11/2/12

Tucker
WIRELINE SERVICES

DUAL INDUCTION RESISTIVITY LOG

RECEIVED
DEC 05 2011
69WD Mo Oil & Gas Council

Company	COLT ENERGY, INC
Well	NORTH RHODEN
Field	
County	JACKSON
State	MISSOURI
Country	USA
API No.	095-21405

File No : TUL-55983
Company : COLT ENERGY, INC
Well : NORTH RHODEN
Field :
County : JACKSON
State : MISSOURI
Country : USA
API No : 095-21405

Location :
1160' FSL & 2190' FEL
NE NW SW SE

LSD : **Sect :** 28 **Twp :** 47N **Rge :** 33W

Permanent Datum:	GL	**Elevations:**			**Services:**
Drilling Measured From:	GL	**KB**	0.00	Ft	CNT
Log Measured From:	GL	**DF**	0.00	Ft	LDT
Above Permanent Datum:	0.00 Ft	**GL**	1036.00	Ft	PIT

Date	2011-10-12			
Run Number	1			
Depth--Driller	700.0	Ft		
Depth--Logger	690.0	Ft		
First Reading	690.0	Ft		
Last Reading	20.0	Ft		
Casing--Driller	20.0	Ft		
Casing--Logger	20.0	Ft		
Bit Size	6.750	In		
Casing Size	8.625	In		
Hole Fluid Type	FRESH			
Density	0.0	LBS/GAL		
Fluid Loss	0.0	CC		
PH/Viscosity	0.0	0.0 SEC		
Sample Source				
RM@Measured Temp.	0.000 @ 0	F		
RMF@Measured Temp	0.000 @ 0	F		
RMC@Measured Temp.	0.000 @ 0	F		
Source RMF/RMC				
RM@BHT	0.000 @ 79	F		
Time Circulation Stopped				
Max Recorded Temp.	79	F		
Equipment/Base	TRK 127	TULSA		
Recorded By	B.BAILEY			
Witnessed By	R.ASHLOCK			

The customer is hereby warned that by providing the log data herein, T. W. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. W. S. does not guarantee or warrant either expressly or impliedly, the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by T. W. S. personnel. Any interpretation, conversion or recommendation is not part of the consideration for the agreement between the parties and is not part of any part of the charge by T. W. S. for its services. Any user of the log data is warned that said user is not entitled to rely on intepretations, conversions or recommendations as aforesaid.

Bitsize Intervals		**Casing Strings**		
Size (In)	**Bottom (Ft)**	**Size (In)**	**Weight (Lbs)**	**Bottom (Ft)**
6.750	700.00	8.625	32.00	20.00

Run Number	1			
Date	2011-10-12			
Date/Time On Bottom				
Depth to Fluid	0.0	Ft		
Salinity	0.000	PPM		
RMF@BHT	0.000 @ 79	F		
RMC@BHT	0.000 @ 79	F		

Run Number 1

Comments

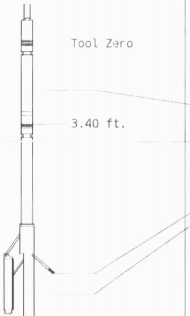
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
GRT, CNT, LDT, MLT AND PIT RUN IN COMBINATION.
CALIPERS ORIENTED ON X-Y AXIS.
2.71 G/CC USED TO CALCULATED POROSITY.
ANNULAR HOLE VOLUME CALCULATED UISING 4.500" PRODUCTION CASING.

GRT: GRP.
CNT: PHIN, CLCNIN
LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
MLT: NOR_R, INV_R, MSCLPIN.
PIT: ILD, ILM, SPU, SFLAEC

OPERATORS:
JT
M.BURKE

Tool String Schematic

Total Tool Length - 43.49 **ft.**
Maximum Outside diameter - 4.80 **in.**
Net Weight in Air - 743.00 **lbs.**

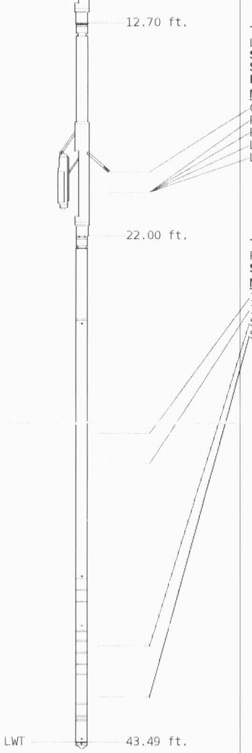


Tool: GRT-B **Length:** 3.40 **ft.** **O.D.** 3.60 **in.**
Gamma Ray Controller
Sonde ID :GRT-BA-14

Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	41.49

Tool: CNT-AA **Length:** 9.30 **ft.** **O.D.** 4.36 **in.**
Compensated Neutron A Pad on NDT-A
Sonde ID :NDT-AB-400
Source ID :N-1044
Pad ID :CNP-AA-116

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	34.09
PHIN	6.80	10.20	33.29



Tool: LDT-DA **Length:** 9.30 **ft.** **O.D.** 4.80 **in.**
Litho Density D Pad on NDT-A
Sonde ID :PDT-GA-465
Source ID :CSV-587
Pad ID :LDP-DA-01

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	24.79
PEL	7.00	19.70	23.79
PES	7.40	20.10	23.39
LDEN	7.20	19.90	23.59
LCOR	7.20	19.90	23.59

Tool: PIT-CA **Length:** 21.49 **ft.** **O.D.** 3.62 **in.**
Phased Dual Induction w/ RM & D
Sonde ID :PIT-AB-18

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	30.92	12.56
ILM	10.10	32.10	11.39
SFLU	17.49	39.49	4.00
SP	20.60	42.60	0.88

Well File: colt_energy_north_rhoden_69wd_oct12_st
Segment: V1.D1.S4 MAIN
Reference: 0

Scale: 1:600
Acquired: 2011-10/12 16:08 3.2.0-10220
Processed: 2011-10/12 16:08 3.2.0-10220

TENSION
LBS
10000 **0**

SPONTANEOUS POTENTIAL
mV
→| |←20

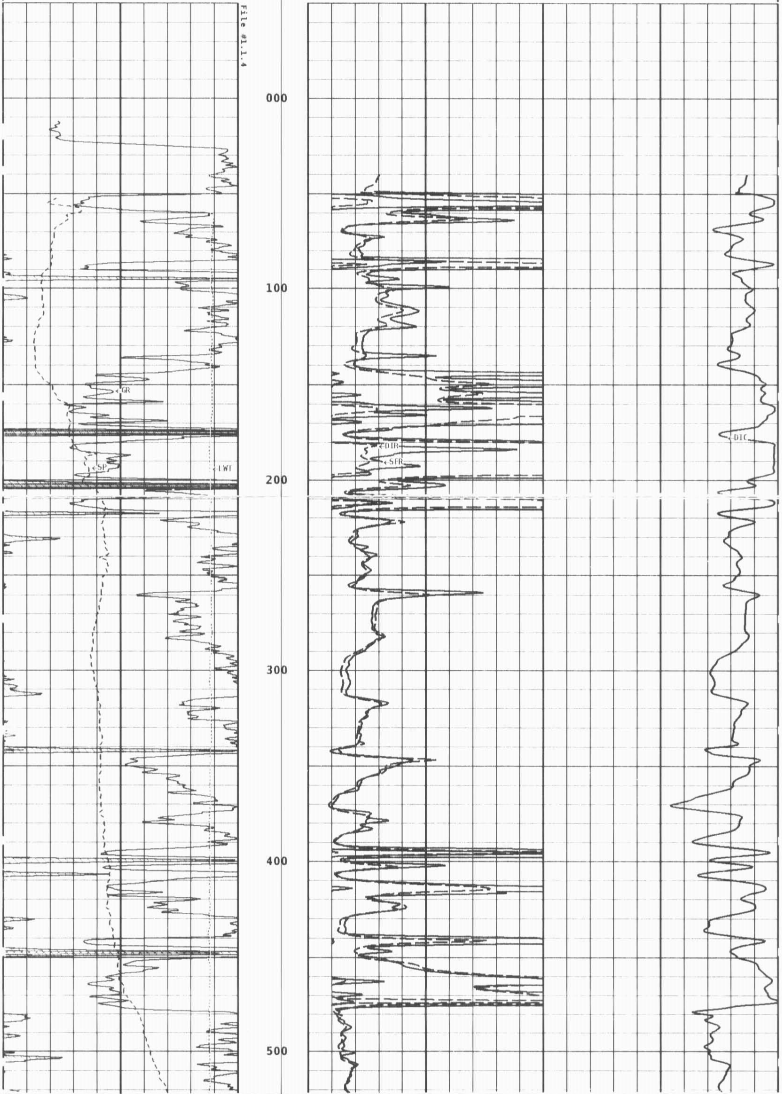
GAMMA RAY
API UNITS
150 ▨ **300**
0 **150**

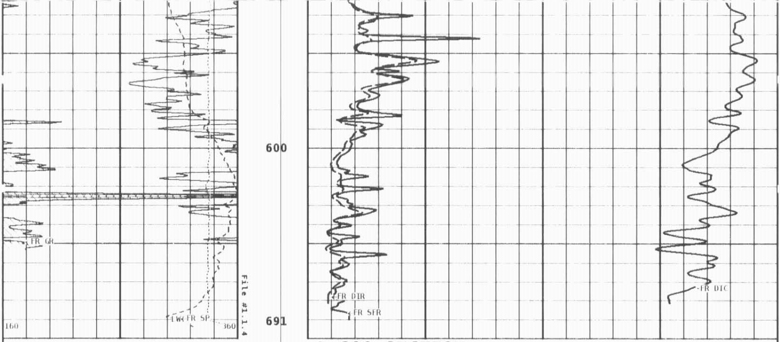
SHALLOW FOCUSED RESISTIVITY
OHMM
0.0 **500.0**
0.0 **50.0**

DEEP INDUCTION
OHMM
0.0 **500.0**
0.0 **50.0**

DEEP CONDUCTIVITY
MMHO
2000 **1000**
1000 **0**

1:600 SECTION
2 INCH





1:600 SECTION

2 INCH

GAMMA RAY
API UNITS
150 ▨ 300
0 150

SPONTANEOUS POTENTIAL
mV
→| |←20

TENSION
LBS
10000 0

DEEP CONDUCTIVITY
MMHO
2000 1000
1000 0

DEEP INDUCTION
OHMM
0.0 500.0
0.0 50.0

SHALLOW FOCUSED RESISTIVITY
OHMM
0.0 500.0
0.0 50.0

Well File: colt_energy_north_rhoden_69wd_oct12_st
Segment: V1.D1.S4 MAIN
Reference: 0
Scale: 1:240
Acquired: 2011-10/12 16:08 3.2.0-10220
Processed: 2011-10/12 16:08 3.2.0-10220

TENSION
LBS
10000 0

SPONTANEOUS POTENTIAL
mV
→| |←20

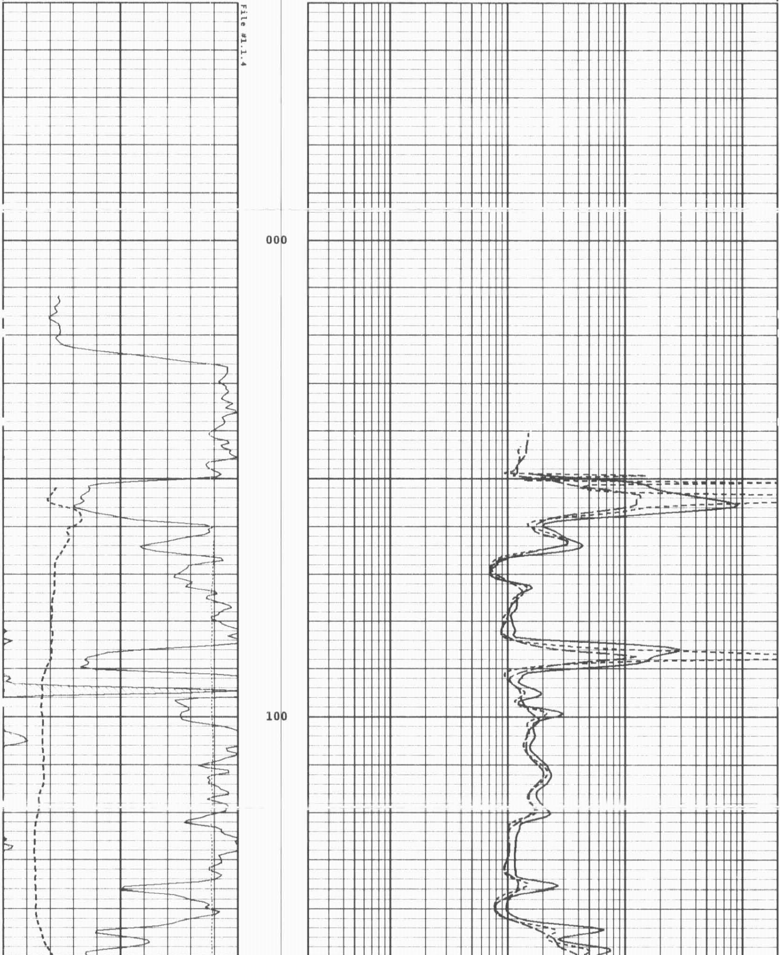
GAMMA RAY
API UNITS
150 ▨ 300
0 150

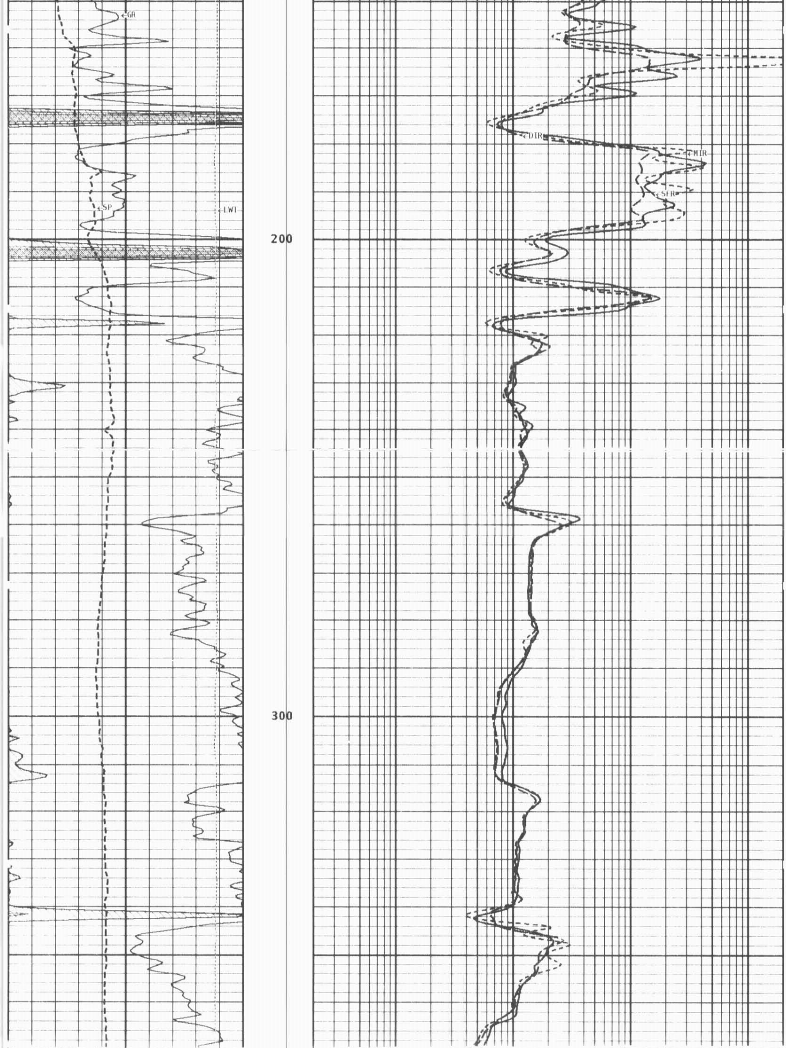
SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 2000.0

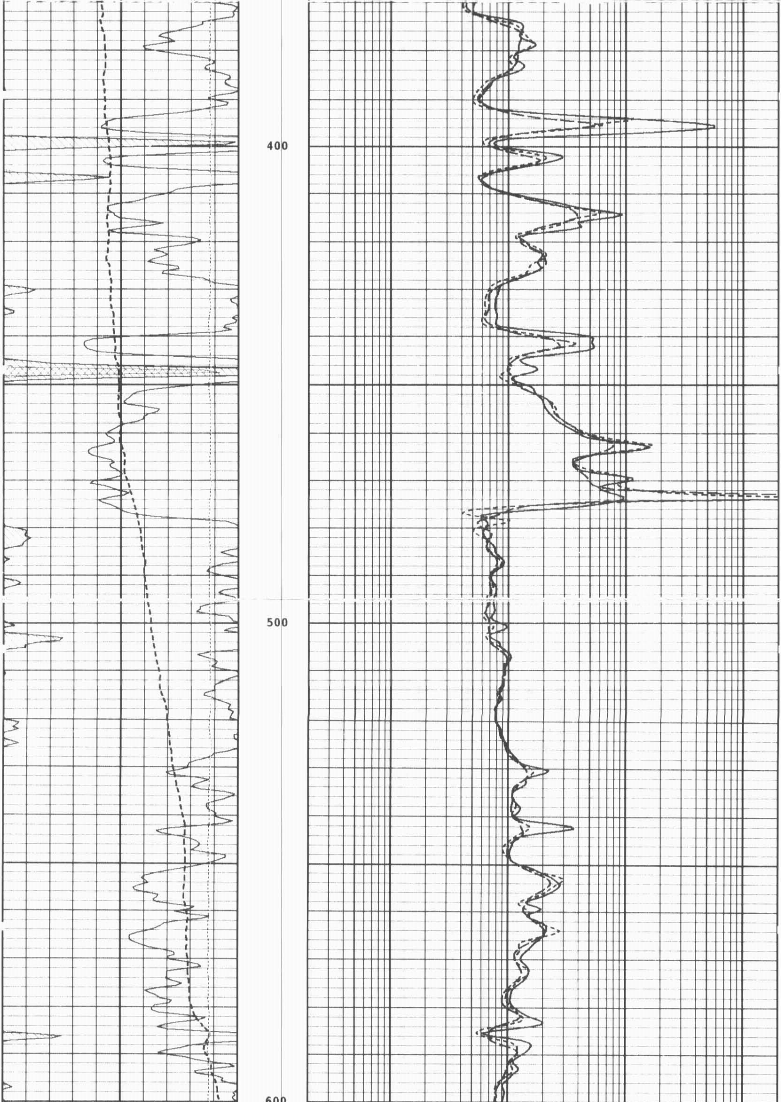
MEDIUM INDUCTION
OHMM
0.2 2000.0

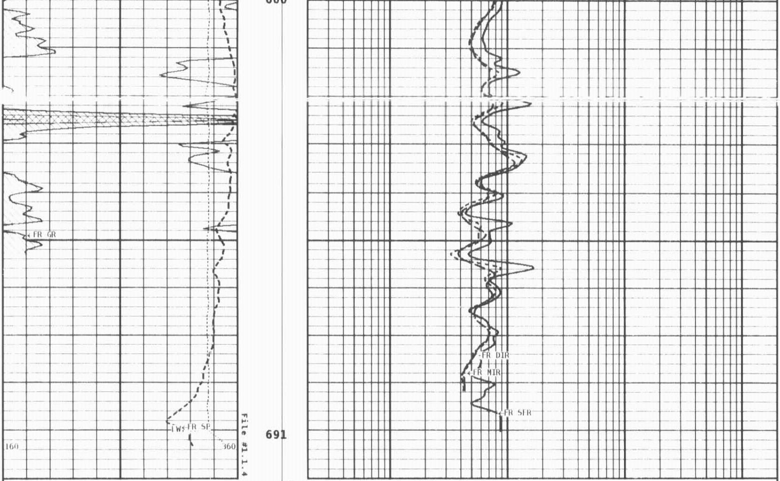
DEEP INDUCTION
OHMM
0.2 2000.0

1:240 MAIN SECTION









1:240 MAIN SECTION

GAMMA RAY
API UNITS
150 300
0 150

SPONTANEOUS POTENTIAL
mV
→| |←20

TENSION
LBS
10000 0

DEEP INDUCTION
OHMM
0.2 2000.0

MEDIUM INDUCTION
OHMM
0.2 2000.0

SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 2000.0

*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	6.750	in
BHT Depth	700.000	ft
Borehole Temperature	79.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.200	ohm/m
Standoff	0.0	
Resistivity Of Mud Temperature	50.00	degF

Well File: colt_energy_north_rhoden_69wd_oct12_st
Segment: V1.D1.S3 Reprocess REPEAT
Reference: 0

Scale: 1:240
Acquired: 2011-10/12 16:00 3.2.0-10220
Processed: 2011-10/12 16:05 3.2.0-10220

TENSION
LBS
10000 **0**

SPONTANEOUS POTENTIAL
mV
→| |←20

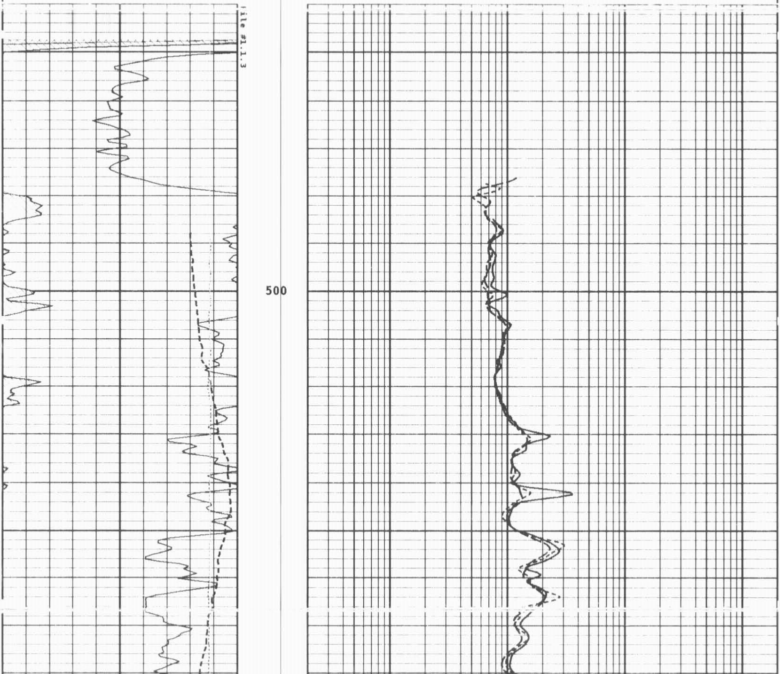
GAMMA RAY
API UNITS
150 **300**
0 **150**

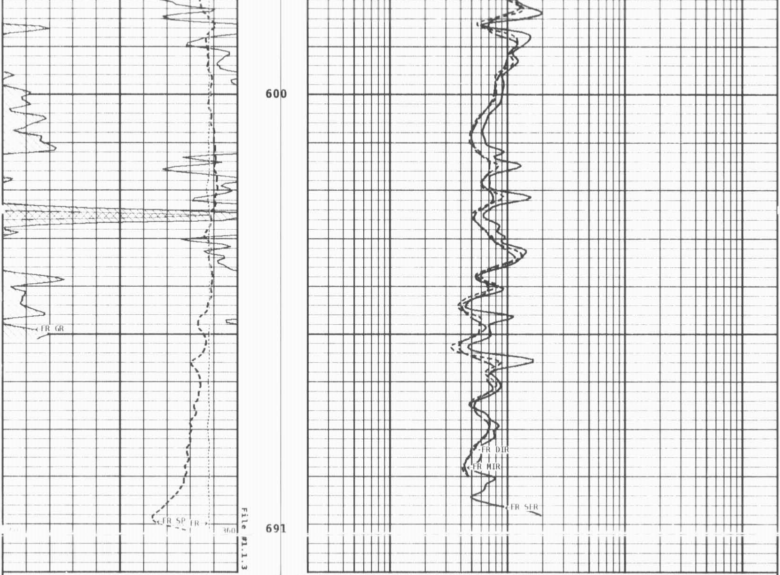
SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 **2000.0**

MEDIUM INDUCTION
OHMM
0.2 **2000.0**

DEEP INDUCTION
OHMM
0.2 **2000.0**

1:240 REPEAT SECTION





1:240 REPEAT SECTION

GAMMA RAY
API UNITS
150 ▨ **300**
0 **150**

SPONTANEOUS POTENTIAL
mV
→| |←20

TENSION
LBS
10000 **0**

DEEP INDUCTION
OHMM
0.2 **2000.0**

MEDIUM INDUCTION
OHMM
0.2 **2000.0**

SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 **2000.0**

*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	6.750	in
BHT Depth	700.000	ft
Borehole Temperature	79.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.200	ohm/m
Standoff	0.0	
Resistivity Of Mud Temperature	50.00	degF

* Calibration Summary *

```
                        Shop Calibration
                             GRT-B
   Performed : 16-MAY-2011                 Time : 09:49
Sensor Suite : GR-GR5                        ID : GRT-BA-14

                       Measured      Units        Calibrated       Units
          Background       Jig                        Jig
GR                  50     361       CPS              175          GRAPI

                        Shop Calibration
                             PIT-CA
   Performed : 18-May-2009                 Time : 10:06
Sensor Suite : P-IND-T                       ID : PIT-AB-18

                             Medium
                   Measured                   Calibrated
                   R        X                R          X          Units
Air             131380   130013             0.2        0.4         MMHOS
Zero            131067   131066             0.0        0.0         MMHOS
Reference       252628   252684          5000.0     5000.0         MMHOS
Loop            151831   174542          2672.1      989.9         MMHOS
Sonde Error                                -2.0       -4.3         MMHOS
Cond                                     5000.0     5000.0         MMHOS

                              Deep
                   Measured                   Calibrated
                   R        X                R          X          Units
Air             129385   131252             0.1        0.1         MMHOS
Zero            131079   131072             0.0        0.0         MMHOS
Reference       230616   232102          2000.0     2000.0         MMHOS
Loop            149042   174745          1256.1      466.1         MMHOS
Sonde Error                                -3.3        0.2         MMHOS
Cond                                     2000.0     2000.0         MMHOS

                           Temperature
                   Measured                   Calibrated
                   Low      High             Low        High       Units
               16980.0  56920.0             70.0       350.0       DEGF

   Performed : 18-May-2009                 Time : 10:04
Sensor Suite : SFL                           ID : PIT-AB-18

                             Internal
                     Measured                 Calibrated
                   Zero     Reference        Zero    Reference     Units
Im               32765.1     50517.2          0.0       7028.0     uA
Ib               32772.1     50309.4          0.0       1750.0     mA
MOM1             32830.8     57160.2          0.0        175.0     mV
Equivalent SFL                                           43.97     OHMM

   Performed : 18-May-2009                 Time : 09:50
Sensor Suite : P-SP                          ID : PIT-AB-18

                             Internal
                  Measured                    Calibrated
             Zero      Reference             Zero    Reference     Units
          32790.5        58989.2              0.0       1000.0     mV

   Performed : 20-Dec-2007                 Time : 12:53
Sensor Suite : P-RMUD                        ID : PIT-AB-18

                             Internal
                     Measured                 Calibrated
                   Zero     Reference        Zero    Reference     Units
Rmi                0.0         238.4          0.0        290.6     mA
Rmv                0.0         198.0          0.0        290.6     mV
Equivalent Rm                                           0.9037     OHMM
```

Well File: colt_energy_north_rhoden_69wd_oct12_st
Segment: V1.D1.S4 MAIN
Reference: 0

Scale: 1:1200
Acquired: 2011-10/12 16:08 3.2.0-10220
Processed: 2011-10/12 16:08 3.2.0-10220

TENSION
LBS
10000 0

SPONTANEOUS POTENTIAL
mV
→| |←20

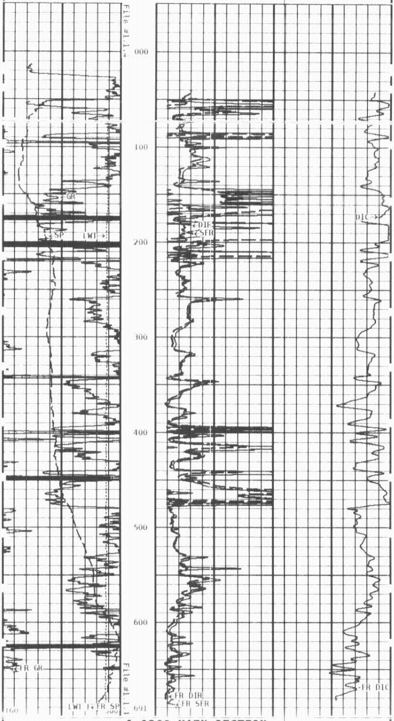
GAMMA RAY
API UNITS
150 300
0 150

DEEP INDUCTION
OHMM
0.0 500.0
0.0 50.0

SHALLOW FOCUSED
OHMM
0.0 500.0
0.0 50.0

DEEP CONDUCTIVITY
MMHO
2000 1000
1000 0

1:1200 MAIN SECTION



1:1200 MAIN SECTION

GAMMA RAY
API UNITS
150 — 300
0 — 150

DEEP CONDUCTIVITY
MMHO
2000 — 1000
1000 — 0

SPONTANEOUS POTENTIAL
mV
→| |← 20

SHALLOW FOCUSED
OHMM
0.0 — 500.0
0.0 — 50.0

TENSION
LBS
10000 — 0

DEEP INDUCTION
OHMM
0.0 — 500.0
0.0 — 50.0