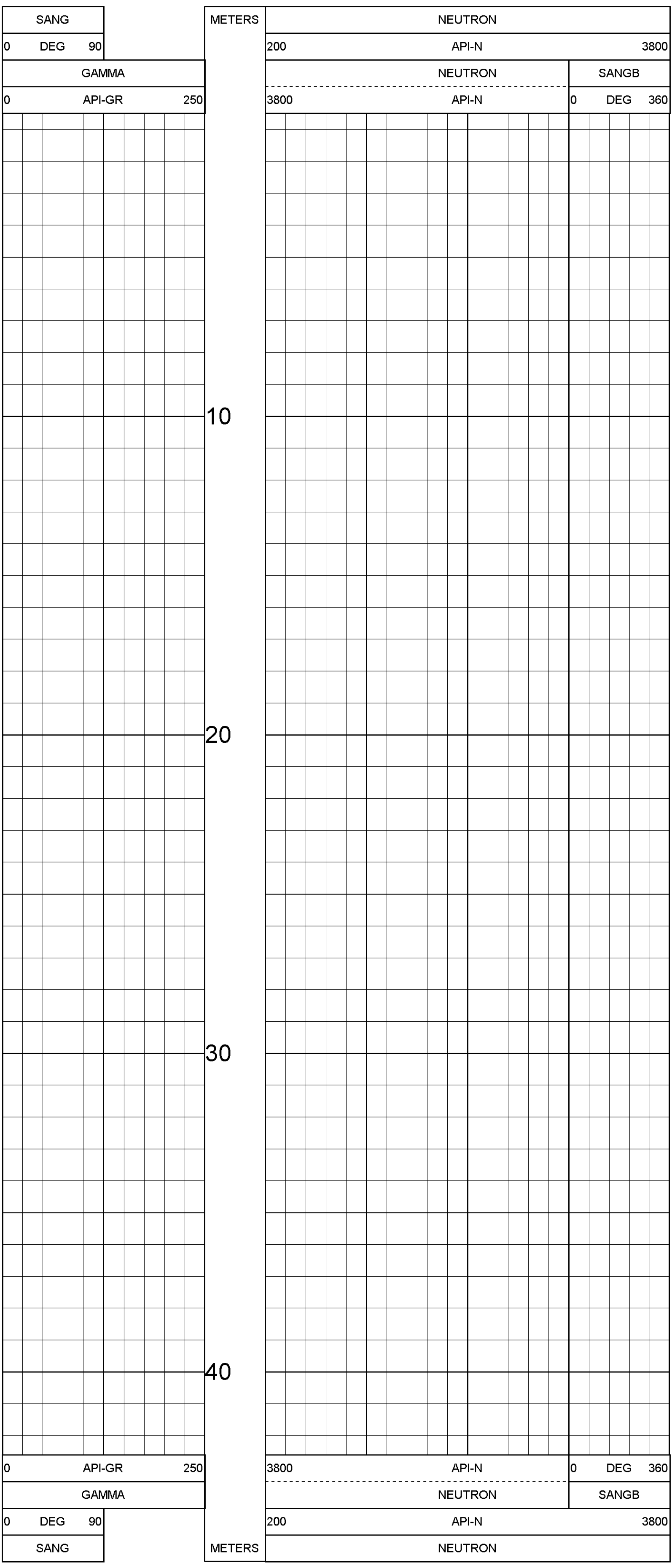
GAMMA - NEUTRON

HB08-8-A

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-8-A
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:
PERMANENT DATUM	:G.L. ELEVATION KB :N/A
LOG MEASURED FROM	:G.L. ELEVATION DF :N/A
DRL MEASURED FROM	:G.L. ELEVATION GL :N/A
DATE	:10/07/08
DEPTH DRILLER	:41.75M
BIT SIZE	:20.3
LOG TOP	:0.47
LOG BOTTOM	:42.55
CASING LOGGER	:4.1M
CASING DRILLER	:4.1M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL WELL
REMARKS 2	:

OTHER SERVICES: DEN

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



1:100 NEUTRON HB08-8-A 10/07/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 20.3
PRESENTATION NAME/DATE = 9057c.0 08/07/2008		VERSION = 3.64EK

1:100 NEUTRON HB08-8-A 10/07/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 20.3
PRESENTATION NAME/DATE = 9057c.0 08/07/2008		VERSION = 3.64EK

TOOL CALIBRATION HB08-8-A 10/07/08 16:45
TOOL 9057A TM VERSION 2
SERIAL NUMBER 4430

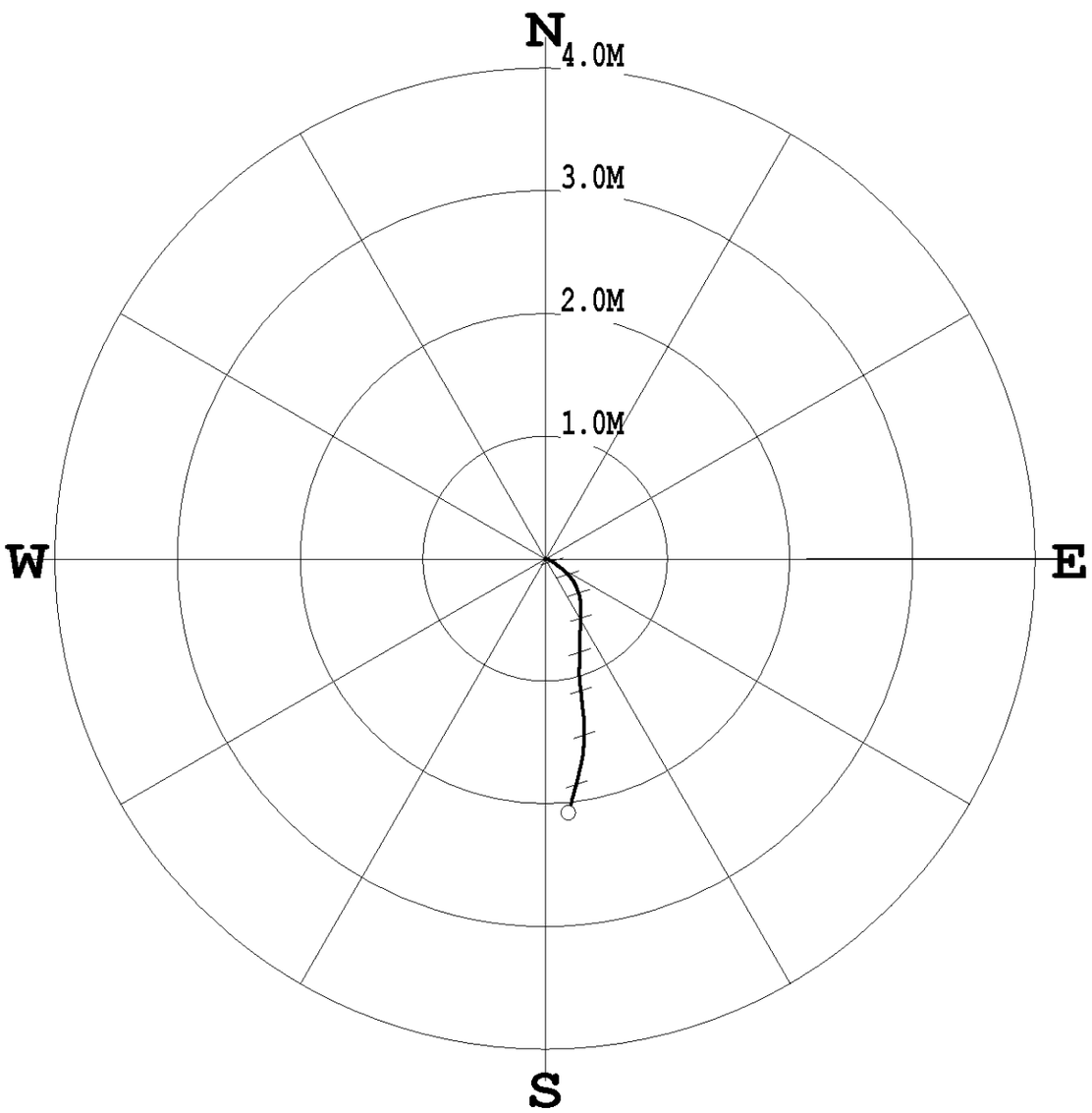
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:32:12	GAMMA	0.000	[API-GR]	10.00	[CPS]
	Oct05,08	13:32:12	GAMMA	311.000	[API-GR]	345.00	[CPS]
2	Sep29,08	16:02:03	NEUTROI	Default	[CPS]	Default	[CPS]
	Sep29,08	16:02:03	NEUTRC	271.000	[API-N]	99.00	[CPS]
3	Sep27,08	12:12:10	SP	0.000	[MV]	325650.00	[CPS]
	Sep27,08	12:12:10	SP	97.000	[MV]	277560.00	[CPS]
4	Sep27,08	12:12:22	RES(16N)	0.000	[OHM-M]	3891.00	[CPS]
	Sep27,08	12:12:22	RES(16I	1996.000	[OHM-M]	421780.00	[CPS]
5	Sep27,08	12:12:31	RES(64N)	0.000	[OHM-M]	3323.00	[CPS]
	Sep27,08	12:12:31	RES(64I	1990.000	[OHM-M]	426302.00	[CPS]
6	Sep27,08	12:12:36	TEMP	64.400	[DEG F]	353843.00	[CPS]
	Sep27,08	12:12:36	TEMP	120.400	[DEG F]	396875.00	[CPS]
7	Sep27,08	12:12:47	RES	0.000	[OHM]	4437.00	[CPS]
	Sep27,08	12:12:47	RES	989.000	[OHM]	162985.00	[CPS]

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-8-A
DATE OF LOG: 10/07/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 42.32 M
AZIMUTH: 174.8
DISTANCE: 2.1 M
+ = 5 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-08-1A
DATE OF LOG : 10/07/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-08-1A_10-07-08_16-45_9057A_.02_0.47_42.55_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.01	-0.13	0.18	0.2	124.5	2.1	141.7
12.00	12.01	-0.18	0.23	0.3	128.2	1.9	150.3
14.00	14.00	-0.24	0.26	0.4	133.2	2.3	162.4
16.00	16.00	-0.31	0.28	0.4	138.1	2.1	168.8
18.00	18.00	-0.39	0.29	0.5	143.5	2.5	179.4
20.00	20.00	-0.48	0.29	0.6	149.1	2.7	182.0
22.00	22.00	-0.58	0.28	0.6	154.0	3.0	184.0
24.00	23.99	-0.70	0.28	0.8	158.2	3.5	179.1
26.00	25.99	-0.81	0.28	0.9	161.2	3.0	186.1
28.00	27.99	-0.93	0.27	1.0	163.6	3.9	182.1
30.00	29.98	-1.07	0.29	1.1	165.0	4.1	174.0
32.00	31.98	-1.22	0.30	1.3	166.0	4.1	174.2
34.00	33.97	-1.36	0.32	1.4	166.9	3.8	181.2
36.00	35.97	-1.50	0.31	1.5	168.2	4.6	189.1
38.00	37.96	-1.66	0.29	1.7	170.0	4.8	193.8
40.00	39.95	-1.83	0.25	1.8	172.2	5.3	196.4
42.00	41.94	-2.03	0.20	2.0	174.4	6.6	184.7
42.38	42.32	-2.07	0.19	2.1	174.8	6.8	193.3

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HB08-8-B

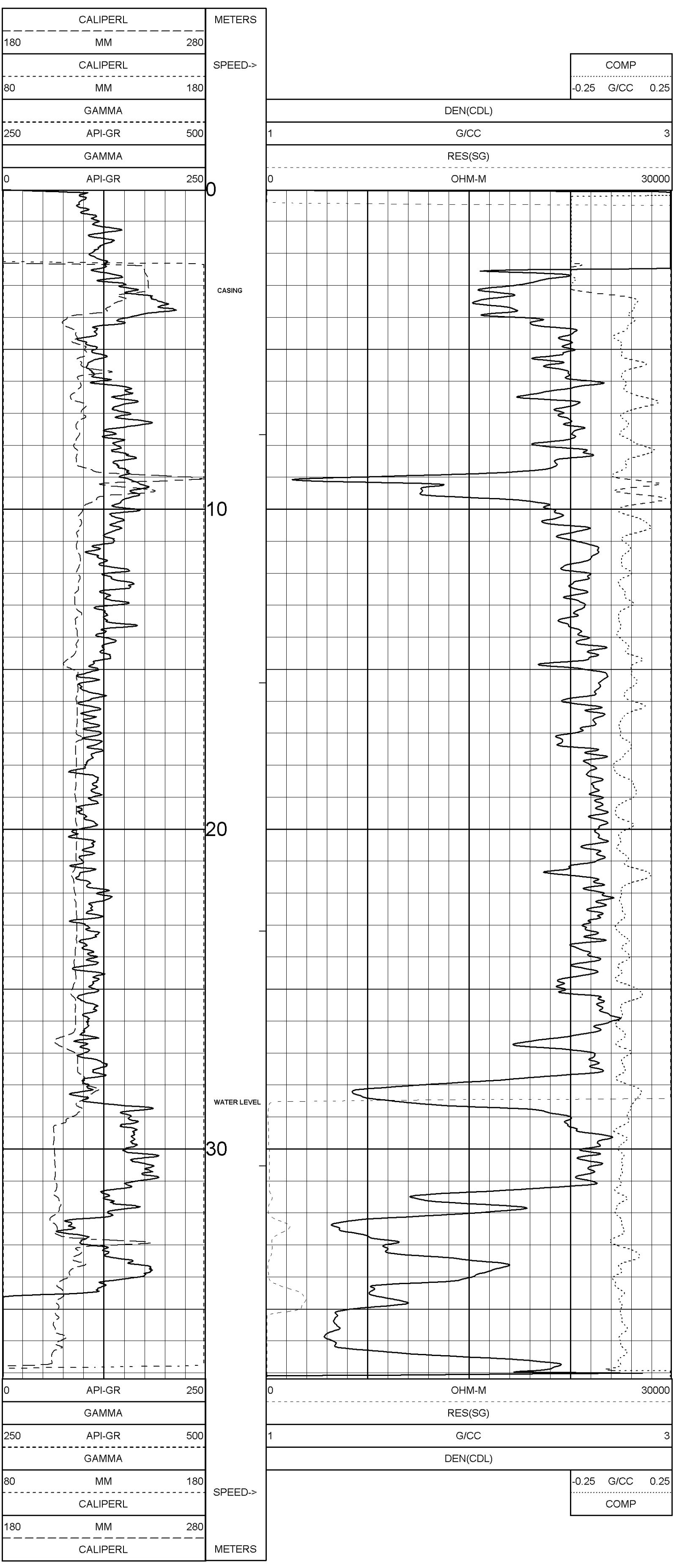
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HB08-8-B	OTHER SERVICES:	
FIELD	:HUGUENOT	NEU	
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/10/08		
DEPTH DRILLER	:39.60M		
BIT SIZE	:202MM		
LOG TOP	:0.01		
LOG BOTTOM	:37.15		
CASING LOGGER	:4.1M		
CASING DRILLER	:4.1M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 DENSITY HB08-8-B 10/10/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK



1:100 DENSITY HB08-8-B 10/10/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK

TOOL CALIBRATION HB08-8-B 10/10/08 17:43
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Centurion WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HB08-8-B

COMPANY	COLONIAL COAL CORPORATION
WELL	HB08-8-B
FIELD	HUGUENOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	
TOWNSHIP	HUGUENOT
RANGE	
LICENCE NO.	
UNIQUE WELL ID	
LOG MEASURED FROM	G.L.
DRILLING MEASURED FROM	G.L.
DATE	10/10/08
DEPTH DRILLER	39.60M
BIT SIZE	20.30
LOG TOP	0.01
LOG BOTTOM	37.15
CASING LOGGER	4.1M
CASING DRILLER	4.1M
CASING TYPE	STEEL
BOR.HOLE FLUID	H2O
RM TEMPERATURE	N/A
MUD RES	2.0
MUD WEIGHT	1.01
WITNESSED BY	D. LUCAS
RECORDED BY	R. RACZ
REMARKS 1	VERTICAL WELL
REMARKS 2	

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

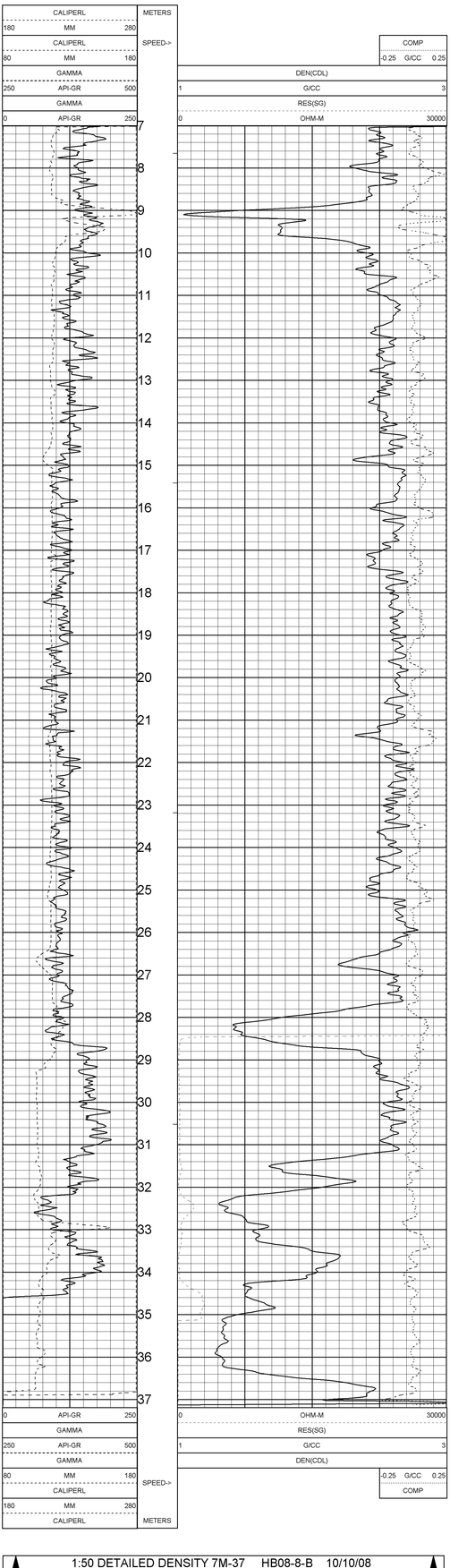
OTHER SERVICES: NEU

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 7M-37 HB08-8-B 10/10/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 7M-37 HB08-8-B 10/10/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008 VERSION = 3.64EK

TOOL CALIBRATION HB08-8-B 10/10/08 17:43
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	285.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Centrum WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HB08-8-B

COMPANY	COLONIAL COAL CORPORATION
WELL	HB08-8-B
FIELD	HUGHERIOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	HUGHERIOT
TOWNSHIP	
RANGE	
LICENCE NO	
UNIQUE WELL ID	
LOG MEASURED FROM	G.L.
DRILLING MEASURED FROM	G.L.
DATE	10/10/08
DEPTH DRILLER	39.60M
BIT SIZE	202MM
LOG TOP	0.01
LOG BOTTOM	37.15
CASING LOGGER	4.1M
CASING TYPE	STEEL
CASING WEIGHT	H20
BOREHOLE FLUID	
RM TEMPERATURE	N/A
MUD RES	2.0
MUD WEIGHT	1.01
WITNESSED BY	D. LUCAS
RECORDED BY	R. RACZ
REMARKS 1	VERTICAL WELL
REMARKS 2	

OTHER SERVICES: NEU

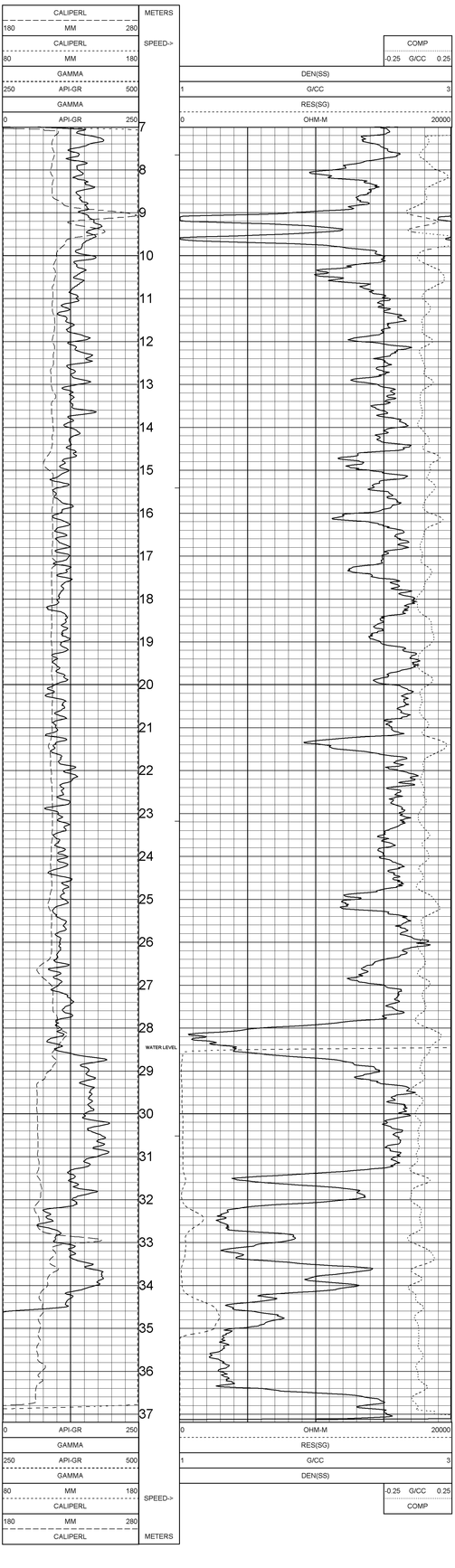
ELEVATION KB N/A
ELEVATION DF N/A
ELEVATION GL N/A

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 7m to 37m HB08-8-B 10/10/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = CASING 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 7m to 37m HB08-8-B 10/10/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 202MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

TOOL CALIBRATION HB08-8-B 10/10/08 17:43
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

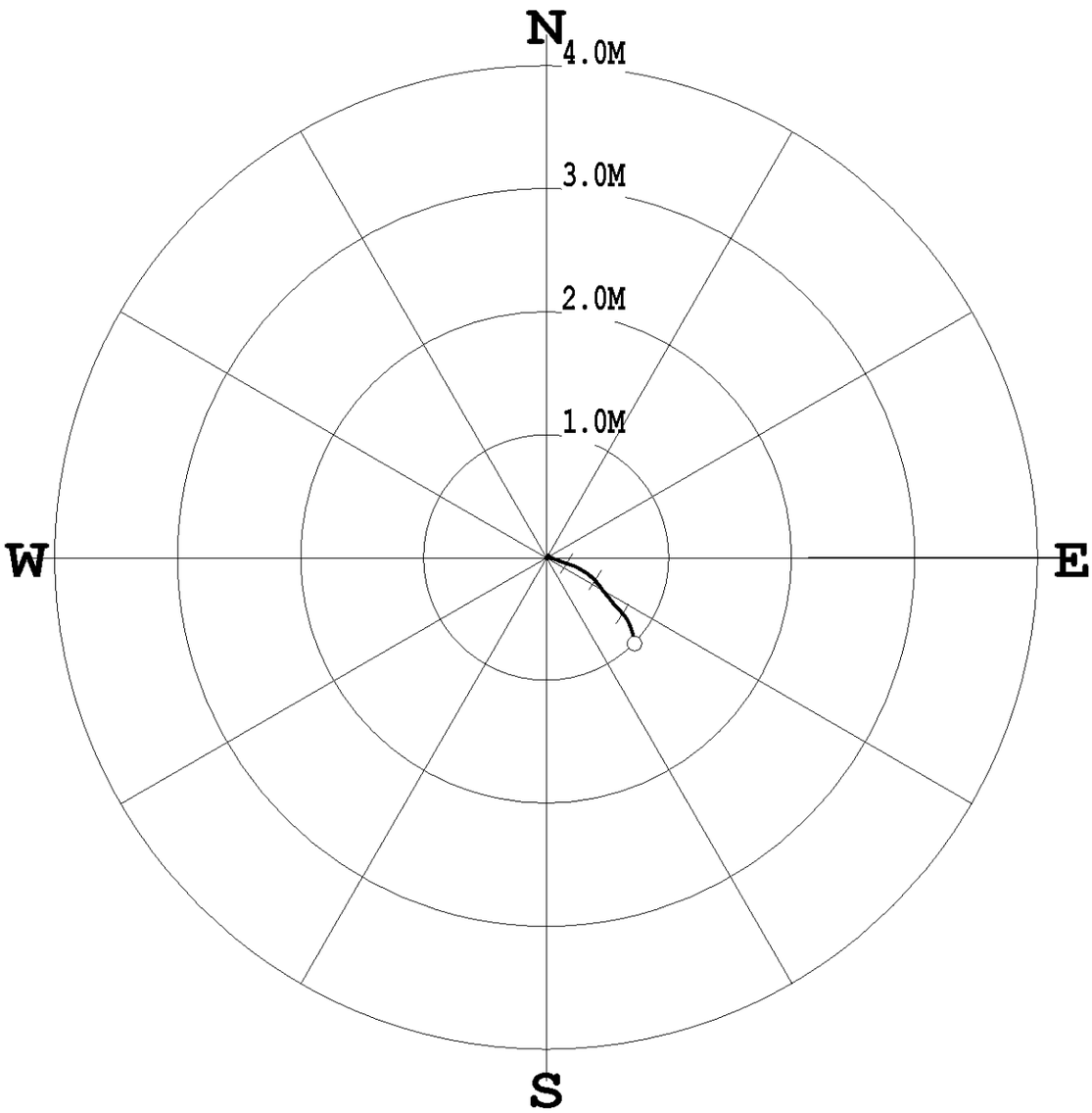
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	285.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HB08-8-B
DATE OF LOG: 10/10/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 36.99 M
AZIMUTH: 134.3
DISTANCE: 1.0 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HB08-08-1B
DATE OF LOG : 10/10/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HB08-08-1B_10-10-08_17-28_9057A_.02_-0.21_37.17_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
8.00	8.01	-0.03	0.11	0.1	104.2	1.7	108.5
10.00	10.01	-0.05	0.16	0.2	105.6	2.0	102.3
12.00	12.01	-0.06	0.22	0.2	106.2	1.4	101.8
14.00	14.01	-0.09	0.26	0.3	108.1	1.9	124.5
16.00	16.00	-0.12	0.32	0.3	110.4	1.5	123.1
18.00	18.00	-0.15	0.36	0.4	112.6	1.6	135.6
20.00	20.00	-0.18	0.39	0.4	115.0	1.3	128.7
22.00	22.00	-0.23	0.43	0.5	117.7	1.7	143.9
24.00	24.00	-0.28	0.47	0.5	120.8	2.1	142.3
26.00	26.00	-0.34	0.52	0.6	123.1	1.5	143.6
28.00	28.00	-0.39	0.57	0.7	124.9	2.6	135.6
30.00	30.00	-0.45	0.62	0.8	126.3	2.5	149.3
32.00	31.99	-0.52	0.66	0.8	127.9	2.0	150.2
34.00	33.99	-0.58	0.69	0.9	130.2	2.2	158.5
36.00	35.99	-0.66	0.71	1.0	133.0	2.5	168.2
37.00	36.99	-0.70	0.72	1.0	134.3	2.4	169.3

Century WIRELINE SERVICES

GAMMA - NEUTRON

HB08-8-B

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HB08-8-B
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

OTHER SERVICES:
DEN

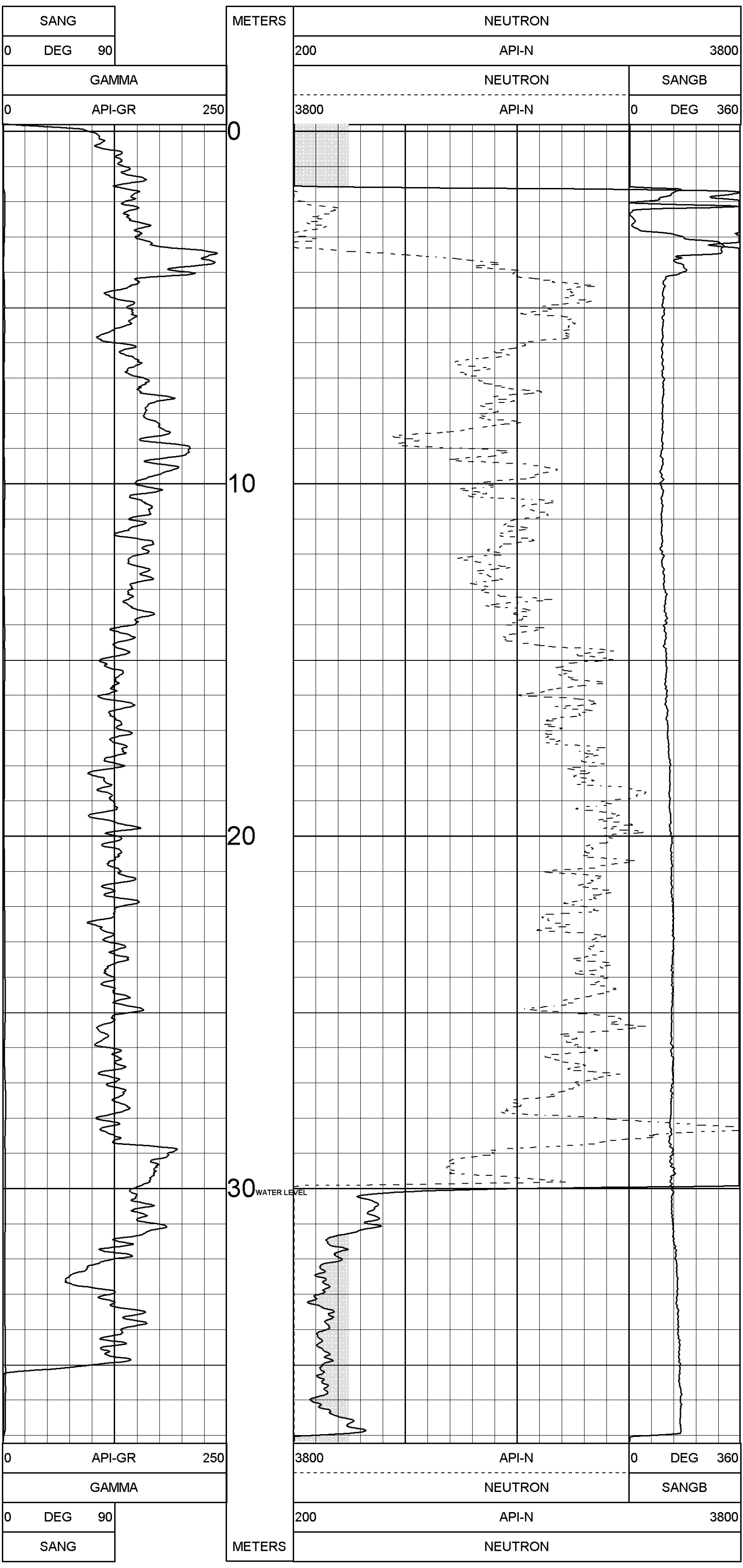
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/10/08		
DEPTH DRILLER	:39.60M		
BIT SIZE	:20.30		
LOG TOP	:-0.21		
LOG BOTTOM	:37.17		
CASING LOGGER	:3.3M		
CASING DRILLER	:3.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 NEUTRON HB08-8-B 10/10/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9057A.0 10/05/2008 VERSION = 3.64EK



1:100 NEUTRON HB08-8-B 10/10/08

LOG PARAMETERS

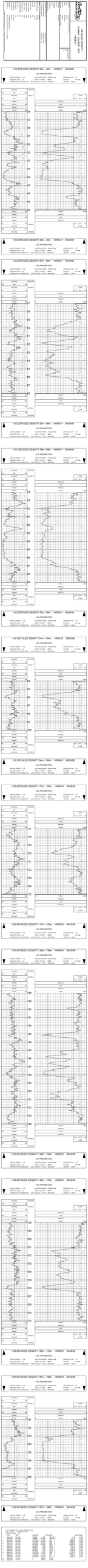
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 20.30
PRESENTATION NAME/DATE = 9057A.0 10/05/2008 VERSION = 3.64EK

TOOL CALIBRATION HB08-8-B 10/10/08 17:28
TOOL 9057A TM VERSION 2
SERIAL NUMBER 4430

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:32:12	GAMMA	0.000	[API-GR]	10.00	[CPS]
	Oct05,08	13:32:12	GAMMA	311.000	[API-GR]	345.00	[CPS]
2	Sep29,08	16:02:03	NEUTROI	Default	[CPS]	Default	[CPS]
	Sep29,08	16:02:03	NEUTRC	271.000	[API-N]	99.00	[CPS]
3	Sep27,08	12:12:10	SP	0.000	[MV]	325650.00	[CPS]
	Sep27,08	12:12:10	SP	97.000	[MV]	277560.00	[CPS]
4	Sep27,08	12:12:22	RES(16N)	0.000	[OHM-M]	3891.00	[CPS]
	Sep27,08	12:12:22	RES(16N	1996.000	[OHM-M]	421780.00	[CPS]
5	Sep27,08	12:12:31	RES(64N)	0.000	[OHM-M]	3323.00	[CPS]
	Sep27,08	12:12:31	RES(64N	1990.000	[OHM-M]	426302.00	[CPS]
6	Sep27,08	12:12:36	TEMP	64.400	[DEG F]	353843.00	[CPS]
	Sep27,08	12:12:36	TEMP	120.400	[DEG F]	396875.00	[CPS]
7	Sep27,08	12:12:47	RES	0.000	[OHM]	4437.00	[CPS]
	Sep27,08	12:12:47	RES	989.000	[OHM]	162985.00	[CPS]

COMPENSATED DENSITY GAMMA HR08-01 RES.

Company	Baitshiy Resources
Well	HR08-01
Field	Hornepayne
Province	Ontario
Country	Canada
Date	09/30/08
Time	09:00
Operator	Bob Bell
Logging Co.	Baitshiy Resources
Log Type	Density
Log Run	1
Log Interval	0 - 180
Log Scale	1:100
Log Direction	Down
Tool Type	Density
Tool Serial	2
Tool Length	1.5
Tool Diameter	3.5
Tool Weight	15
Tool Position	Eccentered
Tool Pad	Pad
Tool Pad Length	0.5
Tool Pad Width	0.5
Tool Pad Area	0.25
Tool Pad Pressure	0.5
Tool Pad Force	0.5
Tool Pad Angle	0
Tool Pad Offset	0
Tool Pad Material	Steel
Tool Pad Hardness	55
Tool Pad Wear	0
Tool Pad Condition	Good
Tool Pad Replacement	No
Tool Pad Cleaning	Yes
Tool Pad Lubrication	No
Tool Pad Temperature



1.50 DETAILED DENSITY 34m - 45m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 45m - 56m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 56m - 67m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 67m - 68m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 78m - 89m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 89m - 90m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 94m - 100m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 94m - 102m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 111m - 123m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 117m - 125m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 135m - 154m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 154m - 154m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 155m - 170m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 169m - 170m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 170m - 186m HR08-01 09/30/08

LOG PARAMETERS

1.50 DETAILED DENSITY 181m - 187m HR08-01 09/30/08

LOG PARAMETERS

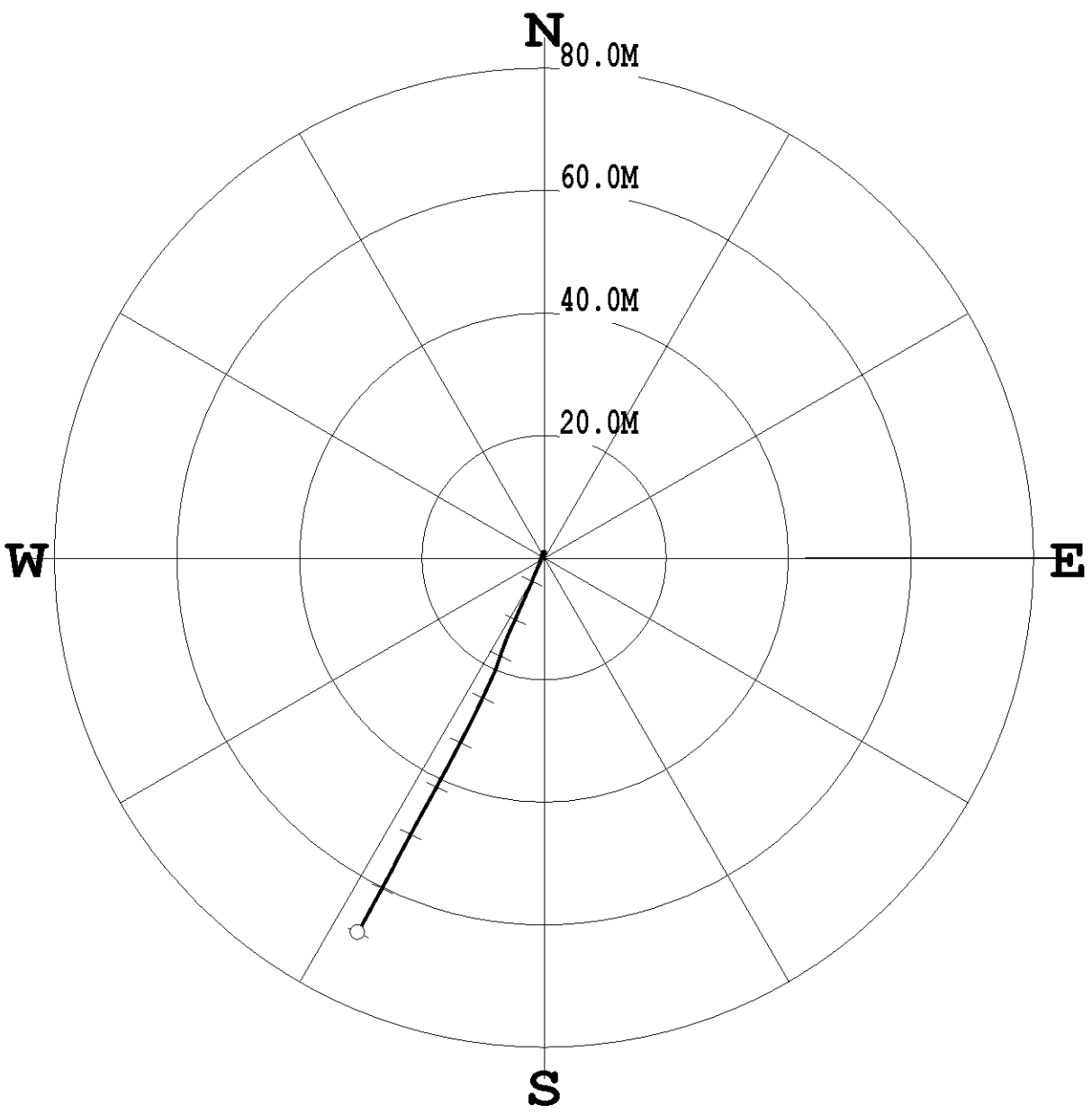
THIS ALBERTA'S ORIGINAL PRODUCER OF
WELL LOGS SINCE 1979
WWW.ALBERTAWELLLOGS.COM

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-01
DATE OF LOG: 09/30/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 10 M/CM
TRUE DEPTH: 175.03 M
AZIMUTH: 206.5
DISTANCE: 68.3 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



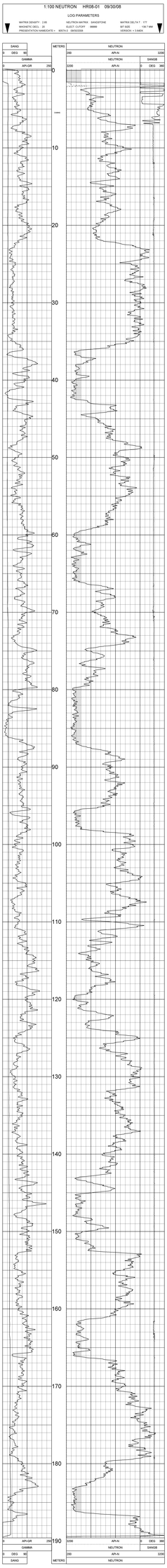
* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : COLONIAL COAL CORPO HOLE ID. : HR08-01
FIELD OFFICE : CENTURY DATE OF LOG : 09/30/08
DATA FROM : PROBE : 9057A , 4430
MAG. DECL. : 20.000 DEPTH UNITS : METERS
LOG: HR08-01_09-30-08_08-35_9057A_.02_-0.19_189.53_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
2.00	1.98	0.15	0.02	0.2	7.8	21.2	357.4
4.00	3.85	0.82	0.08	0.8	5.8	21.0	25.6
6.00	5.71	1.00	-0.34	1.1	341.1	21.1	258.6
8.00	7.59	0.54	-0.44	0.7	320.9	20.3	188.0
10.00	9.46	-0.14	-0.61	0.6	256.9	21.2	195.0
12.00	11.32	-0.82	-0.79	1.1	223.7	20.2	170.5
14.00	13.19	-1.49	-1.07	1.8	215.8	21.0	203.9
16.00	15.06	-2.14	-1.35	2.5	212.2	20.6	202.7
18.00	16.93	-2.77	-1.63	3.2	210.5	19.9	205.2
20.00	18.81	-3.39	-1.90	3.9	209.2	19.4	201.1
22.00	20.69	-4.02	-2.12	4.5	207.8	20.5	207.1
24.00	22.57	-4.65	-2.40	5.2	207.3	19.7	203.7
26.00	24.46	-5.26	-2.67	5.9	206.9	19.4	203.6
28.00	26.34	-5.87	-2.94	6.6	206.6	19.2	203.9
30.00	28.23	-6.46	-3.20	7.2	206.4	18.7	204.9
32.00	30.13	-7.04	-3.46	7.8	206.2	18.3	204.2
34.00	32.03	-7.61	-3.72	8.5	206.0	18.2	202.3
36.00	33.93	-8.19	-3.97	9.1	205.9	18.6	204.3
38.00	35.83	-8.76	-4.22	9.7	205.7	18.3	203.4
40.00	37.72	-9.34	-4.48	10.4	205.6	18.5	203.5
42.00	39.62	-9.92	-4.74	11.0	205.5	18.5	203.3
44.00	41.51	-10.51	-5.00	11.6	205.5	18.7	204.8
46.00	43.41	-11.08	-5.26	12.3	205.4	18.4	205.0
48.00	45.31	-11.65	-5.53	12.9	205.4	18.2	205.1
50.00	47.21	-12.21	-5.80	13.5	205.4	17.7	221.8
52.00	49.12	-12.75	-6.04	14.1	205.3	17.8	197.6
54.00	51.03	-13.32	-6.25	14.7	205.1	17.3	200.2
56.00	52.94	-13.88	-6.45	15.3	204.9	17.1	200.7
58.00	54.85	-14.43	-6.65	15.9	204.8	17.3	199.5
60.00	56.75	-15.00	-6.86	16.5	204.6	17.6	199.9
62.00	58.66	-15.58	-7.07	17.1	204.4	18.0	199.6
64.00	60.56	-16.17	-7.27	17.7	204.2	18.4	198.6
66.00	62.45	-16.77	-7.47	18.4	204.0	19.2	199.5
68.00	64.34	-17.39	-7.69	19.0	203.9	19.2	199.7
70.00	66.23	-18.00	-7.90	19.7	203.7	19.5	184.4
72.00	68.10	-18.64	-8.16	20.3	203.6	21.1	205.1
74.00	69.98	-19.28	-8.45	21.0	203.7	20.5	205.0
76.00	71.85	-19.92	-8.75	21.8	203.7	20.8	199.0
78.00	73.72	-20.56	-9.04	22.5	203.7	21.0	204.2
80.00	75.58	-21.22	-9.35	23.2	203.8	21.3	205.0
82.00	77.45	-21.88	-9.65	23.9	203.8	21.6	203.6
84.00	79.30	-22.55	-9.96	24.7	203.8	21.8	204.8
86.00	81.16	-23.23	-10.27	25.4	203.9	22.2	206.6
88.00	83.01	-23.91	-10.60	26.2	203.9	22.3	206.2
90.00	84.86	-24.59	-10.94	26.9	204.0	22.0	206.0
92.00	86.72	-25.26	-11.26	27.7	204.0	21.9	206.3
94.00	88.57	-25.93	-11.59	28.4	204.1	21.6	208.2
96.00	90.42	-26.61	-11.93	29.2	204.2	22.5	206.9
98.00	92.27	-27.30	-12.27	29.9	204.2	22.9	206.5
100.00	94.11	-27.99	-12.62	30.7	204.3	22.4	206.7
102.00	95.96	-28.67	-12.98	31.5	204.4	22.5	207.3
104.00	97.81	-29.34	-13.33	32.2	204.4	22.2	207.3
106.00	99.66	-30.01	-13.67	33.0	204.5	22.0	208.8
108.00	101.52	-30.67	-14.02	33.7	204.6	22.0	210.1
110.00	103.38	-31.32	-14.37	34.5	204.6	21.9	208.6
112.00	105.23	-31.98	-14.72	35.2	204.7	21.7	207.8
114.00	107.09	-32.63	-15.06	35.9	204.8	21.8	207.6
116.00	108.95	-33.29	-15.41	36.7	204.8	22.4	209.3
118.00	110.80	-33.97	-15.76	37.4	204.9	22.3	207.0
120.00	112.65	-34.64	-16.12	38.2	205.0	22.9	209.0
122.00	114.49	-35.33	-16.49	39.0	205.0	23.3	207.6
124.00	116.33	-36.02	-16.87	39.8	205.1	23.1	208.2
126.00	118.16	-36.71	-17.25	40.6	205.2	23.0	208.2
128.00	120.00	-37.40	-17.62	41.3	205.2	23.0	207.4
130.00	121.84	-38.09	-18.00	42.1	205.3	23.0	209.0
132.00	123.68	-38.77	-18.37	42.9	205.4	23.2	209.0
134.00	125.52	-39.47	-18.76	43.7	205.4	23.6	210.4
136.00	127.35	-40.16	-19.15	44.5	205.5	23.3	209.0
138.00	129.19	-40.85	-19.53	45.3	205.6	23.2	209.4
140.00	131.03	-41.54	-19.91	46.1	205.6	23.3	209.4
142.00	132.87	-42.24	-20.29	46.9	205.7	23.4	207.4
144.00	134.70	-42.94	-20.68	47.7	205.7	24.1	207.5
146.00	136.52	-43.67	-21.07	48.5	205.8	24.4	207.6
148.00	138.33	-44.41	-21.47	49.3	205.8	25.5	208.0
150.00	140.14	-45.17	-21.87	50.2	205.8	25.8	208.1
152.00	141.94	-45.94	-22.29	51.1	205.9	26.2	208.7
154.00	143.73	-46.71	-22.71	51.9	205.9	25.9	208.3
156.00	145.53	-47.48	-23.12	52.8	206.0	25.9	208.6
158.00	147.33	-48.25	-23.53	53.7	206.0	25.7	208.0
160.00	149.13	-49.02	-23.93	54.6	206.0	25.7	208.1
162.00	150.93	-49.79	-24.33	55.4	206.0	26.1	208.3
164.00	152.73	-50.56	-24.68	56.3	206.0	27.5	197.8
166.00	154.50	-51.37	-25.12	57.2	206.1	27.7	207.5
168.00	156.27	-52.19	-25.58	58.1	206.1	28.0	208.8
170.00	158.03	-53.01	-26.03	59.1	206.2	27.9	208.7
172.00	159.80	-53.83	-26.48	60.0	206.2	27.7	208.6
174.00	161.58	-54.64	-26.91	60.9	206.2	27.3	208.5
176.00	163.35	-55.45	-27.35	61.8	206.3	27.0	208.7
178.00	165.13	-56.26	-27.79	62.8	206.3	27.1	208.3
180.00	166.90	-57.07	-28.23	63.7	206.3	28.4	209.7
182.00	168.66	-57.91	-28.69	64.6	206.4	29.4	207.2
184.00	170.40	-58.78	-29.16	65.6	206.4	29.8	208.7
186.00	172.13	-59.65	-29.65	66.6	206.4	30.3	208.5
188.00	173.85	-60.53	-30.14	67.6	206.5	29.9	210.4
189.36	175.03	-61.12	-30.48	68.3	206.5	29.8	209.7

Company:	Geotech Maritime Services
Vessel:	Geotech Maritime Services
Project:	Geotech Maritime Services
Location:	Geotech Maritime Services
Well:	HR08-01
Date:	09/30/08
Time:	09:30:00
Operator:	Geotech Maritime Services
Comments:	

GAMMA - NEUTRON
HR08-01



1:100 NEUTRON HR08-01 09/30/08
LOG PARAMETERS
MATRIX DENSITY : 2.65
MAGNETIC DECL : 20
PRESENTATION NAME/DATE + : MOTA 2 09/30/2008
NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999
MATRIX DELTA-T : 177
BIT SIZE : 7.88 / MM
VERSION : V 3.MAX

TOOL CALIBRATION HR08-01 09/30/08 08:35
TOOL: 9001A TM VERSION 2
TOOL SERIAL NUMBER: 9300

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Sep29,08	16:01:40	GAMMA	0.000	API-GR	0.00	[CPS]
2	Sep29,08	16:01:40	GAMMA	131.000	API-GR	330.00	[CPS]
3	Sep29,08	16:02:03	NEUTRON	Default	[CPS]	Default	[CPS]
4	Sep29,08	16:02:03	NEUTRON	1000.000	[CPS]	1000.00	[CPS]
5	Sep27,08	13:10:10	SP	0.000	MV	339680.00	[CPS]
6	Sep27,08	13:12:10	SP	87.000	MV	277590.00	[CPS]
7	Sep27,08	13:12:22	RES1W	0.000	OHMM	0.00	[CPS]
8	Sep27,08	13:12:22	RES1W	1996.000	OHMM	4217180.00	[CPS]
9	Sep27,08	13:12:31	RES3MN	0.000	OHMM	3323.00	[CPS]
10	Sep27,08	13:12:31	RES3MN	1996.000	OHMM	4217180.00	[CPS]
11	Sep27,08	13:12:36	TEMP	164.400	DEG F	303640.00	[CPS]
12	Sep27,08	13:12:36	TEMP	120.400	DEG F	366275.00	[CPS]
13	Sep27,08	13:12:47	RES	0.000	OHM	16248.00	[CPS]
14	Sep27,08	13:12:47	RES	999.000	OHM	16248.00	[CPS]

Geology
WIRELINE SERVICES

DIPMETER
HR08-01

Company	Geology Wireline Services
Well	HR08-01
Field	
County	
State	
Country	
Date	10/04/08
Run No.	1
Depth Reference	KB
Elevation	
Log Measured From	KB
Drilling Measured From	KB
Permanent Datum	
Elevation	
Log Measured From	
Drilling Measured From

Company:	Cantera Resources
Well:	Gaman - HR08-02
Field:	Hedley
County:	Kootenay
State:	BC
Country:	Canada
API Number:	
Surface Location:	
Lat:	
Long:	
Elevation:	
Permanent Datum:	Ground Level
Log Measured From:	
Drilling Measured From:	
Date:	29-Sep-08
Run Number:	One
Depth Driller:	224.0 m
Depth Logger:	224.0 m
Bottom Log Interval:	224.0 m
Top Log Interval:	0.0 m
Casing Driller:	0.0 m @ 0.0 m
Casing Logger:	0.0 m
Bit Size:	0.0 mm
Type Fluid in Hole:	Air
Density:	
Viscosity:	
Max Rec Temp:	
Estimated Temp:	
Equipment:	1:100 BULK DENSITY
Recorded By:	
Witnessed By:	

COMPENSATED DENSITY
GAMMA - HR08-02
RES:

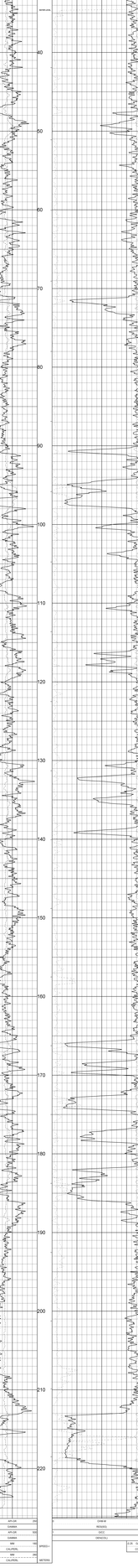
1:100 BULK DENSITY HR08-02 09/29/08

LOG PARAMETERS

MATRIX DENSITY: 2.65 NEUTRON MATRIX: SANDSTONE MATRIX DELTA T: 177
MAGNETIC DECL: 20 ELECT. OUTPUT: 00000 BIT SIZE: 114.3 MM
PASSPORTION AMBIGUITY: 0 SONIC 2: 3600/5300 DENSITY: 2.5400

CALIPER		METERS
100	MM	250
CALIPER		METERS
100	MM	250
GAMMA		
0	API UNI	500
GAMMA		
0	API UNI	500

COMP	
0.05	SACC 0.20
DENSITY	
1	SICC 3
RHOB	
2.0000 M	2500



0	API UNI	500
GAMMA		
0	API UNI	500
GAMMA		
0	API UNI	500
CALIPER		
100	MM	250
CALIPER		
100	MM	250
CALIPER		METERS

RHOB	
2.0000 M	2500
RHOB	
1	SICC 3
DENSITY	
1	SICC 3
DENSITY	
0.05	SACC 0.20
COMP	

1:100 BULK DENSITY HR08-02 09/29/08

LOG PARAMETERS

MATRIX DENSITY: 2.65 NEUTRON MATRIX: SANDSTONE MATRIX DELTA T: 177
MAGNETIC DECL: 20 ELECT. OUTPUT: 00000 BIT SIZE: 114.3 MM
PASSPORTION AMBIGUITY: 0 SONIC 2: 3600/5300 DENSITY: 2.5400

TOOL CALIBRATION: HR08-02/DR08-18 04
TOOL MODEL: 1:100 DENSITY 2.5 F
SERIAL NUMBER: 000

			SENSOR	STANDARD		RESPONSE
	Sep29-08	10:45:44	GAMMA	42.700	API UNI	0.00 [CPS]
	Sep29-08	10:45:44	CALIPER	100.000	MM	100.00 [CPS]
F	Sep29-08	10:45:44	CALIPER	100.000	MM	99.00 [CPS]
	Sep29-08	10:45:44	DENSITY	2.500	SICC 3	2.500 [CPS]
	Sep29-08	10:45:44	RHOB	2.500	SICC 3	2.500 [CPS]
F	Sep29-08	10:45:44	DENSITY	2.500	SICC 3	2.500 [CPS]
	Sep29-08	10:45:44	DENSITY	0.000	SACC 0.20	0.000 [CPS]
	Sep29-08	10:45:44	COMP	0.000	SACC 0.20	0.000 [CPS]
F	Sep29-08	10:45:44	CALIPER	100.000	MM	97.000 [CPS]
	Sep29-08	10:45:44	CALIPER	100.000	MM	97.000 [CPS]
	Sep29-08	10:45:44	GAMMA	42.700	API UNI	0.00 [CPS]
	Sep29-08	10:45:47	GAMMA	42.700	API UNI	0.00 [CPS]
	Sep29-08	10:45:47	2	Delta-R	[CPS]	2.000 [CPS]
	Sep29-08	10:45:47	3	Delta-R	[CPS]	2.000 [CPS]

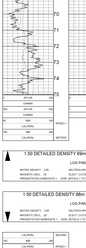
Company	Geotech
Well	HR06-02
Field	
County	
State	
Country	
Date	09/29/06
Time	
Operator	
Witness	
Comments	

DETAILED DENSITY
GAMMA - SPECTRAL
HR06-02

1:50 DETAILED DENSITY 75m to 75m HR06-02 09/29/06

LOG PARAMETERS

MATRIX DENSITY : 2.65		NEUTRON MATRIX : SANDSTONE		MATRIX DELTA T : 177	
MAGNETIC DECL : 20		SLEET CUTOFF : 0000		MT SIZE : 14 X 5 MM	
PRESSURE/TEMPERATURE :		SON DETALS 1 TO 10 : 9999/32768		SENSOR : 1 GAMA	


CALIBRATION
SPEED
CALIBRATION
SPEED
CALIBRATION
SPEED

Baker Hughes

Baker Atlas

Company: BHP BILLITON PETROLEUM (BERMUDA) LTD
Well: HR06-02
Field: BASS STRAIT
Country: AUSTRALIA
Date: 29-Sep-2006
Time: 09:00
Operator: ROBERTSON
Unit: 3
Logging Engineer: ROBERTSON
Witnessed By: BHP BILLITON

Comments: 1.50 DETAILED DENSITY 60m to 222m

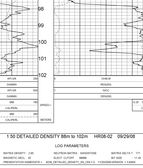
BHP BILLITON PETROLEUM (BERMUDA) LTD
DETAILED DENSITY
HR06-02

1.50 DETAILED DENSITY 60m to 75m HR06-02 09/29/06

LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_60_75LAS 7 / 0000000 ERRORS / 1 WARN

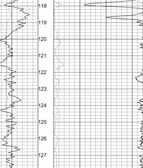
1.50 DETAILED DENSITY 75m to 90m HR06-02 09/29/06



LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_75_90LAS 7 / 0000000 ERRORS / 1 WARN

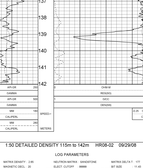
1.50 DETAILED DENSITY 88m to 102m HR06-02 09/29/06



LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_88_102LAS 7 / 0000000 ERRORS / 1 WARN

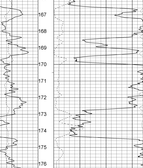
1.50 DETAILED DENSITY 99m to 102m HR06-02 09/29/06



LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_99_102LAS 7 / 0000000 ERRORS / 1 WARN

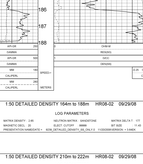
1.50 DETAILED DENSITY 110m to 142m HR06-02 09/29/06



LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_110_142LAS 7 / 0000000 ERRORS / 1 WARN

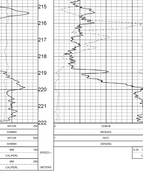
1.50 DETAILED DENSITY 164m to 186m HR06-02 09/29/06



LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_164_186LAS 7 / 0000000 ERRORS / 1 WARN

1.50 DETAILED DENSITY 186m to 222m HR06-02 09/29/06



LOG PARAMETERS

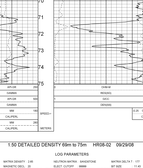
MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_186_222LAS 7 / 0000000 ERRORS / 1 WARN

1.50 DETAILED DENSITY 210m to 222m HR06-02 09/29/06

LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_210_222LAS 7 / 0000000 ERRORS / 1 WARN

1.50 DETAILED DENSITY 219m to 222m HR06-02 09/29/06



LOG PARAMETERS

MATRIX DENSITY: 2.65 MILLIPORE MATRIX: SANDSTONE MATRIX DELTA-T: 177
MAGNETIC DECL.: 20 SLIDST CUTOFF: 10000 MT MAS: 1.0 45
PRESENTATION NAMES/FILE: BOB_DETAILED_DENSITY_219_222LAS 7 / 0000000 ERRORS / 1 WARN

TOOL CALIBRATION - HARDSTRINGER 19.00
TOOL NAMES: DENSITY, GR
TOOL SERIALNUMBER: 0

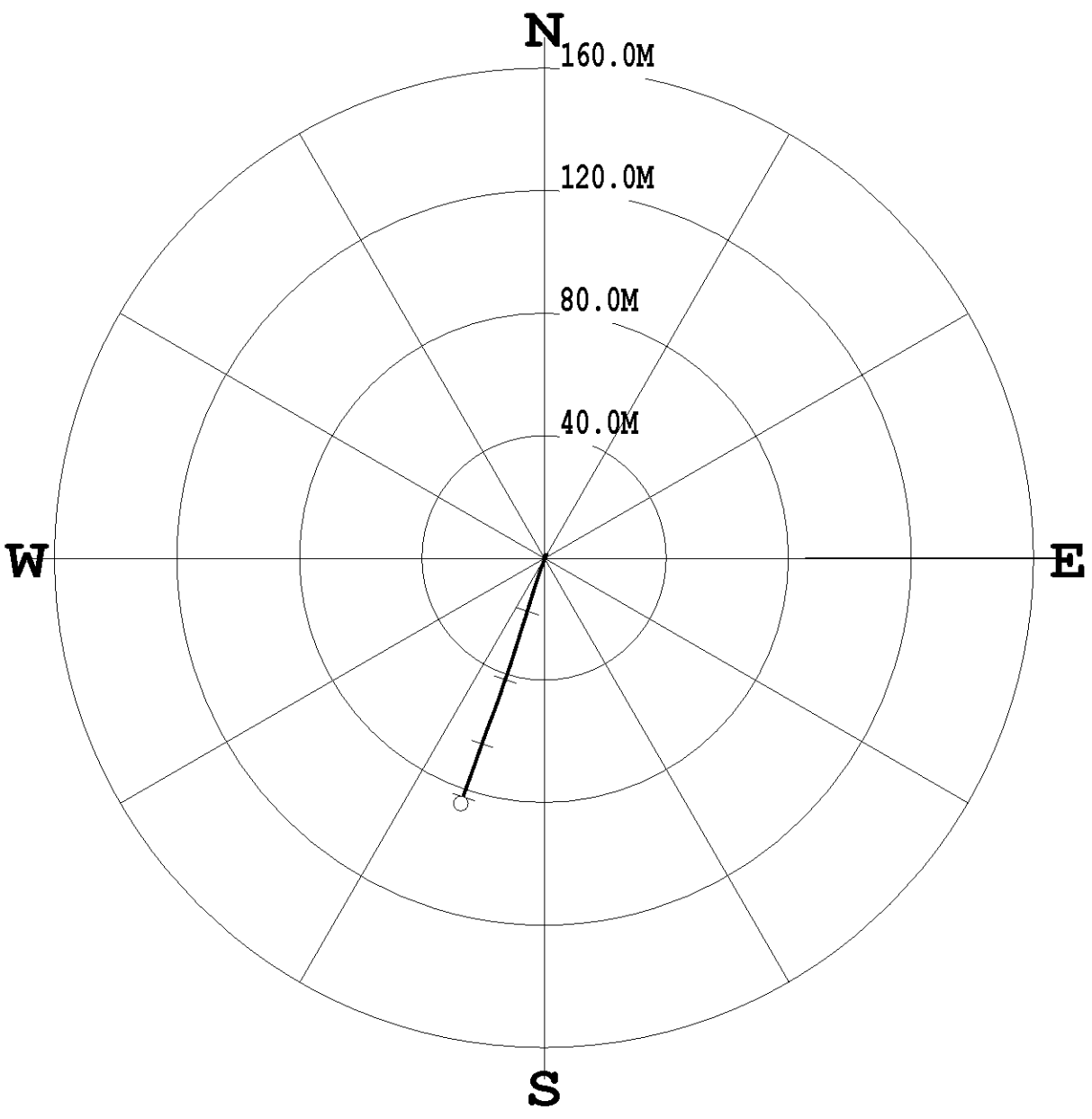
DATE	TIME	DEVICE	STATICVAL	RESPONSE
1 Sep/06	14:41:00	DENSITY	2.00 G/C3	2.00 G/C3
2 Sep/06	14:41:00	DENSITY	2.50 G/C3	2.50 G/C3
3 Sep/06	14:41:00	DENSITY	2.75 G/C3	2.75 G/C3
4 Sep/06	14:41:00	DENSITY	3.00 G/C3	3.00 G/C3
5 Sep/06	14:41:00	DENSITY	3.25 G/C3	3.25 G/C3
6 Sep/06	14:41:00	DENSITY	3.50 G/C3	3.50 G/C3
7 Sep/06	14:41:00	DENSITY	3.75 G/C3	3.75 G/C3
8 Sep/06	14:41:00	DENSITY	4.00 G/C3	4.00 G/C3
9 Sep/06	14:41:00	DENSITY	4.25 G/C3	4.25 G/C3
10 Sep/06	14:41:00	DENSITY	4.50 G/C3	4.50 G/C3
11 Sep/06	14:41:00	DENSITY	4.75 G/C3	4.75 G/C3
12 Sep/06	14:41:00	DENSITY	5.00 G/C3	5.00 G/C3
13 Sep/06	14:41:00	DENSITY	5.25 G/C3	5.25 G/C3
14 Sep/06	14:41:00	DENSITY	5.50 G/C3	5.50 G/C3
15 Sep/06	14:41:00	DENSITY	5.75 G/C3	5.75 G/C3
16 Sep/06	14:41:00	DENSITY	6.00 G/C3	6.00 G/C3
17 Sep/06	14:41:00	DENSITY	6.25 G/C3	6.25 G/C3
18 Sep/06	14:41:00	DENSITY	6.50 G/C3	6.50 G/C3
19 Sep/06	14:41:00	DENSITY	6.75 G/C3	6.75 G/C3
20 Sep/06	14:41:00	DENSITY	7.00 G/C3	7.00 G/C3
21 Sep/06	14:41:00	DENSITY	7.25 G/C3	7.25 G/C3
22 Sep/06	14:41:00	DENSITY	7.50 G/C3	7.50 G/C3
23 Sep/06	14:41:00	DENSITY	7.75 G/C3	7.75 G/C3
24 Sep/06	14:41:00	DENSITY	8.00 G/C3	8.00 G/C3
25 Sep/06	14:41:00	DENSITY	8.25 G/C3	8.25 G/C3
26 Sep/06	14:41:00	DENSITY	8.50 G/C3	8.50 G/C3
27 Sep/06	14:41:00	DENSITY	8.75 G/C3	8.75 G/C3
28 Sep/06	14:41:00	DENSITY	9.00 G/C3	9.00 G/C3
29 Sep/06	14:41:00	DENSITY	9.25 G/C3	9.25 G/C3
30 Sep/06	14:41:00	DENSITY	9.50 G/C3	9.50 G/C3
1 Jan/70	00:00:00	DENSITY	2.00 G/C3	2.00 G/C3
2 Jan/70	00:00:00	DENSITY	2.50 G/C3	2.50 G/C3
3 Jan/70	00:00:00	DENSITY	2.75 G/C3	2.75 G/C3
4 Jan/70	00:00:00	DENSITY	3.00 G/C3	3.00 G/C3
5 Jan/70	00:00:00	DENSITY	3.25 G/C3	3.25 G/C3
6 Jan/70	00:00:00	DENSITY	3.50 G/C3	3.50 G/C3
7 Jan/70	00:00:00	DENSITY	3.75 G/C3	3.75 G/C3
8 Jan/70	00:00:00	DENSITY	4.00 G/C3	4.00 G/C3
9 Jan/70	00:00:00	DENSITY	4.25 G/C3	4.25 G/C3
10 Jan/70	00:00:00	DENSITY	4.50 G/C3	4.50 G/C3
11 Jan/70	00:00:00	DENSITY	4.75 G/C3	4.75 G/C3
12 Jan/70	00:00:00	DENSITY	5.00 G/C3	5.00 G/C3
13 Jan/70	00:00:00	DENSITY	5.25 G/C3	5.25 G/C3
14 Jan/70	00:00:00	DENSITY	5.50 G/C3	5.50 G/C3
15 Jan/70	00:00:00	DENSITY	5.75 G/C3	5.75 G/C3
16 Jan/70	00:00:00	DENSITY	6.00 G/C3	6.00 G/C3
17 Jan/70	00:00:00	DENSITY	6.25 G/C3	6.25 G/C3
18 Jan/70	00:00:00	DENSITY	6.50 G/C3	6.50 G/C3
19 Jan/70	00:00:00	DENSITY	6.75 G/C3	6.75 G/C3
20 Jan/70	00:00:00	DENSITY	7.00 G/C3	7.00 G/C3
21 Jan/70	00:00:00	DENSITY	7.25 G/C3	7.25 G/C3
22 Jan/70	00:00:00	DENSITY	7.50 G/C3	7.50 G/C3
23 Jan/70	00:00:00	DENSITY	7.75 G/C3	7.75 G/C3
24 Jan/70	00:00:00	DENSITY	8.00 G/C3	8.00 G/C3
25 Jan/70	00:00:00	DENSITY	8.25 G/C3	8.25 G/C3
26 Jan/70	00:00:00	DENSITY	8.50 G/C3	8.50 G/C3
27 Jan/70	00:00:00	DENSITY	8.75 G/C3	8.75 G/C3
28 Jan/70	00:00:00	DENSITY	9.00 G/C3	9.00 G/C3
29 Jan/70	00:00:00	DENSITY	9.25 G/C3	9.25 G/C3
30 Jan/70	00:00:00	DENSITY	9.50 G/C3	9.50 G/C3

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-02
DATE OF LOG: 09/29/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 20 M/CM
TRUE DEPTH: 207.24 M
AZIMUTH: 198.7
DISTANCE: 84.7 M
+ = 50 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO HOLE ID. : HR08-02
FIELD OFFICE : CENTURY DATE OF LOG : 09/29/08
DATA FROM : PROBE : 9057A , 4430
MAG. DECL. : 20.000 DEPTH UNITS : METERS
LOG: HR08-02_09-29-08_16-02_9057A_.02_0.06_226.20_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	9.30	0.80	0.60	1.0	36.6	24.5	206.1
12.00	11.12	0.05	0.25	0.3	78.6	24.8	203.0
14.00	12.94	-0.72	-0.08	0.7	186.2	24.7	203.0
16.00	14.75	-1.49	-0.40	1.5	194.9	24.8	202.1
18.00	16.57	-2.27	-0.71	2.4	197.3	24.7	200.7
20.00	18.38	-3.06	-1.01	3.2	198.2	25.0	202.9
22.00	20.19	-3.85	-1.30	4.1	198.7	25.1	200.1
24.00	22.01	-4.62	-1.59	4.9	199.0	24.8	197.1
26.00	23.82	-5.39	-1.79	5.7	198.4	25.0	176.6
28.00	25.63	-6.20	-2.07	6.5	198.5	25.6	199.2
30.00	27.43	-7.02	-2.35	7.4	198.5	25.6	194.8
32.00	29.24	-7.83	-2.63	8.3	198.5	25.5	197.6
34.00	31.04	-8.65	-2.90	9.1	198.5	25.4	199.1
36.00	32.85	-9.47	-3.17	10.0	198.5	25.4	198.2
38.00	34.66	-10.28	-3.44	10.8	198.5	25.1	198.1
40.00	36.47	-11.09	-3.69	11.7	198.4	25.2	198.8
42.00	38.28	-11.91	-3.94	12.5	198.3	25.2	196.7
44.00	40.09	-12.72	-4.19	13.4	198.2	25.2	196.6
46.00	41.89	-13.54	-4.43	14.2	198.1	25.4	197.3
48.00	43.70	-14.37	-4.68	15.1	198.0	25.7	191.6
50.00	45.50	-15.20	-4.93	16.0	198.0	25.9	196.4
52.00	47.30	-16.04	-5.19	16.9	197.9	26.0	197.5
54.00	49.09	-16.87	-5.46	17.7	197.9	25.8	197.1
56.00	50.90	-17.66	-5.72	18.6	198.0	24.9	189.9
58.00	52.71	-18.45	-5.93	19.4	197.8	25.9	199.1
60.00	54.51	-19.27	-6.20	20.2	197.8	25.7	198.8
62.00	56.31	-20.10	-6.48	21.1	197.9	25.7	200.3
64.00	58.11	-20.92	-6.75	22.0	197.9	26.3	208.6
66.00	59.90	-21.76	-7.02	22.9	197.9	26.4	197.2
68.00	61.69	-22.60	-7.30	23.8	197.9	26.2	198.0
70.00	63.49	-23.44	-7.57	24.6	197.9	26.1	198.5
72.00	65.29	-24.25	-7.83	25.5	197.9	25.8	181.0
74.00	67.09	-25.06	-8.03	26.3	197.8	26.5	200.2
76.00	68.88	-25.91	-8.30	27.2	197.8	26.1	197.5
78.00	70.67	-26.75	-8.57	28.1	197.8	26.2	197.7
80.00	72.47	-27.58	-8.83	29.0	197.8	25.9	197.0
82.00	74.27	-28.41	-9.10	29.8	197.8	25.7	197.4
84.00	76.08	-29.23	-9.36	30.7	197.7	25.3	197.7
86.00	77.89	-30.04	-9.61	31.5	197.7	24.9	197.6
88.00	79.71	-30.84	-9.87	32.4	197.7	24.5	197.5
90.00	81.53	-31.62	-10.11	33.2	197.7	24.1	198.3
92.00	83.35	-32.41	-10.36	34.0	197.7	24.7	197.6
94.00	85.17	-33.20	-10.63	34.9	197.8	24.5	199.0
96.00	86.99	-33.96	-10.89	35.7	197.8	23.9	190.7
98.00	88.81	-34.74	-11.09	36.5	197.7	24.8	197.6
100.00	90.63	-35.53	-11.36	37.3	197.7	24.7	199.0
102.00	92.45	-36.32	-11.64	38.1	197.8	24.6	199.6
104.00	94.27	-37.11	-11.91	39.0	197.8	24.6	196.6
106.00	96.08	-37.89	-12.18	39.8	197.8	24.6	199.0
108.00	97.90	-38.68	-12.46	40.6	197.9	24.4	198.3
110.00	99.73	-39.45	-12.74	41.5	197.9	24.6	199.9
112.00	101.54	-40.24	-13.01	42.3	197.9	24.5	199.9
114.00	103.36	-41.02	-13.29	43.1	198.0	24.6	199.3
116.00	105.18	-41.81	-13.56	44.0	198.0	24.7	198.4
118.00	107.00	-42.58	-13.84	44.8	198.0	21.7	193.1
120.00	108.82	-43.37	-14.04	45.6	197.9	25.1	197.8
122.00	110.63	-44.17	-14.32	46.4	198.0	25.3	200.3
124.00	112.44	-44.98	-14.60	47.3	198.0	25.4	199.5
126.00	114.24	-45.79	-14.90	48.1	198.0	25.3	200.2
128.00	116.05	-46.58	-15.18	49.0	198.1	25.0	200.1
130.00	117.87	-47.37	-15.47	49.8	198.1	24.8	194.7
132.00	119.68	-48.16	-15.77	50.7	198.1	24.9	200.6
134.00	121.50	-48.90	-16.02	51.5	198.1	25.1	200.8
136.00	123.31	-49.69	-16.33	52.3	198.2	25.0	202.7
138.00	125.13	-50.47	-16.64	53.1	198.2	24.8	201.1
140.00	126.95	-51.25	-16.94	54.0	198.3	24.4	201.8
142.00	128.77	-52.01	-17.24	54.8	198.3	24.1	202.1
144.00	130.60	-52.77	-17.54	55.6	198.4	23.9	201.0
146.00	132.43	-53.52	-17.82	56.4	198.4	23.6	200.2
148.00	134.26	-54.27	-18.11	57.2	198.5	23.8	200.8
150.00	136.09	-55.03	-18.39	58.0	198.5	23.8	200.7
152.00	137.92	-55.78	-18.67	58.8	198.5	23.8	200.1
154.00	139.75	-56.54	-18.95	59.6	198.5	23.6	200.4
156.00	141.59	-57.28	-19.22	60.4	198.6	23.3	199.0
158.00	143.43	-58.02	-19.49	61.2	198.6	22.9	199.3
160.00	145.27	-58.75	-19.75	62.0	198.6	22.9	199.2
162.00	147.12	-59.47	-20.01	62.7	198.6	22.4	199.9
164.00	148.97	-60.19	-20.27	63.5	198.6	22.1	199.7
166.00	150.82	-60.89	-20.52	64.3	198.6	21.9	198.6
168.00	152.68	-61.60	-20.76	65.0	198.6	21.9	198.7
170.00	154.53	-62.30	-21.01	65.7	198.6	21.8	198.9
172.00	156.39	-62.99	-21.26	66.5	198.6	21.5	199.4
174.00	158.25	-63.69	-21.50	67.2	198.7	21.5	198.2
176.00	160.11	-64.38	-21.74	67.9	198.7	21.4	199.2
178.00	161.98	-65.07	-21.98	68.7	198.7	21.4	199.6
180.00	163.84	-65.76	-22.22	69.4	198.7	21.5	199.2
182.00	165.70	-66.45	-22.47	70.1	198.7	21.3	199.3
184.00	167.56	-67.13	-22.70	70.9	198.7	21.4	198.8
186.00	169.42	-67.82	-22.94	71.6	198.7	21.6	205.9
188.00	171.28	-68.52	-23.19	72.3	198.7	21.4	199.5
190.00	173.15	-69.20	-23.44	73.1	198.7	21.0	199.7
192.00	175.02	-69.87	-23.67	73.8	198.7	20.5	199.1
194.00	176.89	-70.52	-23.91	74.5	198.7	20.3	199.7
196.00	178.77	-71.17	-24.15	75.2	198.7	20.1	200.2
198.00	180.65	-71.81	-24.38	75.8	198.8	19.5	200.1
200.00	182.54	-72.43	-24.61	76.5	198.8	19.2	199.9
202.00	184.43	-73.05	-24.84	77.2	198.8	19.0	200.1
204.00	186.32	-73.66	-25.06	77.8	198.8	18.5	199.5
206.00	188.21	-74.26	-25.28	78.4	198.8	18.4	200.6
208.00	190.11	-74.84	-25.50	79.1	198.8	18.1	200.3
210.00	192.01	-75.43	-25.71	79.7	198.8	17.9	199.7
212.00	193.92	-76.02	-25.91	80.3	198.8	18.6	195.5
214.00	195.81	-76.63	-26.11	81.0	198.8	18.4	198.2
216.00	197.71	-77.23	-26.30	81.6	198.8	18.4	197.3
218.00	199.61	-77.82	-26.49	82.2	198.8	18.0	196.6
220.00	201.51	-78.42	-26.66	82.8	198.8	18.1	194.9
222.00	203.41	-79.01	-26.83	83.4	198.8	18.0	196.6
224.00	205.31	-79.60	-27.00	84.1	198.7	17.7	196.2
226.00	207.22	-80.18	-27.17	84.7	198.7	17.3	195.6
226.02	207.24	-80.19	-27.17	84.7	198.7	17.3	195.6

Company	Baitoil Geophysical Services
Well	HR08-02
Field	GAMMA - NEUTRON
County	
State	
Country	
Service Company	Baitoil Geophysical Services
Date	09/29/08
Time	16:00:00
Operator	
Recorded By	
Witnessed By	
Depth Reference	
Elevation	
Permanent Datum	
Log Measured From	
Drilling Measured From	
Casing Driller	
Casing Logger	
Bottom Log Interval	
Top Log Interval	
Casing Size	
Casing Weight	
Casing Depth	
Bit Size	
Type Fluid	
Density	
Viscosity	
Fluid Loss	
Max Rec Temp	
Max Rec Time	
Equipment Number	
Location	
Recorded From	
Recorded To	
Runs	
Tool Model	
Tool Serial Number	
Detector Offset	
Detector Serial Number	
Source Strength	
Source Serial Number	
Calibration Date	
Calibration Type	
Calibration Location	
Calibration Operator	
Calibration Witnessed By	
Remarks	

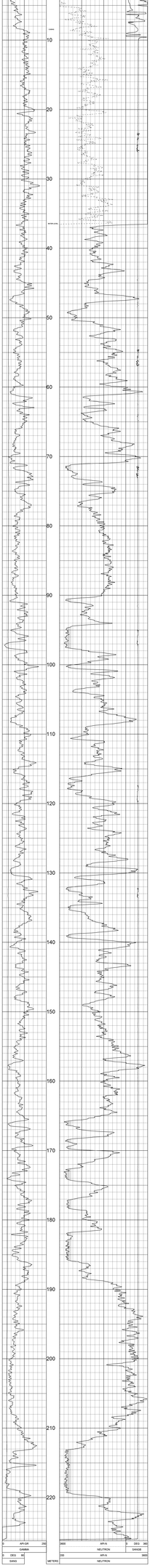
GAMMA - NEUTRON

HR08-02

1:100 NEUTRON HR08-02 09/29/08

LOG PARAMETERS

MATRIX DENSITY 2.65 NEUTRON MATRIX SANDSTONE MATRIX DELTA-T 177
MAGNETIC DECL 0 ELECT CUTOFF 99999 BIT SIZE 114.3 MM
PRESENTATION NAMEGATE 1 MIN FILE MAINSCR VERSION 1.0 AAAA



1:100 NEUTRON HR08-02 09/29/08

LOG PARAMETERS

MATRIX DENSITY 2.65 NEUTRON MATRIX SANDSTONE MATRIX DELTA-T 177
MAGNETIC DECL 0 ELECT CUTOFF 99999 BIT SIZE 114.3 MM
PRESENTATION NAMEGATE 1 MIN FILE MAINSCR VERSION 1.0 AAAA

TOOL CALIBRATION HR08-02 09/29/08 16:02
TOOL MAIN - TAB VERSION 2
SERIAL NUMBER 4432

	DATE	TIME	SENSOR	STANDARD		RESPONSE
1	Sep29,08	16:01:40	GAMMA 0.000	API-GR	0.00	[CPS]
2	Sep29,08	16:01:45	NEUTRON 0.000	API-N	0.00	[CPS]
	Sep29,08	16:02:00	NEUTRON Z-Value	[CPS]	Value	[CPS]
3	Sep29,08	16:10:10	GAMMA 0.000	API-GR	0.00	[CPS]
4	Sep27,08	12:12:10	SP 0.000	MV	329800.00	[CPS]
5	Sep27,08	12:12:15	SP 0.000	MV	329800.00	[CPS]
6	Sep27,08	12:12:22	RES(1M) 0.000	OHMM	2981.00	[CPS]
7	Sep27,08	12:12:23	RES(10)F 1999.000	OHMM	417785.00	[CPS]
8	Sep27,08	12:12:24	RES(10)N 1999.000	OHMM	417785.00	[CPS]
9	Sep27,08	12:12:26	RESAM 1999.000	OHMM	400600.00	[CPS]
10	Sep27,08	12:12:27	TEMP 120.400	DEG F	388575.00	[CPS]
11	Sep27,08	12:12:38	TEMP 120.400	DEG F	388575.00	[CPS]
12	Sep27,08	12:12:47	RES 1999.000	OHM	16000.00	[CPS]
13	Sep27,08	12:12:47	RES 999.000	OHM	16000.00	[CPS]

COMPANY	Calfrac
WELL	HR08-02
FIELD	
COUNTY	
PROVINCE	
COUNTRY	
LOCATION	
LOCATION	
LOCATION

Century Geophysical Corporation

COMPENSATED DENSITY
GAMMA - CALIPER - RES
HR08-03

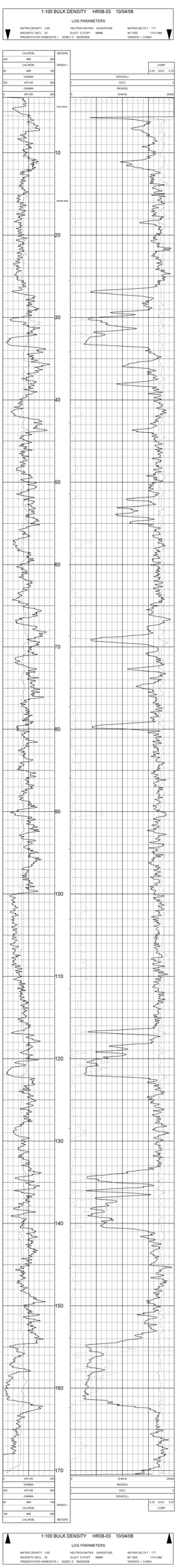
COMPANY	Kinross Gold Corporation
WELL	HR08-03
FIELD	Hardrock
COUNTY	Hinsdale
STATE	Colorado
COUNTRY	USA
API NUMBER	05-051-06000
Other Services	Gamma Ray, Caliper, Density, Neutron, Resistivity
Permanent Datum	Ground Elevation
Elevation	0 ft above perm. datum
Log Measured From	Ground Elevation
Drilling Measured From	Ground Elevation
Date	10/04/08
Run Number	ONE
Depth Driller	170.00
Depth Logger	170.00
Bottom Logged Interval	170.00
Top Log Interval	0.00
Casing Driller	0.00 @ 0 ft
Casing Logger	0 ft
Bit Size	114.3 MM
Type Fluid in the Hole	DRY
Density	N/A lb/gal
Viscosity	N/A s
Fluid Loss	N/A cc
Source of Sample	N/A
Rm @ Measured Temp	N/A @ N/A
Rmf @ Measured Temp	N/A @ N/A
Rmc @ Measured Temp	N/A @ N/A
Source of Rmf / Rmc	N/A / N/A
Rm @ BHT	N/A @ 0 F
Max Recorded Temp	0 F
Equipment Number	3-94MCX
Location	Lake City, Colorado
Recorded By	Jim Ashby
Witnessed By	Kinross Gold Corp.

PROCESSED COMPUTER PRODUCED INTERPRETATION

1:100 BULK DENSITY HR08-03 10/04/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL. : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114.3 MM	
PRESEDIATION NAME/DATE < :	BZ96C1.0 09/30/2008	VERSION : 3-94MCX	



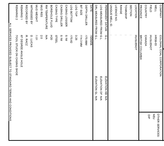
1:100 BULK DENSITY HR08-03 10/04/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL. : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114.3 MM	
PRESEDIATION NAME/DATE < :	BZ96C1.0 09/30/2008	VERSION : 3-94MCX	

TOOL CALIBRATION: HR08-03 10/04/08 12:46
TOOL TYPE: 3-94MCX SERIAL NUMBER: 3-94MCX 2019

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct04.08	12:46:04	GAMMA	4.500	API-GR	32.00	[CPS]
	Oct04.08	12:46:04	GAMMA	250.000	API-GR	1600.00	[CPS]
2	Sep03.08	08:18:05	VOLTAGE	32.500	36V	8660.00	[CPS]
	Sep03.08	08:18:05	VOLTAGE	65.000	36V	17320.00	[CPS]
	Sep03.08	12:45:13	CALIPER	99.000	36M	26320.00	[CPS]
	Sep07.08	12:43:12	CALIPER	143.000	36M	12360.00	[CPS]
3	Oct04.08	12:46:04	DENS.D	0.500	GICC	400.00	[CPS]
	Oct04.08	12:46:04	DENS.D	2.500	GICC	2000.00	[CPS]
5	Oct04.08	10:39:25	DENSIS	1.000	GICC	1349.10	[CPS]
6	Sep03.08	08:18:52	CALIPER1	76.200	36M	6160.00	[CPS]
	Sep03.08	08:18:52	CALIPER1	76.200	36M	6160.00	[CPS]
	Sep03.08	08:18:52	CALIPER1	114.300	36M	12200.10	[CPS]
	Sep03.08	08:18:52	CALIPER1	114.300	36M	12200.10	[CPS]
7	Sep03.08	10:45:54	CURRENT	252.700	LA	2020.10	[CPS]
	May28.08	10:46:47	2	Default	[CPS]		
	May28.08	10:46:47	2	Default	[CPS]		


DETAILED DENSITY
GAMMA - HR08-03 - REEL
Geotechnics
Logging Services
Depth Scale
1:50
Log Interval
Detailed
Scale
Log Interval
Detailed
Comments
Logged
Operator
Logged
Schlumberger
Depth Control
Depth Shift
Wireline Log
Offset
Western Geophysical
Logging Services
Logging Date
04 October, 2008
Number
One
Run Number
Drilling Measured
From
Drill Floor
Drill Floor
Drill Floor

Company:	Baitt Drilling Technologies LLC
Well:	SHORT SPACED DENSITY
Date:	10/04/08
Run No:	HR08-03
Depth Reference:	
Depth Offset:	
Comments:	

TOOL CALIBRATION VERSION VERSION 12.48
TOOL SERIAL NO 1.50 DENSITY 2016
SERIAL NUMBER 000

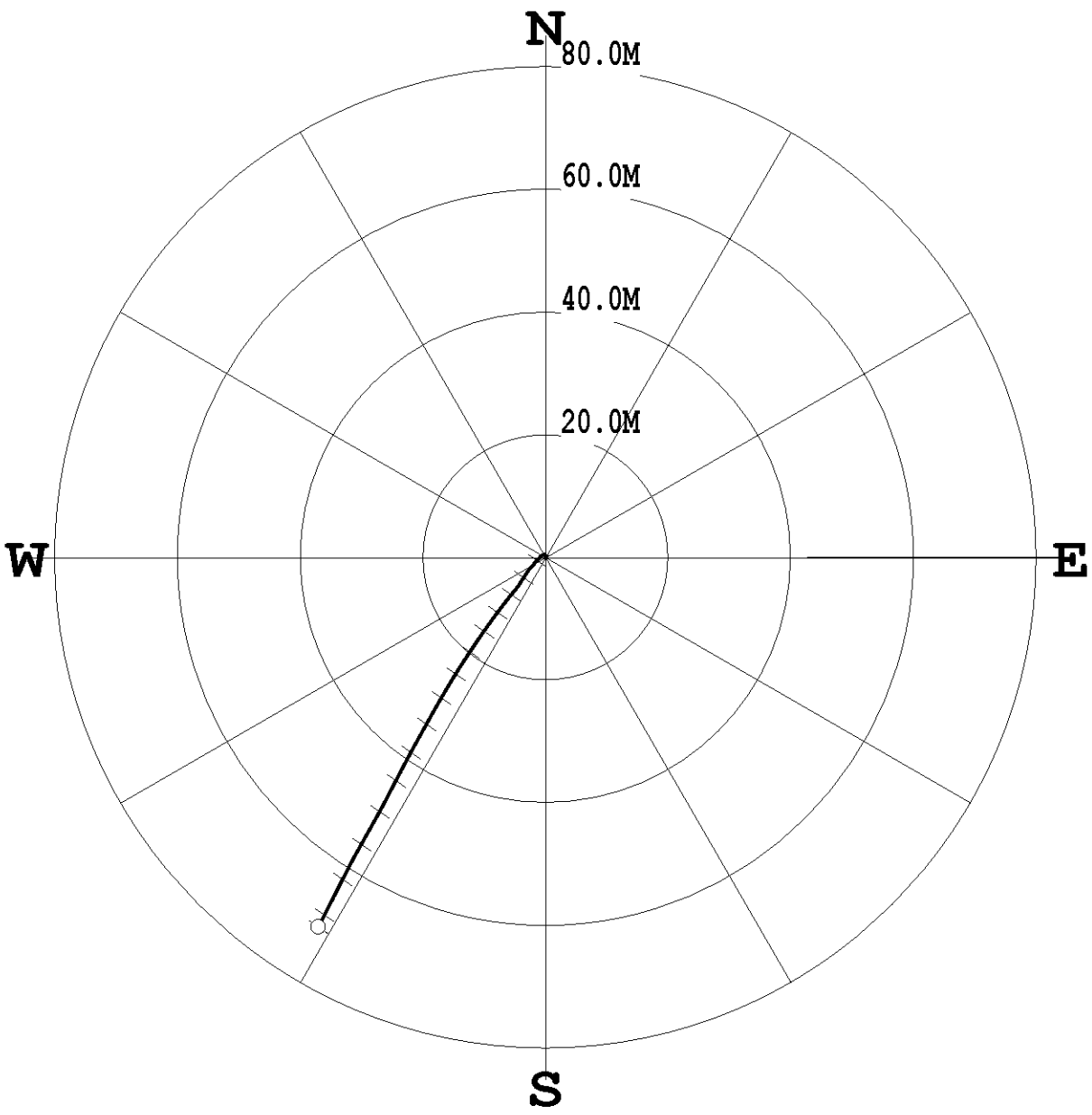
			SENSOR	STANDARD		RESPONSE	
1	Nov27,08	14:54:44	1000000	2670.000	2.70	2700	[CPS]
2	Nov27,08	14:56:06	1000000	1500.000	2670.000	1500	[CPS]
3	Nov27,08	14:57:28	1000000	500.000	1500.000	500	[CPS]
4	Nov27,08	14:58:50	1000000	250.000	500.000	250	[CPS]
5	Nov27,08	15:00:12	1000000	100.000	250.000	100	[CPS]
6	Nov27,08	15:01:33	CALIPER	100.000	0.00	100000.00	[CPS]
7	Nov27,08	15:02:55	CALIPER	50.000	100.000	50000.00	[CPS]
8	Nov27,08	15:04:17	CALIPER	0.00	50.000	0.00	[CPS]
9	Nov28,08	08:16:50	GRAMMA	0.00	0.0	0.00	[CPS]
10	Nov28,08	08:18:12	GRAMMA	4.000	0.0	5700.00	[CPS]
11	Nov28,08	08:19:34	GRAMMA	8.000	0.0	11400.00	[CPS]
12	Nov28,08	08:20:56	GRAMMA	12.000	0.0	17100.00	[CPS]
13	Nov28,08	08:22:18	GRAMMA	16.000	0.0	22800.00	[CPS]
14	Nov28,08	10:45:34	LUMINOSITY	0.0 TUN	0.0	2026.10	[CPS]
15	Nov28,08	10:46:56	LUMINOSITY	0.0 TUN	0.0		[CPS]
16	Nov28,08	10:48:18	0	0.000	0.000		[CPS]

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-03
DATE OF LOG: 10/04/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 10 M/CM
TRUE DEPTH: 153.36 M
AZIMUTH: 211.6
DISTANCE: 70.6 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-03
DATE OF LOG : 10/04/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-03_10-04-08_12-06_9057A_.02_-0.13_170.68_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
12.00	11.41	-0.83	-1.76	1.9	244.7	19.9	221.7
14.00	13.29	-1.35	-2.20	2.6	238.5	19.9	220.9
16.00	15.17	-1.86	-2.66	3.2	234.9	19.9	220.7
18.00	17.05	-2.41	-3.05	3.9	231.7	19.5	213.9
20.00	18.94	-2.96	-3.41	4.5	229.1	19.2	213.5
22.00	20.82	-3.51	-3.77	5.1	227.1	19.2	213.0
24.00	22.72	-4.06	-4.12	5.8	225.4	19.0	213.2
26.00	24.61	-4.60	-4.45	6.4	224.1	18.3	208.7
28.00	26.51	-5.08	-4.84	7.0	223.6	19.0	219.7
30.00	28.40	-5.58	-5.26	7.7	223.3	19.1	219.2
32.00	30.29	-6.10	-5.67	8.3	223.0	19.4	220.7
34.00	32.17	-6.62	-6.10	9.0	222.6	20.1	219.4
36.00	34.05	-7.16	-6.52	9.7	222.3	20.2	219.4
38.00	35.92	-7.71	-6.95	10.4	222.0	20.4	217.3
40.00	37.80	-8.27	-7.37	11.1	221.7	20.4	217.2
42.00	39.67	-8.82	-7.79	11.8	221.5	20.3	216.7
44.00	41.55	-9.38	-8.21	12.5	221.2	20.3	216.0
46.00	43.42	-9.94	-8.62	13.2	220.9	20.7	214.9
48.00	45.29	-10.51	-9.03	13.9	220.7	20.6	215.9
50.00	47.17	-11.08	-9.44	14.6	220.4	20.6	216.1
52.00	49.03	-11.67	-9.86	15.3	220.2	21.1	214.8
54.00	50.90	-12.27	-10.27	16.0	220.0	21.7	213.9
56.00	52.75	-12.88	-10.70	16.7	219.7	22.0	214.8
58.00	54.61	-13.49	-11.12	17.5	219.5	21.8	215.7
60.00	56.46	-14.12	-11.54	18.2	219.3	22.2	214.2
62.00	58.31	-14.75	-11.97	19.0	219.1	22.6	212.5
64.00	60.15	-15.39	-12.39	19.8	218.8	22.8	213.4
66.00	62.00	-16.04	-12.82	20.5	218.6	22.9	211.8
68.00	63.84	-16.69	-13.25	21.3	218.4	23.0	212.7
70.00	65.68	-17.35	-13.67	22.1	218.2	23.5	211.3
72.00	67.51	-18.02	-14.11	22.9	218.1	23.4	212.7
74.00	69.35	-18.69	-14.53	23.7	217.9	23.5	212.8
76.00	71.18	-19.37	-14.95	24.5	217.7	23.9	212.4
78.00	73.01	-20.07	-15.37	25.3	217.4	24.3	212.1
80.00	74.83	-20.78	-15.80	26.1	217.2	24.5	211.4
82.00	76.65	-21.50	-16.23	26.9	217.0	25.0	211.4
84.00	78.46	-22.22	-16.66	27.8	216.9	25.0	211.1
86.00	80.27	-22.95	-17.09	28.6	216.7	25.1	210.3
88.00	82.08	-23.68	-17.51	29.5	216.5	25.0	211.6
90.00	83.88	-24.44	-17.95	30.3	216.3	25.8	209.6
92.00	85.68	-25.20	-18.38	31.2	216.1	26.5	208.5
94.00	87.47	-25.98	-18.81	32.1	215.9	26.6	209.8
96.00	89.25	-26.77	-19.25	33.0	215.7	27.2	207.1
98.00	91.03	-27.58	-19.70	33.9	215.5	27.7	205.4
100.00	92.79	-28.40	-20.15	34.8	215.4	28.0	209.7
102.00	94.56	-29.21	-20.60	35.7	215.2	27.6	209.1
104.00	96.34	-30.02	-21.05	36.7	215.0	27.8	207.3
106.00	98.11	-30.83	-21.49	37.6	214.9	27.3	208.8
108.00	99.89	-31.64	-21.94	38.5	214.7	27.2	209.0
110.00	101.67	-32.44	-22.37	39.4	214.6	27.2	208.2
112.00	103.44	-33.25	-22.80	40.3	214.4	27.2	206.9
114.00	105.22	-34.06	-23.24	41.2	214.3	27.5	207.0
116.00	106.99	-34.88	-23.66	42.2	214.2	27.9	208.7
118.00	108.76	-35.72	-24.10	43.1	214.0	28.4	205.9
120.00	110.51	-36.56	-24.54	44.0	213.9	28.6	206.6
122.00	112.27	-37.41	-24.99	45.0	213.7	28.9	210.2
124.00	114.01	-38.28	-25.44	46.0	213.6	29.5	206.9
126.00	115.75	-39.16	-25.89	46.9	213.5	30.4	206.2
128.00	117.48	-40.05	-26.37	48.0	213.4	30.8	208.6
130.00	119.20	-40.95	-26.85	49.0	213.3	30.5	210.3
132.00	120.92	-41.84	-27.34	50.0	213.2	30.7	208.6
134.00	122.63	-42.74	-27.84	51.0	213.1	31.0	210.2
136.00	124.35	-43.64	-28.34	52.0	213.0	31.3	208.8
138.00	126.05	-44.55	-28.85	53.1	212.9	31.6	209.5
140.00	127.75	-45.46	-29.37	54.1	212.9	31.8	208.5
142.00	129.45	-46.38	-29.89	55.2	212.8	31.7	209.4
144.00	131.14	-47.31	-30.40	56.2	212.7	32.9	207.5
146.00	132.82	-48.27	-30.93	57.3	212.7	32.9	209.0
148.00	134.50	-49.22	-31.45	58.4	212.6	32.9	209.6
150.00	136.18	-50.17	-31.96	59.5	212.5	32.7	208.4
152.00	137.86	-51.14	-32.46	60.6	212.4	32.9	207.9
154.00	139.54	-52.11	-32.96	61.7	212.3	33.1	206.7
156.00	141.21	-53.08	-33.45	62.7	212.2	32.8	207.4
158.00	142.89	-54.06	-33.94	63.8	212.1	33.1	207.8
160.00	144.56	-55.03	-34.44	64.9	212.0	33.3	206.4
162.00	146.24	-56.01	-34.94	66.0	212.0	33.4	208.1
164.00	147.91	-56.99	-35.44	67.1	211.9	33.1	206.6
166.00	149.58	-57.96	-35.93	68.2	211.8	33.0	206.7
168.00	151.26	-58.93	-36.42	69.3	211.7	32.9	207.8
170.00	152.94	-59.91	-36.90	70.4	211.6	33.5	207.1
170.68	153.50	-60.16	-37.01	70.6	211.6	0.0	0.0

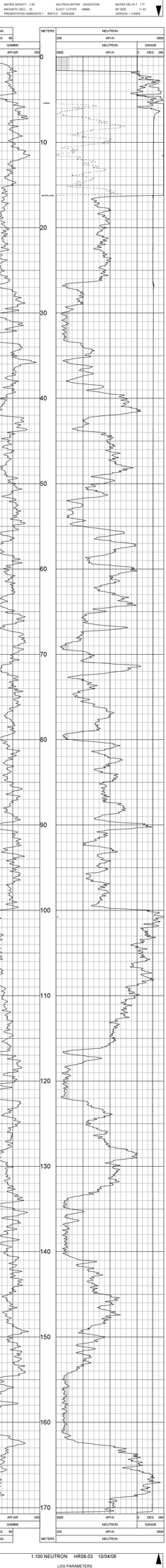
Century Geophysics

COMPANY	ENERGY RESOURCES CORPORATION
WELL	HR08-03
FIELD	ROCKY MOUNTAIN
COUNTY	BOULDER
STATE	COLORADO
Other Services	GAMMA - NEUTRON
Date	10/04/08

GAMMA - NEUTRON
HR08-03

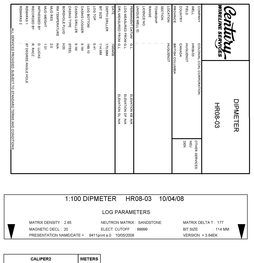
Permanent Datum	GROUND LEVEL	Elev.			
Log Measured From	KELLY BUSHING	0 ft. Above Perm. Datum			
Drilling Measured From	KELLY BUSHING				
API Serial No.					
Run Number	ONE	TWO	THREE		
Depth Driller	1000				
Depth Logger	1000				
Bottom Logged Interval	1000				
Top Log Interval	0				
Casing Driller	8.625 @ 0				
Casing Logger					
Bit Size	7.875				
Type Fluid in the Hole	AIR				
Density / Viscosity					
Max. Rec. Temp.					
Estimated Cement Top					
Time Since Circulation					
Time Logger at Bottom					
Equipment Number					
Location					
Recorded By					
Witnessed By					

THIS DATA HAS NOT BEEN CORRECTED FOR ENVIRONMENTAL EFFECTS



TOOL CALIBRATION HR08-03 10/04/08 12:06
TOOL 9573-A TM VERSION 2
SERIAL NUMBER 4400

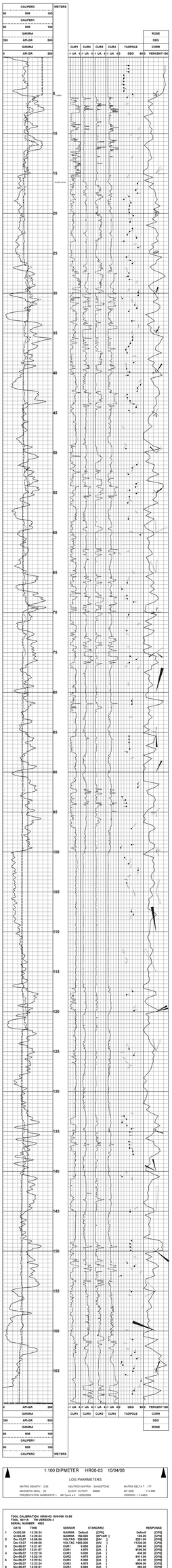
DATA		SENSOR	STANDARD		RESPONSE
1	Outside	GAMMA 0.000	API-GR 0	10.00	[CPS]
2	Sep27,08 19:42:51	GAMMA 317.000	API-GR 200	345.00	[CPS]
3	Sep29,08 16:02:03	NEUTRON Default	[CPS]	Default	[CPS]
3	Sep29,08 16:02:03	NEUTRO 271.000	API-N 0	99.00	[CPS]
4	Sep27,08 12:12:10	SP 0.000	MV 0	329000.00	[CPS]
5	Sep27,08 12:12:10	SP 97.000	MV 100	277900.00	[CPS]
4	Sep27,08 12:12:22	RES(1ER) 0.000	OHMAM 0	3891.00	[CPS]
5	Sep27,08 12:12:22	RES(1ER) 16.000	OHMAM 16	1000.00	[CPS]
6	Sep27,08 12:12:31	RES(64N) 0.000	OHMAM 0	1333.00	[CPS]
6	Sep27,08 12:12:31	RES(64N) 1990.000	OHMAM 2000	426302.00	[CPS]
7	Sep27,08 12:12:36	TEMP 64.400	DEG F 64	353840.00	[CPS]
7	Sep27,08 12:12:36	TEMP 120.400	DEG F 120	396875.00	[CPS]
8	Sep27,08 12:12:41	RES 0.000	OHM 0	1000.00	[CPS]
8	Sep27,08 12:12:41	RES 989.000	OHM 1000	162660.00	[CPS]



1:100 DIPMETER HR08-03 10/04/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA-T : 177
MAGNETIC DECL. : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114 MM
PRESENTATION NAMECOATE =	8411print a.0 : 10/05/2008	VERSION : 3.640K



1:100 DIPMETER HR08-03 10/04/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA-T : 177
MAGNETIC DECL. : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114 MM
PRESENTATION NAMECOATE =	8411print a.0 : 10/05/2008	VERSION : 3.640K

TOOL CALIBRATION HR08-03 10/04/08 13:58
TOOL 8411A TW VERSION 4
SERIAL NUMBER 4902

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
			GAMMA	Default	[CPS]	Default	[CPS]
1	Oct03,08	13:36:24	GAMMA	1000.000	[API GR]	2000.00	[CPS]
2	Dec13,07	10:08:00	VOLTAG	225.000	[MV]	2251.00	[CPS]
3	Dec13,07	10:09:00	VOLTAG	1693.000	[MV]	11294.00	[CPS]
4	Dec06,07	13:21:57	CUR1	0.000	[UA]	0.00	[CPS]
5	Dec06,07	13:21:57	CUR1	4.975	[UA]	9126.00	[CPS]
6	Dec06,07	13:22:16	CUR2	0.000	[UA]	436.00	[CPS]
7	Dec06,07	13:22:16	CUR2	4.975	[UA]	8410.00	[CPS]
8	Dec06,07	13:22:34	CUR3	0.000	[UA]	424.00	[CPS]
9	Dec06,07	13:22:34	CUR3	4.975	[UA]	8408.00	[CPS]
10	Dec06,07	13:22:51	CUR4	0.000	[UA]	460.00	[CPS]
11	Dec06,07	13:22:51	CUR4	4.975	[UA]	9088.00	[CPS]
12	Oct03,08	13:42:00	CALIBR	0.000	[INCH]	0.00	[CPS]
13	Oct03,08	13:42:00	CALIBR	175.000	[INCH]	1150.10	[CPS]

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HR08-04

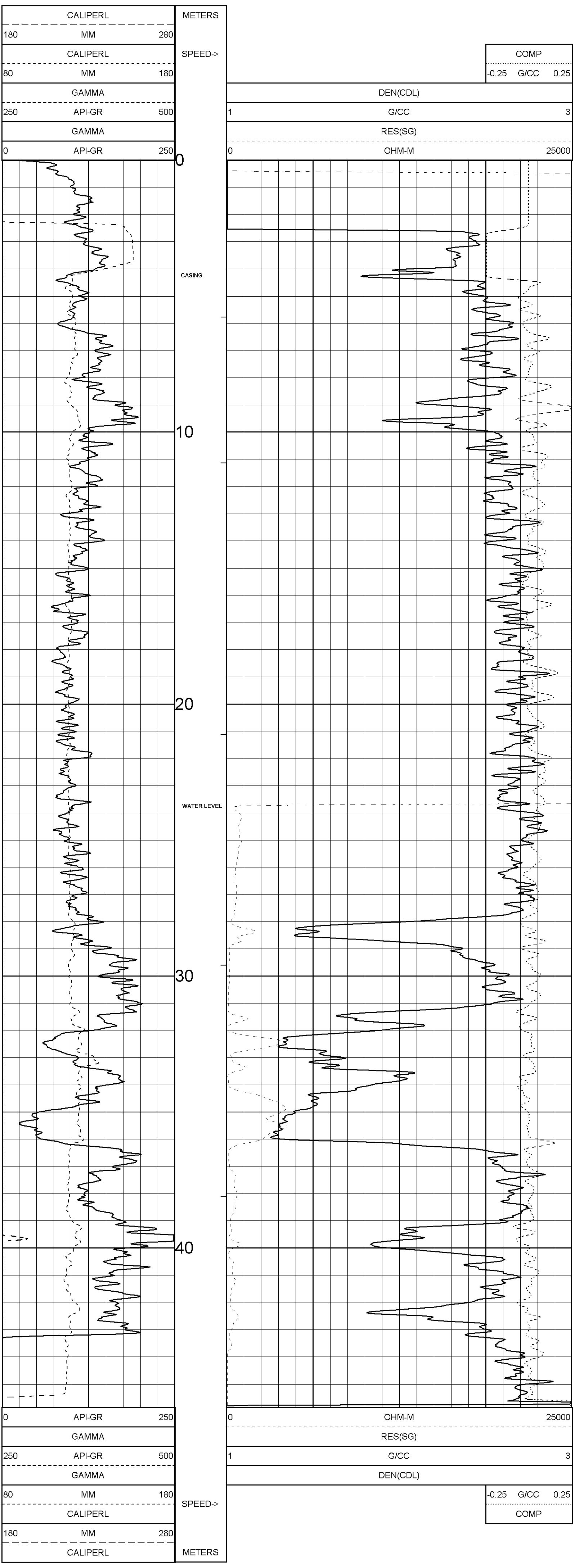
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HR08-04		
FIELD	:HUGUENOT	OTHER SERVICES:	
COUNTRY	:CANADA	NEU	
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/05/08		
DEPTH DRILLER	:46.30M		
BIT SIZE	:11.4		
LOG TOP	:-0.01		
LOG BOTTOM	:45.81		
CASING LOGGER	:4.2M		
CASING DRILLER	:4.2M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL HOLE		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 BULK DENSITY HR08-04 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239C1.0 09/29/2008		VERSION = 3.64EK



1:100 BULK DENSITY HR08-04 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239C1.0 09/29/2008		VERSION = 3.64EK

TOOL CALIBRATION HR08-04 10/05/08 14:00
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-04

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HR08-04
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:
PERMANENT DATUM	:G.L.
LOG MEASURED FROM	:G.L.
DRL MEASURED FROM	:G.L.
DATE	:10/05/08
DEPTH DRILLER	:46.30M
BIT SIZE	:11.4
LOG TOP	:-0.01
LOG BOTTOM	:45.81
CASING LOGGER	:4.2M
CASING DRILLER	:4.2M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL HOLE
REMARKS 2	:

OTHER SERVICES: NEU

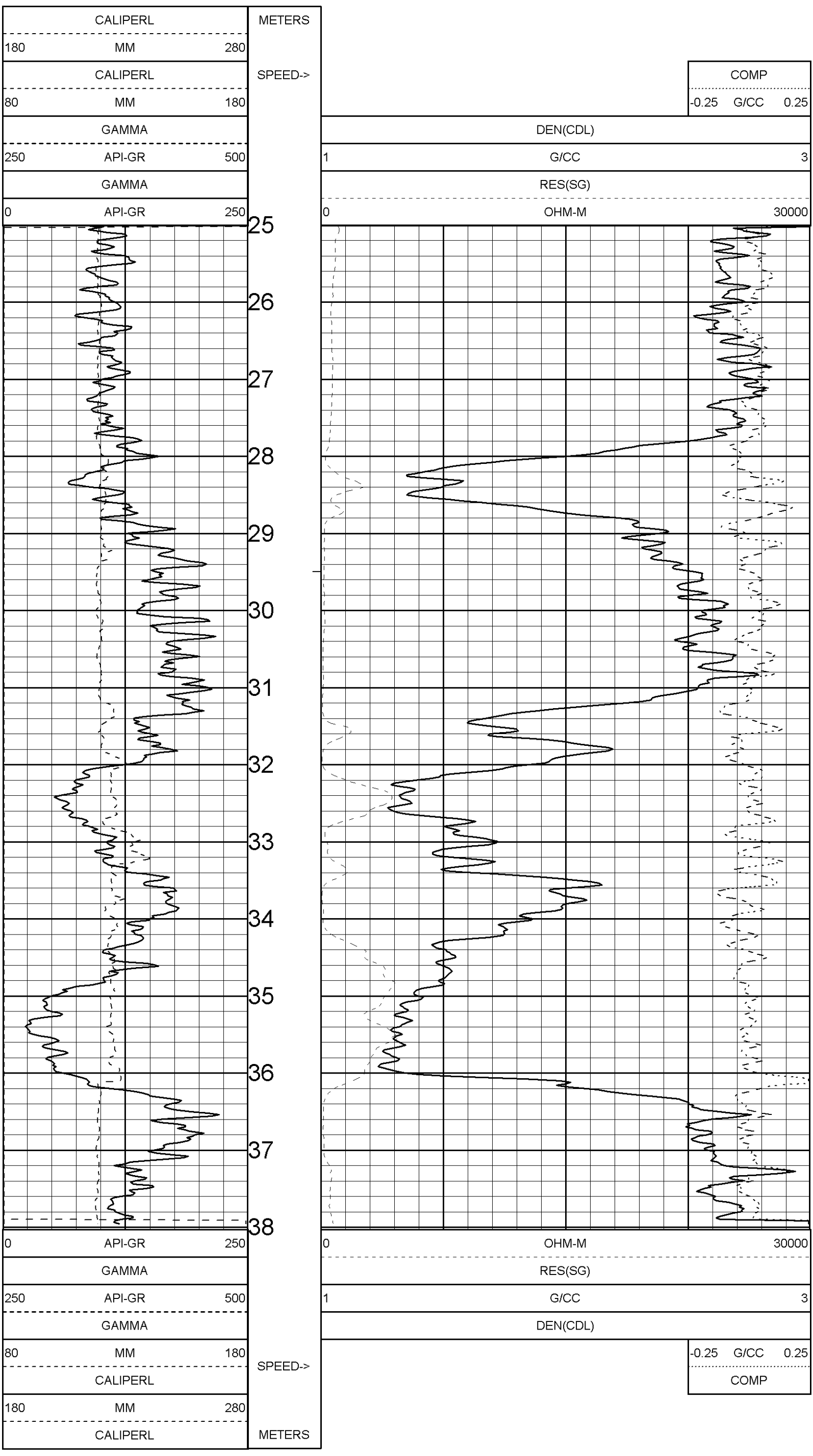
ELEVATION KB :N/A
ELEVATION DF :N/A
ELEVATION GL :N/A

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 25m to 38m HR08-04 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 38m HR08-04 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-04 10/05/08 14:00
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HR08-04

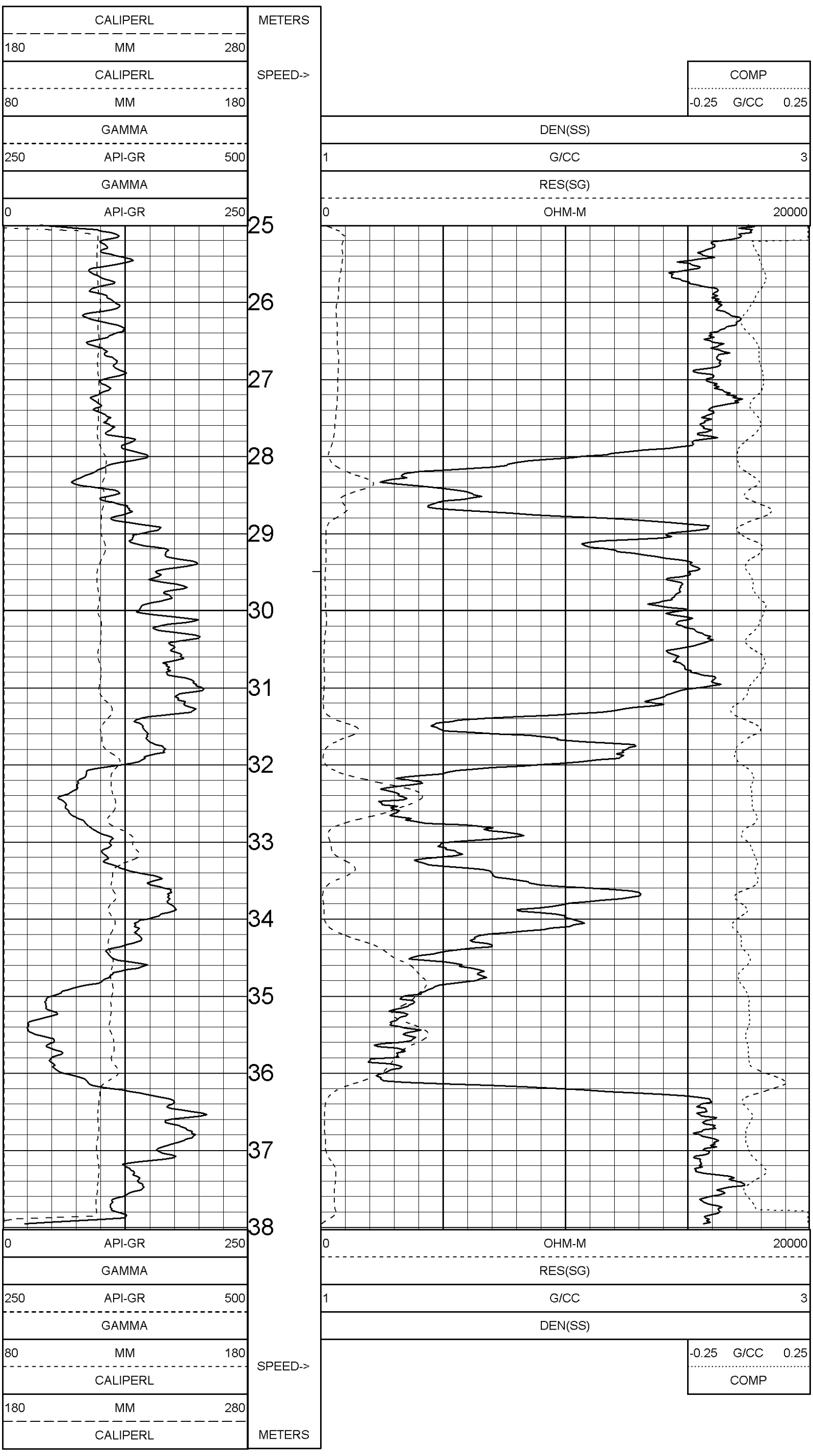
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HR08-04		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	
SECTION	:	NEU	
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/05/08		
DEPTH DRILLER	:46.30M		
BIT SIZE	:11.4		
LOG TOP	:-0.01		
LOG BOTTOM	:45.81		
CASING LOGGER	:4.2M		
CASING DRILLER	:4.2M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL HOLE		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 25m to 38m HR08-04 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 38m HR08-04 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-04 10/05/08 14:00
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

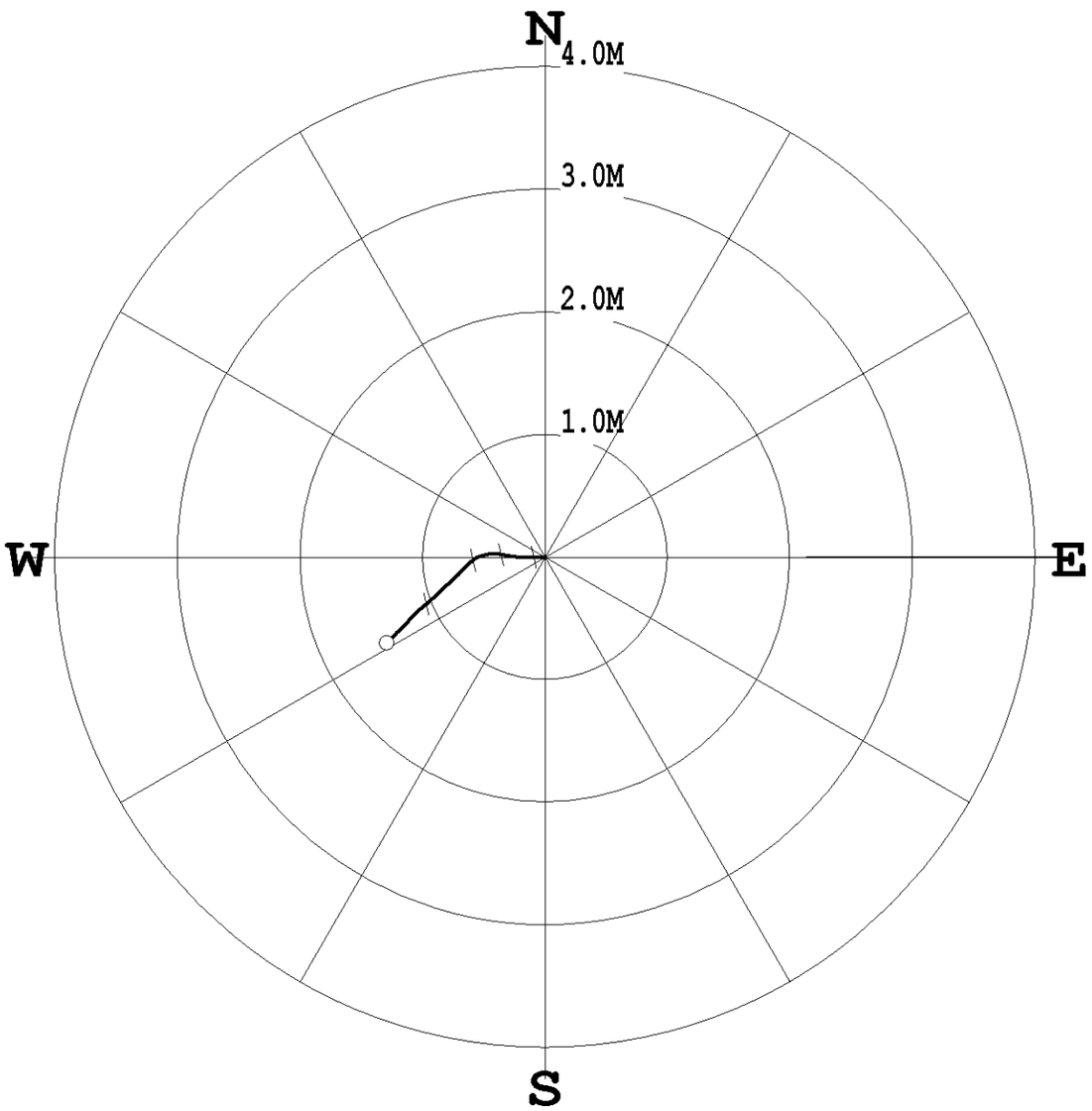
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-04
DATE OF LOG: 10/05/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 45.69 M
AZIMUTH: 241.5
DISTANCE: 1.5 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

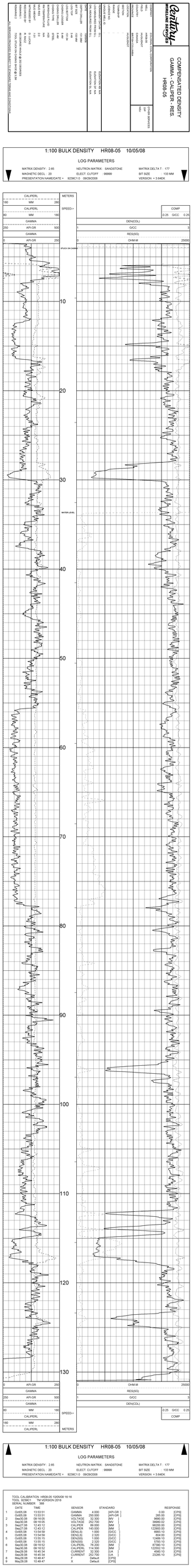
CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-04
DATE OF LOG : 10/05/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-04_10-05-08_13-35_9057A_.02_0.01_45.91_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	9.99	0.00	-0.09	0.1	271.4	1.3	271.8
12.00	11.99	0.00	-0.14	0.1	270.6	1.5	267.1
14.00	13.99	0.00	-0.20	0.2	270.6	1.8	280.5
16.00	15.99	0.00	-0.26	0.3	271.1	1.7	276.3
18.00	17.99	0.01	-0.31	0.3	272.5	1.4	277.8
20.00	19.99	0.02	-0.36	0.4	273.5	1.5	272.1
22.00	21.98	0.03	-0.41	0.4	273.9	1.3	275.7
24.00	23.98	0.03	-0.45	0.5	273.4	1.1	263.8
26.00	25.98	0.02	-0.49	0.5	272.1	1.4	259.0
28.00	27.98	0.00	-0.54	0.5	270.4	1.5	248.9
30.00	29.98	-0.02	-0.59	0.6	267.6	1.7	228.5
32.00	31.98	-0.07	-0.64	0.6	263.9	1.9	228.8
34.00	33.98	-0.13	-0.70	0.7	259.6	2.9	221.3
36.00	35.98	-0.21	-0.78	0.8	255.2	3.4	238.5
38.00	37.97	-0.29	-0.87	0.9	251.6	3.7	226.4
40.00	39.97	-0.38	-0.97	1.0	248.5	4.2	229.3
42.00	41.96	-0.48	-1.08	1.2	246.0	4.6	222.4
44.00	43.96	-0.60	-1.20	1.3	243.3	4.8	225.7
45.74	45.69	-0.70	-1.29	1.5	241.5	4.8	223.1

COMPANY:	CENTURY WIRELINE SERVICES CORPORATION
WELL:	HR08-05
FIELD:	HAUGSRUD
COUNTY:	SANDSTONE
PROVINCE:	MANITOBA
COORDINATES:	6239CN 0
SECTION:	10
TOWNSHIP:	8
RANGE:	14
LOCATION:	1-5-0
LICENCE NO.:	9999
DATE:	10/05/08
DRILLER:	HAUGSRUD
RIG:	1
DATUM:	GROUND
ELEVATION:	1184
DRILLER'S TD:	1184
LOGGER'S TD:	1184
CASING SIZE:	114.3
CASING DEPTH:	1184
BIT SIZE:	133
MUD TYPE:	WATER
MUD WT:	9.0
VISCOSITY:	50
FLUID LOSS:	N/A
RM @ MEAS TEMP:	N/A
RMF @ MEAS TEMP:	N/A
RMC @ MEAS TEMP:	N/A
RM @ BHT:	N/A
MAX REC TEMP:	0
EQUIP. LOCATION:	3 HR
RECORDED BY:	D. LUCAS
WITNESSED BY:	N/A
REMARKS 1:	4 1/2 CASING
REMARKS 2:	RIG 1
REMARKS 3:	4 1/2 CASING @ 1184 CEMENTED
REMARKS 4:	8 BBL SOLD, 10 SACKS PLUG, 5 BBL FLUSH
REMARKS 5:	4 1/2 CASING SHOE TEST 1000 PSI, 15 MIN, GOOD

COMPENSATED DENSITY
GAMMA - CALIPER - RES
HR08-05

CENTURY WIRELINE SERVICES
1984



TOOL CALIBRATION: HR08-05 10/05/08 16:16
TOOL SCSBCT TM VERSION 2618
TOOL SERIAL NUMBERS

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	08:18:05	VOLTAGE	32.300	[MV]	9990.00	[CPS]
	Sep30,08	08:18:05	VOLTAGE	32.300	[MV]	19980.00	[CPS]
3	Sep27,08	12:43:11	CALIPER	38.000	[MM]	36330.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	123600.00	[CPS]
4	Oct05,08	13:54:59	DENLSI	1.000	[G/CC]	9993.10	[CPS]
	Oct05,08	13:54:59	DENLSI	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DENSSI	1.000	[G/CC]	11000.10	[CPS]
	Oct05,08	13:55:15	DENSSI	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	08:16:52	CALIPER2	76.200	[MM]	87390.10	[CPS]
	Sep30,08	08:16:52	CALIPER1	114.500	[MM]	122052.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4060.10	[CPS]
	Sep29,08	16:45:34	CURRENT	32.300	[UA]	20395.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

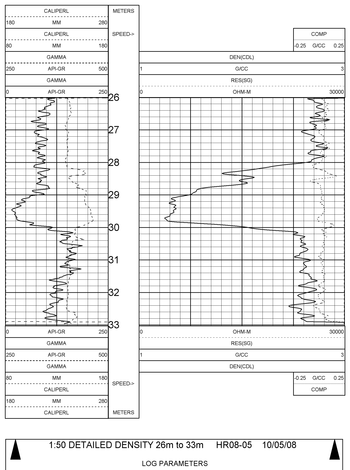
DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-05

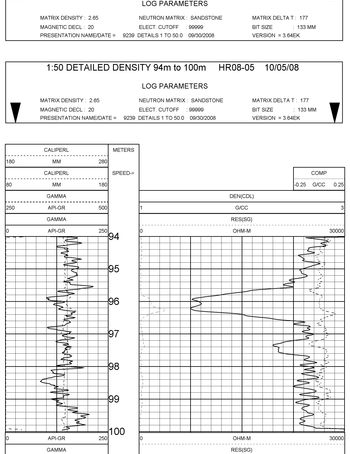
COMPANY	COMPANY TOOL CORPORATION
FIELD	
WELL	HR08-05
PROVINCE	
COUNTRY	CANADA
LOCATION	HIGHWAY
TOWNSHIP	
RANGE	
SECTION	
LEGAL DESCRIPTION	BERTEG COLUMBIA
LATITUDE NO.	
LONGITUDE NO.	
PROJECT NO.	
PROGRAM	
DATE	10/05/08
TIME	
OPERATOR	
UNIT	

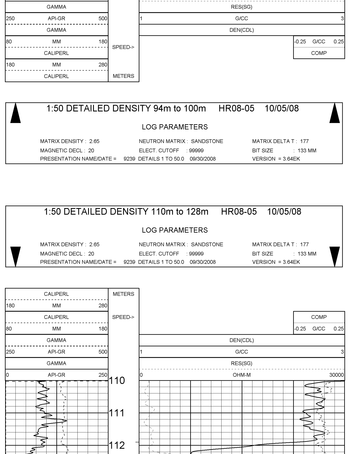
ELEVATIONS
KB: N/A
DF: N/A
GL: N/A

DEPTH DRILLER	131.000
DEPTH LOGGER	131.000
BTM LOG INTERVAL	131.000
TOP LOG INTERVAL	33.000
CASING DRILLER	5.400
CASING LOGGER	5.400
BIT SIZE	133 MM
TYPE FLUID IN HOLE	WATER
DENSITY	N/A
VISCOSITY	N/A
PH	N/A
FLUID LOSS	N/A
SOURCE OF SAMPLE	FLOWLINE
RM @ MEASURED TEMP	0.000 @ 0.000 DEGREES
RMF @ MEASURED TEMP	0.000 @ 0.000 DEGREES
RMC @ MEASURED TEMP	0.000 @ 0.000 DEGREES
RM @ BHT	0.000
TIME CIRC.	0:00
TIME LOGGER ON BOTTOM	0:00
MAX. RECORDED TEMP.	0.000
ESTIMATED BHT	0.000
I. D.	5.000
WITNESSED BY	
RIG NO.	
BASE LOG	
REMARKS 1	
REMARKS 2	
REMARKS 3	
RECORDED BY	
RECHECKED BY	

ALL DEPTHS REFER TO DRILLER'S DEPTH
TOOL SERIAL NUMBER: 3238
TOOL CALIBRATION: HR08-05 10/05/08 18:16
TOOL TYPE: 3238CT
TM VERSION: 2019







	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
2	Oct05.08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
3	Sep30.08	09:16:05	VOLTAGE	32.300	[MV]	9990.00	[CPS]
4	Sep30.08	09:16:05	VOLTAGE	32.300	[MV]	36000.00	[CPS]
5	Sep27.08	12:43:12	CALIPER	99.000	[MM]	98200.00	[CPS]
6	Sep27.08	12:43:12	CALIPER	143.000	[MM]	123900.00	[CPS]
7	Oct05.08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
8	Oct05.08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
9	Oct05.08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
10	Oct05.08	13:55:15	DEN(SS)	2.320	[G/CC]	5795.10	[CPS]
11	Sep30.08	09:16:52	CALIPER1	114.300	[MM]	85000.00	[CPS]
12	Sep30.08	09:16:52	CALIPER1	114.300	[MM]	122552.10	[CPS]
13	Sep29.08	16:45:34	CURRENT	32.300	[UA]	4580.10	[CPS]
14	Sep29.08	16:45:34	CURRENT	252.700	[UA]	23385.10	[CPS]
15	May29.08	10:49:47	F	Default	[CPS]		
16	May29.08	10:49:47	X	Default	[CPS]		

COMPANY	CONOCOPHILLIPS ALASKA, INC.
WELL	2H-09
FIELD	KUPARUK
COUNTY	NORTH SLOPE
STATE	ALASKA
LOCATION	1 FNL 1 FEL
TOWNSHIP	11N
RANGE	10E
PERMANENT DATUM	MEAN SEA LEVEL
LOG MEASURED FROM	0.0
DRILLING MEASURED FROM	0.0
API SERIAL NO.	50-103-20349
LATITUDE	70.3400
LONGITUDE	-149.8500
SECTION	36
TOWNSHIP	11N
RANGE	10E
PROVINCE	NORTH SLOPE BOROUGH
COUNTRY	USA
ELEVATIONS	
KB	0.0
DF	0.0
GL	-34.0
DATE	05-Oct-08
RUN NUMBER	ONE
TD DRILLER	131.000
TD LOGGER	131.000
BTM LOG INTERVAL	130.944
TOP LOG INTERVAL	26.000
CASING DRILLER	9.625 @ 3.000
CASING LOGGER	9.625 @ 3.000
BIT SIZE	8.500
TYPE FLUID IN HOLE	KCL POLYMER
DENSITY	8.5
PH	9.5
FLUID LEVEL	FULL
MAX RECORDED TEMP	125
ESTIMATED BHT	135
TIME CIRC. END	19:00
TIME LOGGER ON BOTTOM	21:00
LOGGING DISTRICT	ALASKA
LOGGING ENGINEER	R. KUCZ
WITNESS	ROSENBAUM / AHVAK @ 2000 DOWSES
REMARKS	ALL DEPTHS REFLECT CORRECTIONS FROM WIRELINE CONVENTION

Century WIRELINE SERVICES

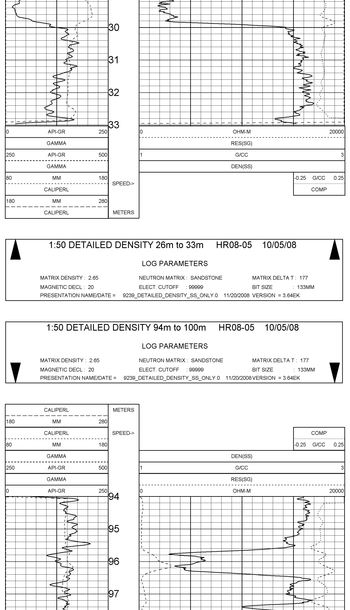
SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HR08-05

OPHIR SERVICES
NO

1:50 DETAILED DENSITY 26m to 33m HR08-05 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 133MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 26m to 33m HR08-05 10/05/08

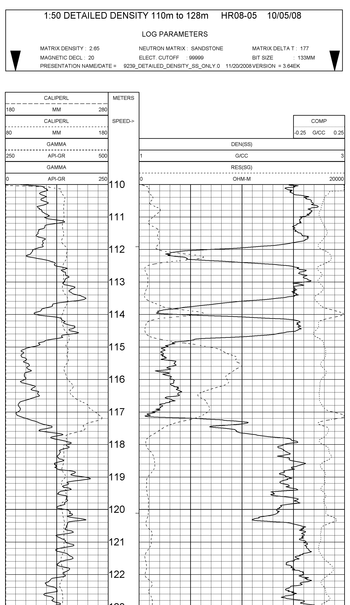
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 133MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

1:50 DETAILED DENSITY 94m to 100m HR08-05 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 133MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 94m to 100m HR08-05 10/05/08

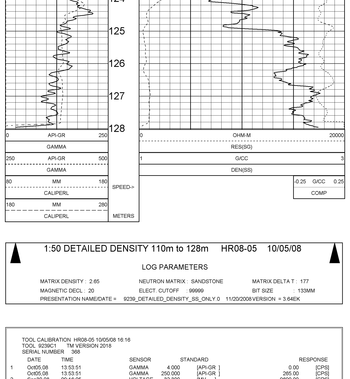
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 133MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

1:50 DETAILED DENSITY 110m to 128m HR08-05 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 133MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 110m to 128m HR08-05 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 133MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-05 10/05/08 18:16
TOOL 9230C1 TM VERSION 2019
SERIAL NUMBER 368

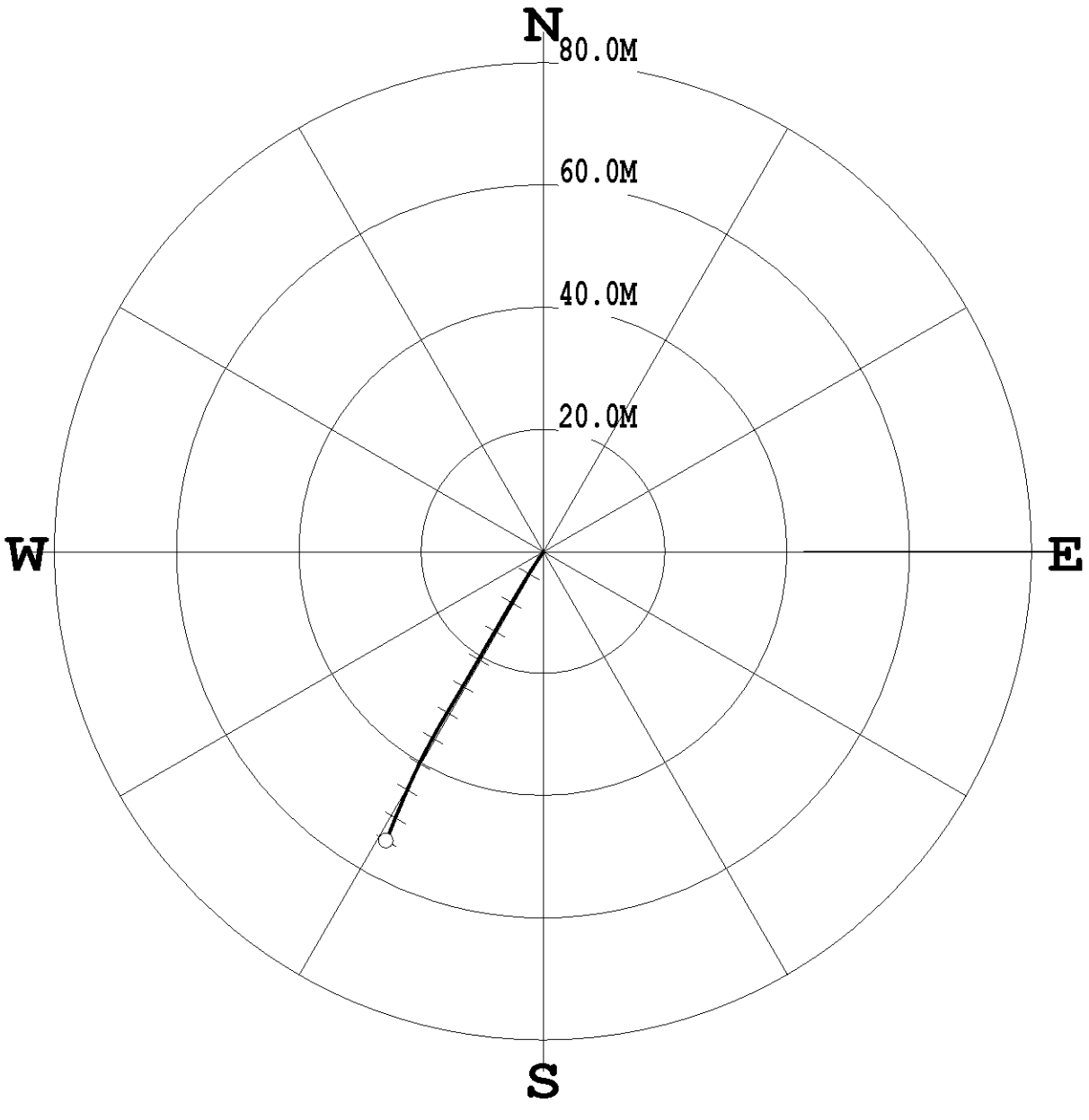
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05.08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30.08	09:16:05	VOLTAGE	32.300	[MV]	9990.00	[CPS]
3	Sep27.08	12:43:12	VOLTAGE	32.300	[MV]	38000.00	[CPS]
3	Sep27.08	12:43:12	CALIPER	99.000	[MM]	98200.00	[CPS]
	Sep27.08	12:43:12	CALIPER	143.000	[MM]	123900.00	[CPS]
4	Oct05.08	13:54:59	DENL(S)	1.000	[G/CC]	6993.10	[CPS]
	Oct05.08	13:54:59	DENL(S)	2.320	[G/CC]	804.00	[CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05.08	13:55:15	DEN(SS)	2.320	[G/CC]	5795.10	[CPS]
6	Sep30.08	09:15:52	CALIPER1	99.000	[MM]	85200.00	[CPS]
	Sep30.08	09:15:52	CALIPER1	114.300	[MM]	122552.10	[CPS]
7	Sep28.08	16:45:34	CURRENT	32.300	[UA]	4580.10	[CPS]
	Sep28.08	16:45:34	CURRENT	252.700	[UA]	23365.10	[CPS]
8	May28.08	10:49:47	F	Default	[CPS]		
9	May28.08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-05
DATE OF LOG: 10/05/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 10 M/CM
TRUE DEPTH: 118.00 M
AZIMUTH: 208.5
DISTANCE: 53.8 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-05
DATE OF LOG : 10/05/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-05_10-05-08_15-44_9057A_.02_12.00_131.14_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
14.00	13.76	-0.80	-0.54	1.0	213.9	28.3	213.9
16.00	15.52	-1.59	-1.05	1.9	213.5	27.6	212.7
18.00	17.28	-2.38	-1.56	2.8	213.3	28.2	213.1
20.00	19.04	-3.18	-2.07	3.8	213.1	28.9	213.8
22.00	20.80	-3.99	-2.58	4.8	212.9	28.6	211.6
24.00	22.55	-4.81	-3.08	5.7	212.7	28.8	211.8
26.00	24.31	-5.64	-3.58	6.7	212.5	28.9	212.4
28.00	26.06	-6.46	-4.08	7.6	212.3	28.8	210.7
30.00	27.81	-7.29	-4.57	8.6	212.1	28.7	210.9
32.00	29.56	-8.12	-5.07	9.6	212.0	28.8	210.9
34.00	31.32	-8.94	-5.56	10.5	211.9	28.7	211.2
36.00	33.07	-9.77	-6.05	11.5	211.8	28.5	209.6
38.00	34.83	-10.59	-6.53	12.4	211.6	28.4	209.9
40.00	36.59	-11.42	-7.01	13.4	211.5	28.4	210.5
42.00	38.35	-12.24	-7.49	14.3	211.4	28.5	209.7
44.00	40.10	-13.07	-7.96	15.3	211.4	28.6	209.8
46.00	41.86	-13.89	-8.44	16.3	211.3	28.3	210.1
48.00	43.63	-14.71	-8.91	17.2	211.2	28.1	210.0
50.00	45.39	-15.52	-9.39	18.1	211.2	27.9	209.1
52.00	47.16	-16.33	-9.85	19.1	211.1	27.6	210.5
54.00	48.93	-17.13	-10.32	20.0	211.1	27.5	210.3
56.00	50.71	-17.93	-10.78	20.9	211.0	27.4	210.1
58.00	52.49	-18.72	-11.24	21.8	211.0	27.0	210.1
60.00	54.27	-19.51	-11.70	22.7	210.9	27.1	210.4
62.00	56.05	-20.29	-12.15	23.7	210.9	26.9	210.0
64.00	57.83	-21.07	-12.61	24.6	210.9	26.8	211.2
66.00	59.62	-21.85	-13.07	25.5	210.9	26.8	210.6
68.00	61.40	-22.62	-13.53	26.4	210.9	26.8	209.9
70.00	63.19	-23.40	-13.99	27.3	210.9	26.6	212.2
72.00	64.98	-24.17	-14.45	28.2	210.9	26.5	210.9
74.00	66.77	-24.93	-14.91	29.0	210.9	26.3	210.0
76.00	68.56	-25.69	-15.36	29.9	210.9	26.2	211.1
78.00	70.36	-26.45	-15.81	30.8	210.9	26.0	210.2
80.00	72.15	-27.20	-16.26	31.7	210.9	25.9	210.2
82.00	73.95	-27.95	-16.70	32.6	210.9	25.7	210.5
84.00	75.76	-28.71	-17.13	33.4	210.8	25.6	210.0
86.00	77.56	-29.46	-17.55	34.3	210.8	25.4	208.0
88.00	79.37	-30.21	-17.97	35.1	210.7	25.3	208.4
90.00	81.18	-30.95	-18.38	36.0	210.7	25.3	209.0
92.00	82.99	-31.70	-18.78	36.8	210.6	25.1	207.9
94.00	84.80	-32.45	-19.18	37.7	210.6	25.1	207.8
96.00	86.61	-33.21	-19.57	38.5	210.5	25.2	207.1
98.00	88.42	-33.97	-19.95	39.4	210.4	25.5	206.9
100.00	90.23	-34.73	-20.33	40.2	210.3	25.2	203.7
102.00	92.03	-35.50	-20.70	41.1	210.2	25.2	206.6
104.00	93.84	-36.28	-21.06	41.9	210.1	25.3	205.6
106.00	95.65	-37.05	-21.41	42.8	210.0	25.4	203.3
108.00	97.46	-37.84	-21.77	43.7	209.9	25.6	205.7
110.00	99.26	-38.62	-22.13	44.5	209.8	25.9	204.6
112.00	101.06	-39.42	-22.48	45.4	209.7	25.8	206.3
114.00	102.86	-40.23	-22.82	46.3	209.6	26.3	203.7
116.00	104.65	-41.05	-23.16	47.1	209.4	26.2	202.3
118.00	106.44	-41.87	-23.50	48.0	209.3	27.4	204.4
120.00	108.22	-42.71	-23.85	48.9	209.2	27.0	202.3
122.00	110.00	-43.54	-24.21	49.8	209.1	26.8	202.7
124.00	111.79	-44.36	-24.55	50.7	209.0	26.7	202.6
126.00	113.58	-45.20	-24.88	51.6	208.8	26.9	202.9
128.00	115.36	-46.04	-25.22	52.5	208.7	26.9	205.3
130.00	117.14	-46.88	-25.55	53.4	208.6	26.9	200.4
130.96	118.00	-47.28	-25.71	53.8	208.5	27.0	201.6

Century WIRELINE SERVICES

GAMMA - NEUTRON

HR08-05

COMPANY	PRESCOTT ENERGY CORPORATION
WELL	HR08-05
FIELD	
COUNTY	CRAWFORD
STATE	KANSAS
OTHER SERVICES	DENSITY/NEUTRON
SECT	36
TWP	27S
RGE	25E
PERMANENT DATUM	GL
LOG MEASURED FROM	KB
DRILLING MEASURED FROM	KB
API SERIAL NO.	15-037-22-0000
DATE	10/05/08
RUN NO.	ONE
TYPE LOG	GAMMA RAY NEUTRON
DEPTH-DRILLER	331.0M
DEPTH-LOGGER	331.0M
BTM LOG INTERVAL	331.0M
TOP LOG INTERVAL	0.0M
CASING-DRILLER	5.5" @ 21.0M
CASING-LOGGER	5.5" @ 21.0M
BIT SIZE	5.5"
TYPE FLUID	AIR
DENSITY	N/A
VISCOSITY	N/A
PH	N/A
FLUID LOSS	N/A
SOURCE OF SAMPLE	N/A
RM @ MEASURED TEMP	N/A
RMF @ MEASURED TEMP	N/A
RMC @ MEASURED TEMP	N/A
SOURCE RMF / RMC	N/A
RM @ BHT	N/A
TIME CIRC. ENDED	N/A
TIME LOGGER ON BOTTOM	N/A
MAX. REC. TEMP.	N/A
EQUIP. NO.	N/A
LOCATION	N/A
RECORDED BY	N/A
WITNESSED BY	N/A

REMARKS 1: DENSITY/NEUTRON TOOL 1.75 CPS/PPS DIAL SETTING 2.0 DENSITY/NEUTRON TOOL 1.75 CPS/PPS DIAL SETTING 2.0 DENSITY/NEUTRON TOOL 1.75 CPS/PPS DIAL SETTING 2.0

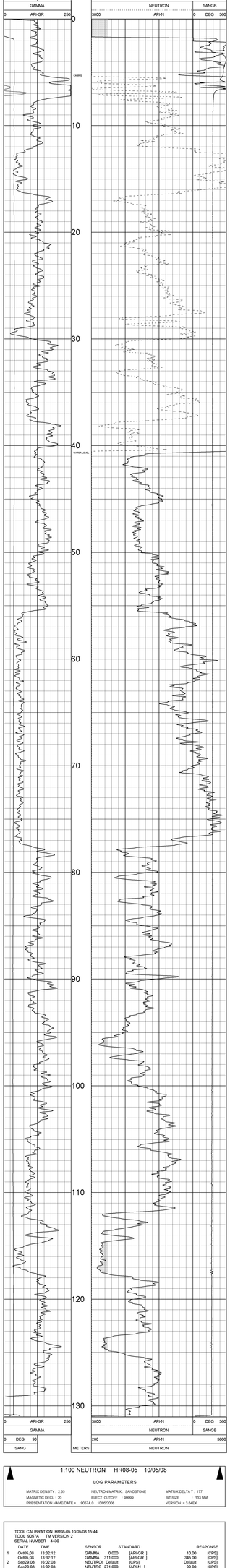
REMARKS 2: 96 SECONDS SAMPLE @ 200 DEGREES

REMARKS 3: 1:100 DENSITY/NEUTRON WELL LOG DISPLAYED ON THE LAS DOWNLOAD

MATRIX DENSITY	2.65
MAGNETIC DECL.	20
PRESENTATION NAME/DATE	9057A.0 10/05/2008
NEUTRON MATRIX	SANDSTONE
ELECT. CUTOFF	99999
BIT SIZE	133 MM
MATRIX DELTA T	177
VERSION	3.64EK

1:100 NEUTRON HR08-05 10/05/08

LOG PARAMETERS



1:100 NEUTRON HR08-05 10/05/08

LOG PARAMETERS

MATRIX DENSITY	2.65
MAGNETIC DECL.	20
PRESENTATION NAME/DATE	9057A.0 10/05/2008
NEUTRON MATRIX	SANDSTONE
ELECT. CUTOFF	99999
BIT SIZE	133 MM
MATRIX DELTA T	177
VERSION	3.64EK

TOOL CALIBRATION HR08-05 10/05/08 15:44
TOOL 9057A TM VERSION 2
SERIAL NUMBER 4430

	DATE	TIME	SENSOR	STANDARD		RESPONSE
1	Oct05,08	13:32:12	GAMMA	0.000	[API-GR]	10.00 [CPS]
	Oct05,08	13:32:12	GAMMA	311.000	[API-GR]	345.00 [CPS]
2	Sep29,08	16:02:03	NEUTRON	Default	[CPS]	Default [CPS]
	Sep29,08	16:02:03	NEUTRC	271.000	[API-N]	89.00 [CPS]
3	Sep27,08	12:12:10	SP	0.000	[MV]	325650.00 [CPS]
	Sep27,08	12:12:10	SP	97.000	[MV]	277560.00 [CPS]
4	Sep27,08	12:12:22	RES(16IN)	0.000	[OHMM]	3891.00 [CPS]
	Sep27,08	12:12:22	RES(16I	1996.000	[OHMM]	421750.00 [CPS]
5	Sep27,08	12:12:31	RES(64I	0.000	[OHMM]	3891.00 [CPS]
	Sep27,08	12:12:31	RES(64I	1990.000	[OHMM]	432832.00 [CPS]
6	Sep27,08	12:12:36	TEMP	64.400	[DEG F]	353843.00 [CPS]
	Sep27,08	12:12:36	TEMP	129.400	[DEG F]	396875.00 [CPS]
7	Sep27,08	12:12:47	RES	0.000	[OHM]	4437.00 [CPS]
	Sep27,08	12:12:47	RES	689.000	[OHM]	162585.00 [CPS]

COMPANY	CONTINUUM WIRELINE CORPORATION
WELL	HR08-05
FIELD	HOLLOWAY
COUNTY	
PROVINCE	CANADA
SECTION	
RANGE	
TOWNSHIP	
PERMANENT DATUM	GRD
LOG MEASURED FROM	KB
DRILLING MEASURED FROM	KB
ELEVATION	
ELEVATION OF DF	N/A
ELEVATION OF GL	N/A
DATE	10/05/08
RUN NUMBER	ONE
DEPTH DRILLER	131
DEPTH LOGGER	130
BOTTOM LOG INTERVAL	130
TOP LOG INTERVAL	30.18
CASING DRILLER	9.68
CASING LOGGER	9.68
BIT SIZE	6.5
CASING SIZE	5.5
TYPE FLUID IN HOLE	WATER
DENSITY	1.0
VISCOSITY	50
PH	7.5
FLUID LOSS	N/A
SOURCE OF SAMPLE	N/A
RM @ MEASURED TEMP	N/A
RMF @ MEASURED TEMP	N/A
RMC @ MEASURED TEMP	N/A
SOURCE RMF / RMC	N/A / N/A
RM @ BHT	N/A
TIME CIRC. STOPPED	10:00
TIME LOGGER ON BOTTOM	10:09
MAX. RECORDED TEMP.	0
EQUIPMENT NO.	9411
LOCATION	PRINCE GEORGE
RECORDED BY	R. KACZ
WITNESSED BY	MR. DONCHUK

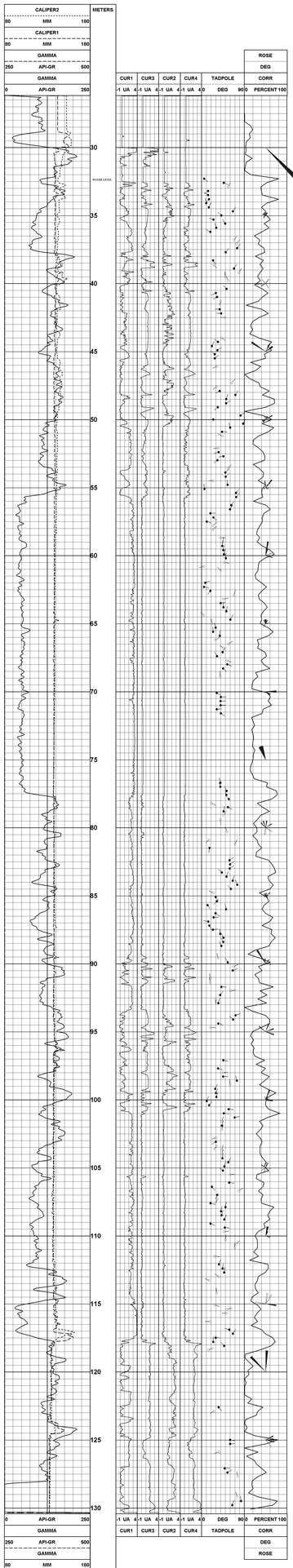
DIPMETER
HR08-05

CONTINUUM WIRELINE SERVICES
CONTINUUM WIRELINE CORPORATION
PRINCE GEORGE, BRITISH COLUMBIA

1:100 DIPMETER HR08-05 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 13.3	
PRESENTATION NAME/DATE = 9411print a.0 10/05/2008		VERSION = 3.64EK	



1:100 DIPMETER HR08-05 10/05/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 13.3	
PRESENTATION NAME/DATE = 9411print a.0 10/05/2008		VERSION = 3.64EK	

TOOL CALIBRATION HR08-05 10/05/08 16:53
TOOL 9411A TM VERSION 4
SERIAL NUMBER 4502

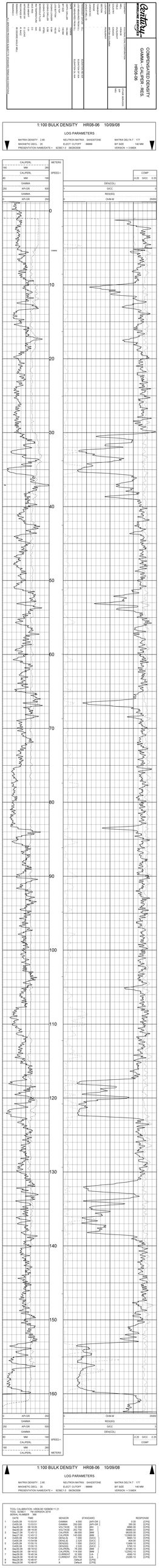
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct03,08	13:26:24	GAMMA	Default	[CPS]	Default	[CPS]
	Oct03,08	13:26:24	GAMMA	150.000	[API-GR]	150.00	[CPS]
2	Dec13,07	10:09:00	VOLTAG	228.000	[MV]	2281.00	[CPS]
	Dec13,07	10:09:00	VOLTAG	1603.000	[MV]	11236.00	[CPS]
3	Dec05,07	13:21:57	CUR1	0.000	[UA]	290.00	[CPS]
	Dec05,07	13:21:57	CUR1	4.975	[UA]	9186.00	[CPS]
4	Dec05,07	13:22:16	CUR2	0.000	[UA]	438.00	[CPS]
	Dec05,07	13:22:16	CUR2	4.975	[UA]	9414.00	[CPS]
5	Dec05,07	13:22:34	CUR3	0.000	[UA]	424.00	[CPS]
	Dec05,07	13:22:34	CUR3	4.975	[UA]	9609.00	[CPS]
6	Dec05,07	13:22:51	CUR4	0.000	[UA]	460.00	[CPS]
	Dec05,07	13:22:51	CUR4	4.975	[UA]	9464.00	[CPS]
7	Oct03,08	13:27:12	CALIPER	140.000	[INCH]	5500.10	[CPS]
	Oct03,08	13:27:12	CALIPER	170.400	[INCH]	7150.10	[CPS]

Century Geophysics Corporation

RIG:	1
COMPANY:	CONOCOPHILLIPS COMPANY
WELL:	HR08-06
FIELD:	HORSESHOE CANYON
COUNTY:	SANDSTONE
STATE:	UTAH
COORDINATES:	LAT: 39.6 LONG: -111.1
LOCATION:	SECTION 36 T14S R6E
ELEVATION:	KB: 6,000 GL: 5,985
DATE:	09/09/2008
SPUD:	09/09/2008
TD:	09/09/2008
DRILLING CONTRACTOR:	N/A
MUD:	N/A
BIT:	7 7/8"
CASING:	8 5/8" @ 140'
DRILLER:	N/A
LOGGER:	N/A
LOGGING UNIT:	1
LOGGING ENGINEER:	N/A
DATA:	N/A
DENSITY:	N/A
NEUTRON:	N/A
GAMMA:	N/A
CALIPER:	N/A
RESISTIVITY:	N/A
DIP:	N/A
DIP AZIMUTH:	N/A
DIP STRIKE:	N/A
DIP SCALE:	N/A
DIP TYPE:	N/A
DIP QUALITY:	N/A
DIP ANALYSIS:	N/A
DIP ANALYST:	N/A
DIP ANALYSIS DATE:	N/A
DIP ANALYSIS TIME:	N/A
DIP ANALYSIS DATUM:	N/A
DIP ANALYSIS DATUM TYPE:	N/A
DIP ANALYSIS DATUM ELEVATION:	N/A
DIP ANALYSIS DATUM DEPTH:	N/A
DIP ANALYSIS DATUM TIME:	N/A
DIP ANALYSIS DATUM DATE:	N/A
DIP ANALYSIS DATUM COMMENTS:	N/A

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HR08-06

DATE 9/9/2008
SCALE 1:100



TOOL CALIBRATION HR08-06 10/08/08 11:21
TOOL NAME 3-D DENSITY 2010
SERIAL NUMBER 3-D

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	11:13:51	GAMMA	0.000	API-GR	0.00	[CPS]
	Oct05,08	11:13:51	GAMMA	248.000	API-GR	289.00	[CPS]
2	Sep30,08	09:18:05	VOLTAGE	32.500	[MV]	9990.00	[CPS]
	Sep30,08	09:18:05	VOLTAGE	32.500	[MV]	9990.00	[CPS]
3	Sep27,08	12:43:12	CALIPER	99.000	[MM]	99200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	123060.00	[CPS]
4	Oct05,08	11:54:59	DENS(D)	0.000	[GCC]	0.00	[CPS]
	Oct05,08	11:54:59	DENS(D)	2.500	[GCC]	804.00	[CPS]
5	Oct05,08	13:55:15	DENS(D)	2.500	[GCC]	12969.10	[CPS]
	Oct05,08	13:55:15	DENS(D)	2.500	[GCC]	12969.10	[CPS]
6	Sep20,08	09:16:52	CALIPER1	76.200	[MM]	87580.10	[CPS]
	Sep20,08	09:16:52	CALIPER1	114.300	[MM]	123052.10	[CPS]
7	Sep20,08	10:48:47	CALIPER2	76.200	[MM]	2526.10	[CPS]
	Sep20,08	10:48:47	CALIPER2	252.700	[LA]	2526.10	[CPS]
8	May29,08	10:49:47	X	Default	[CPS]		
	May29,08	10:49:47	X	Default	[CPS]		

1:100 BULK DENSITY HR08-06 10/09/08
LOG PARAMETERS
MATRIX DENSITY : 2.65
MAGNETIC DECL. : 22
PRESENTATION NAME/DATE = 823KC-3 09/09/2008
NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF 99999
MATRIX DELTA-T : 177
BIT SIZE 140 MM
VERSION = 3.04EK

Geotech

GEOTECH DESCRIPTIVE
CANADA - CHINA - INDIA
HONG KONG

Geotech Canada Inc.
Geotech Hong Kong Ltd.
Geotech Inc.
Geotech Ltd.
Geotech Pty Ltd.
Geotech Sdn Bhd
Geotech Pte Ltd.
Geotech Ltd.
Geotech Ltd.
Geotech

Geotech

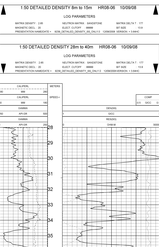
SHORT-SPACED DENSITY
GAMMA - GAMMA - HR16
HR08-06

Hole Depth: 162.00 m
Date: 10/09/08
Time: 10:00:00
Operator: Jim Cunningham
Shift: Day
Hole Diameter: 152 mm
Casing Depth: 0.00 m
Casing Diameter: 0 mm
Casing Density: 0.00 g/cm³
Water Level: 0.00 m
Water Density: 1.00 g/cm³
Comments: Hole Dry

1.50 DETAILED DENSITY 8m to 15m HR08-06 10/09/08

LOG PARAMETERS

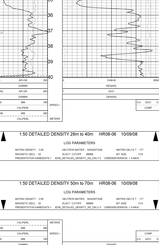
MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 8m to 15m HR08-06 10/09/08

LOG PARAMETERS

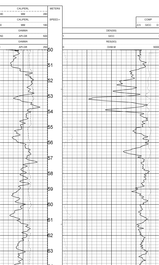
MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 28m to 40m HR08-06 10/09/08

LOG PARAMETERS

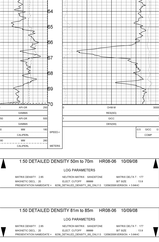
MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 40m to 50m HR08-06 10/09/08

LOG PARAMETERS

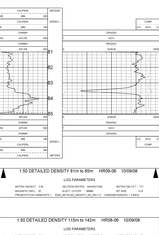
MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 50m to 70m HR08-06 10/09/08

LOG PARAMETERS

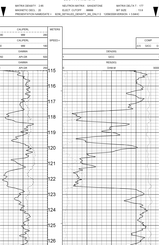
MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 50m to 70m HR08-06 10/09/08

LOG PARAMETERS

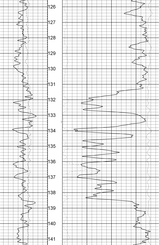
MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 81m to 85m HR08-06 10/09/08

LOG PARAMETERS

MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 81m to 85m HR08-06 10/09/08

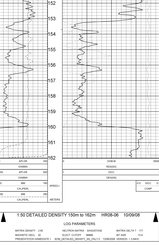
LOG PARAMETERS

MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2

1.50 DETAILED DENSITY 115m to 142m HR08-06 10/09/08

LOG PARAMETERS

MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2



1.50 DETAILED DENSITY 115m to 142m HR08-06 10/09/08

LOG PARAMETERS

MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2

1.50 DETAILED DENSITY 142m to 162m HR08-06 10/09/08

LOG PARAMETERS

MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2

1.50 DETAILED DENSITY 150m to 162m HR08-06 10/09/08

LOG PARAMETERS

MATRIX DENSITY: 2.65 ULTRA MATRIX - SANDSTONE MATRIX DELTA-T: 177
MINIMUM SKID: 30 SLICE COUNTER: 20000 SPIKE: 10 SP BIAS: 1024
PROBE STATION NUMBER(S): 1 SERIAL DETAILED_DENSITY_RB_CALC.3 CABLE/DRIVER: ERWIN - 1 CAN2

TOOL CALIBRATION: HR08-06 TOOBAR 11.01
TOOL SERIAL NO: TBA-0000-0279
TOOL TYPE: HR16

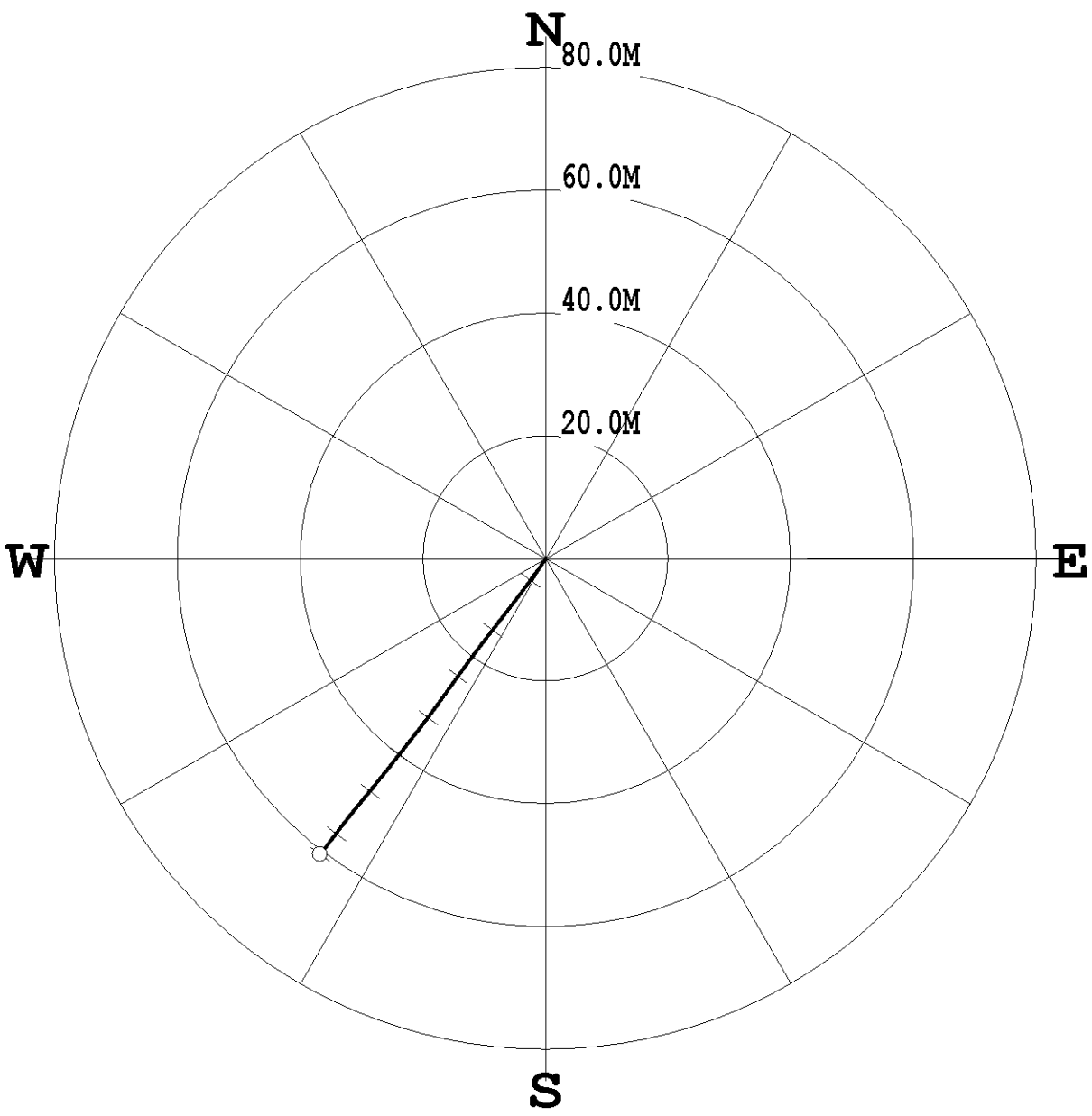
1	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
2	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
3	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
4	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
5	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
6	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
7	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
8	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
9	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
10	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
11	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
12	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
13	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
14	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
15	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
16	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
17	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
18	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
19	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
20	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
21	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
22	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
23	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
24	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
25	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
26	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
27	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
28	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
29	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
30	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
31	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
32	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
33	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
34	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
35	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
36	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
37	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
38	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
39	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00
40	Date:08-10-10	10:00:00	0.00	0.00	0.00	0.00	0.00

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-06
DATE OF LOG: 10/09/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 10 M/CM
TRUE DEPTH: 149.03 M
AZIMUTH: 217.4
DISTANCE: 60.5 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO HOLE ID. : HR08-06
FIELD OFFICE : CENTURY DATE OF LOG : 10/09/08
DATA FROM : PROBE : 9057A , 4430
MAG. DECL. : 20.000 DEPTH UNITS : METERS
LOG: HR08-06_10-09-08_10-44_9057A_.02_12.00_162.14_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
12.02	12.02	-0.01	-0.01	0.0	218.0	28.4	218.0
14.00	13.76	-0.78	-0.54	0.9	214.9	28.3	213.7
16.00	15.52	-1.55	-1.08	1.9	214.9	28.1	215.6
18.00	17.29	-2.32	-1.64	2.8	215.2	28.3	216.3
20.00	19.05	-3.09	-2.19	3.8	215.4	28.2	216.3
22.00	20.81	-3.85	-2.75	4.7	215.6	28.2	216.7
24.00	22.57	-4.60	-3.31	5.7	215.7	27.9	216.4
26.00	24.35	-5.35	-3.87	6.6	215.9	27.6	216.8
28.00	26.12	-6.08	-4.43	7.5	216.1	27.1	217.0
30.00	27.90	-6.80	-4.98	8.4	216.2	26.8	217.3
32.00	29.69	-7.51	-5.52	9.3	216.3	26.5	216.8
34.00	31.48	-8.22	-6.07	10.2	216.4	26.6	218.3
36.00	33.27	-8.93	-6.62	11.1	216.5	26.7	218.3
38.00	35.05	-9.64	-7.17	12.0	216.6	26.7	216.8
40.00	36.84	-10.35	-7.72	12.9	216.7	26.7	217.8
42.00	38.63	-11.06	-8.26	13.8	216.8	26.3	218.3
44.00	40.42	-11.76	-8.80	14.7	216.8	26.3	217.2
46.00	42.22	-12.46	-9.34	15.6	216.8	26.1	217.8
48.00	44.02	-13.16	-9.87	16.4	216.9	25.9	217.3
50.00	45.82	-13.85	-10.40	17.3	216.9	25.5	217.1
52.00	47.62	-14.53	-10.92	18.2	216.9	25.4	217.4
54.00	49.43	-15.21	-11.43	19.0	216.9	25.2	216.8
56.00	51.24	-15.90	-11.94	19.9	216.9	24.9	216.4
58.00	53.06	-16.58	-12.44	20.7	216.9	24.9	217.5
60.00	54.87	-17.26	-12.94	21.6	216.9	24.6	216.2
62.00	56.69	-17.93	-13.43	22.4	216.8	24.3	216.0
64.00	58.51	-18.59	-13.92	23.2	216.8	24.3	216.2
66.00	60.34	-19.25	-14.40	24.0	216.8	24.1	216.0
68.00	62.16	-19.91	-14.87	24.9	216.8	24.0	215.9
70.00	63.99	-20.57	-15.35	25.7	216.7	23.7	215.0
72.00	65.83	-21.22	-15.81	26.5	216.7	23.3	214.9
74.00	67.66	-21.86	-16.27	27.2	216.7	23.0	216.4
76.00	69.51	-22.49	-16.72	28.0	216.6	22.7	214.8
78.00	71.35	-23.11	-17.17	28.8	216.6	22.3	216.3
80.00	73.21	-23.72	-17.61	29.5	216.6	21.9	217.1
82.00	75.07	-24.31	-18.05	30.3	216.6	21.4	216.9
84.00	76.93	-24.90	-18.48	31.0	216.6	21.5	217.1
86.00	78.79	-25.48	-18.92	31.7	216.6	21.2	217.1
88.00	80.66	-26.06	-19.35	32.5	216.6	21.2	217.6
90.00	82.52	-26.64	-19.80	33.2	216.6	21.6	217.1
92.00	84.38	-27.22	-20.23	33.9	216.6	21.3	215.7
94.00	86.25	-27.79	-20.67	34.6	216.6	21.2	217.5
96.00	88.11	-28.36	-21.11	35.4	216.7	21.0	217.8
98.00	89.98	-28.93	-21.55	36.1	216.7	20.9	219.8
100.00	91.85	-29.49	-21.98	36.8	216.7	20.4	217.9
102.00	93.73	-30.04	-22.41	37.5	216.7	20.3	217.9
104.00	95.60	-30.58	-22.84	38.2	216.8	20.5	219.1
106.00	97.48	-31.13	-23.28	38.9	216.8	20.3	218.8
108.00	99.35	-31.67	-23.71	39.6	216.8	20.0	218.1
110.00	101.23	-32.20	-24.13	40.2	216.8	19.7	218.0
112.00	103.12	-32.73	-24.54	40.9	216.9	20.0	215.7
114.00	105.00	-33.27	-24.96	41.6	216.9	19.7	217.6
116.00	106.88	-33.80	-25.39	42.3	216.9	21.8	212.2
118.00	108.75	-34.35	-25.83	43.0	216.9	20.6	219.2
120.00	110.62	-34.90	-26.27	43.7	217.0	21.2	220.5
122.00	112.48	-35.46	-26.73	44.4	217.0	21.3	215.3
124.00	114.34	-36.04	-27.19	45.1	217.0	21.5	218.6
126.00	116.20	-36.62	-27.67	45.9	217.1	22.1	218.8
128.00	118.05	-37.21	-28.14	46.7	217.1	22.6	220.0
130.00	119.89	-37.81	-28.62	47.4	217.1	22.5	217.1
132.00	121.73	-38.41	-29.12	48.2	217.2	23.0	218.8
134.00	123.57	-39.02	-29.62	49.0	217.2	23.4	220.5
136.00	125.41	-39.64	-30.12	49.8	217.2	23.6	218.9
138.00	127.24	-40.26	-30.63	50.6	217.3	23.9	218.4
140.00	129.06	-40.90	-31.15	51.4	217.3	24.3	219.4
142.00	130.89	-41.54	-31.66	52.2	217.3	23.8	218.6
144.00	132.72	-42.17	-32.16	53.0	217.3	23.8	217.5
146.00	134.55	-42.80	-32.65	53.8	217.3	23.9	216.3
148.00	136.37	-43.45	-33.16	54.7	217.3	24.5	218.0
150.00	138.19	-44.11	-33.66	55.5	217.4	24.5	217.3
152.00	140.01	-44.77	-34.17	56.3	217.4	24.7	217.9
154.00	141.83	-45.43	-34.67	57.2	217.4	24.7	217.2
156.00	143.64	-46.10	-35.18	58.0	217.4	25.2	217.6
158.00	145.45	-46.78	-35.71	58.8	217.4	25.3	217.8
160.00	147.26	-47.45	-36.23	59.7	217.4	25.2	218.7
162.00	149.07	-48.12	-36.76	60.5	217.4	0.0	0.0
161.96	149.03	-48.12	-36.76	60.5	217.4	25.8	219.0

Geothyr
WIRELINE SERVICES

GAMMA - NEUTRON
HR08-06

COMPANY	GEOTHYR WIRELINE CORPORATION
WELL	HR08-06
FIELD	
COUNTY	
PROVINCE	
COUNTRY	
WITNESS	
LOCATION	
LOG DATE	10/09/08
RUN	ONE
DEPTH DRILLER	1000
DEPTH LOGGER	1000
BTM LOG INTERVAL	1000
TOP LOG INTERVAL	0
CASING DRILLER	0
CASING LOGGER	0
BIT SIZE	13.5
TYPE FLUID IN HOLE	WATER
DENSITY	1.0
VISCOSITY	0
PH	0
FLUID LOSS	0
SOURCE OF SAMPLE	
RM @ MEASURED TEMP	
RMF @ MEASURED TEMP	
RMC @ MEASURED TEMP	
SOURCE RMF / RMC	
RM @ BHT	
TIME CIRC. STOPPED	
TIME LOGGER ON BOTTOM	
MAX. RECORDED TEMP.	
EQUIP. NO.	
LOCATION	
RECORDED BY	
WITNESSED BY	

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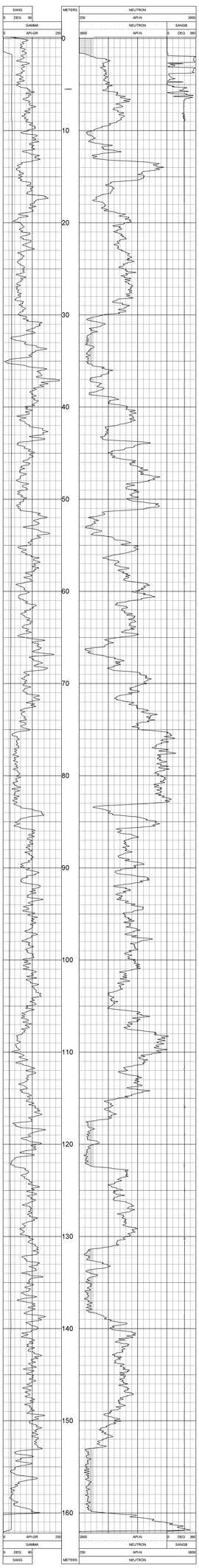
1:100 NEUTRON HR08-06 10/09/08

LOG PARAMETERS

MATRIX DENSITY : 2.65		NEUTRON MATRIX : SANDSTONE		MATRIX DELTA T : 177	
MAGNETIC DECL. : 20		ELECT. CUTOFF : 99999		BIT SIZE : 13.5	
PRESENTATION: NAMGCATE =	9037A-3	10/05/2008		VERSION = 3.84DK	



1:100 NEUTRON HR08-06 10/09/08

LOG PARAMETERS

MATRIX DENSITY : 2.65		NEUTRON MATRIX : SANDSTONE		MATRIX DELTA T : 177	
MAGNETIC DECL. : 20		ELECT. CUTOFF : 99999		BIT SIZE : 13.5	
PRESENTATION: NAMGCATE =	9037A-3	10/05/2008		VERSION = 3.84DK	

TOOL CALIBRATION: HR08-06 10/09/08 10:44
TOOL: 9037A TM VERSION 2
SERIAL NUMBER : 4430

	DATE	TIME	SENSOR	STANDARD	RESPONSE	
1	Oct05,08	13:32:12	GAMMA 0.000	[API-GR]	15.00	[CPS]
	Oct05,08	13:32:12	GAMMA 311.000	[API-GR]	345.00	[CPS]
2	Sep27,08	18:02:03	NEUTRON 0.000	[API-N]	0.00	[CPS]
	Sep27,08	18:02:03	NEUTRON 217.000	[API-N]	89.00	[CPS]
3	Sep27,08	12:12:10	SP 0.000	[MV]	329600.00	[CPS]
	Sep27,08	12:12:10	SP 87.000	[MV]	277900.00	[CPS]
4	Sep27,08	12:12:22	RES(16N) 0.000	[OHM-M]	3891.00	[CPS]
	Sep27,08	12:12:22	RES(16N) 1000.000	[OHM-M]	4100.00	[CPS]
5	Sep27,08	12:12:31	RES(64N) 0.000	[OHM-M]	3323.00	[CPS]
	Sep27,08	12:12:31	RES(64N) 1990.000	[OHM-M]	429302.00	[CPS]
6	Sep27,08	12:12:36	TEMP 64.400	[DEG F]	353643.00	[CPS]
	Sep27,08	12:12:36	TEMP 120.400	[DEG F]	396875.00	[CPS]
7	Sep27,08	12:12:47	RES 0.000	[OHM]	162.00	[CPS]
	Sep27,08	12:12:47	RES 999.000	[OHM]	162985.00	[CPS]

WELL	HR08-06
FIELD	HORNBEAK
COUNTY	CONNAR
STATE	TEXAS
COUNTRY	UNITED STATES OF AMERICA
API NUMBER	42-105-00000
LATITUDE	30.9
LONGITUDE	-104.7
ELEVATION	1,000
DATUM	NAD27
PROJECTION	UTM
ZONE	13
SPOT	NA
SECTION	NA
BLOCK	NA
SURVEY	NA
ABSTRACT	NA
LEASE	DIPMETER
WELL	HR08-06
DATE	10/09/08
DIPMETER	HR08-06
DIPMETER	HR08-06
DIPMETER	HR08-06

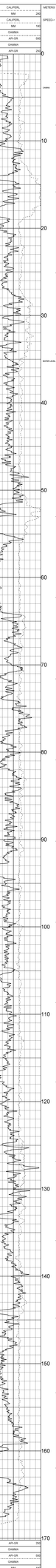
COMPANY	Gardline Geosurvey
FIELD	Southern Gas Corridor
WELL	HR08-07
COUNTRY	Azerbaijan
DATE	10/12/2008
SERVICE	Gamma, Caliper, Density
DEPTH	Logged from 0 to 170 m
DATUM	Seabed
DATA	Raw
FORMATS	Gamma, Caliper, Density, Resistivity
SCALE	1:100
PROCESSING	Gardline Geosurvey

COMPENSATED DENSITY GAMMA, CALIPER, RES HR08-07

1:100 BULK DENSITY HR08-07 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL. : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7 MM	
PRESENTATION NAMECATE = : 82362.C 0 10/12/2008		VERSION : = 3.64EK	



1:100 BULK DENSITY HR08-07 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL. : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7 MM	
PRESENTATION NAMECATE = : 82362.C 0 10/12/2008		VERSION : = 3.64EK	

TOOL CALIBRATION: MBGLST 10/12/08 11:55
TOOL TYPE: MBGLST SERIAL 2018
SERIAL NUMBER:

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	15:53:51	GAMMA	4.500	[API-GR]	0.00	[CPS]
2	Oct05,08	16:18:05	VOLTAGE	32.500	[V]	9900.00	[CPS]
3	Oct05,08	16:18:35	VOLTAGE	32.500	[V]	9900.00	[CPS]
4	Dec27,08	12:40:11	CALIPER	250.000	[MM]	38000.00	[CPS]
5	Dec27,08	12:40:12	CALIPER	143.000	[MM]	12300.00	[CPS]
6	Dec27,08	12:40:13	CALIPER	76.200	[MM]	2500.00	[CPS]
7	Oct05,08	13:55:15	DENSG	2.500	[G/CC]	800.00	[CPS]
8	Oct05,08	13:55:15	DENSG	1.000	[G/CC]	1349.10	[CPS]
9	Oct05,08	09:16:52	CALIPER	76.200	[MM]	2500.00	[CPS]
10	Oct05,08	09:16:52	CALIPER	76.200	[MM]	8748.10	[CPS]
11	Oct05,08	09:16:52	CALIPER	114.500	[MM]	12250.10	[CPS]
12	Oct05,08	09:16:52	CALIPER	152.400	[MM]	15750.10	[CPS]
13	Dec22,08	10:34:34	CURRENT	252.700	[LA]	2539.10	[CPS]
14	May28,08	10:46:41	2	Default	[CPS]		
15	May28,08	10:46:41	2	Default	[CPS]		

Geotech Holdings Ltd.

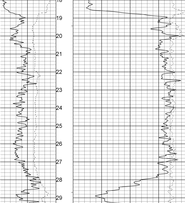
Client	TECK COMINCO LTD.
Project	QUAMA - CALERM - TEES
Hole No.	HR08-07
Date	10/12/08
Logged By	
Checked By	
Elevation	
Collar Location	
Azimuth	
Dip	
Total Depth	
Casing Depth	
Drilling Co.	
Rig Type	
Drill Bit	
Core Size	
Water Level	
Comments	

Geotech Holdings Ltd. assumes no responsibility for the accuracy of the information contained herein.

1.50 DETAILED DENSITY 12m to 38m HR08-07 10/12/08

LOG PARAMETERS

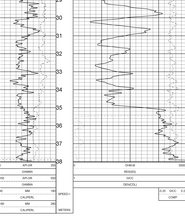
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



1.50 DETAILED DENSITY 38m to 65m HR08-07 10/12/08

LOG PARAMETERS

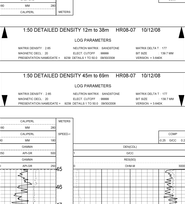
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



1.50 DETAILED DENSITY 65m to 89m HR08-07 10/12/08

LOG PARAMETERS

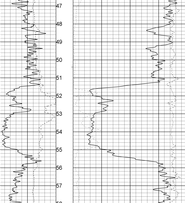
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



1.50 DETAILED DENSITY 89m to 122m HR08-07 10/12/08

LOG PARAMETERS

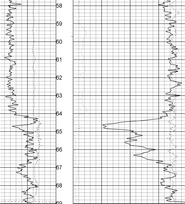
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



1.50 DETAILED DENSITY 122m to 147m HR08-07 10/12/08

LOG PARAMETERS

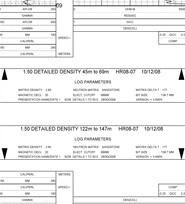
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



1.50 DETAILED DENSITY 147m to 165m HR08-07 10/12/08

LOG PARAMETERS

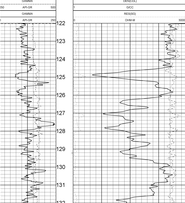
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



1.50 DETAILED DENSITY 157m to 165m HR08-07 10/12/08

LOG PARAMETERS

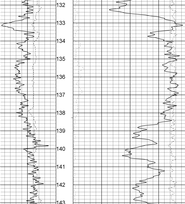
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



1.50 DETAILED DENSITY 157m to 165m HR08-07 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 20	ELECT. CUTOFF : 0MMB	BIT SIZE : 1M7 RM	
PRESENTATION HAMSCATE V :	KEW DETAILS 1 TO 50.0	SKRIBOSIM	VERSION = 1.04MX



TOOL CALIBRATION - HIBALIT VERSION 1.16

TOOL	DATE	TIME	TOOL	STANDARD		RESPONSE	
1	12/05/08	13:55:51	GAMMA	4.000	CPS UNIT	0.00	[CPS]
2	12/05/08	13:55:51	CALIPER	10.000	CM	10.000	[CM]
3	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
4	12/05/08	13:55:51	CALIPER	10.000	CM	10.000	[CM]
5	12/05/08	13:55:51	CALIPER	30.000	CM	30.000	[CM]
6	12/05/08	13:55:51	GAMMA	4.000	CPS UNIT	0.00	[CPS]
7	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
8	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
9	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
10	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
11	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
12	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
13	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
14	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
15	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
16	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
17	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
18	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
19	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
20	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
21	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
22	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
23	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
24	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
25	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
26	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
27	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
28	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
29	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
30	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
31	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
32	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
33	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
34	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
35	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
36	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
37	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
38	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
39	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
40	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
41	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
42	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
43	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
44	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
45	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
46	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
47	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
48	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
49	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
50	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
51	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
52	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
53	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
54	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
55	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
56	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
57	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
58	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
59	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
60	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
61	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
62	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
63	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
64	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
65	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
66	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
67	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
68	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
69	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
70	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
71	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
72	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
73	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
74	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
75	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
76	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
77	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
78	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
79	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
80	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
81	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
82	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
83	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
84	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
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86	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
87	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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95	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
96	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
97	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
98	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
99	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
100	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
101	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
102	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
103	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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109	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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112	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
113	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
114	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
115	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
116	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
117	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
118	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
119	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
120	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
121	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
122	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
123	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
124	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
125	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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127	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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129	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
130	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
131	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
132	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
133	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
134	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
135	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
136	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
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141	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
142	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
143	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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145	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
146	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
147	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
148	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
149	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
150	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
151	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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153	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
154	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
155	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
156	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
157	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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163	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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166	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
167	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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169	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
170	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
171	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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174	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
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176	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
177	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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207	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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218	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
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223	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
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250	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
251	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700	[GCC]
252	12/05/08	13:55:51	DENSITY	1.000	GCC	1.000	[GCC]
253	12/05/08	13:55:51	DENSITY	2.700	GCC	2.700

Geotech Holdings Ltd.

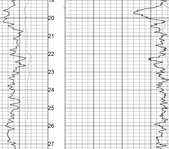
Client:	Geotech Holdings Ltd.
Project:	Hornepayne
Location:	Hornepayne, Ontario
Hole No.:	HR08-07
Date:	October 12, 2008
Logged By:	Geotech Holdings Ltd.
Drilled By:	Geotech Holdings Ltd.
Drill Rig:	Boart Longyear LF90
Hole Size:	76 mm
Azimuth:	0
Dip:	-90
Collar Elevation:	0
Grid Reference:	NAD 83
Zone:	17
Easting:	0
Northing:	0
Logged By:	Geotech Holdings Ltd.
Comments:	Downhole Survey

HORNEPAYNE DENSITY DETAILED 1:50 SCALE
HR08-07

1.50 DETAILED DENSITY 12m to 38m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N



1.50 DETAILED DENSITY 12m to 38m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N

1.50 DETAILED DENSITY 45m to 69m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N

1.50 DETAILED DENSITY 45m to 69m HR08-07 10/12/08

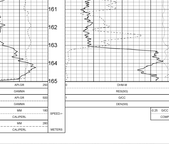
LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N

1.50 DETAILED DENSITY 122m to 147m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N



1.50 DETAILED DENSITY 122m to 147m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N

1.50 DETAILED DENSITY 157m to 165m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N

1.50 DETAILED DENSITY 157m to 165m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N

1.50 DETAILED DENSITY 157m to 165m HR08-07 10/12/08

LOG PARAMETERS

METRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE METRIX DELTA-T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 9999 MT MIN : 15.9
PRESENTATION NAMEDATE : KON_DETAILED_DENSITY_08_DN_1:2 11/03/2008 4:09:09 = 1:44M.N

TOOL CALIBRATION - HEBLET VULCAN 11-06
TOOL SERIAL NUMBER : 1000

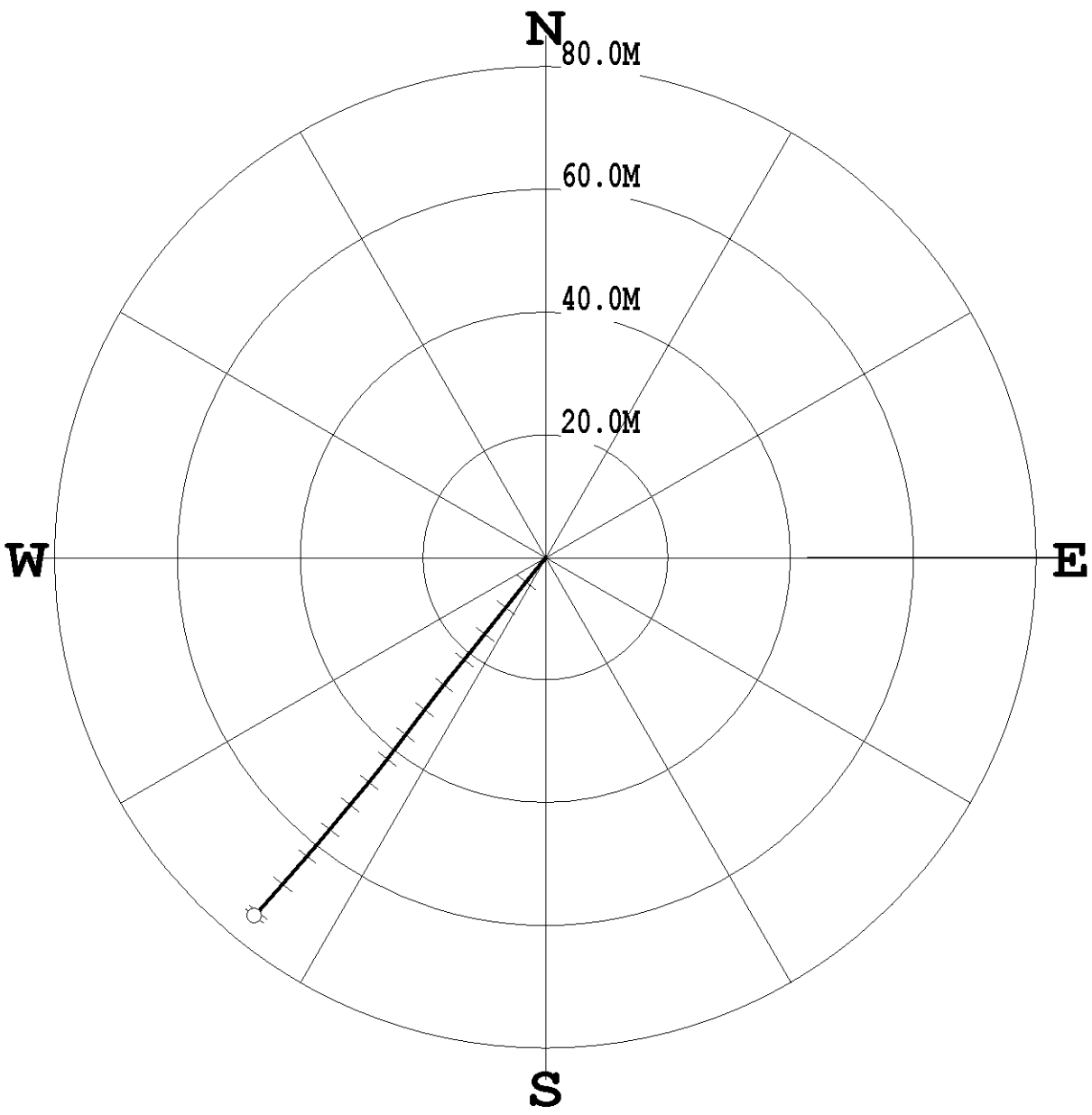
	DATE	TIME		STANDARD		RESPONSE
1	04/05/06	13:55:51	GAMMA	4.000	API UNIT	9.00 [CPS]
2	04/05/06	13:56:01	GAMMA	4.000	API UNIT	9.00 [CPS]
3	04/05/06	13:56:11	CALIPER	50.000	MM	50.000 [CPS]
4	04/05/06	13:56:21	CALIPER	50.000	MM	50.000 [CPS]
5	04/05/06	13:56:31	CALIPER	50.000	MM	50.000 [CPS]
6	04/05/06	13:56:41	DENSITY	2.500	G/CC	2.500 [CPS]
7	04/05/06	13:56:51	DENSITY	2.500	G/CC	2.500 [CPS]
8	04/05/06	13:57:01	DENSITY	2.500	G/CC	2.500 [CPS]
9	04/05/06	13:57:11	DENSITY	2.500	G/CC	2.500 [CPS]
10	04/05/06	13:57:21	DENSITY	2.500	G/CC	2.500 [CPS]
11	04/05/06	13:57:31	DENSITY	2.500	G/CC	2.500 [CPS]
12	04/05/06	13:57:41	DENSITY	2.500	G/CC	2.500 [CPS]
13	04/05/06	13:57:51	DENSITY	2.500	G/CC	2.500 [CPS]
14	04/05/06	13:58:01	DENSITY	2.500	G/CC	2.500 [CPS]
15	04/05/06	13:58:11	DENSITY	2.500	G/CC	2.500 [CPS]
16	04/05/06	13:58:21	DENSITY	2.500	G/CC	2.500 [CPS]
17	04/05/06	13:58:31	DENSITY	2.500	G/CC	2.500 [CPS]
18	04/05/06	13:58:41	DENSITY	2.500	G/CC	2.500 [CPS]
19	04/05/06	13:58:51	DENSITY	2.500	G/CC	2.500 [CPS]
20	04/05/06	13:59:01	DENSITY	2.500	G/CC	2.500 [CPS]
21	04/05/06	13:59:11	DENSITY	2.500	G/CC	2.500 [CPS]
22	04/05/06	13:59:21	DENSITY	2.500	G/CC	2.500 [CPS]
23	04/05/06	13:59:31	DENSITY	2.500	G/CC	2.500 [CPS]
24	04/05/06	13:59:41	DENSITY	2.500	G/CC	2.500 [CPS]
25	04/05/06	13:59:51	DENSITY	2.500	G/CC	2.500 [CPS]
26	04/05/06	14:00:01	DENSITY	2.500	G/CC	2.500 [CPS]
27	04/05/06	14:00:11	DENSITY	2.500	G/CC	2.500 [CPS]
28	04/05/06	14:00:21	DENSITY	2.500	G/CC	2.500 [CPS]
29	04/05/06	14:00:31	DENSITY	2.500	G/CC	2.500 [CPS]
30	04/05/06	14:00:41	DENSITY	2.500	G/CC	2.500 [CPS]
31	04/05/06	14:00:51	DENSITY	2.500	G/CC	2.500 [CPS]
32	04/05/06	14:01:01	DENSITY	2.500	G/CC	2.500 [CPS]
33	04/05/06	14:01:11	DENSITY	2.500	G/CC	2.500 [CPS]
34	04/05/06	14:01:21	DENSITY	2.500	G/CC	2.500 [CPS]
35	04/05/06	14:01:31	DENSITY	2.500	G/CC	2.500 [CPS]
36	04/05/06	14:01:41	DENSITY	2.500	G/CC	2.500 [CPS]
37	04/05/06	14:01:51	DENSITY	2.500	G/CC	2.500 [CPS]
38	04/05/06	14:02:01	DENSITY	2.500	G/CC	2.500 [CPS]
39	04/05/06	14:02:11	DENSITY	2.500	G/CC	2.500 [CPS]
40	04/05/06	14:02:21	DENSITY	2.500	G/CC	2.500 [CPS]
41	04/05/06	14:02:31	DENSITY	2.500	G/CC	2.500 [CPS]
42	04/05/06	14:02:41	DENSITY	2.500	G/CC	2.500 [CPS]
43	04/05/06	14:02:51	DENSITY	2.500	G/CC	2.500 [CPS]
44	04/05/06	14:03:01	DENSITY	2.500	G/CC	2.500 [CPS]
45	04/05/06	14:03:11	DENSITY	2.500	G/CC	2.500 [CPS]
46	04/05/06	14:03:21	DENSITY	2.500	G/CC	2.500 [CPS]
47	04/05/06	14:03:31	DENSITY	2.500	G/CC	2.500 [CPS]
48	04/05/06	14:03:41	DENSITY	2.500	G/CC	2.500 [CPS]
49	04/05/06	14:03:51	DENSITY	2.500	G/CC	2.500 [CPS]
50	04/05/06	14:04:01	DENSITY	2.500	G/CC	2.500 [CPS]
51	04/05/06	14:04:11	DENSITY	2.500	G/CC	2.500 [CPS]
52	04/05/06	14:04:21	DENSITY	2.500	G/CC	2.500 [CPS]
53	04/05/06	14:04:31	DENSITY	2.500	G/CC	2.500 [CPS]
54	04/05/06	14:04:41	DENSITY	2.500	G/CC	2.500 [CPS]
55	04/05/06	14:04:51	DENSITY	2.500	G/CC	2.500 [CPS]
56	04/05/06	14:05:01	DENSITY	2.500	G/CC	2.500 [CPS]
57	04/05/06	14:05:11	DENSITY	2.500	G/CC	2.500 [CPS]
58	04/05/06	14:05:21	DENSITY	2.500	G/CC	2.500 [CPS]
59	04/05/06	14:05:31	DENSITY	2.500	G/CC	2.500 [CPS]
60	04/05/06	14:05:41	DENSITY	2.500	G/CC	2.500 [CPS]
61	04/05/06	14:05:51	DENSITY	2.500	G/CC	2.500 [CPS]
62	04/05/06	14:06:01	DENSITY	2.500	G/CC	2.500 [CPS]
63	04/05/06	14:06:11	DENSITY	2.500	G/CC	2.500 [CPS]
64	04/05/06	14:06:21	DENSITY	2.500	G/CC	2.500 [CPS]
65	04/05/06	14:06:31	DENSITY	2.500	G/CC	2.500 [CPS]
66	04/05/06	14:06:41	DENSITY	2.500	G/CC	2.500 [CPS]
67	04/05/06	14:06:51	DENSITY	2.500	G/CC	2.500 [CPS]
68	04/05/06	14:07:01	DENSITY	2.500	G/CC	2.500 [CPS]
69	04/05/06	14:07:11	DENSITY	2.500	G/CC	2.500 [CPS]
70	04/05/06	14:07:21	DENSITY	2.500	G/CC	2.500 [CPS]
71	04/05/06	14:07:31	DENSITY	2.500	G/CC	2.500 [CPS]
72	04/05/06	14:07:41	DENSITY	2.500	G/CC	2.500 [CPS]
73	04/05/06	14:07:51	DENSITY	2.500	G/CC	2.500 [CPS]
74	04/05/06	14:08:01	DENSITY	2.500	G/CC	2.500 [CPS]
75	04/05/06	14:08:11	DENSITY	2.500	G/CC	2.500 [CPS]
76	04/05/06	14:08:21	DENSITY	2.500	G/CC	2.500 [CPS]
77	04/05/06	14:08:31	DENSITY	2.500	G/CC	2.500 [CPS]
78	04/05/06	14:08:41	DENSITY	2.500	G/CC	2.500 [CPS]
79	04/05/06	14:08:51	DENSITY	2.500	G/CC	2.500 [CPS]
80	04/05/06	14:09:01	DENSITY	2.500	G/CC	2.500 [CPS]
81	04/05/06	14:09:11	DENSITY	2.500	G/CC	2.500 [CPS]
82	04/05/06	14:09:21	DENSITY	2.500	G/CC	2.500 [CPS]
83	04/05/06	14:09:31	DENSITY	2.500	G/CC	2.500 [CPS]
84	04/05/06	14:09:41	DENSITY	2.500	G/CC	2.500 [CPS]
85	04/05/06	14:09:51	DENSITY	2.500	G/CC	2.500 [CPS]
86	04/05/06	14:10:01	DENSITY	2.500	G/CC	2.500 [CPS]
87	04/05/06	14:10:11	DENSITY	2.500	G/CC	2.500 [CPS]
88	04/05/06	14:10:21	DENSITY	2.500	G/CC	2.500 [CPS]
89	04/05/06	14:10:31	DENSITY	2.500	G/CC	2.500 [CPS]
90	04/05/06	14:10:41	DENSITY	2.500	G/CC	2.500 [CPS]
91	04/05/06	14:10:51	DENSITY	2.500	G/CC	2.500 [CPS]
92	04/05/06	14:11:01	DENSITY	2.500	G/CC	2.500 [CPS]
93	04/05/06	14:11:11	DENSITY	2.500	G/CC	2.500 [CPS]
94	04/05/06	14:11:21	DENSITY	2.500	G/CC	2.500 [CPS]
95	04/05/06	14:11:31	DENSITY	2.500	G/CC	2.500 [CPS]
96	04/05/06	14:11:41	DENSITY	2.500	G/CC	2.500 [CPS]
97	04/05/06	14:11:51	DENSITY	2.500	G/CC	2.500 [CPS]
98	04/05/06	14:12:01	DENSITY	2.500	G/CC	2.500 [CPS]
99	04/05/06	14:12:11	DENSITY	2.500	G/CC	2.500 [CPS]
100	04/05/06	14:12:21	DENSITY	2.500	G/CC	2.500 [CPS]
101	04/05/06	14:12:31	DENSITY	2.500	G/CC	2.500 [CPS]
102	04/05/06	14:12:41	DENSITY	2.500	G/CC	2.500 [CPS]
103	04/05/06	14:12:51	DENSITY	2.500	G/CC	2.500 [CPS]
104	04/05/06	14:13:01	DENSITY	2.500	G/CC	2.500 [CPS]
105	04/05/06	14:13:11	DENSITY	2.500	G/CC	2.500 [CPS]
106	04/05/06	14:13:21	DENSITY	2.500	G/CC	2.500 [CPS]
107	04/05/06	14:13:31	DENSITY	2.500	G/CC	2.500 [CPS]
108	04/05/06	14:13:41	DENSITY	2.500	G/CC	2.500 [CPS]
109	04/05/06	14:13:51	DENSITY	2.500	G/CC	2.500 [CPS]
110	04/05/06	14:14:01	DENSITY	2.500	G/CC	2.500 [CPS]
111	04/05/06	14:14:11	DENSITY	2.500	G/CC	2.500 [CPS]
112	04/05/06	14:14:21	DENSITY	2.500	G/CC	2.500 [CPS]
113	04/05/06	14:14:31	DENSITY	2.500	G/CC	2.500 [CPS]
114	04/05/06	14:14:41	DENSITY	2.500	G/CC	2.500 [CPS]
115	04/05/06	14:14:51	DENSITY	2.500	G/CC	2.500 [CPS]
116	04/05/06	14:15:01	DENSITY	2.500	G/CC	2.500 [CPS]
117	04/05/06	14:15:11	DENSITY	2.500	G/CC	2.500 [CPS]
118	04/05/06	14:15:21	DENSITY	2.500	G/CC	2.500 [CPS]
119	04/05/06	14:15:31	DENSITY	2.500	G/CC	2.500 [CPS]
120	04/05/06	14:15:41	DENSITY	2.500	G/CC	2.500 [CPS]
121	04/05/06	14:15:51	DENSITY	2.500	G/CC	2.500 [CPS]
122	04/05/06	14:16:01	DENSITY	2.500	G/CC	2.500 [CPS]
123	04/05/06	14:16:11	DENSITY	2.500	G/CC	2.500 [CPS]
124	04/05/06	14:16:21	DENSITY	2.500	G/CC	2.500 [CPS]
125	04/05/06	14:16:31	DENSITY	2.500	G/CC	2.500 [CPS]
126	04/05/06	14:16:41	DENSITY	2.500	G/CC	2.500 [CPS]
127	04/05/06	14:16:51	DENSITY	2.500	G/CC	2.500 [CPS]
128	04/05/06	14:17:01	DENSITY	2.500	G/CC	2.500 [CPS]
129	04/05/06	14:17:11	DENSITY	2.500	G/CC	2.500 [CPS]
130	04/05/06	14:17:21	DENSITY	2.500	G/CC	2.500 [CPS]
131	04/05/06	14:17:31	DENSITY	2.500	G/CC	2.500 [CPS]
132	04/05/06	14:17:41	DENSITY	2.500	G/CC	2.500 [CPS]
133	04/05/06	14:17:51	DENSITY	2.500	G/CC	2.500 [CPS]
134	04/05/06	14:18:01	DENSITY	2.500	G/CC	2.500 [CPS]
135	04/05/06	14:18:11	DENSITY	2.500	G/CC	2.500 [CPS]
136	04/05/06	14:18:21	DENSITY	2.500	G/CC	2.500 [CPS]
137	04/05/06	14:18:31	DENSITY	2.500	G/CC	2.500 [CPS]
138	04/05/06	14:18:41	DENSITY	2.500	G/CC	2.500 [CPS]
139	04/05/06	14:18:51	DENSITY	2.500	G/CC	2.500 [CPS]
140	04/05/06	14:19:01	DENSITY	2.500	G/CC	2.500 [CPS]
141	04/05/06	14:19:11	DENSITY	2.500	G/CC	2.500 [CPS]
142	04/05/06	14:19:21	DENSITY	2.500	G/CC	2.500 [CPS]
143	04/05/06	14:19:31	DENSITY	2.500	G/CC	2.500 [CPS]
144	04/05/06	14:19:41	DENSITY	2.500	G/CC	2.500 [CPS]
145	04/05/06	14:19:51	DENSITY	2.500	G/CC	2.500 [CPS]
146	04/05/06	14:20:01	DENSITY	2.500	G/CC	2.500 [CPS]
147	04/05/06	14:20:11	DENSITY	2.500	G/CC	2.500 [CPS]
148	04/05/06	14:20:21	DENSITY	2.500	G/CC	2.500 [CPS]
149	04/05/06	14:20:31	DENSITY	2.500	G/CC	2.500 [CPS]
150	04/05/06	14:20:41	DENSITY	2.500	G/CC	2.500 [CPS]
151	04/05/06	14:20:51	DENSITY	2.500	G/CC	2.500 [CPS]
152	04/05/06	14:21:01	DENSITY	2.500	G/CC	2.500 [CPS]
153	04/05/06	14:21:11	DENSITY	2.500	G/CC	2.500 [CPS]
154	04/05/06	14:21:21	DENSITY	2.500	G/CC	2.500 [CPS]
155	04/05/06	14:21:31	DENSITY	2.500	G/CC	2.500 [CPS]
156	04/05/06	14:21:41	DENSITY	2.500	G/CC	2.500 [CPS]
157	04/05/06	14:21:51	DENSITY	2.500	G/CC	2.500 [CPS]
158	04/05/06	14:22:01	DENSITY	2.500	G/CC	2.500 [CPS]
159	04/05/06	14:22:11	DENSITY	2.500	G/CC	2.500 [CPS]
160	04/05/06	14:22:21	DENSITY	2.500	G/CC	2.500 [CPS]
161	04/05/06	14:22:31	DENSITY	2.500	G/CC	2.500 [CPS]
162	04/05/06	14:22:41	DENSITY	2.500	G/CC	2.500 [CPS]
163	04/05/06	14:22:51	DENSITY	2.500	G/CC	2.500 [CPS]
164	04/05/06	14:23:01	DENSITY	2.500	G/CC	2.500 [CPS]
165	04/05/06	14:23:11	DENSITY	2.500	G/CC	2.500 [CPS]

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-07
DATE OF LOG: 10/12/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 10 M/CM
TRUE DEPTH: 151.39 M
AZIMUTH: 219.1
DISTANCE: 75.2 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



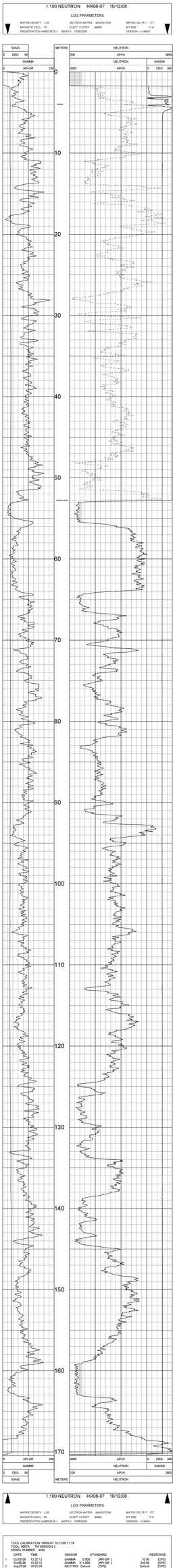
* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : COLONIAL COAL CORPO HOLE ID. : HR08-07
FIELD OFFICE : CENTURY DATE OF LOG : 10/12/08
DATA FROM : PROBE : 9057A , 4430
MAG. DECL. : 20.000 DEPTH UNITS : METERS
LOG: HR08-07_10-12-08_11-19_9057A_.02_10.00_170.42_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.02	10.02	-0.01	-0.01	0.0	218.4	26.1	218.4
12.00	11.79	-0.68	-0.56	0.9	219.5	27.3	202.9
14.00	13.57	-1.39	-1.14	1.8	219.5	26.8	218.9
16.00	15.35	-2.09	-1.72	2.7	219.4	27.1	218.9
18.00	17.13	-2.80	-2.29	3.6	219.3	27.4	217.7
20.00	18.90	-3.52	-2.87	4.5	219.2	27.7	218.0
22.00	20.67	-4.26	-3.45	5.5	219.0	28.0	215.5
24.00	22.44	-4.99	-4.03	6.4	219.0	27.9	218.3
26.00	24.21	-5.72	-4.61	7.3	218.9	27.7	218.4
28.00	25.98	-6.45	-5.18	8.3	218.8	27.9	218.9
30.00	27.75	-7.19	-5.77	9.2	218.7	28.0	217.7
32.00	29.51	-7.93	-6.35	10.2	218.7	28.3	220.3
34.00	31.27	-8.67	-6.95	11.1	218.7	28.8	217.2
36.00	33.02	-9.43	-7.55	12.1	218.7	29.0	218.3
38.00	34.77	-10.18	-8.16	13.0	218.7	29.1	219.1
40.00	36.52	-10.94	-8.76	14.0	218.7	28.9	219.1
42.00	38.27	-11.69	-9.36	15.0	218.7	28.7	218.0
44.00	40.03	-12.44	-9.96	15.9	218.7	28.5	218.4
46.00	41.79	-13.19	-10.54	16.9	218.6	28.2	217.9
48.00	43.55	-13.93	-11.12	17.8	218.6	28.2	218.5
50.00	45.32	-14.66	-11.72	18.8	218.6	28.2	218.9
52.00	47.08	-15.40	-12.31	19.7	218.7	28.2	218.9
54.00	48.84	-16.13	-12.91	20.7	218.7	28.4	219.2
56.00	50.60	-16.87	-13.51	21.6	218.7	28.6	218.8
58.00	52.36	-17.61	-14.10	22.6	218.7	28.0	219.0
60.00	54.13	-18.34	-14.69	23.5	218.7	27.7	219.2
62.00	55.90	-19.05	-15.27	24.4	218.7	27.3	219.0
64.00	57.68	-19.76	-15.85	25.3	218.7	27.1	219.5
66.00	59.46	-20.47	-16.42	26.2	218.7	27.0	218.2
68.00	61.24	-21.19	-16.98	27.2	218.7	27.0	217.1
70.00	63.03	-21.90	-17.53	28.1	218.7	26.9	218.2
72.00	64.81	-22.62	-18.08	29.0	218.6	27.1	217.2
74.00	66.59	-23.35	-18.64	29.9	218.6	27.0	216.9
76.00	68.36	-24.09	-19.19	30.8	218.5	27.5	217.9
78.00	70.14	-24.82	-19.75	31.7	218.5	27.4	216.9
80.00	71.91	-25.55	-20.31	32.6	218.5	27.3	215.6
82.00	73.69	-26.28	-20.87	33.6	218.5	27.3	218.3
84.00	75.47	-27.00	-21.42	34.5	218.4	27.1	216.7
86.00	77.25	-27.73	-21.97	35.4	218.4	27.0	216.3
88.00	79.03	-28.45	-22.52	36.3	218.4	27.0	217.5
90.00	80.82	-29.17	-23.07	37.2	218.3	26.8	217.5
92.00	82.60	-29.89	-23.61	38.1	218.3	26.9	217.5
94.00	84.39	-30.60	-24.15	39.0	218.3	26.3	217.4
96.00	86.19	-31.31	-24.68	39.9	218.2	26.7	217.7
98.00	87.98	-32.02	-25.22	40.8	218.2	26.1	217.5
100.00	89.78	-32.71	-25.75	41.6	218.2	26.1	220.3
102.00	91.57	-33.40	-26.29	42.5	218.2	25.8	217.6
104.00	93.38	-34.09	-26.82	43.4	218.2	25.6	218.0
106.00	95.18	-34.77	-27.36	44.2	218.2	25.8	218.9
108.00	96.98	-35.45	-27.91	45.1	218.2	25.6	218.9
110.00	98.78	-36.12	-28.44	46.0	218.2	25.4	219.1
112.00	100.59	-36.78	-28.98	46.8	218.2	25.1	219.0
114.00	102.40	-37.44	-29.53	47.7	218.3	25.9	220.2
116.00	104.20	-38.10	-30.08	48.5	218.3	25.4	220.0
118.00	106.01	-38.76	-30.63	49.4	218.3	25.6	218.6
120.00	107.81	-39.43	-31.19	50.3	218.3	25.8	219.5
122.00	109.61	-40.10	-31.75	51.1	218.4	25.9	222.1
124.00	111.41	-40.78	-32.31	52.0	218.4	26.5	219.4
126.00	113.19	-41.47	-32.88	52.9	218.4	27.0	219.8
128.00	114.97	-42.17	-33.47	53.8	218.4	27.5	221.0
130.00	116.74	-42.89	-34.06	54.8	218.5	28.0	221.8
132.00	118.50	-43.62	-34.67	55.7	218.5	28.5	220.3
134.00	120.25	-44.36	-35.29	56.7	218.5	28.8	221.3
136.00	122.00	-45.10	-35.91	57.6	218.5	28.8	220.3
138.00	123.76	-45.83	-36.52	58.6	218.5	28.9	220.4
140.00	125.50	-46.59	-37.15	59.6	218.6	30.1	219.4
142.00	127.22	-47.36	-37.81	60.6	218.6	30.7	220.7
144.00	128.94	-48.13	-38.48	61.6	218.6	30.9	222.2
146.00	130.66	-48.92	-39.15	62.7	218.7	31.2	220.2
148.00	132.36	-49.70	-39.83	63.7	218.7	31.5	223.5
150.00	134.07	-50.48	-40.52	64.7	218.8	31.3	221.0
152.00	135.78	-51.27	-41.21	65.8	218.8	31.2	220.6
154.00	137.49	-52.04	-41.88	66.8	218.8	30.9	221.1
156.00	139.21	-52.82	-42.56	67.8	218.9	30.8	224.8
158.00	140.92	-53.59	-43.24	68.9	218.9	31.0	221.3
160.00	142.64	-54.36	-43.91	69.9	218.9	31.0	220.8
162.00	144.35	-55.14	-44.60	70.9	219.0	31.5	222.8
164.00	146.06	-55.92	-45.29	72.0	219.0	31.4	220.0
166.00	147.76	-56.70	-45.98	73.0	219.0	31.3	220.8
168.00	149.47	-57.48	-46.67	74.0	219.1	31.3	223.7
170.00	151.18	-58.25	-47.35	75.1	219.1	31.0	222.9
170.24	151.39	-58.34	-47.44	75.2	219.1	31.0	222.0

Century Geophysics

COMPANY : PRIMARY RESOURCES CORPORATION
WELL : HR08-07
FIELD : HORSESHOE BAY
COUNTY : MILLS
STATE : TEXAS
COUNTRY : USA
API NUMBER : 42-333-00000
LOCATION : 31° 46' 0.000" N 98° 0' 0.000" W
LATITUDE : 31.766667
LONGITUDE : -98.000000
ELEVATION : 1300.000 ft
LOG DATE : 10/12/2008
LOG TYPE : GAMMA - NEUTRON
RUN NUMBER : 1
DEPTH DRILLER : 1200.000 ft
DEPTH LOGGER : 1199.000 ft
BOTTOM LOG INTERVAL : 1199.000 ft
TOP LOG INTERVAL : 0.000 ft
CASING DRILLER : 0.000 ft @ 0.000 ft
CASING LOGGER : 0.000 ft @ 0.000 ft
BIT SIZE : 7.875 in @ 0.000 ft
TYPE FLUID IN HOLE : WATER
DENSITY : 0.000 lb/gal
PH : 0.000
FLUID LEVEL : 0.000 ft
MAX RECORDED TEMP : 0.000 degF
ESTIMATED TEMP : 0.000 degF
TIME SINCE CIRCULATION : 0.000 hr
TIME LOGGER ON BOTTOM : 0.000 hr
MAXIMUM HOLE DEVIATION : 0.000 deg
EQUIPMENT : 0000
RECORDED BY : 0000
WITNESSED BY : 0000
Gamma - Neutron
HR08-07
Gross Interval
0.00 - 1199.00 ft



TOOL CALIBRATION HR08-07 10/12/08 11:19
TOOL 9057A TM VERSION 2
SERIAL NUMBER 4400

	Date	Time	SENSOR	STANDARD		RESPONSE	
1	Oct27,08	13:02:10	GAMMA 0.000	API-GR	10.00	[CPS]	
	Oct27,08	13:32:12	GAMMA 311.000	API-GR	345.00	[CPS]	
2	Sep29,08	16:02:03	NEUTRON Default	[CPS]	Default	[CPS]	
	Sep29,08	16:02:03	NEUTRC 271.000	API-N	99.00	[CPS]	
3	Sep27,08	12:12:10	SP 0.000	MV	329600.00	[CPS]	
	Sep27,08	12:12:10	SP 97.000	MV	277660.00	[CPS]	
4	Sep27,08	12:12:22	RES1BN 0.000	OHMAM	3891.00	[CPS]	
5	Sep27,08	12:12:27	RES1BN 16.000	OHMAM	1000.00	[CPS]	
6	Sep27,08	12:12:31	RES3AN 0.000	OHMAM	71323.00	[CPS]	
	Sep27,08	12:12:31	RES3AN 1990.000	OHMAM	426302.00	[CPS]	
7	Sep27,08	12:12:36	TEMP 64.400	DEG F	353840.00	[CPS]	
	Sep27,08	12:12:36	TEMP 120.400	DEG F	396875.00	[CPS]	
8	Sep27,08	12:12:41	RES 0.000	OHM	1000.00	[CPS]	
	Sep27,08	12:12:41	RES 989.000	OHM	162860.00	[CPS]	

Century WIRELINE SERVICES

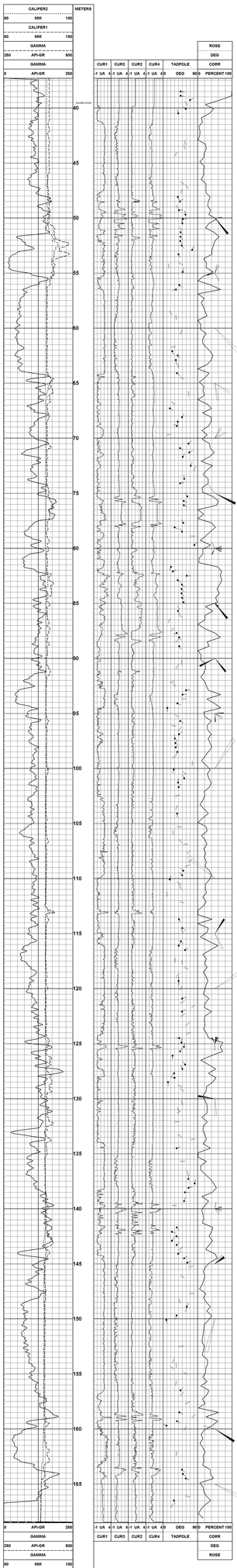
COMPANY	CONTINENTAL CORPORATION
WELL	HR08-07
FIELD	HIGHGATE
COUNTY	PEACE RIVER
PROVINCE	BRITISH COLUMBIA
LOCATION	07-08-085-15W6
PROJECT	
LOG DATE	10/12/2008
RUN	ONE
DEPTH	1:100

DIPMETER
HR08-07

1:100 DIPMETER HR08-07 10/12/08

LOG PARAMETERS

MATRIX DENSITY:	2.65	NEUTRON MATRIX:	SANDSTONE	MATRIX DELTA T:	177
MAGNETIC DECL:	20	ELECT. CUTOFF:	99999	BIT SIZE:	13.9
PRESENTATION NAMEDATE =	0841print a.0	10/12/2008		VERSION: = 3.646X	



1:100 DIPMETER HR08-07 10/12/08

LOG PARAMETERS

MATRIX DENSITY:	2.65	NEUTRON MATRIX:	SANDSTONE	MATRIX DELTA T:	177
MAGNETIC DECL:	20	ELECT. CUTOFF:	99999	BIT SIZE:	13.9
PRESENTATION NAMEDATE =	0841print a.0	10/12/2008		VERSION: = 3.646X	

TOOL CALIBRATION: HR08-07 10/12/08 12:38
TOOL: 8411A TM VERSION 4
SERIAL NUMBER 6502

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
			GAMMA	Default	[CPS]	Default	[CPS]
1	Oct03,08	13:26:24	GAMMA	100.000	[API-GR]	1584.00	[CPS]
2	Oct12,08	12:29:39	VOLTAG	100.000	[MV]	1229.00	[CPS]
	Oct12,08	12:29:39	VOLTAG	1603.000	[MV]	1229.00	[CPS]
3	Dec06,07	13:21:57	CUR1	0.000	[UA]	290.00	[CPS]
	Dec06,07	13:21:57	CUR1	4.975	[UA]	9188.00	[CPS]
4	Dec06,07	13:22:18	CUR2	0.000	[UA]	438.00	[CPS]
	Dec06,07	13:22:18	CUR2	4.975	[UA]	9414.00	[CPS]
5	Dec06,07	13:22:34	CUR3	0.000	[UA]	424.00	[CPS]
	Dec06,07	13:22:34	CUR3	4.975	[UA]	9609.00	[CPS]
6	Dec06,07	13:22:51	CUR4	0.000	[UA]	438.00	[CPS]
	Dec06,07	13:22:51	CUR4	4.975	[UA]	9456.00	[CPS]
7	Oct12,08	16:33:58	CALIPER	140.000	[INCH]	5660.10	[CPS]
	Oct12,08	16:33:58	CALIPER	176.400	[INCH]	7150.10	[CPS]

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HR08-08

COMPANY	:COLONIAL COAL CORPORATION	OTHER SERVICES:	
WELL	:HR08-08	NEU	
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/12/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:11.40		
LOG TOP	:-0.03		
LOG BOTTOM	:42.01		
CASING LOGGER	:2.3M		
CASING DRILLER	:2.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

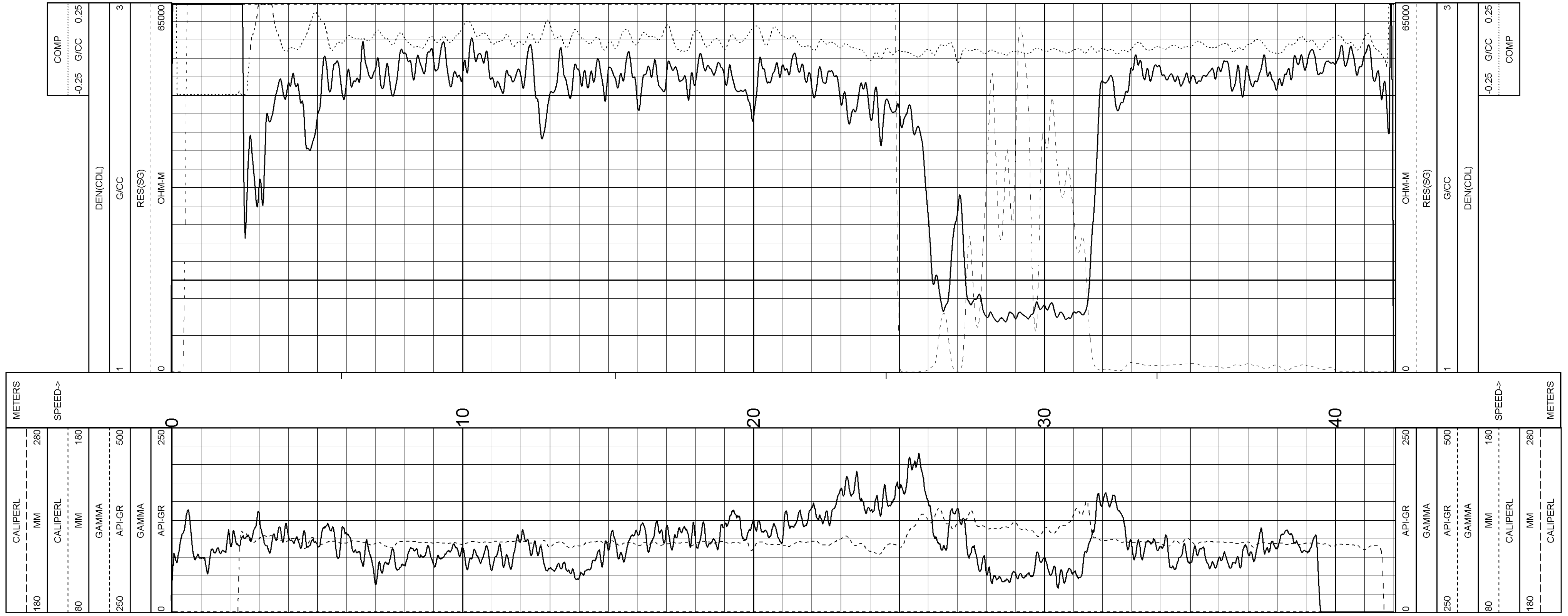
1:100 BULK DENSITY HR08-08 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 10/12/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 11.40
VERSION = 3.64EK



1:100 BULK DENSITY HR08-08 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 10/12/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 11.40
VERSION = 3.64EK

TOOL CALIBRATION HR08-08 10/12/08 09:00
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Oct05.08	13:50:51	GAMMA	4.000 [API-GR]	0.00 [CPS]
1	Oct05.08	13:55:15	GAMMA	250.000 [API-GR]	26.00 [CPS]
2	Sep30.08	09:16:05	VOLTAGE	32.300 [MV]	9990.00 [CPS]
2	Sep30.08	09:16:05	VOLTAGE	252.700 [MV]	38980.02 [CPS]
3	Sep27.08	12:43:12	CALIPER	88.000 [MM]	98200.00 [CPS]
3	Sep27.08	12:43:12	CALIPER	141.000 [MM]	122000.00 [CPS]
4	Oct05.08	13:54:59	DEN(LS)	1.000 [G/CC]	6993.10 [CPS]
4	Oct05.08	13:54:59	DEN(LS)	2.320 [G/CC]	804.00 [CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000 [G/CC]	12489.10 [CPS]
5	Oct05.08	13:55:15	DEN(SS)	2.320 [G/CC]	1172.00 [CPS]
6	Sep30.08	09:16:52	CALIPER1	76.200 [MM]	87390.10 [CPS]
6	Sep30.08	09:16:52	CALIPER1	114.300 [MM]	122552.10 [CPS]
7	Sep29.08	16:46:34	CURRENT	32.300 [UA]	4560.10 [CPS]
7	Sep29.08	16:46:34	CURRENT	252.700 [UA]	22285.10 [CPS]
8	May29.08	10:49:47	F	Default [CPS]	
9	May29.08	10:49:47	X	Default [CPS]	

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-08

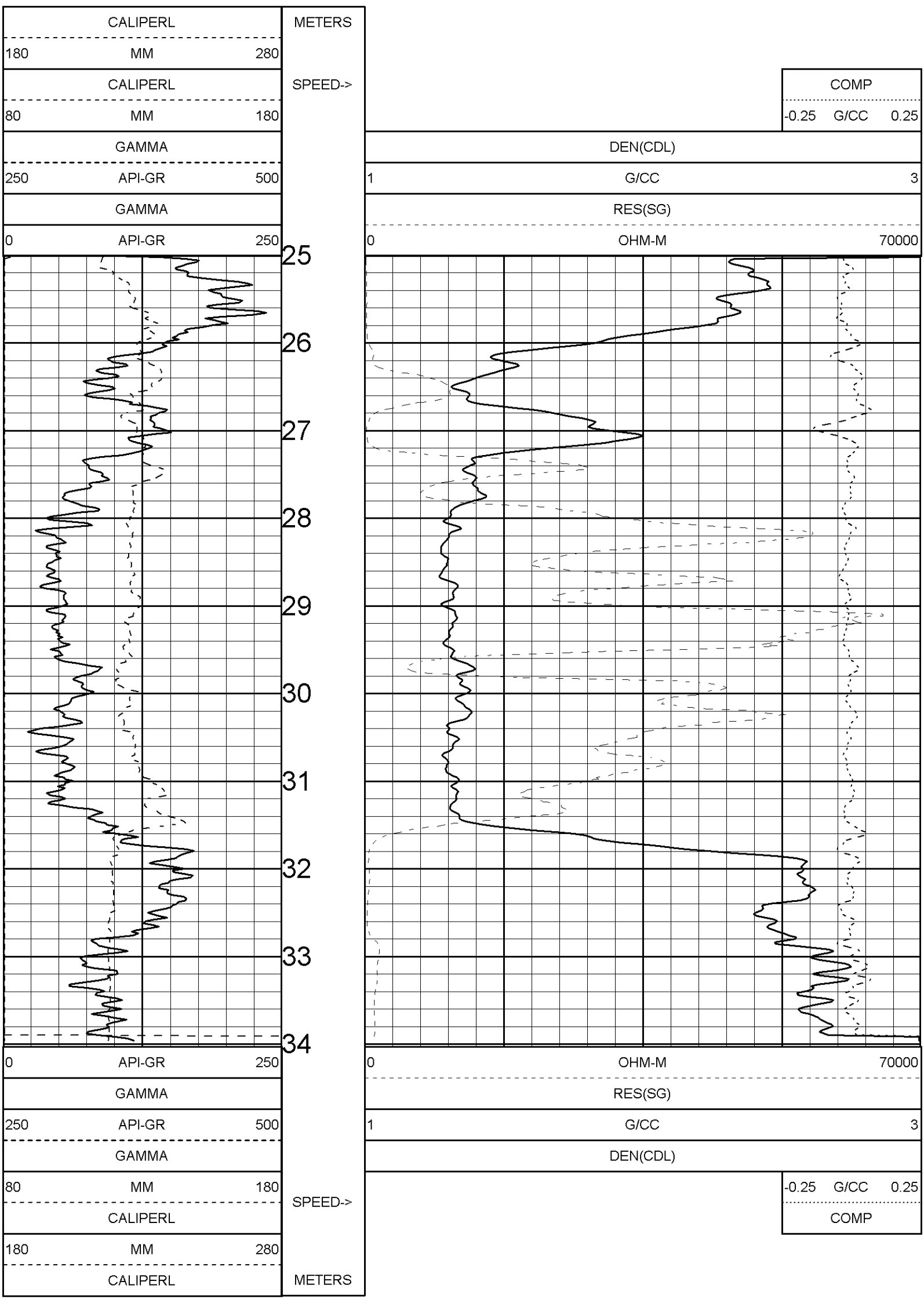
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HR08-08		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	
SECTION	:	NEU	
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/12/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:11.40		
LOG TOP	:-0.03		
LOG BOTTOM	:42.01		
CASING LOGGER	:2.3M		
CASING DRILLER	:2.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 25m to 34m HR08-08 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.40
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 34m HR08-08 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.40
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-08 10/12/08 09:00
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HR08-08

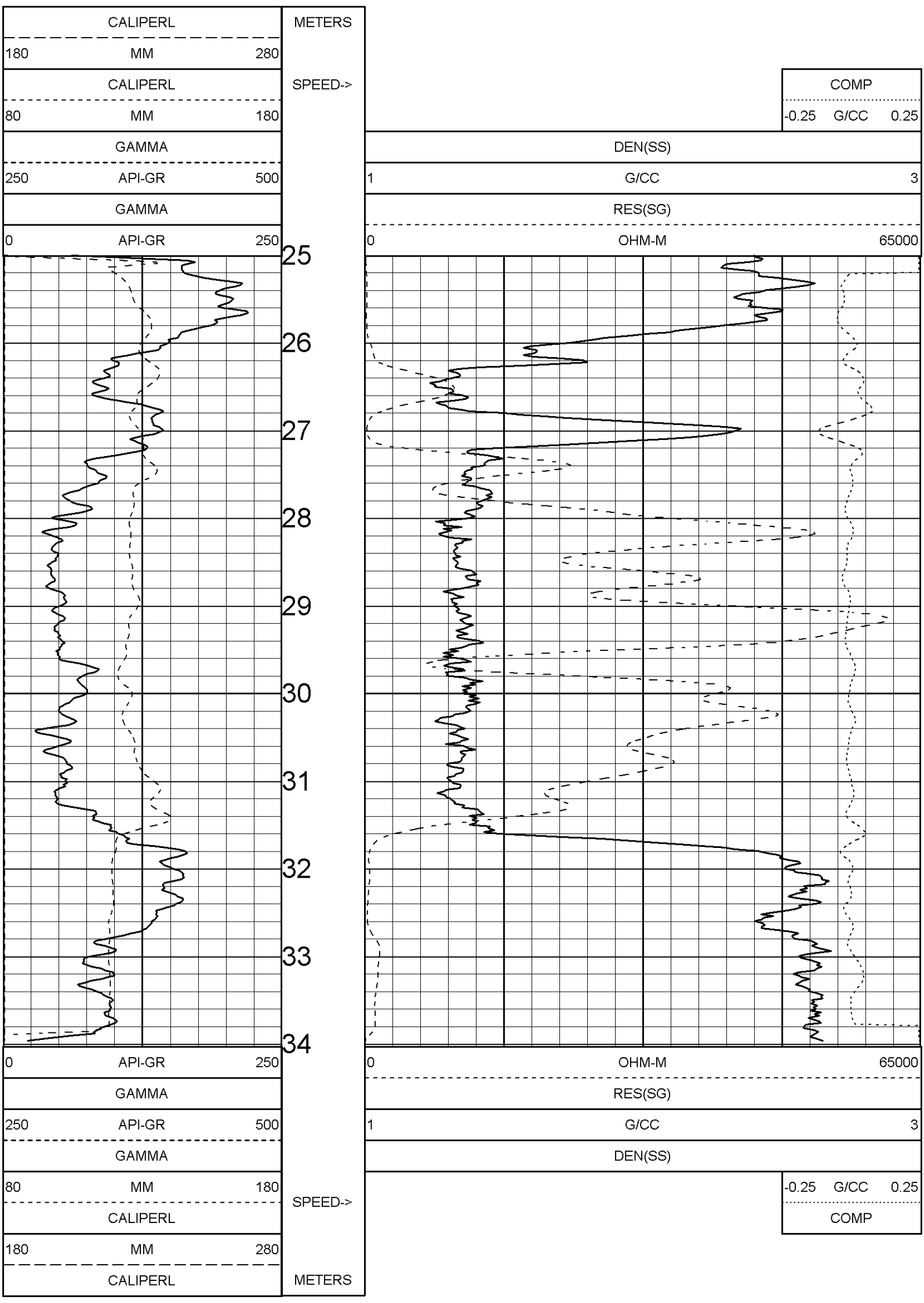
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HR08-08		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	
SECTION	:	NEU	
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/12/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:11.4		
LOG TOP	:-0.03		
LOG BOTTOM	:42.01		
CASING LOGGER	:2.3M		
CASING DRILLER	:2.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 25m to 34m HR08-08 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 34m HR08-08 10/12/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-08 10/12/08 09:00
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

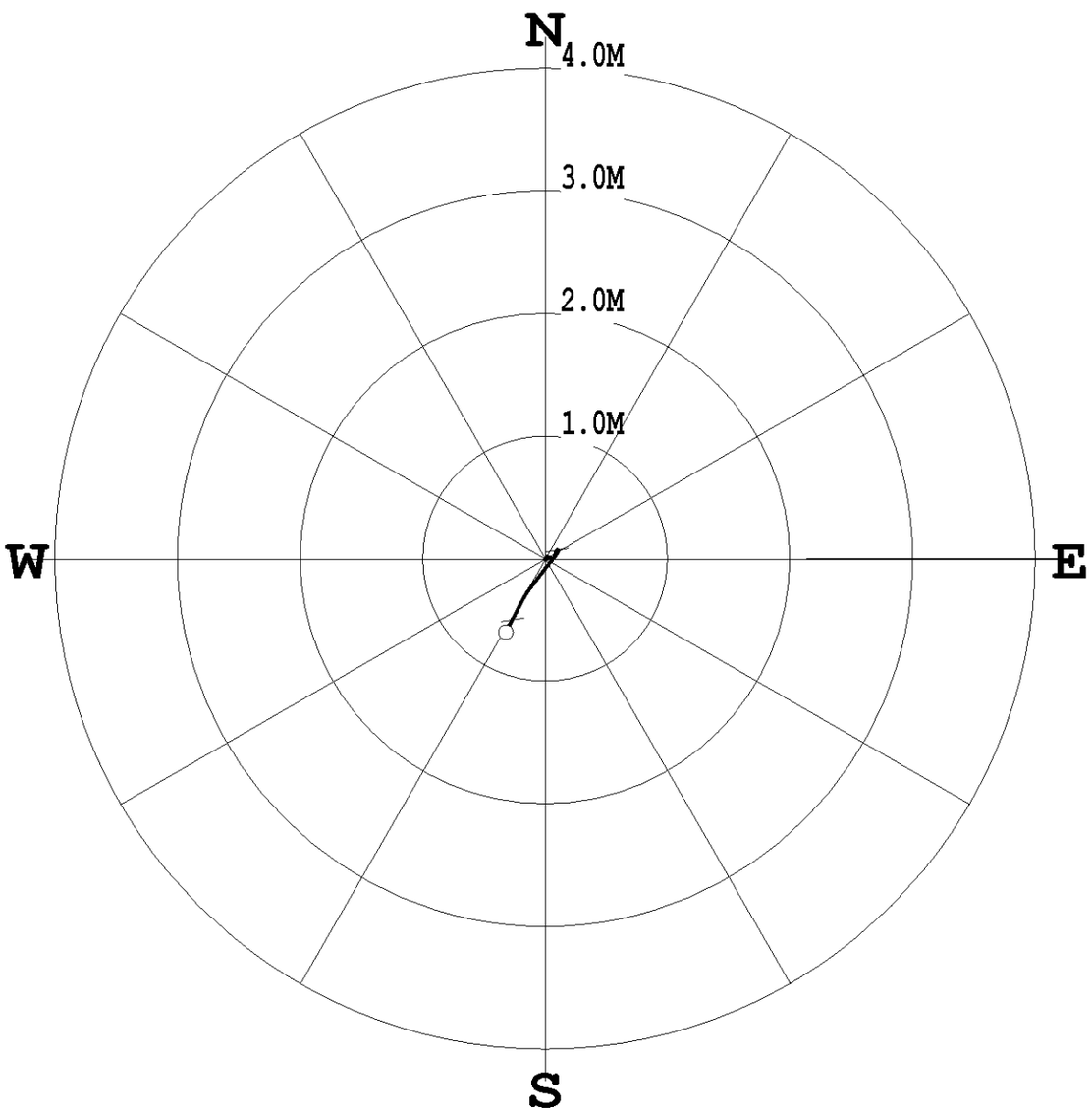
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-08
DATE OF LOG: 10/12/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 41.83 M
AZIMUTH: 208.0
DISTANCE: 0.7 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-08
DATE OF LOG : 10/12/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-08_10-12-08_08-41_9057A_.02_-0.09_42.01_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.01	0.01	0.07	0.1	82.5	0.2	10.0
12.00	12.01	0.02	0.07	0.1	77.8	0.2	30.3
14.00	14.01	0.02	0.07	0.1	72.8	0.3	17.5
16.00	16.01	0.04	0.08	0.1	63.2	0.5	22.2
18.00	18.01	0.06	0.09	0.1	55.7	0.5	20.6
20.00	20.01	0.07	0.09	0.1	51.9	0.3	29.1
22.00	22.01	0.07	0.10	0.1	52.7	0.1	103.5
24.00	24.01	0.07	0.10	0.1	55.1	0.2	140.2
26.00	26.01	0.06	0.10	0.1	60.3	0.8	204.8
28.00	28.01	0.03	0.08	0.1	71.1	1.3	207.8
30.00	30.01	-0.02	0.05	0.0	110.7	2.1	212.0
32.00	32.01	-0.08	-0.01	0.1	185.1	2.8	221.8
34.00	34.00	-0.17	-0.07	0.2	202.9	3.1	217.8
36.00	36.00	-0.26	-0.14	0.3	208.6	3.6	213.7
38.00	38.00	-0.38	-0.21	0.4	209.0	3.9	206.9
40.00	39.99	-0.50	-0.27	0.6	208.6	3.8	208.9
42.00	41.99	-0.60	-0.32	0.7	208.0	0.0	0.0
41.84	41.83	-0.60	-0.32	0.7	208.0	3.7	200.7

Century WIRELINE SERVICES

GAMMA - NEUTRON

HR08-08

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HR08-08
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

OTHER SERVICES: DEN

PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/12/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:11.4		
LOG TOP	:-0.09		
LOG BOTTOM	:42.01		
CASING LOGGER	:2.3M		
CASING DRILLER	:2.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

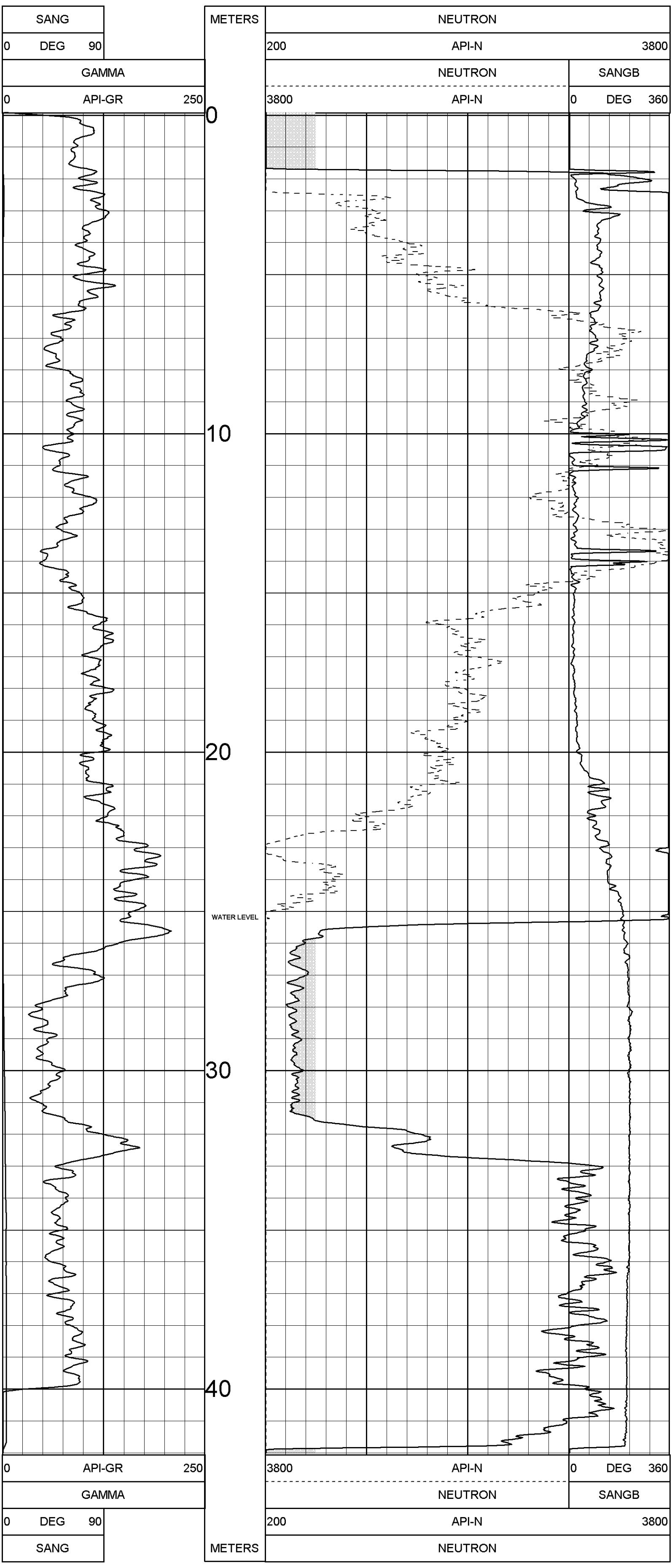
1:100 NEUTRON HR08-08 10/12/08

LOG PARAMETERS

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

MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4

PRESENTATION NAME/DATE = 9057A.0 10/05/2008 VERSION = 3.64EK



1:100 NEUTRON HR08-08 10/12/08

LOG PARAMETERS

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

MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 11.4

PRESENTATION NAME/DATE = 9057A.0 10/05/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-08 10/12/08 08:41
TOOL 9057A TM VERSION 2
SERIAL NUMBER 4430

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:32:12	GAMMA	0.000	[API-GR]	10.00	[CPS]
	Oct05,08	13:32:12	GAMMA	311.000	[API-GR]	345.00	[CPS]
2	Sep29,08	16:02:03	NEUTROI	Default	[CPS]	Default	[CPS]
	Sep29,08	16:02:03	NEUTRC	271.000	[API-N]	99.00	[CPS]
3	Sep27,08	12:12:10	SP	0.000	[MV]	325650.00	[CPS]
	Sep27,08	12:12:10	SP	97.000	[MV]	277560.00	[CPS]
4	Sep27,08	12:12:22	RES(16N)	0.000	[OHM-M]	3891.00	[CPS]
	Sep27,08	12:12:22	RES(16I	1996.000	[OHM-M]	421780.00	[CPS]
5	Sep27,08	12:12:31	RES(64N)	0.000	[OHM-M]	3323.00	[CPS]
	Sep27,08	12:12:31	RES(64I	1990.000	[OHM-M]	426302.00	[CPS]
6	Sep27,08	12:12:36	TEMP	64.400	[DEG F]	353843.00	[CPS]
	Sep27,08	12:12:36	TEMP	120.400	[DEG F]	396875.00	[CPS]
7	Sep27,08	12:12:47	RES	0.000	[OHM]	4437.00	[CPS]
	Sep27,08	12:12:47	RES	989.000	[OHM]	162985.00	[CPS]

Century WIRELINE SERVICES

COMPENSATED DENSITY GAMMA - CALIPER - RES.

HR08-09

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HR08-09
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA

OTHER SERVICES:
DEV

LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A

DATE	:10/13/08
DEPTH DRILLER	:42.67M
BIT SIZE	:139.7MM
LOG TOP	:-0.03
LOG BOTTOM	:42.61
CASING LOGGER	:2.3M
CASING DRILLER	:2.3M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL PILOT WELL
REMARKS 2	:NO WATER IN WELL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

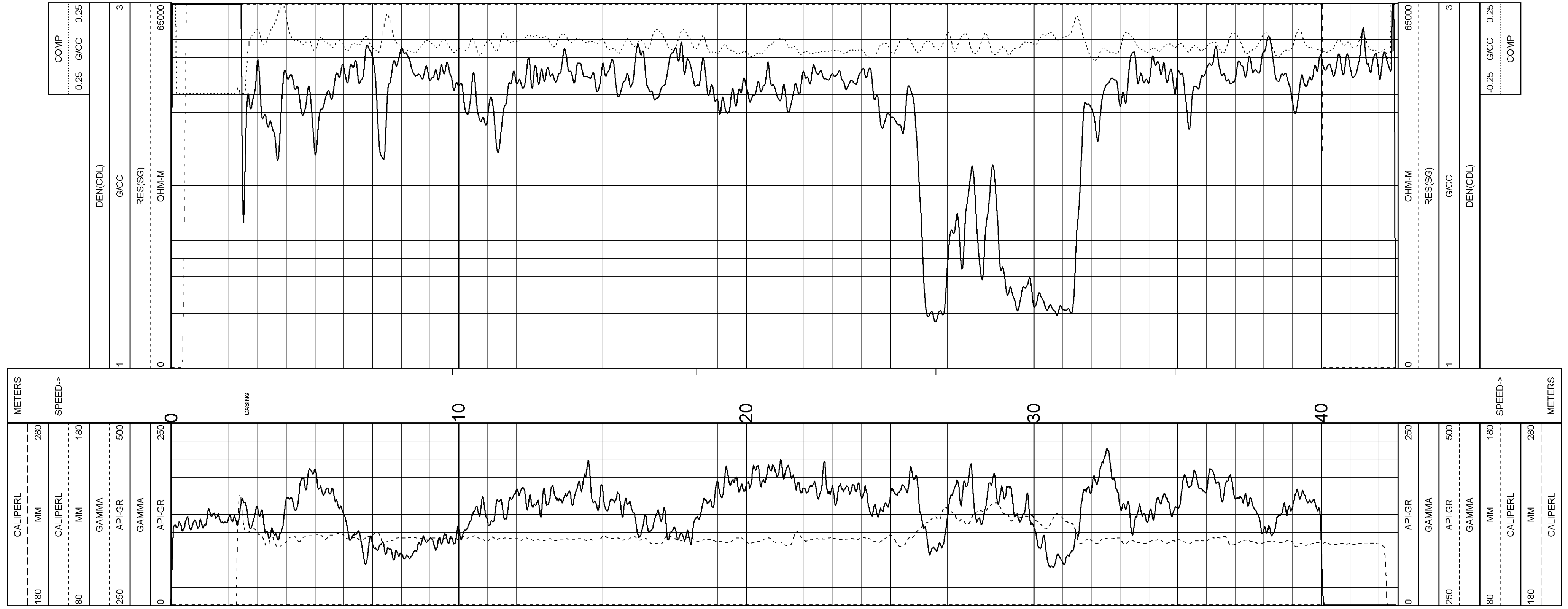
1:100 BULK DENSITY HR08-09 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 10/12/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999
9239C1.0 10/12/2008

MATRIX DELTA T : 177
BIT SIZE : 139.7MM
VERSION : 3.64EK



1:100 BULK DENSITY HR08-09 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 10/12/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999
9239C1.0 10/12/2008

MATRIX DELTA T : 177
BIT SIZE : 139.7MM
VERSION : 3.64EK

TOOL CALIBRATION HR08-09 10/13/08 11:44
TOOL 9239C1 TM VERSION 2016
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05.08	13:55:15	GAMMA	254.000	[API-GR]	255.00	[CPS]
2	Sep30.08	09:16:05	VOLTAGE	32.300	[MV]	9680.00	[CPS]
	Sep30.08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27.08	12:43:12	CALIPER	88.000	[MM]	89200.00	[CPS]
	Sep27.08	12:45:27	CALIPER	141.000	[MM]	122800.00	[CPS]
4	Oct05.08	13:54:59	DEN(LS)	1.000	[G/CC]	6693.10	[CPS]
	Oct05.08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05.08	13:55:15	DEN(SS)	2.320	[G/CC]	1503.10	[CPS]
6	Sep30.08	09:16:52	CALIPER1	76.200	[MM]	87390.10	[CPS]
	Sep30.08	09:16:52	CALIPER1	114.300	[MM]	122552.10	[CPS]
7	Sep29.08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29.08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29.08	10:49:47	F	Default	[CPS]		
9	May29.08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-09

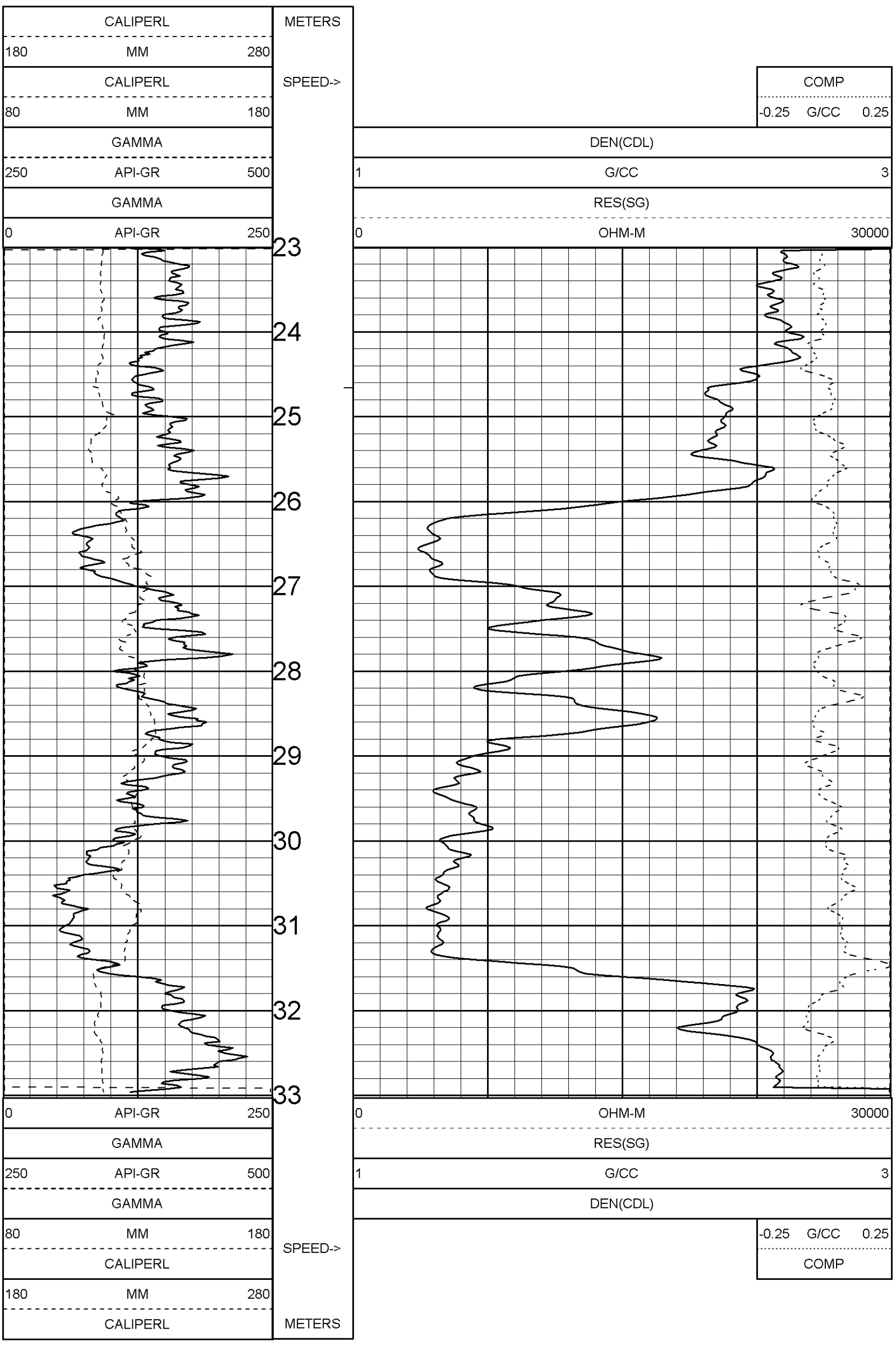
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HR08-09		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	DEV
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/13/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:139.7MM		
LOG TOP	:-0.03		
LOG BOTTOM	:42.61		
CASING LOGGER	:2.3M		
CASING DRILLER	:2.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL PILOT WELL		
REMARKS 2	:NO WATER IN WELL		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 23m to 33m HR08-09 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 23m to 33m HR08-09 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-09 10/13/08 11:44
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HR08-09

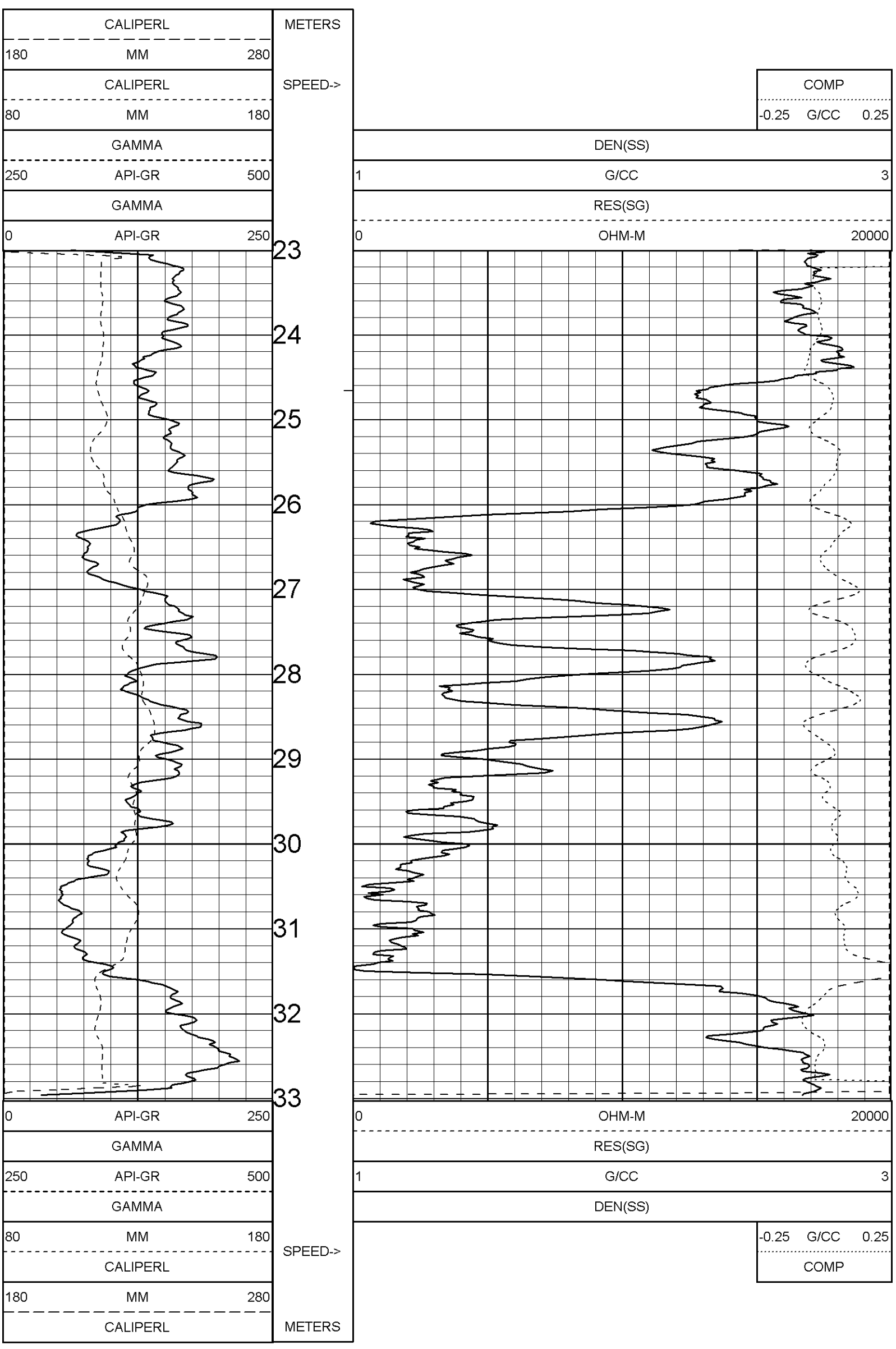
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HR08-09		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA	OTHER SERVICES:	DEV
LOCATION	:HUGUENOT		
SECTION	:		
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/13/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:139MM		
LOG TOP	:-0.03		
LOG BOTTOM	:42.61		
CASING LOGGER	:2.3M		
CASING DRILLER	:2.3M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL PILOT WELL		
REMARKS 2	:DENSITY AFFECTED BY NO WATER IN HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 23m TO 33m HR08-09 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 139MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 23m TO 33m HR08-09 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 139MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-09 10/13/08 11:44
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

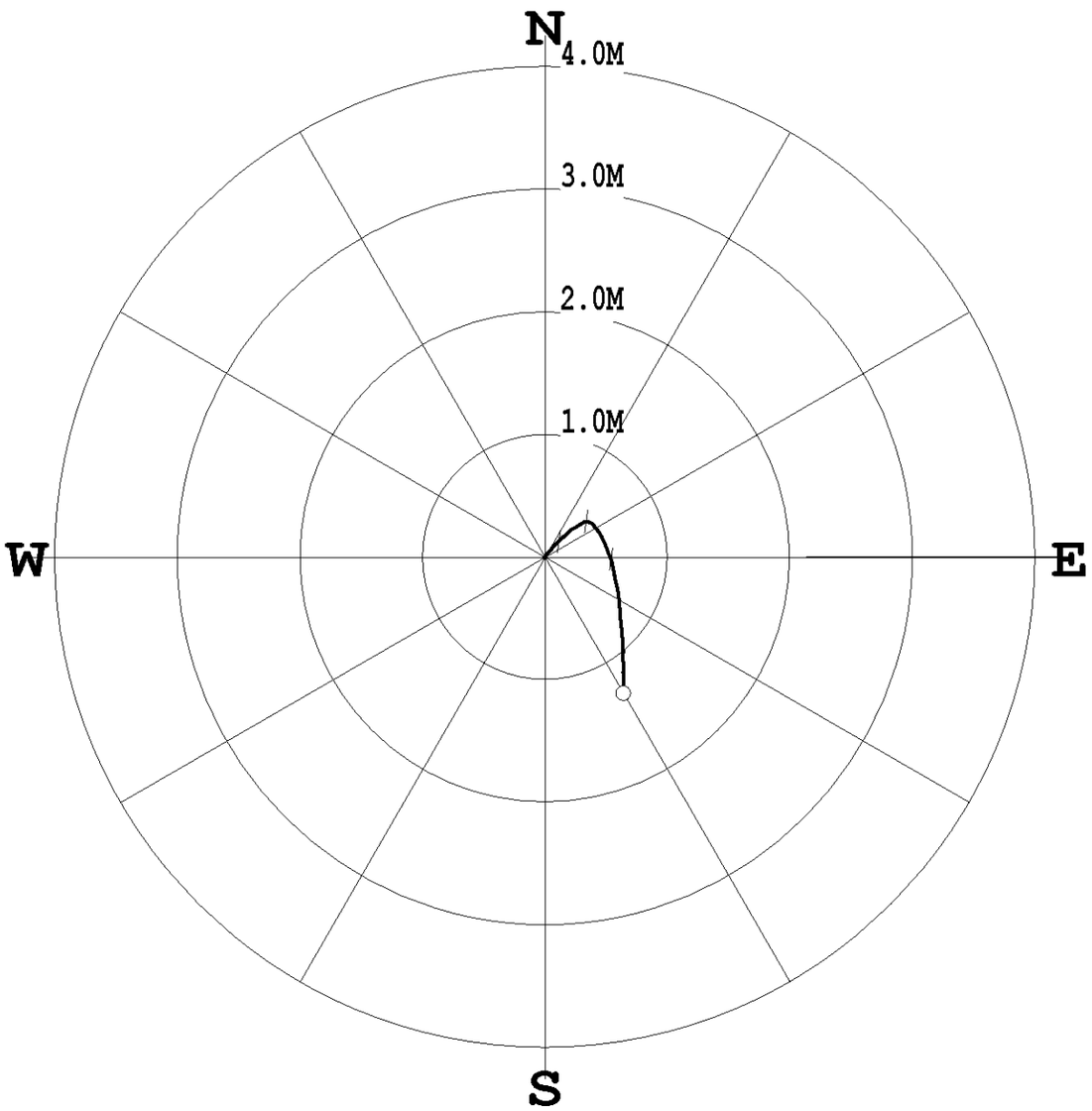
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-09
DATE OF LOG: 10/13/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 42.46 M
AZIMUTH: 150.0
DISTANCE: 1.3 M
+ = 10 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-09
DATE OF LOG : 10/13/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-09_10-13-08_11-23_9057A_.02_-0.03_42.69_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
8.00	8.01	0.08	0.07	0.1	38.2	1.8	44.9
10.00	10.01	0.13	0.11	0.2	40.6	1.9	50.7
12.00	12.01	0.18	0.16	0.2	42.2	1.8	44.4
14.00	14.01	0.21	0.20	0.3	43.3	1.4	50.3
16.00	16.00	0.24	0.24	0.3	45.0	1.6	60.6
18.00	18.00	0.27	0.29	0.4	47.1	1.9	56.5
20.00	20.00	0.29	0.33	0.4	48.9	1.1	89.1
22.00	22.00	0.28	0.38	0.5	53.6	1.5	119.1
24.00	24.00	0.24	0.41	0.5	60.0	2.0	145.7
26.00	26.00	0.18	0.46	0.5	68.9	2.3	157.1
28.00	28.00	0.09	0.49	0.5	79.8	2.9	160.3
30.00	29.99	-0.02	0.54	0.5	91.9	3.3	162.5
32.00	31.99	-0.14	0.56	0.6	103.6	4.2	166.6
34.00	33.98	-0.29	0.59	0.7	115.8	4.6	172.9
36.00	35.98	-0.46	0.61	0.8	126.9	5.8	175.5
38.00	37.97	-0.66	0.63	0.9	136.2	5.5	175.2
40.00	39.96	-0.85	0.64	1.1	143.2	5.7	176.1
42.00	41.95	-1.06	0.64	1.2	148.8	6.0	181.6
42.52	42.46	-1.11	0.64	1.3	150.0	6.1	180.8

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HR08-10

COMPANY	COLONIAL COAL CORPORATION
WELL	HR08-10
FIELD	HUGUENOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA

OTHER SERVICES: DEV

LOCATION	HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:

PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A

DATE	:10/13/08
DEPTH DRILLER	:45.72M
BIT SIZE	:139.7MM
LOG TOP	:-0.09
LOG BOTTOM	:45.77
CASING LOGGER	:2.5M
CASING DRILLER	:2.5M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL PILOT WELL
REMARKS 2	:NO WATER IN WELL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

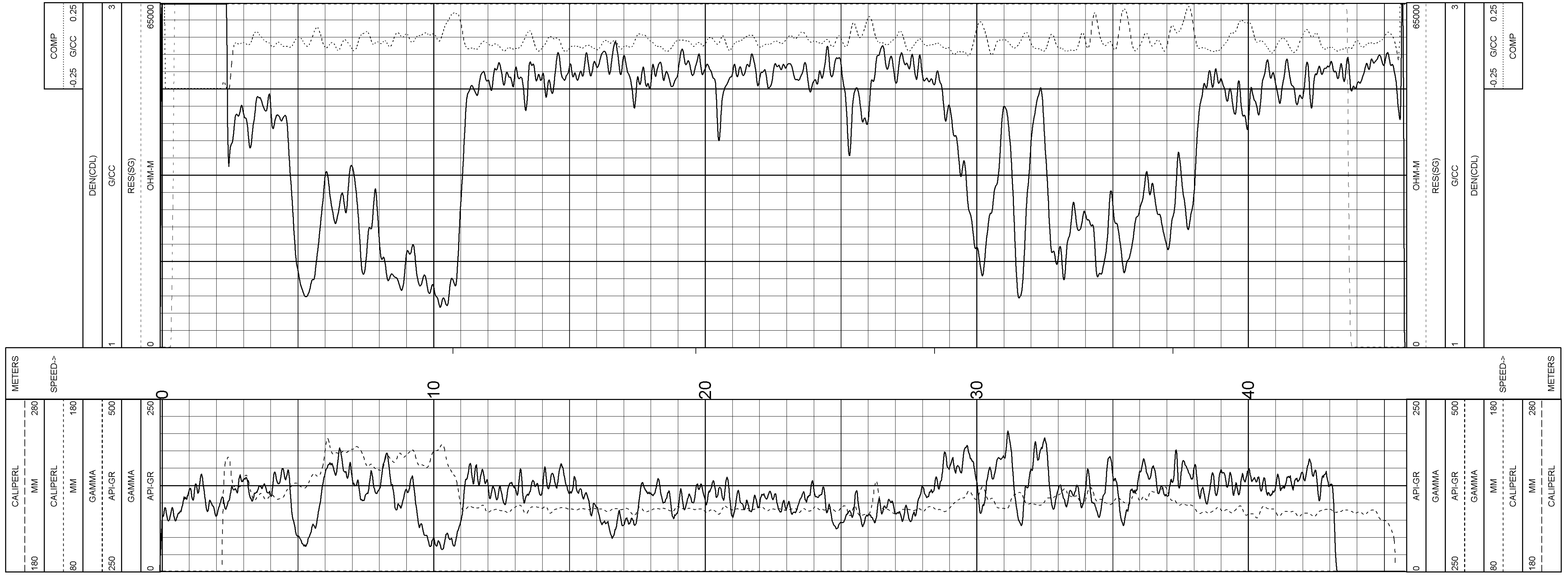
1:100 BULK DENSITY HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 10/12/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 139.7MM
VERSION = 9.64EK



1:100 BULK DENSITY HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 20
PRESENTATION NAME/DATE = 9239C1.0 10/12/2008

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99999

MATRIX DELTA T : 177
BIT SIZE : 139.7MM
VERSION = 9.64EK

TOOL CALIBRATION HR08-10 10/13/08 12:10
TOOL: 9239C1 TM VERSION 2018
SERIAL NUMBER : 9239

	DATE	TIME	SENSOR	STANDARD	RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000 [API-GR]	0.00	[CPS]
	Oct05.08	13:53:51	GAMMA	250.000 [API-GR]	265.00	[CPS]
2	Sep30.08	09:16:05	VOLTAGE	32.300 [MV]	98960.00	[CPS]
	Sep30.08	09:16:05	VOLTAGE	32.700 [MV]	98960.00	[CPS]
3	Sep27.08	12:43:12	CALIPER	88.000 [MM]	98200.00	[CPS]
	Sep27.08	12:43:12	CALIPER	143.000 [MM]	122900.00	[CPS]
4	Oct05.08	13:54:59	DEN(LS)	1.000 [G/CC]	894.00	[CPS]
	Oct05.08	13:54:59	DEN(LS)	2.320 [G/CC]	894.00	[CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000 [G/CC]	12489.10	[CPS]
	Oct05.08	13:55:15	DEN(SS)	2.320 [G/CC]	5793.10	[CPS]
6	Sep30.08	09:16:52	CALIPER1	76.200 [MM]	87280.10	[CPS]
	Sep30.08	09:16:52	CALIPER1	114.300 [MM]	122552.10	[CPS]
7	Sep29.08	16:45:34	CURRENT	32.300 [UA]	4560.10	[CPS]
	Sep29.08	16:45:34	CURRENT	252.100 [UA]	23285.10	[CPS]
8	May29.08	10:49:47	F	Default [CPS]		
9	May29.08	10:49:47	X	Default [CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-10

COMPANY	COLONIAL COAL CORPORATION
WELL	HR08-10
FIELD	HUGUENOT
COUNTY	GANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	HUGUENOT
SECTION	
TOWNSHIP	
RANGE	
LONGITUDE	
LATITUDE	
UNIQUE WELL ID	
PERMANENT DATUM G.L.	ELEVATION KB N/A
LOG MEASURED FROM G.L.	ELEVATION DF N/A
DRILL MEASURED FROM G.L.	ELEVATION GL N/A

OTHER SERVICES
DIV

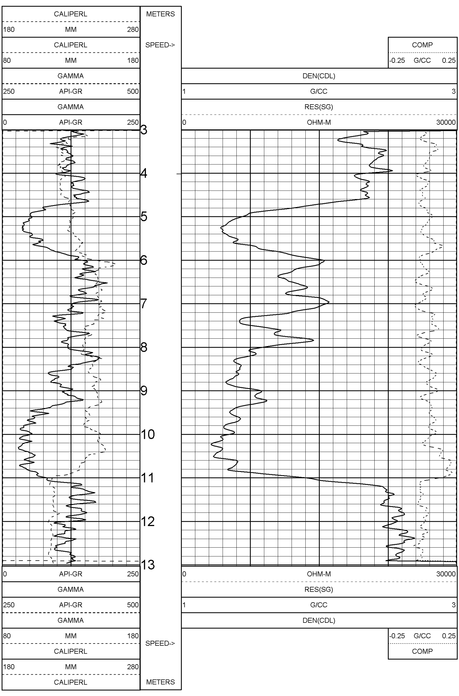
DATE	10/13/08
DEPTH DRILLER	139.7MM
BIT SIZE	44.7MM
LOG TOP	-0.09
LOG BOTTOM	45.77
CASING LOGGER	2.3M
CASING DRILLER	2.3M
CASING TYPE	STEEL
CASING WEIGHT	H20
BOREHOLE FLUID	H20
RM TEMPERATURE	N/A
MAX REC TEMP	2.0
MAX REC	N/A
WITNESSED BY	D. LUCAS
RECORDED BY	R. RACZ
REMARKS 1	VERTICAL PILOT WELL
REMARKS 2	NO WATER IN WELL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 3m - 13m HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 3m - 13m HR08-10 10/13/08

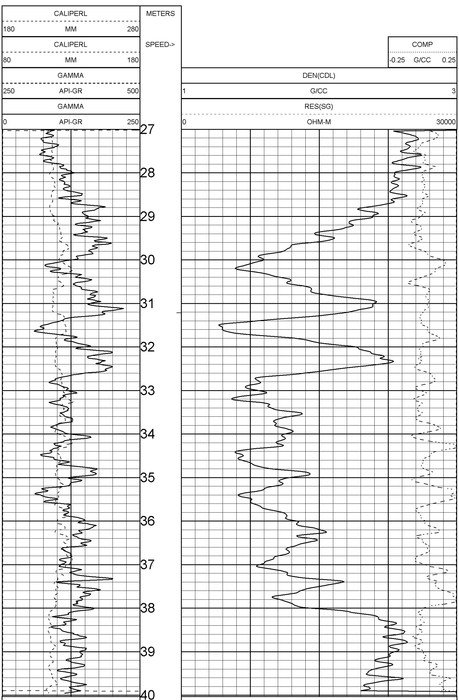
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK

1:50 DETAILED DENSITY 27m - 40m HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 27m - 40m HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK

TOOL CALIBRATION HR08-10 10/13/08 12:10
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05.08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30.08	09:18:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30.08	09:18:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27.08	12:43:12	CALIPER	88.000	[MM]	95200.00	[CPS]
	Sep27.08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05.08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05.08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05.08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30.08	09:18:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30.08	09:18:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29.08	16:45:34	CURRENT	32.300	[UA]	4569.10	[CPS]
	Sep29.08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29.08	10:49:47	F	Default	[CPS]		
9	May29.08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HR08-10

COMPANY	COLONIAL COAL CORPORATION
WELL	HR08-10
FIELD	HUGUENOT
COUNTY	GANADA
STATE	BRITISH COLUMBIA
LOCATION	HUGUENOT
SECTION	
TOWNSHIP	
RANGE	
PERMANENT DATUM	G.L.
LOG MEASURED FROM	G.L.
DRILL MEASURED FROM	G.L.
ELEVATION	
DATE	20-Oct-08
DEPTH DRILLER	43.72M
BIT SIZE	139MM
LOG TOP	-0.09
LOG BOTTOM	45.77
CASING LOGGER	2.3M
CASING DRILLER	2.3M
CASING TYPE	STEEL
BOREHOLE FLUID	H20
RM TEMPERATURE	N/A
MUD RES	2.0
MUD SAMPLE	0.0
WITNESSED BY	D. LUCAS
RECORDED BY	R. RACZ
REMARKS 1	VERTICAL PILOT WELL
REMARKS 2	DENSITY RESPONSE AFFECTED BY NO WATER IN WELL

OTHER SERVICES ON DAY

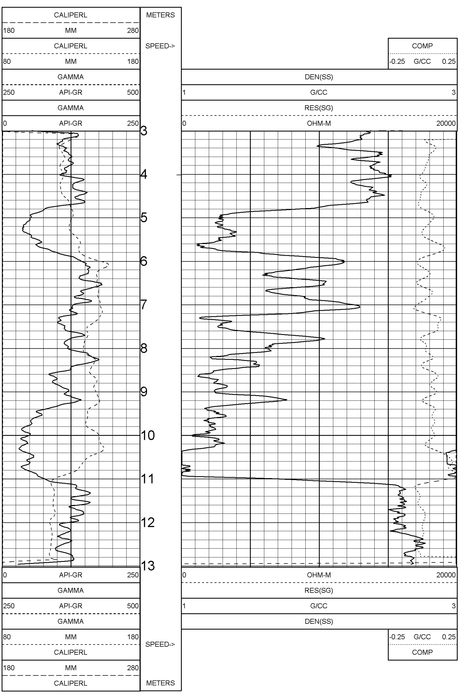
ELEVATION KB N/A
ELEVATION DF N/A
ELEVATION GL N/A

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 3m to 13m HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 139MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 3m to 13m HR08-10 10/13/08

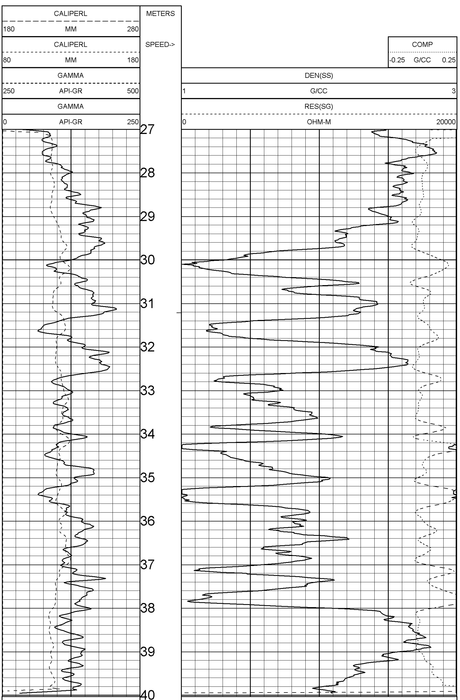
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 139MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

1:50 DETAILED DENSITY 27m to 40m HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 139MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 27m to 40m HR08-10 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 139MM
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/20/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-10 10/13/08 12:10
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

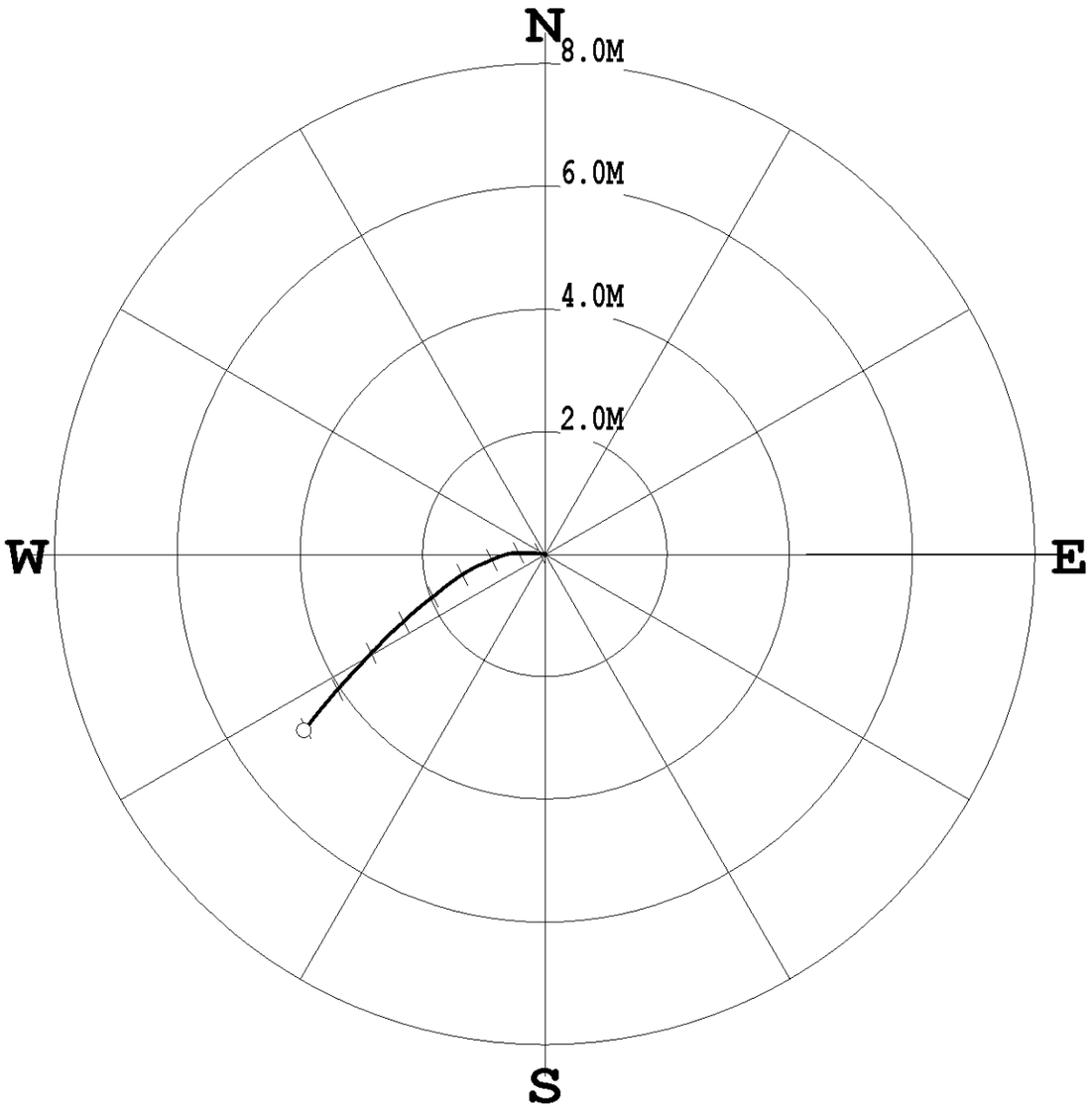
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05.08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30.08	09:18:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30.08	09:18:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27.08	12:43:12	CALIPER	88.000	[MM]	95200.00	[CPS]
	Sep27.08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05.08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05.08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05.08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30.08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30.08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29.08	16:45:34	CURRENT	32.300	[UA]	4569.10	[CPS]
	Sep29.08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29.08	10:49:47	F	Default	[CPS]		
9	May29.08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-10
DATE OF LOG: 10/13/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 45.26 M
AZIMUTH: 233.9
DISTANCE: 4.9 M
+ = 5 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-10
DATE OF LOG : 10/13/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-10_10-13-08_12-29_9057A_.02_0.05_45.77_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
8.00	7.98	0.03	-0.28	0.3	276.3	4.1	268.7
10.00	9.97	0.03	-0.44	0.4	273.9	4.7	269.7
12.00	11.97	0.01	-0.61	0.6	270.9	5.1	257.3
14.00	13.96	-0.05	-0.78	0.8	266.4	5.4	251.4
16.00	15.95	-0.13	-0.97	1.0	262.5	6.1	245.4
18.00	17.94	-0.21	-1.16	1.2	259.5	6.1	243.0
20.00	19.92	-0.32	-1.35	1.4	256.5	6.5	238.6
22.00	21.91	-0.46	-1.54	1.6	253.5	6.6	234.5
24.00	23.90	-0.60	-1.72	1.8	250.8	6.9	226.7
26.00	25.88	-0.75	-1.92	2.1	248.5	7.0	231.7
28.00	27.87	-0.91	-2.10	2.3	246.7	7.3	231.6
30.00	29.85	-1.08	-2.30	2.5	244.8	8.0	231.1
32.00	31.83	-1.27	-2.50	2.8	243.2	8.0	226.0
34.00	33.81	-1.47	-2.71	3.1	241.4	9.0	225.2
36.00	35.78	-1.70	-2.92	3.4	239.8	9.1	220.3
38.00	37.76	-1.93	-3.15	3.7	238.4	8.7	219.0
40.00	39.73	-2.17	-3.36	4.0	237.1	8.9	220.7
42.00	41.71	-2.41	-3.56	4.3	235.9	9.4	221.2
44.00	43.68	-2.66	-3.77	4.6	234.8	9.6	212.4
45.60	45.26	-2.87	-3.93	4.9	233.9	9.1	220.5

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HR08-11

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HR08-11
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:
PERMANENT DATUM	:G.L.
LOG MEASURED FROM	:G.L.
DRL MEASURED FROM	:G.L.
DATE	:10/13/08
DEPTH DRILLER	:45.72M
BIT SIZE	:139.7MM
LOG TOP	:-0.07
LOG BOTTOM	:45.45
CASING LOGGER	:4.2M
CASING DRILLER	:4.2M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL PILOT WELL
REMARKS 2	:

OTHER SERVICES: DEV

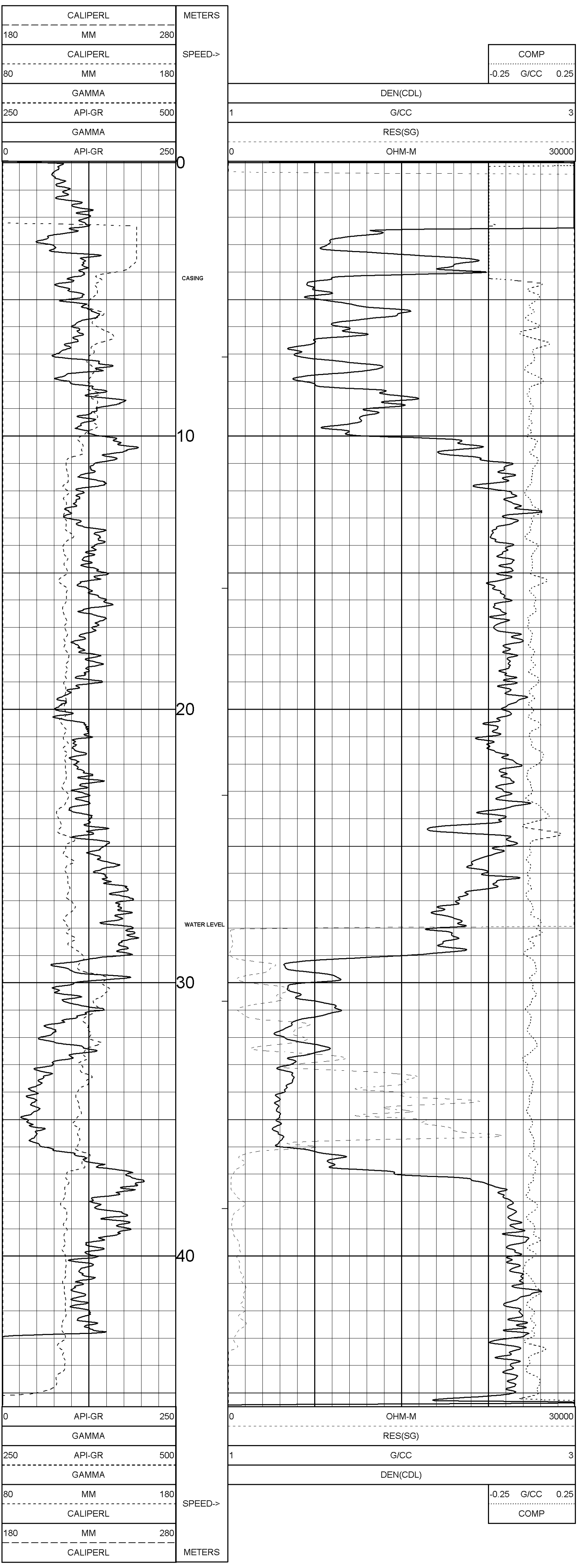
ELEVATION KB :N/A
ELEVATION DF :N/A
ELEVATION GL :N/A

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 BULK DENSITY HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK



1:100 BULK DENSITY HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK

TOOL CALIBRATION HR08-11 10/13/08 14:46
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-11

COMPANY	COLONIAL COAL CORPORATION
WELL	HR08-11
FIELD	HUGUENOT
COUNTY	CAMCA
PROVINCE	BRITISH COLUMBIA
COUNTRY	CANADA
LOCATION	
SECTION	
TOWNSHIP	
RANGE	
LICENCE NO.	
PERMANENT DATUM	G.L.
LOG MEASURED FROM	ELEVATION KB N/A
DRILLING MEASURED FROM	ELEVATION DF N/A
	ELEVATION GL N/A

OTHER SERVICES: DRV

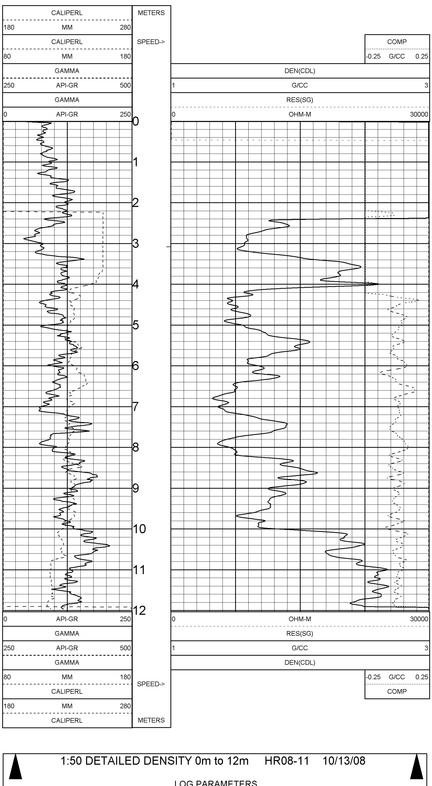
DATE	09/30/08		
DEPTH DRILLER	45.72M		
BIT SIZE	139.7MM		
LOG TOP	-0.07		
CASING LOGGER	4.3M		
CASING SIZE	139.7MM		
CASING DRILLER	4.3M		
CASING TYPE	STEEL		
BOREHOLE FLUID	NA		
RM TEMPERATURE	NA		
MAX REC TEMP	2.0		
MUD WEIGHT	1.01		
VISCOSITY	0		
RM	1.01		
RMF	NA		
RMC	NA		
MEASURED BY			
WITNESSED BY			
REMARKS 1	VERTICAL PILOT WELL		
REMARKS 2			

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 0m to 12m HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 0m to 12m HR08-11 10/13/08

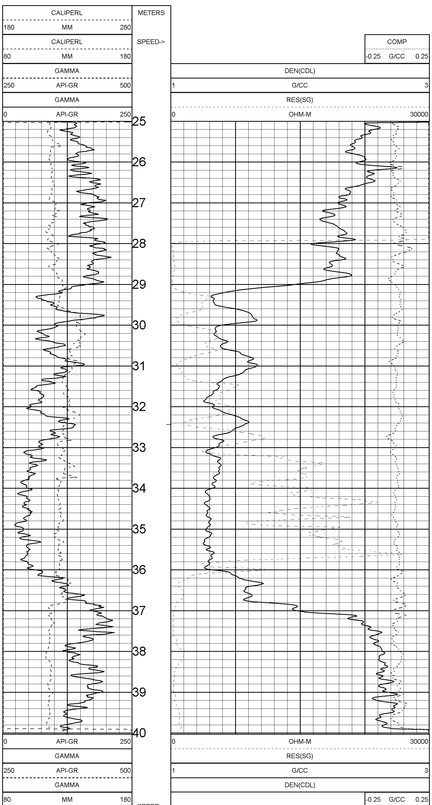
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK

1:50 DETAILED DENSITY 25m to 40m HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 40m HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 139.7MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK

TOOL CALIBRATION HR08-11 10/13/08 14.46
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38880.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPER1	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPER1	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

COMPANY	COLONIAL COAL CORPORATION
WELL	HR08-11
FIELD	HUSUM/BOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	
TOWNSHIP	
RANGE	
LICENCE NO.	
PERMANENT DATUM	G.L.
LOG MEASURED FROM	ELEVATION KB N/A
DRILLING MEASURED FROM G.L.	ELEVATION OF N/A
ELEVATION GL N/A	
DATE	
DEPTH DRILLER	45.72M
BIT SIZE	13.9
CASING LOGGER	4.2M
CASING DRILLER	4.2M
LOG TOP	-0.07
LOG BOTTOM	45.72M
CASING TYPE	STEEL
BHT	2.0
MUD RESISTIVITY	N/A
MUD WEIGHT	1.01
VISCOSITY	0.0
WITNESSED BY	B. LACKIE
RECORDED BY	VERTICAL PILOT WELL
REMARKS 1	NO WATER IN WELL
REMARKS 2	

OTHER SERVICES: DRV

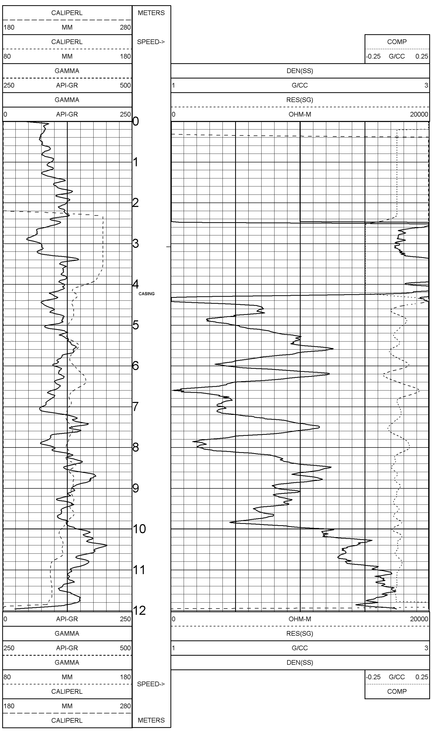
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
HR08-11

1:50 DETAILED DENSITY 0m to 12m HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 0m to 12m HR08-11 10/13/08

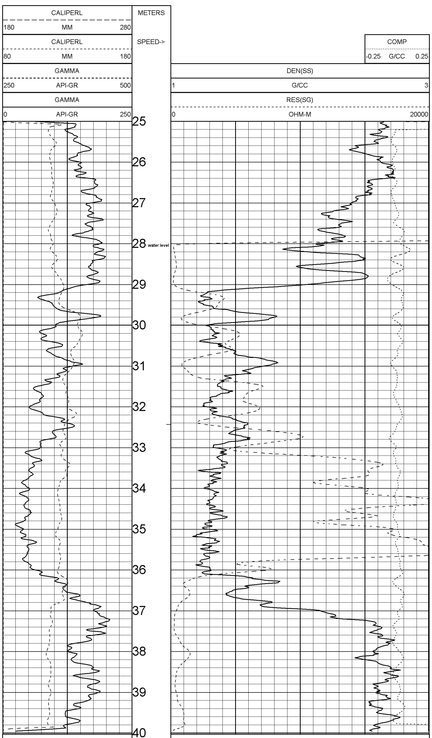
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

1:50 DETAILED DENSITY 25m to 40m HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 40m HR08-11 10/13/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-11 10/13/08 14.46
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

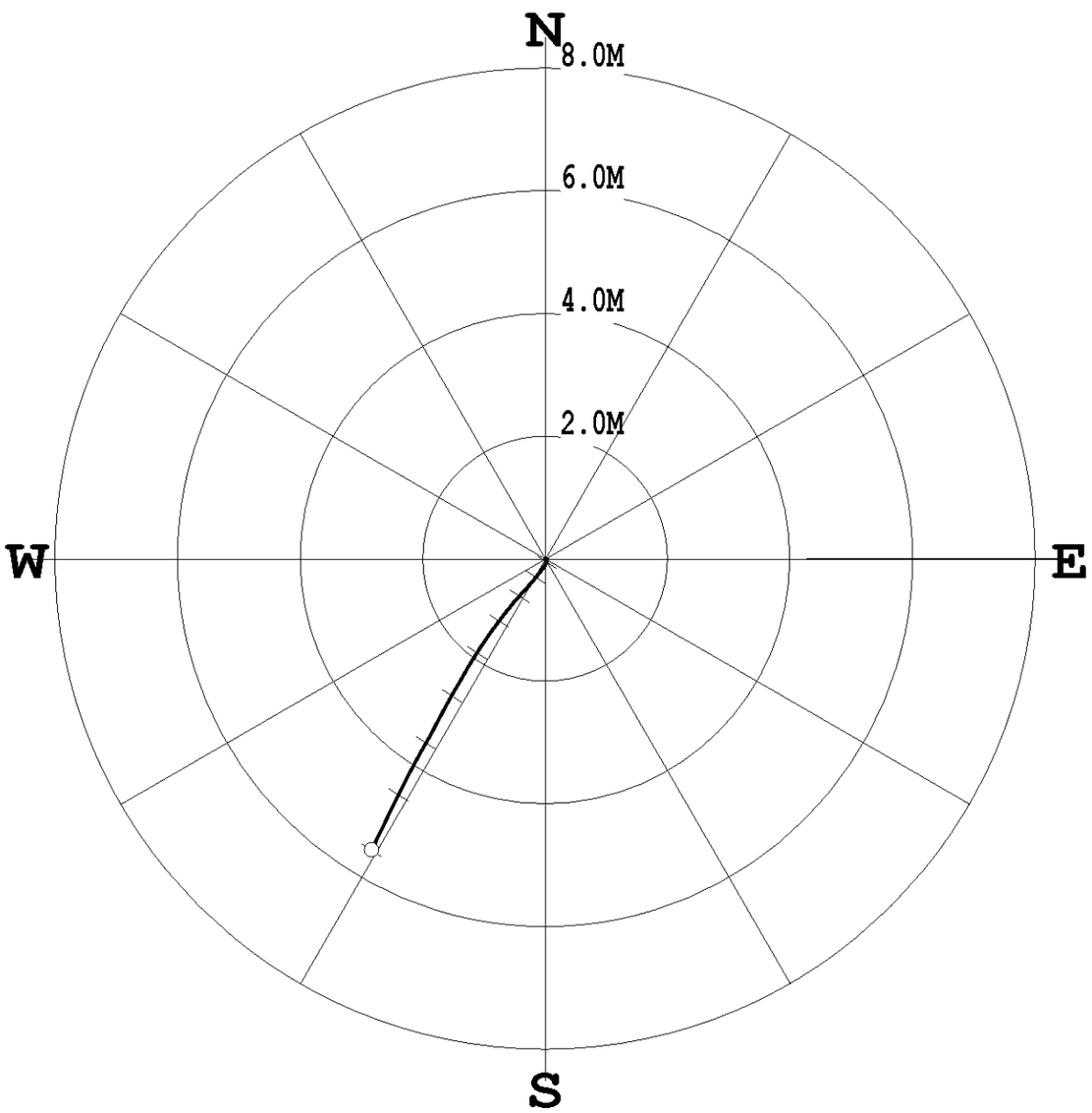
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	39880.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPER1	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPER1	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-11
DATE OF LOG: 10/13/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 44.90 M
AZIMUTH: 210.8
DISTANCE: 5.5 M
+ = 5 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-11
DATE OF LOG : 10/13/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-11_10-13-08_14-24_9057A_.02_-0.07_45.49_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
12.00	11.99	-0.41	-0.25	0.5	211.3	4.6	227.4
14.00	13.99	-0.54	-0.37	0.7	214.2	5.0	222.8
16.00	15.98	-0.67	-0.49	0.8	215.9	5.5	222.1
18.00	17.97	-0.83	-0.62	1.0	216.6	6.4	216.2
20.00	19.95	-1.01	-0.75	1.3	216.8	6.3	213.3
22.00	21.94	-1.19	-0.89	1.5	216.8	7.1	215.3
24.00	23.92	-1.41	-1.04	1.7	216.4	7.7	217.2
26.00	25.90	-1.64	-1.19	2.0	215.9	8.7	210.7
28.00	27.88	-1.91	-1.35	2.3	215.1	9.5	209.8
30.00	29.85	-2.20	-1.52	2.7	214.5	9.5	207.4
32.00	31.82	-2.50	-1.68	3.0	213.9	9.9	209.0
34.00	33.79	-2.81	-1.84	3.4	213.3	10.2	209.6
36.00	35.76	-3.12	-2.02	3.7	212.9	10.2	206.8
38.00	37.72	-3.44	-2.19	4.1	212.5	11.0	212.6
40.00	39.69	-3.79	-2.37	4.5	212.0	10.9	206.0
42.00	41.65	-4.14	-2.54	4.9	211.6	11.3	204.6
44.00	43.61	-4.50	-2.72	5.3	211.1	11.9	204.8
45.32	44.90	-4.74	-2.83	5.5	210.9	12.0	205.7

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HR08-12

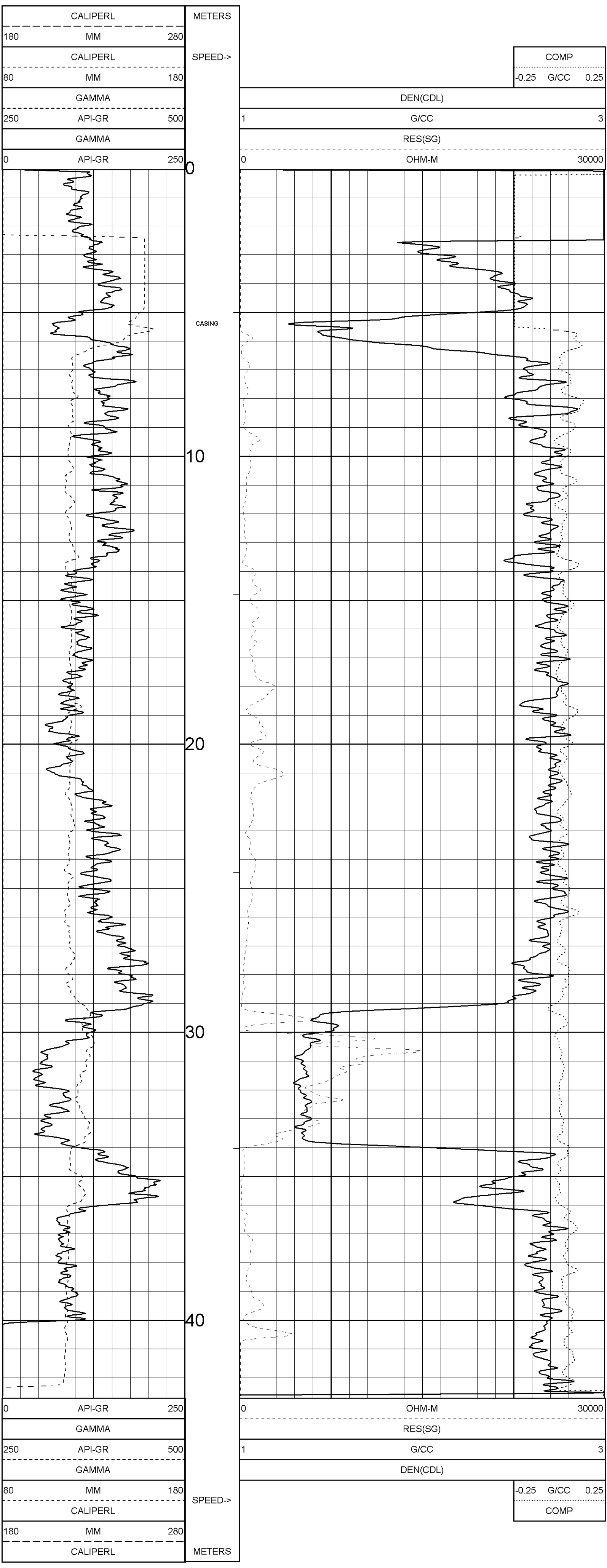
COMPANY	:COLONIAL COAL CORPORATION		
WELL	:HR08-12		
FIELD	:HUGUENOT		
COUNTRY	:CANADA		
PROVINCE	:BRITISH COLUMBIA		
LOCATION	:HUGUENOT	OTHER SERVICES:	
SECTION	:	DEV	
TOWNSHIP	:		
RANGE	:		
LICENCE NO.	:		
UNIQUE WELL ID.	:		
PERMANENT DATUM	:G.L.	ELEVATION KB	:N/A
LOG MEASURED FROM	:G.L.	ELEVATION DF	:N/A
DRL MEASURED FROM	:G.L.	ELEVATION GL	:N/A
DATE	:10/15/08		
DEPTH DRILLER	:42.67M		
BIT SIZE	:11.40		
LOG TOP	:0.03		
LOG BOTTOM	:42.67		
CASING LOGGER	:2.5M		
CASING DRILLER	:2.5M		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:H20		
RM TEMPERATURE	:N/A		
MUD RES	:2.0		
MUD WEIGHT	:1.01		
WITNESSED BY	:D. LUCAS		
RECORDED BY	:R. RACZ		
REMARKS 1	:VERTICAL PILOT WELL		
REMARKS 2	:		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 BULK DENSITY HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 11.40
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK



1:100 BULK DENSITY HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 11.40
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008		VERSION = 3.64EK

TOOL CALIBRATION HR08-12 10/15/08 13:53
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-12

COMPANY	COLONIAL COAL CORPORATION
WELL	HR08-12
FIELD	HUGUENOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	HUGUENOT
SECTION	
TOWNSHIP	
RANGE	
LONGITUDE	
LATITUDE	
UNIQUE WELL ID	
PERMANENT DATUM	GL
LOG MEASURED FROM	G.L.
DRL MEASURED FROM	G.L.
ELEVATION	ELEVATION KB N/A ELEVATION DF N/A ELEVATION GL N/A

OTHER SERVICES: DIV

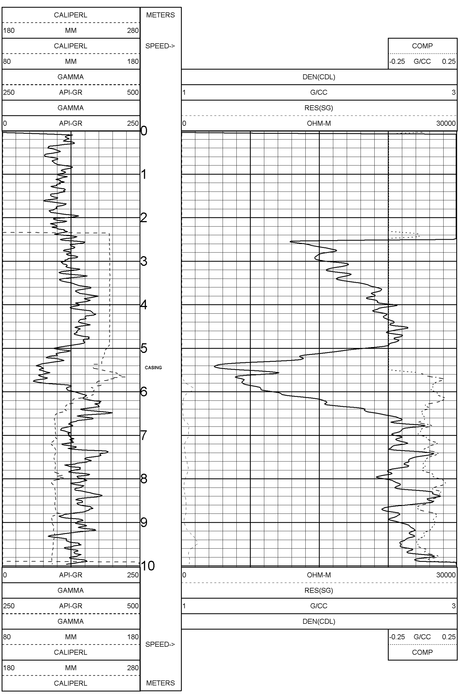
DATE	10/15/08
DEPTH DRILLER	42.67M
BIT SIZE	11.40
LOG TOP	0.03
LOG BOTTOM	42.67
CASING LOGGER	2.3M
CASING TYPE	STEEL
CASING DRILLER	2.3M
BOREHOLE FLUID	H20
RM TEMPERATURE	N/A
MUD RES	2.0
MUD SAMPLE SOURCE	DI
WITNESSED BY	DI LUCAS
RECORDED BY	R. BACZ
REMARKS 1	VERTICAL PILOT WELL
REMARKS 2	

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 0m to 10m HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 11.40
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 0m to 10m HR08-12 10/15/08

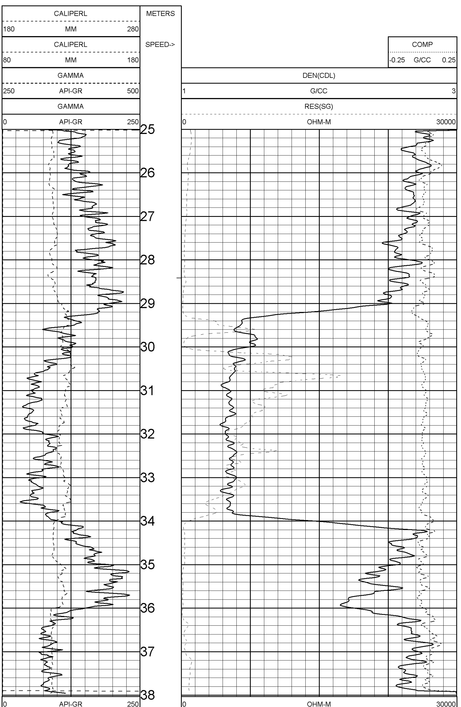
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 11.40
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK

1:50 DETAILED DENSITY 25m to 38m HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 11.40
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 38m HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE 11.40
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 09/30/2008		VERSION = 3.64EK

TOOL CALIBRATION HR08-12 10/15/08 13:53
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05.08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05.08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30.08	09:18:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30.08	09:18:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27.08	12:43:12	CALIPER	88.000	[MM]	95200.00	[CPS]
	Sep27.08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05.08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05.08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05.08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05.08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30.08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30.08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29.08	16:45:34	CURRENT	32.300	[UA]	4569.10	[CPS]
	Sep29.08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29.08	10:49:47	F	Default	[CPS]		
9	May29.08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY DETAILED 1:50 SCALE HR08-12

COMPANY	COLONIAL COAL CORPORATION
WELL	HR08-12
FIELD	HUGUNOT
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	HUGUNOT
SECTION	
TOWNSHIP	
RANGE	
LONGITUDE	
LATITUDE	
UNIQUE WELL ID	
PERMANENT DATUM	G.L.
LOG MEASURED FROM G.L.	ELEVATION KB N/A
DRILL MEASURED FROM G.L.	ELEVATION DF N/A
PROJ. NO.	ELEVATION GL N/A
DATE	
DEPTH DRILLER	43.20M
BIT SIZE	11.4
LOG TOP	0.03
LOG BOTTOM	42.87
CASING LOGGER	2.3M
CASING TYPE	STEEL
CASING DRILLER	H20
BOREHOLE FLUID	H20
RM TEMPERATURE	N/A
MUD RES	
MUD SAMPLE SOURCE	
WITNESSED BY	D. LUCAS
RECORDED BY	R. RACZ
REMARKS 1	VERTICAL PILOT WELL
REMARKS 2	

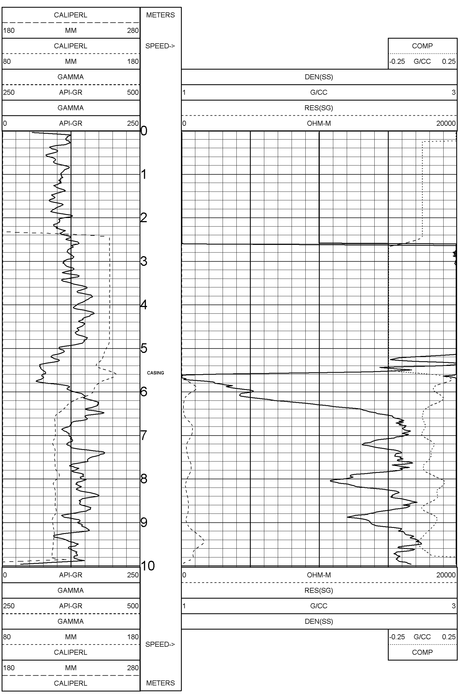
OTHER SERVICES DIP

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 0m to 10m HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 0m to 10m HR08-12 10/15/08

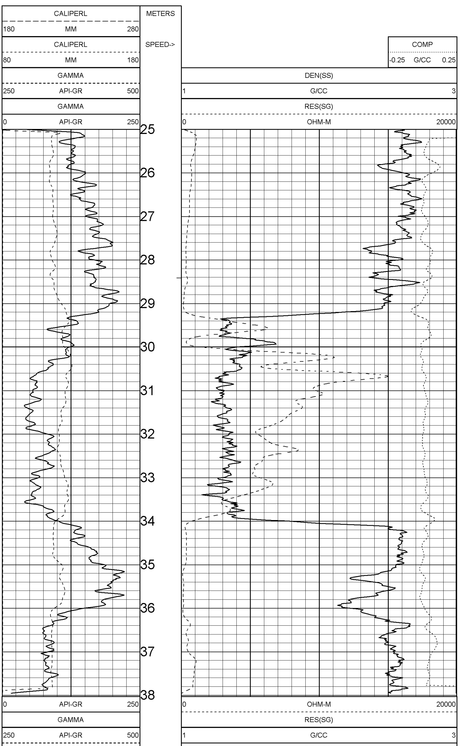
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

1:50 DETAILED DENSITY 25m to 38m HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 38m HR08-12 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE 11.4
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-12 10/15/08 13:53
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

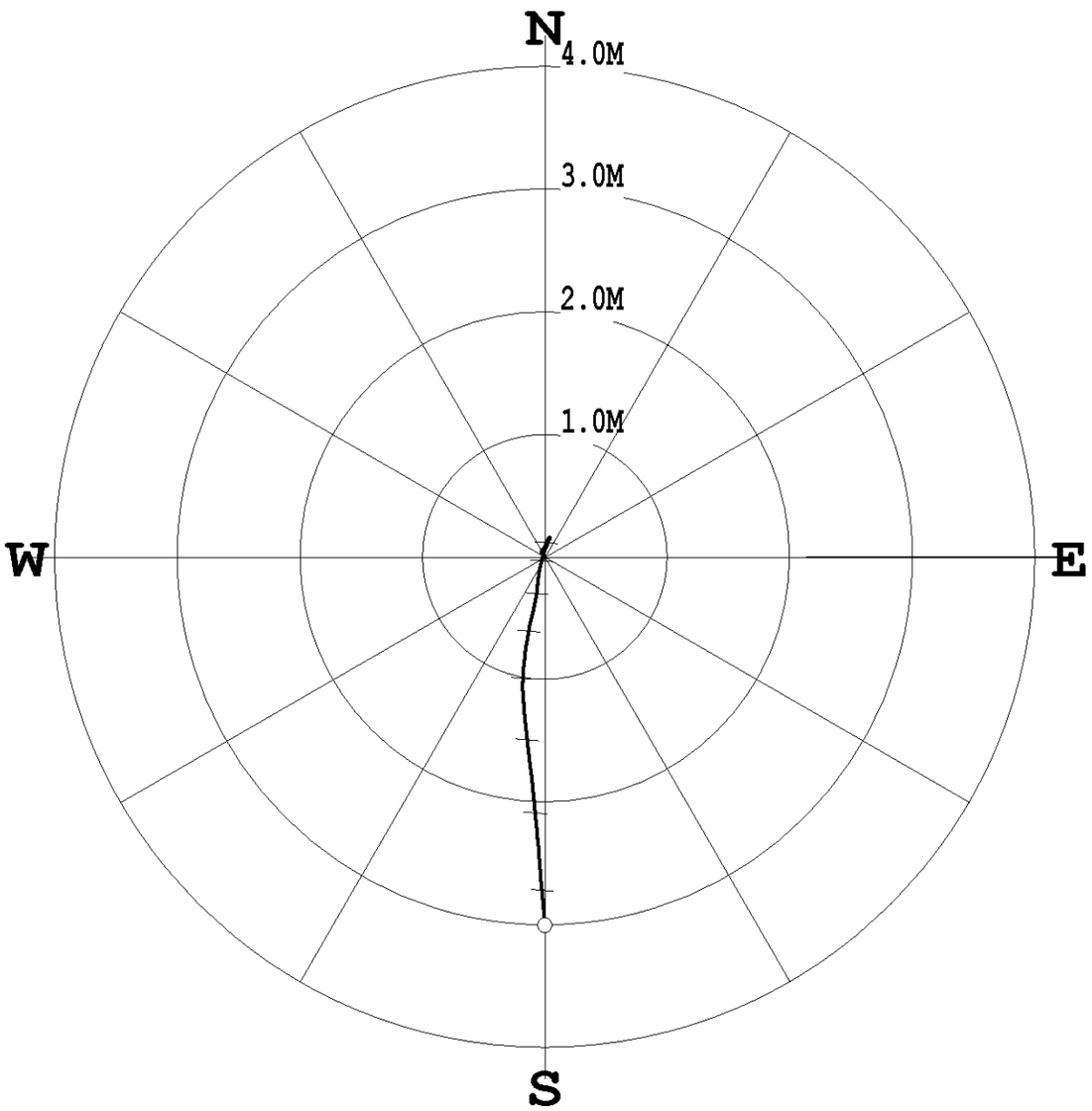
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:18:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:18:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	88.000	[MM]	95200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:18:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:18:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-12
DATE OF LOG: 10/15/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 42.25 M
AZIMUTH: 180.0
DISTANCE: 3.0 M
+ = 5 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-12
DATE OF LOG : 10/15/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-12_10-15-08_13-33_9057A_.02_0.03_42.59_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
8.00	7.98	0.07	0.00	0.1	1.8	3.2	204.1
10.00	9.98	-0.03	-0.03	0.0	226.8	3.0	191.2
12.00	11.98	-0.13	-0.05	0.1	201.4	3.0	193.0
14.00	13.97	-0.24	-0.06	0.2	195.1	3.3	185.8
16.00	15.97	-0.35	-0.08	0.4	192.9	3.5	189.6
18.00	17.97	-0.48	-0.11	0.5	192.6	4.0	192.5
20.00	19.96	-0.60	-0.13	0.6	192.6	3.8	184.7
22.00	21.96	-0.74	-0.16	0.8	192.1	4.4	189.1
24.00	23.95	-0.90	-0.18	0.9	191.1	4.7	188.8
26.00	25.94	-1.07	-0.18	1.1	189.8	5.2	182.1
28.00	27.93	-1.27	-0.17	1.3	187.6	6.0	176.4
30.00	29.92	-1.48	-0.15	1.5	185.7	6.6	167.5
32.00	31.91	-1.71	-0.12	1.7	184.0	6.6	172.1
34.00	33.89	-1.95	-0.09	1.9	182.8	6.8	175.1
36.00	35.88	-2.20	-0.07	2.2	181.9	7.2	174.4
38.00	37.86	-2.44	-0.05	2.4	181.2	6.9	172.8
40.00	39.85	-2.69	-0.03	2.7	180.6	7.4	174.9
42.00	41.83	-2.95	-0.00	2.9	180.1	7.4	174.2
42.42	42.25	-3.00	0.00	3.0	180.0	7.3	173.5

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA - CALIPER - RES.
HR08-13

COMPANY	:COLONIAL COAL CORPORATION
WELL	:HR08-13
FIELD	:HUGUENOT
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LOCATION	:HUGUENOT
SECTION	:
TOWNSHIP	:
RANGE	:
LICENCE NO.	:
UNIQUE WELL ID.	:
PERMANENT DATUM	:G.L. ELEVATION KB :N/A
LOG MEASURED FROM	:G.L. ELEVATION DF :N/A
DRL MEASURED FROM	:G.L. ELEVATION GL :N/A
DATE	:10/15/08
DEPTH DRILLER	:48.77M
BIT SIZE	:114 MM
LOG TOP	:0.10
LOG BOTTOM	:48.46
CASING LOGGER	:2.5M
CASING DRILLER	:2.5M
CASING TYPE	:STEEL
BOREHOLE FLUID	:H20
RM TEMPERATURE	:N/A
MUD RES	:2.0
MUD WEIGHT	:1.01
WITNESSED BY	:D. LUCAS
RECORDED BY	:R. RACZ
REMARKS 1	:VERTICAL PILOT WELL
REMARKS 2	:

OTHER SERVICES: DEV

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:100 BULK DENSITY HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 114 MM
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008 VERSION = 3.64EK

1:100 BULK DENSITY HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 114 MM
PRESENTATION NAME/DATE = 9239C1.0 10/13/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-13 10/15/08 12:18
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 368

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	89.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6993.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.320	[G/CC]	804.00	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	12489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.320	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPERL	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPERL	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4560.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

DETAILED DENSITY
GAMMA - CALIPER - RES.
HR08-13

COMPANY	CONTINENTAL CORPORATION
WELL	HR08-13
FIELD	HUGHSON
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
SECTION	
RANGE	
TOWNSHIP	
PERMANENT DATUM	G.L.
LOG MEASURED FROM	K.B.
LANDOWNER WELL ID	
LOG TOP	0.10
LOG BOTTOM	20.00
CASING LOGGER	2.5M
CASING DRILLER	2.5M
BIT SIZE	114.1MM
BIT TYPE	5.10
MAX RECORDED TEMPERATURE	N/A
RUN NUMBER	1
MAX DEPTH	20.00
RECORDED BY	R. RAZZ
WITNESSED BY	D. LUCAS
REMARKS 1	VERTICAL/ALL/LOT WELL
REMARKS 2	

DATE 10/15/08
RUN NUMBER ONE
DRILLER 1
LOGGER 1
TOP LOGGED INTERVAL 0.10
BOTTOM LOGGED INTERVAL 20.00
TYPE OF FLUID IN HOLE
SALINITY
DENSITY
LEVEL
MAX REC. TEMP.
ESTIMATED BHT
MATRIX
MATRIX DENSITY 2.65
HOLE CORRECTION
ELEVATION KB N/A
ELEVATION DF N/A
ELEVATION GL N/A

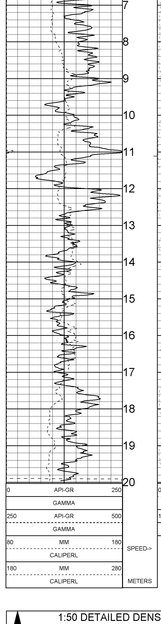
DETAILS SERVICES
DIV

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 5m to 20m HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114 MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 5m to 20m HR08-13 10/15/08

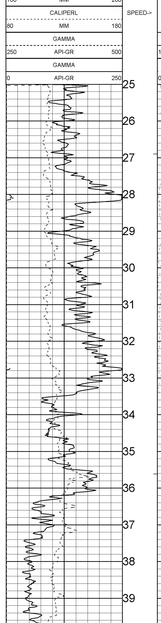
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114 MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008		VERSION = 3.64EK

1:50 DETAILED DENSITY 25m to 44m HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114 MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008		VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 44m HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 20	ELECT. CUTOFF : 99999	BIT SIZE : 114 MM
PRESENTATION NAME/DATE = 9239 DETAILS 1 TO 50.0 10/15/2008		VERSION = 3.64EK

TOOL CALIBRATION HR08-13 10/15/08 12:18
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 388

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	88.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6923.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.500	[G/CC]	17461.50	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	13489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.500	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPER L	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPER L	114.300	[MM]	122562.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4060.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

Century WIRELINE SERVICES

SHORT SPACED DENSITY DETAILED 1:50 SCALE HR08-13

COMPANY	CONTINENTAL CORPORATION
WELL	HR08-13
FIELD	HIGHRIDGE
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LOCATION	
LOCATION	
RANGE	
TOWNSHIP	
SECTION	
PERMANENT DATUM	G.L.
LOG MEASURED FROM	K.B.
LANDOWNER	
LICENCE NO.	
DATE	10/15/08
BIT SIZE	13.9
LOG TOP	0.10
LOG BOTTOM	44.00
CASING LOGGER	3.5M
CASING DRILLER	3.5M
BIT RUN	1
RUN NUMBER	ONE
MAX DEPTH	44.00
BHT	NA
BHT TEMPERATURE	NA
TIME SINCE CIRC.	2.0
TIME ON BOTTOM	2.0
RIG	D. LUCAS
WITNESSED BY	
RECORDED BY	R. RAZZ
PROBE	VERTICAL PLOT WELL
REMARKS 1	
REMARKS 2	

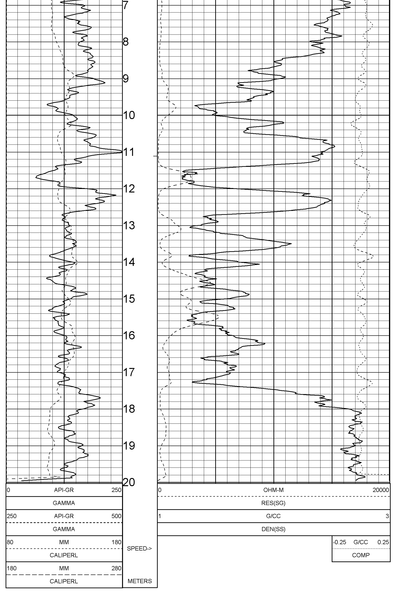
DENSITY SERVICES ONLY

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:50 DETAILED DENSITY 5m to 20m HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 5m to 20m HR08-13 10/15/08

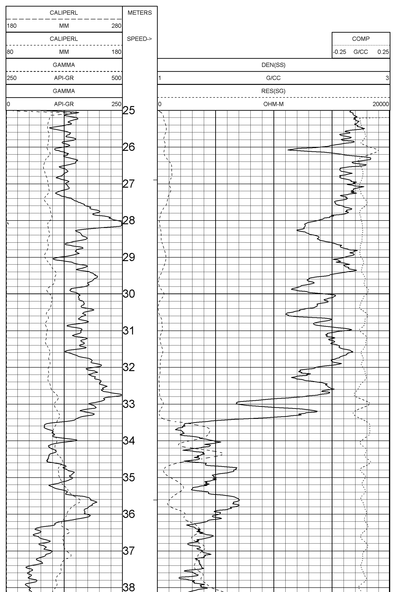
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

1:50 DETAILED DENSITY 25m to 44m HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK



1:50 DETAILED DENSITY 25m to 44m HR08-13 10/15/08

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 20 ELECT. CUTOFF : 99999 BIT SIZE : 13.9
PRESENTATION NAME/DATE = 9239_DETAILED_DENSITY_SS_ONLY.0 11/22/2008 VERSION = 3.64EK

TOOL CALIBRATION HR08-13 10/15/08 12:18
TOOL 9239C1 TM VERSION 2018
SERIAL NUMBER 388

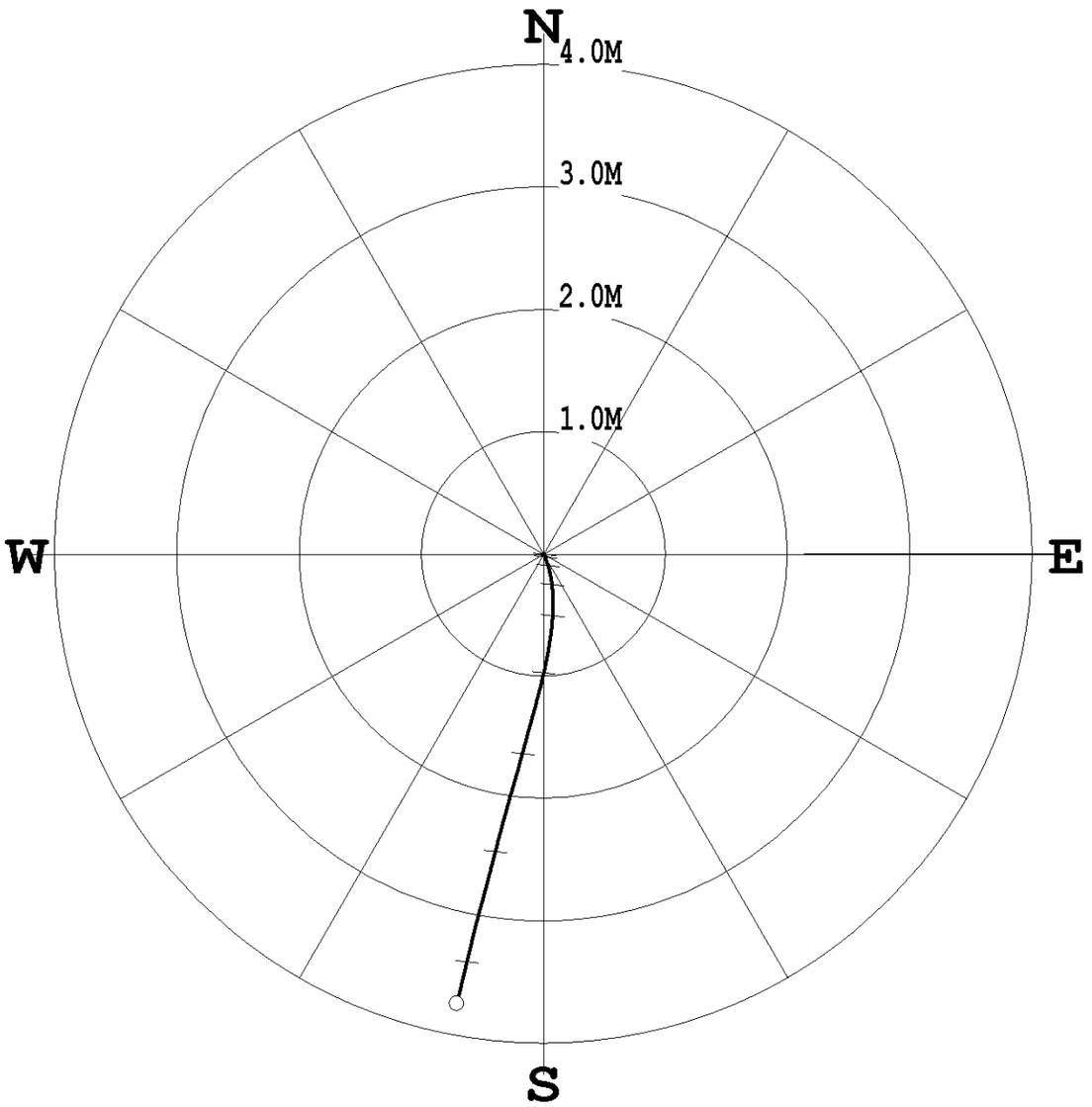
	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Oct05,08	13:53:51	GAMMA	4.000	[API-GR]	0.00	[CPS]
	Oct05,08	13:53:51	GAMMA	250.000	[API-GR]	265.00	[CPS]
2	Sep30,08	09:16:05	VOLTAGE	32.300	[MV]	9690.00	[CPS]
	Sep30,08	09:16:05	VOLTAGE	252.700	[MV]	38980.02	[CPS]
3	Sep27,08	12:43:12	CALIPER	88.000	[MM]	98200.00	[CPS]
	Sep27,08	12:43:12	CALIPER	143.000	[MM]	122900.00	[CPS]
4	Oct05,08	13:54:59	DEN(LS)	1.000	[G/CC]	6923.10	[CPS]
	Oct05,08	13:54:59	DEN(LS)	2.500	[G/CC]	17700.10	[CPS]
5	Oct05,08	13:55:15	DEN(SS)	1.000	[G/CC]	13489.10	[CPS]
	Oct05,08	13:55:15	DEN(SS)	2.500	[G/CC]	5793.10	[CPS]
6	Sep30,08	09:16:52	CALIPER	76.200	[MM]	87390.10	[CPS]
	Sep30,08	09:16:52	CALIPER	114.300	[MM]	122552.10	[CPS]
7	Sep29,08	16:45:34	CURRENT	32.300	[UA]	4060.10	[CPS]
	Sep29,08	16:45:34	CURRENT	252.700	[UA]	23285.10	[CPS]
8	May29,08	10:49:47	F	Default	[CPS]		
9	May29,08	10:49:47	X	Default	[CPS]		

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-13
DATE OF LOG: 10/15/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 1 M/CM
TRUE DEPTH: 46.80 M
AZIMUTH: 190.9
DISTANCE: 3.7 M
+ = 5 M INCR
○ = BOTTOM OF HOLE

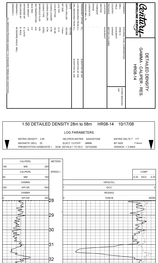


* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-13
DATE OF LOG : 10/15/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-13_10-15-08_12-36_9057A_.02_-0.15_47.24_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
8.00	8.01	-0.01	0.01	0.0	148.6	0.4	158.6
10.00	10.01	-0.02	0.01	0.0	151.8	0.7	148.9
12.00	12.01	-0.04	0.02	0.0	156.3	0.9	158.1
14.00	14.01	-0.07	0.03	0.1	158.4	1.1	167.0
16.00	16.01	-0.11	0.04	0.1	159.6	1.5	160.8
18.00	18.01	-0.17	0.06	0.2	162.1	1.9	165.9
20.00	20.01	-0.25	0.07	0.3	164.8	2.3	174.6
22.00	22.00	-0.33	0.07	0.3	167.5	2.6	177.6
24.00	24.00	-0.44	0.07	0.4	170.3	3.5	182.9
26.00	26.00	-0.57	0.07	0.6	173.2	4.1	183.7
28.00	27.99	-0.75	0.04	0.7	176.5	5.6	195.8
30.00	29.98	-0.97	0.00	1.0	179.9	7.0	190.8
32.00	31.96	-1.21	-0.06	1.2	182.8	7.6	192.3
34.00	33.94	-1.48	-0.13	1.5	185.1	8.4	197.7
36.00	35.92	-1.77	-0.21	1.8	186.9	9.2	201.1
38.00	37.89	-2.08	-0.30	2.1	188.3	9.5	199.4
40.00	39.86	-2.41	-0.39	2.4	189.2	9.9	190.6
42.00	41.83	-2.75	-0.48	2.8	189.9	10.5	194.0
44.00	43.80	-3.11	-0.57	3.2	190.5	10.7	192.2
46.00	45.76	-3.47	-0.66	3.5	190.8	11.0	191.4
47.06	46.80	-3.67	-0.71	3.7	191.0	10.9	193.6

Company	Cantuy
Well	HR08-14
Field	
County	
State	
Country	
Service Company	SCHLUMBERGER
Date	10/17/2008
Time	
Run Number	
Depth Reference	
Log Measured From	
Permanent Datum	
Elevation	
Elevation	
Elevation


GEOPHYSICAL DATA
PROJECT
Well Site
HR08-14
Operator
Date
Run No.
Depth Driller
Depth Logger
Bottom Log Interval
Top Log Interval
Casing Driller
Casing Logger
Bit Size
Type Fluid in Hole
Density
Viscosity
pH
Fluid Loss
Source of Sample
Rm @ Measured Temp
Rmf @ Measured Temp
Rmc @ Measured Temp
Source of Rmf/Rmc
Rm @ BHT
Time Since Circulation
Max. Rec. Temp. °C
Equipment Location
Recorded By
Witnessed By
Equipment Number
Location
Date
Time
Max. Rec. Temp. °F

Century Wireline Services

SHORT SPACED DENSITY
DETAILED 1:50 SCALE
18926-14

Company	Crew No.
Well	Date
Field	Operator
County	Rig
Province	Elevation
Latitude	Longitude
Township	Range
Section	Unit
Permanent Datum	Log Measured From
Drilling Measured From	
Elevation: KB	GL
Elevation: DF	
Date	Run No.
Depth Driller	Depth Logged
Bottom Log Interval	Top Log Interval
Casing Driller	Casing Logged
Bit Size	Type Fluid in Hole
Density	Viscosity
pH	Fluid Loss
Source of Sample	Rm @ Measured Temp
Rmf @ Measured Temp	Rmc @ Measured Temp
Source: Rmf / Rmc	Rm @ BHT
Time Since Circulation	Time Logged
Max. Rec. Temp.	Equipment No.
Location	Recorded By
Witnessed By	

Run No.	Bottom Log Interval
Top Log Interval	Casing Driller
Casing Logged	Bit Size
Type Fluid in Hole	Density
Viscosity	pH
Fluid Loss	Source of Sample
Rm @ Measured Temp	Rmf @ Measured Temp
Rmc @ Measured Temp	Source: Rmf / Rmc
Rm @ BHT	Time Since Circulation
Time Logged	Max. Rec. Temp.
Equipment No.	Location
Recorded By	Witnessed By

Run No.	Bottom Log Interval
Top Log Interval	Casing Driller
Casing Logged	Bit Size
Type Fluid in Hole	Density
Viscosity	pH
Fluid Loss	Source of Sample
Rm @ Measured Temp	Rmf @ Measured Temp
Rmc @ Measured Temp	Source: Rmf / Rmc
Rm @ BHT	Time Since Circulation
Time Logged	Max. Rec. Temp.
Equipment No.	Location
Recorded By	Witnessed By

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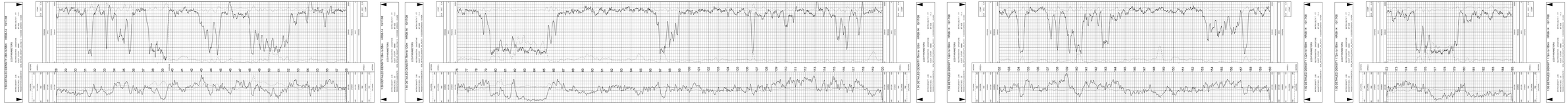
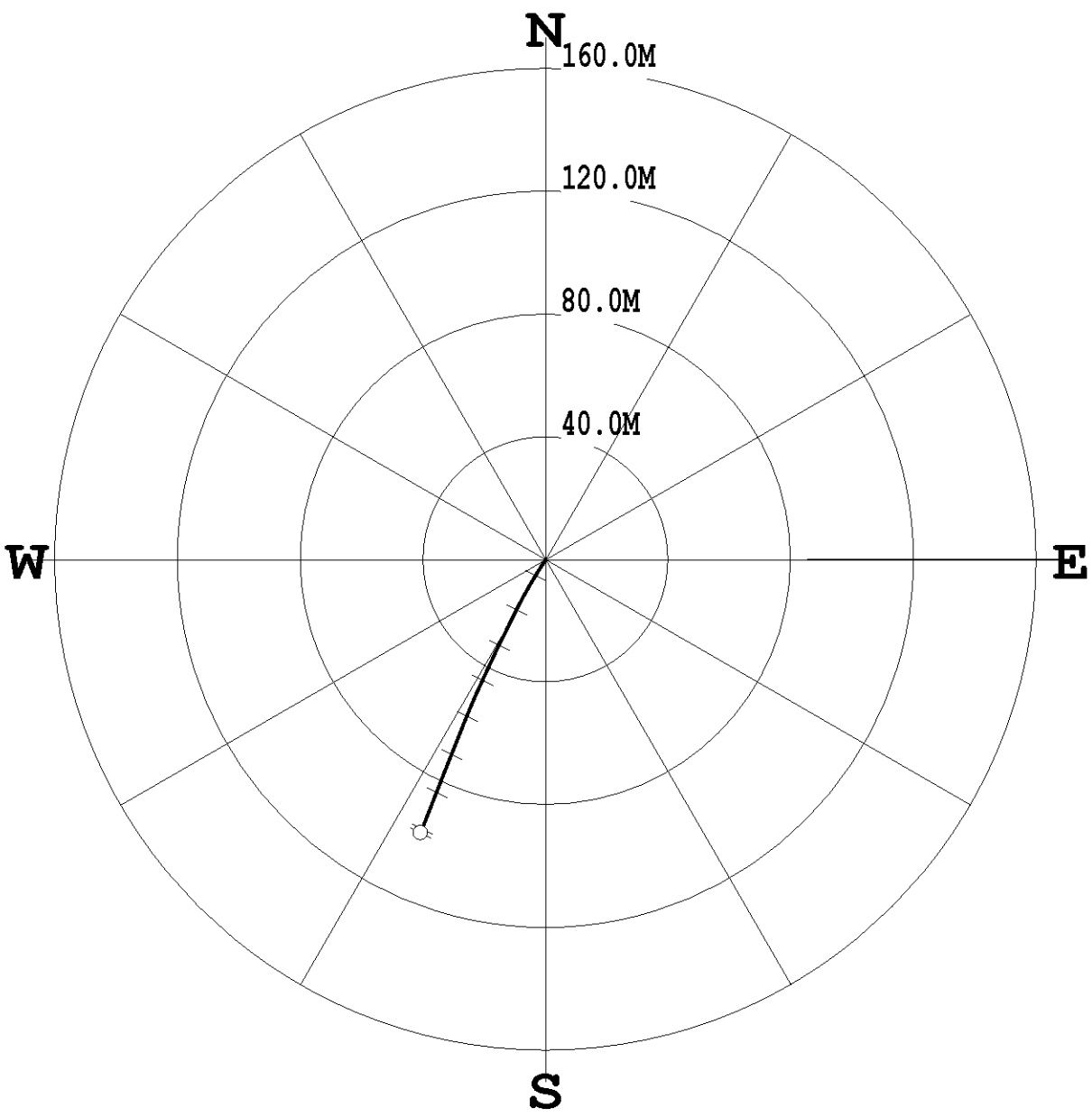


PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: COLONIAL COAL CORPORATION
LOCATION: HUGUENOT
HOLE ID: HR08-14
DATE OF LOG: 10/17/08
PROBE: 9057A 4430

MAG DECL: 20.0

SCALE: 20 M/CM
TRUE DEPTH: 162.36 M
AZIMUTH: 204.6
DISTANCE: 97.9 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : COLONIAL COAL CORPO
FIELD OFFICE : CENTURY
DATA FROM :
MAG. DECL. : 20.000
HOLE ID. : HR08-14
DATE OF LOG : 10/17/08
PROBE : 9057A , 4430
DEPTH UNITS : METERS
LOG: HR08-14_10-17-08_11-07_9057A_.02_10.00_191.40_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.02	10.02	-0.01	-0.01	0.0	217.0	31.1	217.0
12.00	11.71	-0.86	-0.58	1.0	214.1	31.3	217.6
14.00	13.42	-1.72	-1.16	2.1	214.0	31.2	212.9
16.00	15.12	-2.60	-1.73	3.1	213.6	31.9	212.3
18.00	16.82	-3.49	-2.30	4.2	213.4	31.8	212.6
20.00	18.52	-4.38	-2.85	5.2	213.0	31.7	211.6
22.00	20.23	-5.28	-3.40	6.3	212.8	31.7	212.0
24.00	21.93	-6.18	-3.94	7.3	212.5	31.9	207.9
26.00	23.62	-7.09	-4.48	8.4	212.3	32.0	210.8
28.00	25.32	-8.01	-5.02	9.5	212.1	32.2	210.7
30.00	27.01	-8.93	-5.56	10.5	211.9	32.4	209.8
32.00	28.70	-9.86	-6.09	11.6	211.7	32.4	209.3
34.00	30.38	-10.79	-6.62	12.7	211.5	32.5	209.3
36.00	32.07	-11.73	-7.14	13.7	211.3	32.8	208.7
38.00	33.75	-12.68	-7.66	14.8	211.1	32.5	208.1
40.00	35.43	-13.64	-8.17	15.9	210.9	33.0	206.7
42.00	37.11	-14.60	-8.67	17.0	210.7	33.0	206.9
44.00	38.79	-15.57	-9.17	18.1	210.5	33.0	206.3
46.00	40.46	-16.54	-9.66	19.2	210.3	33.3	206.4
48.00	42.14	-17.52	-10.16	20.2	210.1	33.0	206.0
50.00	43.82	-18.49	-10.64	21.3	209.9	33.1	205.1
52.00	45.49	-19.47	-11.12	22.4	209.7	33.2	206.2
54.00	47.17	-20.46	-11.60	23.5	209.6	33.2	206.4
56.00	48.84	-21.44	-12.09	24.6	209.4	33.1	205.7
58.00	50.52	-22.41	-12.56	25.7	209.3	33.0	205.8
60.00	52.20	-23.39	-13.04	26.8	209.1	32.9	204.6
62.00	53.88	-24.37	-13.52	27.9	209.0	32.8	206.3
64.00	55.56	-25.34	-13.99	28.9	208.9	32.6	206.5
66.00	57.25	-26.30	-14.46	30.0	208.8	32.4	206.5
68.00	58.94	-27.27	-14.93	31.1	208.7	32.3	206.1
70.00	60.63	-28.22	-15.40	32.2	208.6	32.0	206.0
72.00	62.33	-29.17	-15.87	33.2	208.5	31.9	206.4
74.00	64.02	-30.12	-16.33	34.3	208.5	31.9	205.3
76.00	65.72	-31.08	-16.79	35.3	208.4	32.0	205.1
78.00	67.42	-32.03	-17.25	36.4	208.3	32.2	206.3
80.00	69.11	-33.00	-17.70	37.4	208.2	32.3	205.4
82.00	70.80	-33.97	-18.15	38.5	208.1	32.6	206.2
84.00	72.48	-34.95	-18.61	39.6	208.0	32.6	205.3
86.00	74.16	-35.93	-19.06	40.7	207.9	32.7	204.4
88.00	75.85	-36.91	-19.52	41.8	207.9	32.5	204.8
90.00	77.53	-37.88	-19.97	42.8	207.8	32.3	204.2
92.00	79.22	-38.85	-20.42	43.9	207.7	32.2	205.0
94.00	80.92	-39.82	-20.86	45.0	207.7	32.3	205.7
96.00	82.61	-40.79	-21.31	46.0	207.6	32.2	204.9
98.00	84.30	-41.75	-21.76	47.1	207.5	32.1	203.1
100.00	85.99	-42.73	-22.20	48.1	207.5	32.2	204.8
102.00	87.69	-43.69	-22.63	49.2	207.4	32.0	204.6
104.00	89.38	-44.66	-23.06	50.3	207.3	32.0	203.9
106.00	91.08	-45.63	-23.48	51.3	207.2	31.9	202.4
108.00	92.77	-46.61	-23.91	52.4	207.2	32.6	204.5
110.00	94.46	-47.60	-24.33	53.5	207.1	32.9	203.6
112.00	96.13	-48.61	-24.75	54.5	207.0	33.1	203.0
114.00	97.81	-49.62	-25.17	55.6	206.9	33.4	204.8
116.00	99.48	-50.64	-25.59	56.7	206.8	33.6	204.3
118.00	101.14	-51.67	-26.01	57.8	206.7	33.9	203.2
120.00	102.80	-52.70	-26.44	59.0	206.6	33.7	202.3
122.00	104.46	-53.73	-26.85	60.1	206.6	33.7	202.1
124.00	106.13	-54.76	-27.26	61.2	206.5	33.7	201.9
126.00	107.79	-55.79	-27.67	62.3	206.4	33.7	201.3
128.00	109.45	-56.83	-28.07	63.4	206.3	33.8	198.6
130.00	111.11	-57.86	-28.48	64.5	206.2	33.8	201.9
132.00	112.77	-58.90	-28.89	65.6	206.1	34.3	201.5
134.00	114.43	-59.94	-29.31	66.7	206.1	33.8	201.6
136.00	116.09	-60.98	-29.73	67.8	206.0	33.9	201.8
138.00	117.75	-62.01	-30.14	68.9	205.9	33.7	201.7
140.00	119.41	-63.04	-30.55	70.1	205.9	33.9	202.2
142.00	121.07	-64.08	-30.97	71.2	205.8	34.1	202.4
144.00	122.73	-65.12	-31.38	72.3	205.7	34.0	201.6
146.00	124.39	-66.16	-31.79	73.4	205.7	33.9	201.9
148.00	126.05	-67.19	-32.20	74.5	205.6	33.7	201.2
150.00	127.72	-68.22	-32.61	75.6	205.5	33.5	201.2
152.00	129.38	-69.25	-33.01	76.7	205.5	33.4	201.7
154.00	131.05	-70.27	-33.42	77.8	205.4	33.6	199.9
156.00	132.72	-71.30	-33.83	78.9	205.4	33.7	201.3
158.00	134.38	-72.33	-34.24	80.0	205.3	33.7	200.6
160.00	136.05	-73.36	-34.64	81.1	205.3	33.7	201.1
162.00	137.72	-74.39	-35.04	82.2	205.2	33.4	202.0
164.00	139.38	-75.42	-35.45	83.3	205.2	33.7	201.3
166.00	141.05	-76.45	-35.85	84.4	205.1	33.1	202.0
168.00	142.72	-77.46	-36.26	85.5	205.1	33.0	202.0
170.00	144.41	-78.47	-36.66	86.6	205.0	32.7	202.0
172.00	146.09	-79.48	-37.05	87.7	205.0	32.7	201.3
174.00	147.77	-80.48	-37.45	88.8	205.0	32.6	201.9
176.00	149.46	-81.48	-37.84	89.8	204.9	32.5	200.9
178.00	151.15	-82.48	-38.23	90.9	204.9	32.5	200.2
180.00	152.84	-83.48	-38.62	92.0	204.8	32.5	201.9
182.00	154.53	-84.48	-39.00	93.0	204.8	32.0	202.4
184.00	156.22	-85.46	-39.39	94.1	204.7	31.9	201.4
186.00	157.92	-86.45	-39.78	95.2	204.7	31.9	201.2
188.00	159.62	-87.43	-40.16	96.2	204.7	31.6	200.8
190.00	161.32	-88.40	-40.55	97.3	204.6	31.4	203.9
191.22	162.36	-88.99	-40.78	97.9	204.6	31.7	201.3

COMPANY	Continental Emsco
WELL	HR08-14
FIELD	NEUTRON
COUNTY	
STATE	
LOCATION	
OTHER SERVICES	
PERMANENT DATUM	GROUND LEVEL
LOG MEASURED FROM	KELLY BUSHING
DRILLING MEASURED FROM	KELLY BUSHING
API SERIAL NO.	
SECTION	
TOWNSHIP	
RANGE	
DATE	10/17/08
RUN NO.	ONE
DEPTH-DRILLER	190
DEPTH-LOGGER	190
BTM LOG INTERVAL	190
TOP LOG INTERVAL	0
CASING-DRILLER	8.625@ 0
CASING-LOGGER	190
BIT SIZE	11.4
TYPE FLUID IN HOLE	AIR
DENSITY / VISCOSITY	N/A
PH / FLUID LOSS	N/A
SOURCE OF SAMPLE	N/A
RM @ MEAS. TEMP.	N/A
RMF @ MEAS. TEMP.	N/A
RMC @ MEAS. TEMP.	N/A
SOURCE RMF / RMC	N/A
RM @ BHT	N/A
TIME SINCE CIRC.	N/A
TIME LOGGER ON BOTTOM	10:00
MAX. REC. TEMP.	70 F
EQUIP. LOCATION	0
RECORDED BY	
WITNESSED BY	

GAMMA / NEUTRON

HR08-14

RUN NUMBER	ONE
DATE	10/17/08
DEPTH-DRILLER	190
DEPTH-LOGGER	190
BTM LOG INTERVAL	190
TOP LOG INTERVAL	0
CASING-DRILLER	8.625@ 0
CASING-LOGGER	190
BIT SIZE	11.4
TYPE FLUID IN HOLE	AIR
DENSITY / VISCOSITY	N/A
PH / FLUID LOSS	N/A
SOURCE OF SAMPLE	N/A
RM @ MEAS. TEMP.	N/A
RMF @ MEAS. TEMP.	N/A
RMC @ MEAS. TEMP.	N/A
SOURCE RMF / RMC	N/A
RM @ BHT	N/A
TIME SINCE CIRC.	N/A
TIME LOGGER ON BOTTOM	10:00
MAX. REC. TEMP.	70 F
EQUIP. LOCATION	0
RECORDED BY	
WITNESSED BY	

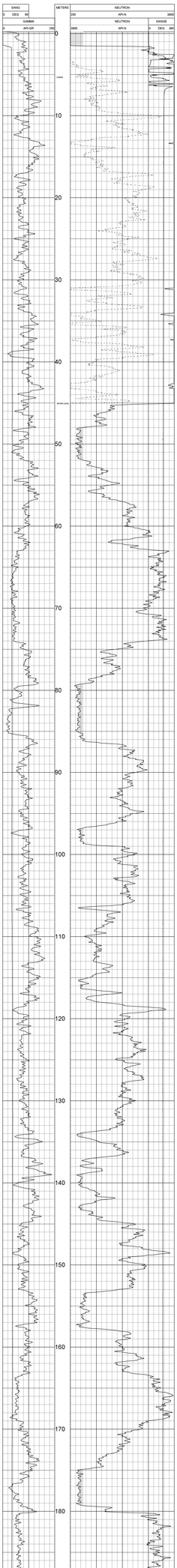
1:100 NEUTRON HR08-14 10/17/08

LOG PARAMETERS

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

MAGNETIC DECL. 20 ELECT. CUTOFF 99999 BIT SIZE 11.4

PRESENTATION NAME/DATE = MOTA 3 10/05/2008 VERSION = 3.54MX



1:100 NEUTRON HR08-14 10/17/08

LOG PARAMETERS

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

MAGNETIC DECL. 20 ELECT. CUTOFF 99999 BIT SIZE 11.4

PRESENTATION NAME/DATE = MOTA 3 10/05/2008 VERSION = 3.54MX

TOOL CALIBRATION HR08-14 10/17/08 11:07
TOOL MOTA TM VERSION 2
SERIAL NUMBER 1 ID 0
DATA TYPE TIME

			SENSOR	STANDARD		RESPONSE
1	0x08,08	13:32:12	GAMMA 0.000	API-GR	10.00	[CPS]
	0x08,08	13:32:12	GAMMA 311.000	API-GR	245.00	[CPS]
2	0xa29,08	16:02:60	NEUTRON Default	[CPS]	Default	[CPS]
	0xa29,08	16:02:60	NEUTRON 0.000	API-N	0.000000	[CPS]
3	0xa27,08	12:12:10	SP 0.000	MV	229000.00	[CPS]
	0xa27,08	12:12:10	SP 87.000	MV	277000.00	[CPS]
4	0xa27,08	12:12:21	RESISTIVITY 1000.000	OHMM	3.000000	[CPS]
	0xa27,08	12:12:21	RESISTIVITY 1998.000	OHMM	4177.00	[CPS]
5	0xa27,08	12:12:31	RESIMIN 0.000	OHMM	3.023.00	[CPS]
	0xa27,08	12:12:31	RESIMIN 1998.000	OHMM	4177.00	[CPS]
6	0xa27,08	12:12:36	TEMP 69.400	DEG F	353643.00	[CPS]
	0xa27,08	12:12:36	TEMP 120.400	DEG F	366875.00	[CPS]
7	0xa27,08	12:12:47	RES 0.000	OHM	162000.00	[CPS]
	0xa27,08	12:12:47	RES 999.000	OHM	162000.00	[CPS]

Century
WIRELINE SERVICES

COMPANY	TOTAL EXPLORATION PTY LTD
WELL	HR08-14
FIELD	DIPMETER
COUNTY	
STATE	
COUNTRY	AUSTRALIA
PROVINCE	
RIG	
DATE	10/17/08
RUN NO.	ONE
DEPTH DRILLER	190
DEPTH LOGGER	190
BOTTOM LOG INTERVAL	190
TOP LOG INTERVAL	0
CASING DRILLER	0
CASING LOGGER	0
BIT SIZE	114 MM
TYPE FLUID IN HOLE	WATER BASED
DENSITY	N/A
VISCOSITY	N/A
PH	N/A
FLUID LOSS	N/A
SOURCE OF SAMPLE	N/A
RM @ MEASURED TEMP	N/A
RMF @ MEASURED TEMP	N/A
RMC @ MEASURED TEMP	N/A
SOURCE RMF & RMC	N/A
RM @ BHT	N/A
TIME CIRC. STOPPED	N/A
TIME LOGGER ON BOTTOM	N/A
MAX. REC. TEMP.	N/A
EQUIPMENT NO.	5411
LOCATION	N/A
RECORDED BY	N/A
WITNESSED BY	N/A

DIPMETER
HR08-14

"A" DENOTES ESTIMATED VALUE, "N" DENOTES NO VALUE RECORDED, "I" DENOTES INVALID VALUE

1:100 DIPMETER HR08-14 10/17/08

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL. : 20	ELECT CUTOFF : 99999	BIT SIZE : 114 MM	
PRESENTATION NAME/DATE = 5411pm v.0 10/12/2009		VERSION = 3.64DK	

| CALPER2 | METERS | | |