Century WIRELINE SERVICES

GAMMA - CALIPER THRU PIPE DENSITY DHGH-14-23

COMPANY	ATRUM COAL
WELL	DHGH-14-23
FIELD	GROUNDHOG
COUNTRY	CANADA
PROVINCE	BRITISH COLUMBIA
LSD	
SECTION	GROUNDHOG
TOWNSHIP	N/A
RANGE	N/A
LICENSE NO.	N/A
UNIQUE WELL ID.	N/A
PERMANENT DATUM	GL
LOG MEASURED FROM	GL
DRL MEASURED FROM	GL
DATE	06/27/14
DEPTH DRILLER	:126.19
BIT SIZE	:98.40
LOG TOP	:0.00
LOG BOTTOM	:125.32
CASING LOGGER	3.048
CASING DRILLER	3.048
CASING TYPE	STEEL
BOREHOLE FLUID	WATER
RM TEMPERATURE	N/A
MUD RES	N/A
MUD WEIGHT	:1.00
WITNESSED BY	N/A
RECORDED BY	:D. SINKWICH
REMARKS 1	VERTICAL
REMARKS 2	:

OTHER SERVICES: NEUTP DIP

ELEVATION KB	:N/A
ELEVATION DF	:N/A
ELEVATION GL	:N/A
RIG NUMBER	:2
LOGGER TD	:125.32
ARRIVAL TIME	:10:00
DEPARTURE TIME	:
CIRC STOPPED	:N/A

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY TP 1:200 DHGH-14-23 06/27/14

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 19.5 ELECT. CUTOFF : 75000 BIT SIZE : 98.40
PRESENTATION NAME/DATE = Atrum_9239_(IN-PIPE)_(200scale).0 06/12/2014 VERSION = 3.64LG

DENSITY TP 1:200 DHGH-14-23 06/27/14

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 19.5 ELECT. CUTOFF : 75000 BIT SIZE : 98.40
PRESENTATION NAME/DATE = Atrum_9239_(IN-PIPE)_(200scale).0 06/12/2014 VERSION = 3.64LG

DENSITY TP 1:100 DHGH-14-23 06/27/14

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 19.5 ELECT. CUTOFF : 75000 BIT SIZE : 98.40
PRESENTATION NAME/DATE = Atrum_9239_(IN-PIPE)_(100scale).0 06/12/2014 VERSION = 3.64LG

DENSITY TP 1:100 DHGH-14-23 06/27/14

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 19.5 ELECT. CUTOFF : 75000 BIT SIZE : 98.40
PRESENTATION NAME/DATE = Atrum_9239_(IN-PIPE)_(100scale).0 06/12/2014 VERSION = 3.64LG

TOOL CALIBRATION DHGH-14-23 06/27/14 18:32
TOOL 9239C TM VERSION 2025
SERIAL NUMBER 2477

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Mar21,14	15:16:58	GAMMA	0.100	[API-GR]	4.000	[CPS]
	Mar21,14	15:16:58	GAMMA	545.000	[API-GR]	589.000	[CPS]
2	Jun14,13	09:36:44	VOLTAGE	26.400	[MV]	8050.000	[CPS]
	Jun14,13	09:36:44	VOLTAGE	229.200	[MV]	35258.000	[CPS]
3	Mar21,14	14:07:48	CALIPER	100.000	[MM]	168300.000	[CPS]
	Mar21,14	14:07:48	CALIPER	200.000	[MM]	423180.000	[CPS]
4	Mar21,14	14:58:29	DEN(LS)	1.620	[G/CC]	8686.000	[CPS]
	Mar21,14	14:58:29	DEN(LS)	2.612	[G/CC]	1205.000	[CPS]
5	Jun21,14	10:45:39	DEN(SS)	1.620	[G/CC]	31905.000	[CPS]
	Jun21,14	10:45:39	DEN(SS)	2.580	[G/CC]	14021.000	[CPS]
6	Jun14,13	08:59:07	CALIPERL	Default	[CPS]	Default	[CPS]
	Jun14,13	08:59:07	CALIPERL	Default	[CPS]	Default	[CPS]
7	Mar21,14	14:27:18	CURRENT	26.400	[UA]	6623.000	[CPS]
	Mar21,14	14:27:18	CURRENT	229.200	[UA]	23884.000	[CPS]
8	Jun14,13	08:59:07	F	Default	[CPS]		
9	Jun14,13	08:59:07	X	Default	[CPS]		