Century WIRELINE SERVICES

GAMMA - CALIPER
THRU PIPE DENSITY
DHGH-14-18

OTHER SERVICES:
NEUTRON

COMPANY	:ATRUM COAL
WELL	:DHGH-14-18
FIELD	:GROUNDHOG
COUNTRY	:CANADA
PROVINCE	:BRITISH COLUMBIA
LSD	:GROUNDHOG
SECTION	:N/A
TOWNSHIP	:N/A
RANGE	:N/A
LICENSE NO.	:N/A
UNIQUE WELL ID.	:N/A

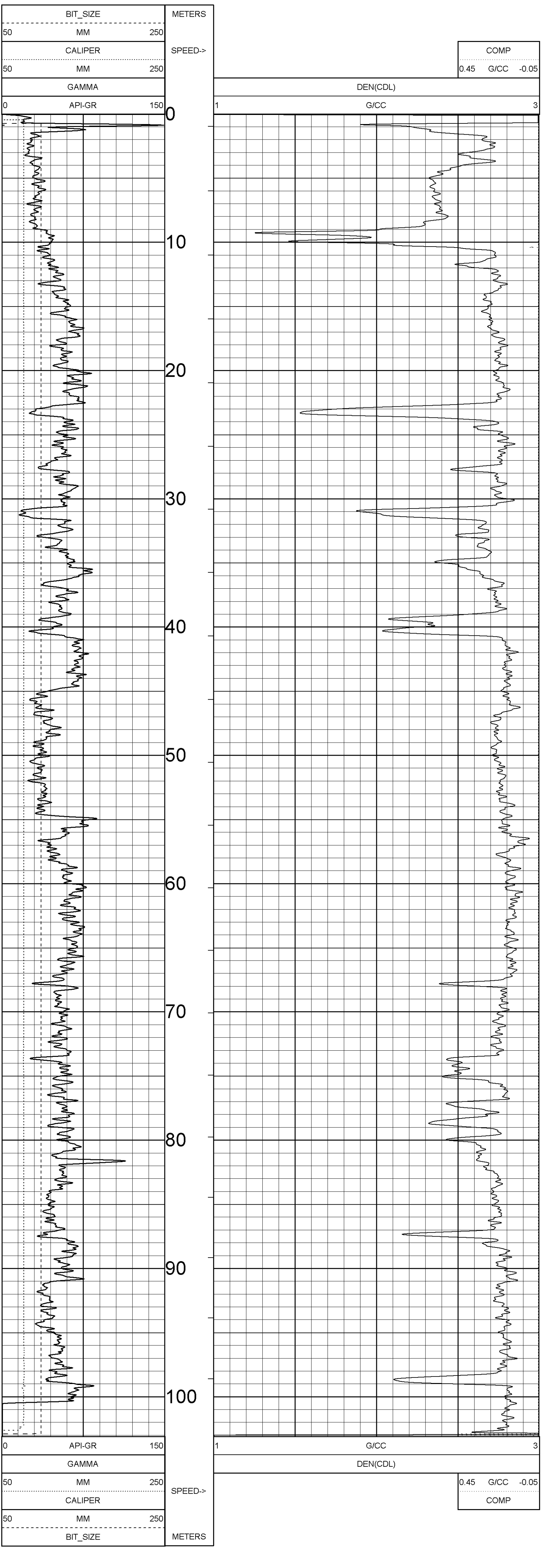
PERMANENT DATUM	:GL	ELEVATION KB	:N/A
LOG MEASURED FROM	:GL	ELEVATION DF	:N/A
DRL MEASURED FROM	:GL	ELEVATION GL	:N/A
DATE	:06/22/14	RIG NUMBER	:
DEPTH DRILLER	:103.63	LOGGER TD	:103.06
BIT SIZE	:98.40	ARRIVAL TIME	:7:30
LOG TOP	:-1.63	DEPARTURE TIME	:15:00
LOG BOTTOM	:103.06	CIRC STOPPED	:N/A
CASING DRILLER	:9.144		
CASING LOGGER	:9.144		
CASING TYPE	:STEEL		
BOREHOLE FLUID	:WATER		
RM TEMPERATURE	:N/A		
MUD RES	:N/A		
MUD WEIGHT	:1.00		
WITNESSED BY	:N/A		
RECORDED BY	:T. NEAL		
REMARKS 1	:VERTICAL		
REMARKS 2	:IN-PIPE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY LOG 1:200 DHGH-14-18 06/22/14

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 = 3.64KX



DENSITY LOG 1:200 DHGH-14-18 06/22/14

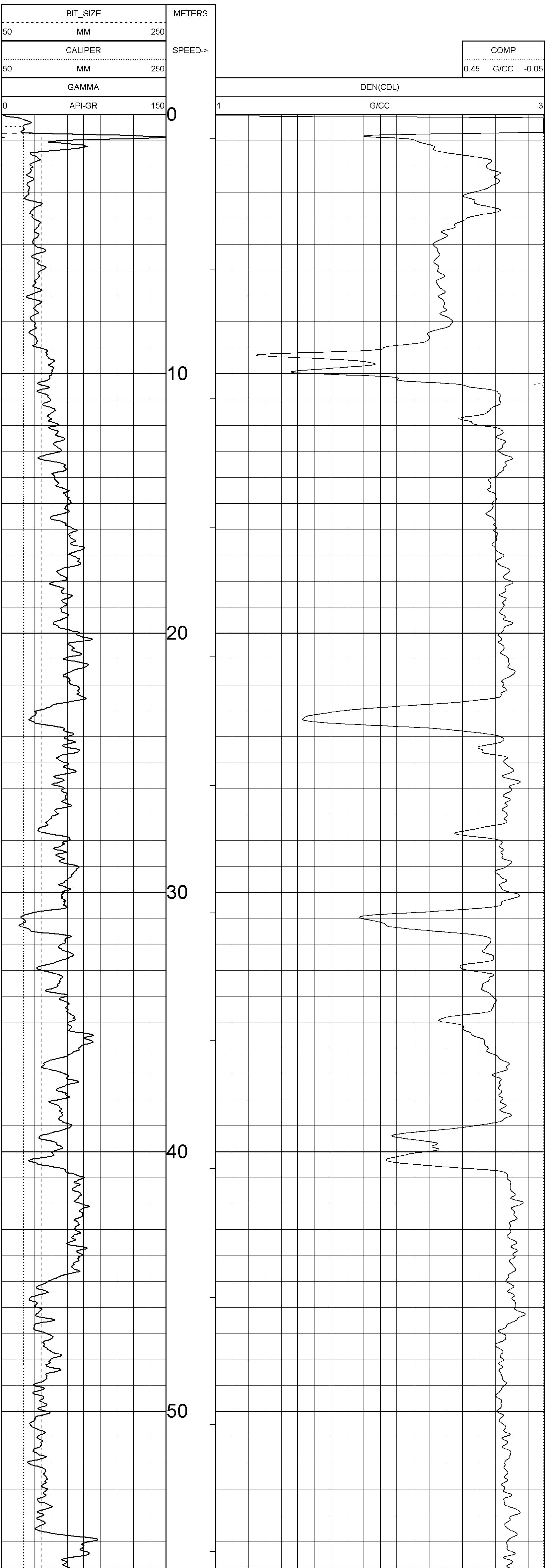
LOG PARAMETERS

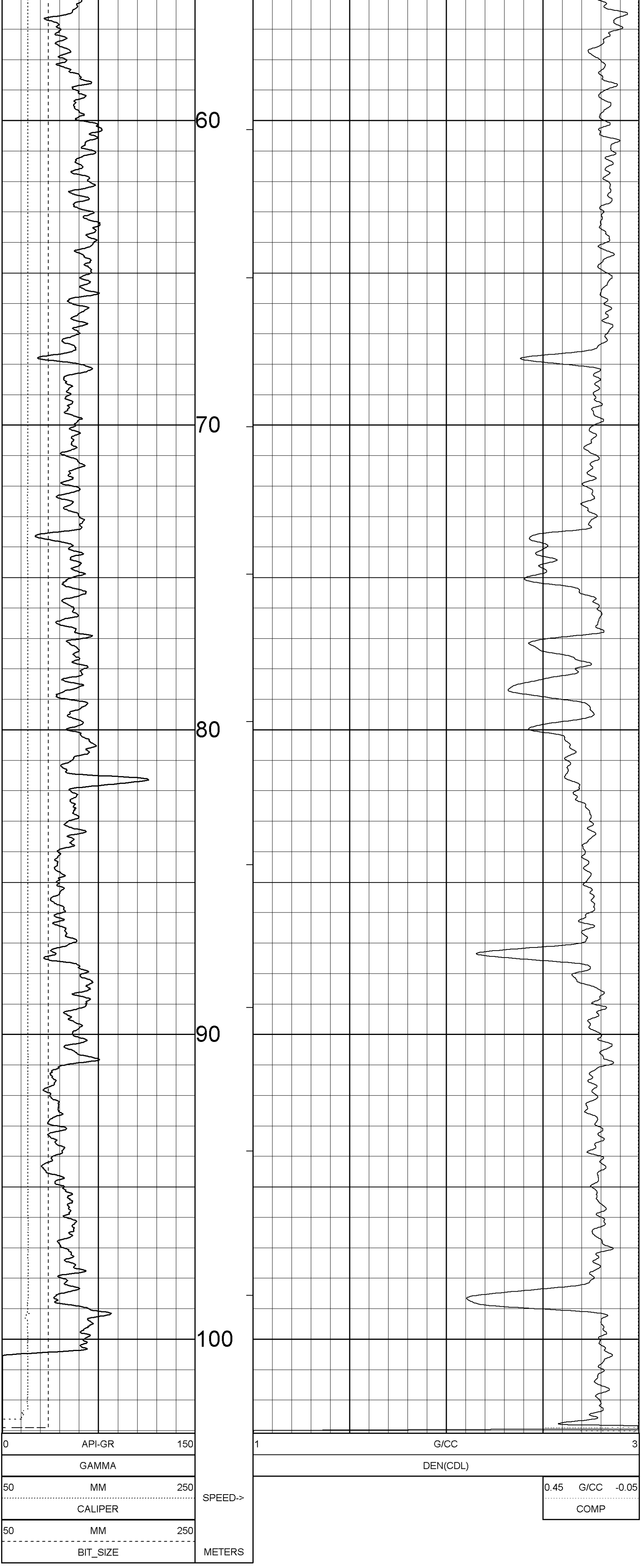
MATRIX DENSITY : 2.65
NEUTRON MATRIX : SANDSTONE
MATRIX DELTA T : 177
MAGNETIC DECL : 19.5
ELECT. CUTOFF : 75000
BIT SIZE : 98.40
PRESENTATION NAME/DATE = Atrum_9239_(IN-PIPE)_(200scale).0 06/12/2014
VERSION = 3.64KX

DENSITY LOG 1:100 DHGH-14-18 06/22/14

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 = 3.64KX





DENSITY LOG 1:100 DHGH-14-18 06/22/14

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 = 3.64KX

TOOL CALIBRATION DHGH-14-18 06/22/14 08:58
TOOL 9239C TM VERSION 2025
SERIAL NUMBER 2477

	DATE	TIME	SENSOR	STANDARD		RESPONSE	
1	Mar21,14	14:16:58	GAMMA	0.100	[API-GR]	4.000	[CPS]
	Mar21,14	14:16:58	GAMMA	545.000	[API-GR]	589.000	[CPS]
2	Jun14,13	08:36:44	VOLTAGE	26.400	[MV]	8050.000	[CPS]
	Jun14,13	08:36:44	VOLTAGE	229.200	[MV]	35258.000	[CPS]
3	Mar21,14	13:07:48	CALIPER	100.000	[MM]	168300.000	[CPS]
	Mar21,14	13:07:48	CALIPER	200.000	[MM]	423180.000	[CPS]
4	Mar21,14	13:58:29	DEN(LS)	1.620	[G/CC]	8686.000	[CPS]
	Mar21,14	13:58:29	DEN(LS)	2.612	[G/CC]	1205.000	[CPS]
5	Jun16,14	20:21:35	DEN(SS)	1.620	[G/CC]	31905.000	[CPS]
	Jun16,14	20:21:35	DEN(SS)	2.580	[G/CC]	14021.000	[CPS]
6	Jun14,13	07:59:07	CALIPERL	Default	[CPS]	Default	[CPS]
	Jun14,13	07:59:07	CALIPERL	Default	[CPS]	Default	[CPS]
7	Mar21,14	13:27:18	CURRENT	26.400	[UA]	6623.000	[CPS]
	Mar21,14	13:27:18	CURRENT	229.200	[UA]	23884.000	[CPS]
8	Jun14,13	07:59:07	F	Default	[CPS]		
9	Jun14,13	07:59:07	X	Default	[CPS]		