COMPENSATED NEUTRON
PEL DENSITY LOG

Tucker
WIRELINE SERVICES

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FEB 01 2011
Mo Oil & Gas Council

CONFIDENTIAL
8/11/2011

File No. : TUL-55274
Company : RUNNING FOXES PETROLEUM INC.
Well : KIETH ~~13-9C~~ 13-29C
Field :
County : VERNON
State : MISSOURI
Country : USA

Location : PERMIT: 22412
310' FSL & 310' FWL

Sect : 29 Twp : 37N Rge : 33W

Recorded By : B.BAILEY
Witnessed By : C.COUNTS

Elevations :
KB : FT
DF : FT
GL : 892.00 FT

Date : AUG 11 2010
Run No. : 1

Permanent Datum : GL
Drilling Measured From : GL
Log Measured From: GL
Above Permanent Datum : 0.00 FT

Additional Services
PIT

Depth--Driller : 490.0 FT
Depth--Logger : 490.0 FT
Bottom Log Interval : 400.0 FT
Top Log Interval : 20.0 FT

Casing Depth--Driller: 20.0 FT
Casing Depth--Logger : 20.0 FT
Casing Diameter : 8.625 IN

Bit Size : 6.125 IN
Unit No. : 122
Location : TULSA

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.

Run Number 1

Depth To Fluid	0.0	FT		
Fluid Type In Hole :	FRESH			
Density :	0.000	SG		
Viscosity :	0.000	SEC		
pH :	0.000			
Fluid Loss :	0.000			
Salinity :	0.000	KPPM		
RM Source :	MEASURED			
RM :	9.800	OHMM at	98	F
RM at BHT :	9.239	OHMM at	92	F
RMF Source :	CALCULATED			
RMF :	8.330	OHMM at	98	F
RMF at BHT :	7.753	OHMM at	92	F
RMC Source :	CALCULATED			
RMC :	11.270	OHMM at	98	F
RMC at BHT :	10.624	OHMM at	92	F

Max Recorded Temp. : 92 F
Time Circulation Stopped :
Operating Rig Time, Hrs. : 2.0

- Source Serial Numbers -

Gamma	CSV-587
Neutron	N-1044

- Sonde Serial Numbers -

GRTB	GRT-BA-14
CNT	CNP-AA-111
LDTNG	LDP-DA-01
PIT	PIT-AB-14

Casing Strings

Size (IN)	Weight (LB/FT)	Bottom (FT)
8.625	32.00	20.00

- Comments -

ALL PRESENTATIONS AS PER CUSTOMER REQUEST.

GRT, CNT, LDT, PIT RAN IN COMBINATION
CALIPERS ORIENTED ON THE X-Y AXIS.
PHIN IS CALIPER CORRECTED.
2.71 G/CC USED TO CALCULATE POROSITY.
ANNULAR HOLE VOLUME CALCULATED USING 4.500" PRODUCTION CASING.
LOGGER PULLED TIGHT ON BOTTUM CLOSED CALIPERS UP TO 402' DUE TO BIT SIZE.
PROSITY LOGS START AT 400' DUE TO CALIPERS ARE CLOSED
BIT SIZE CHANGE
TD TO 402' USED 6.125"
402' TO 20' USED 6.750"

GRT: GRP.
CNT: PHIN, CLCNIN, PHINLS.
LDT: PORL, LCORN, PECLN, CLLDIN, LDENN, PORLLS, PECSN.
PIT: ILD, ILM, CIRD, SFLAEC, SPU.

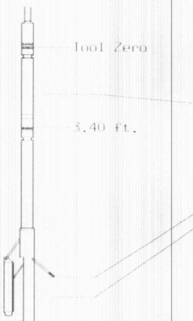
OPERATORS:

R.AUSTIN
S.DAVIS

THANK YOU FOR USING TUCKER WIRELINE SERVICES!

Tool String Schematic

Total Tool Length - 43.29 **ft.**
Maximum Outside diameter - 4.80 **in.**
Net Weight in Air - 743.00 **lbs.**

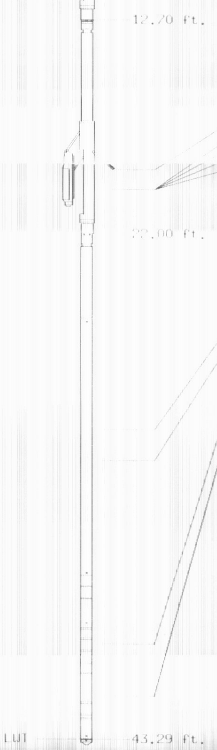


Tool: GRTB **Length:** 3.40 **ft. O.D.:** 3.60 **in.**
Sonde ID : GRT-BA-14

Measure Point	Stack Offset	Tool Offset	Bottom Offset
GRP	2.00	2.00	41.29

Tool: CNT **Length:** 9.30 **ft. O.D.:** 4.36 **in.**
Sonde ID : CNP-AA-111
Source ID : N-1044
Pad ID : CNP-AA-111

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLCN	9.40	6.00	33.89
PHIN	10.24	6.84	33.05



Tool: LDTNG **Length:** 9.30 ft. **O.D.:** 4.80 in.
Sonde ID : LDP-DA-01
Source ID : CSV-587
Pad ID : LDP-DA-01

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLLD	18.70	6.00	24.59
PEL	19.70	7.00	23.59
PES	20.10	7.40	23.19
LDEN	19.70	7.00	23.59
LCOR	19.70	7.00	23.59

Tool: PIT **Length:** 21.29 ft. **O.D.:** 3.62 in.
Sonde ID : PIT-AB-14

Measure Point	Stack Offset	Tool Offset	Bottom Offset
ILD	30.92	8.92	12.37
ILM	32.10	10.10	11.20
SFLU	39.49	17.49	3.81
SP	42.60	20.60	0.69

TENSION
LBS
10000 0

BIT SIZE
INCHES (IN)
4 14

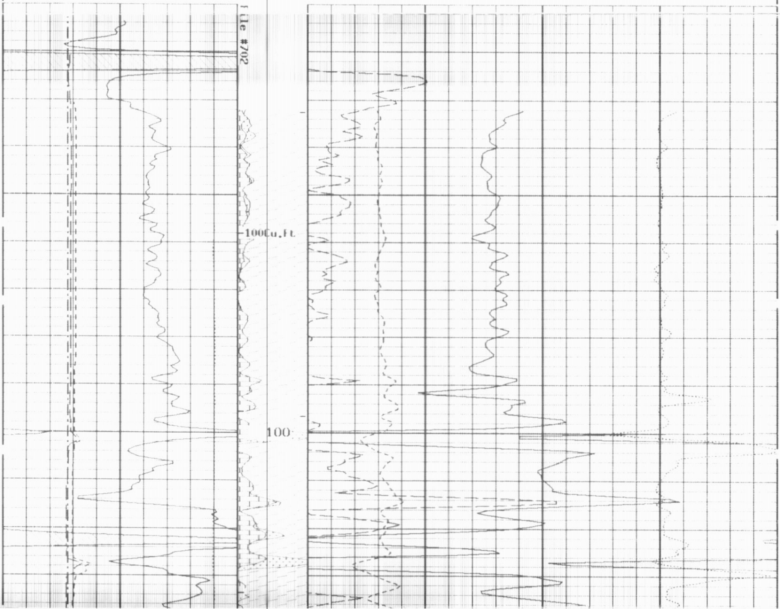
Volume
Quartz ▨

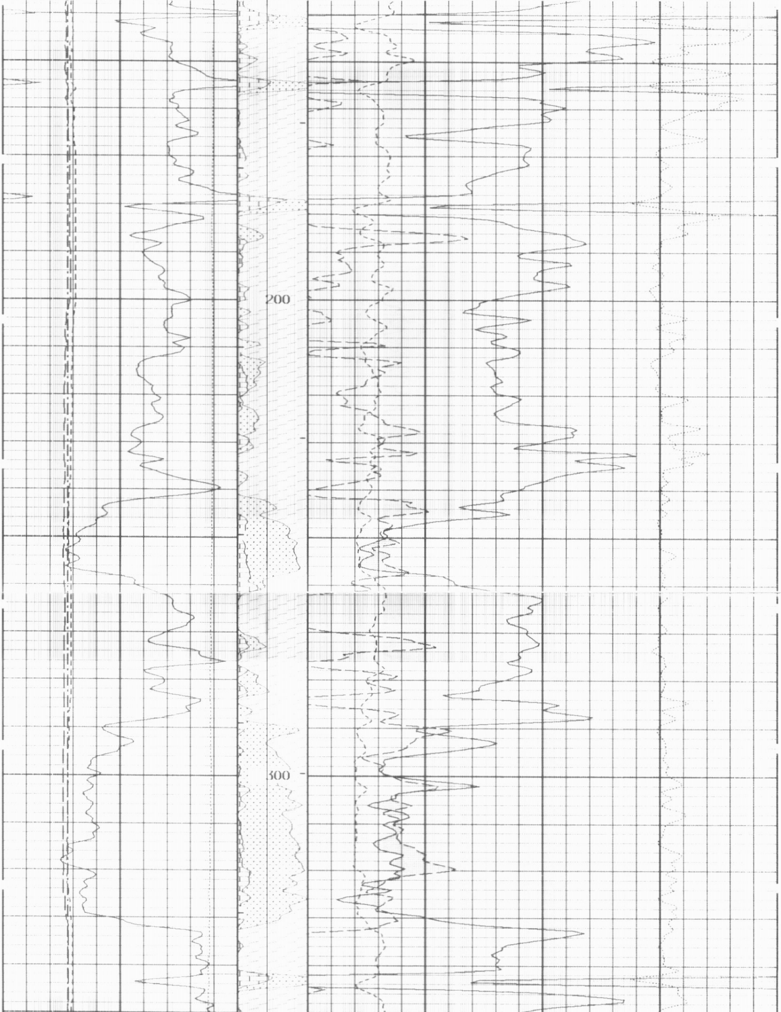
DENSITY (X) CALIPER INCHES (IN)	Volume Calcite	PE CROSS-SECTION BARNS/ELECTRON	DENSITY CORRECTION G/CC
14 24 4 14		0 10	-0.25 0.25

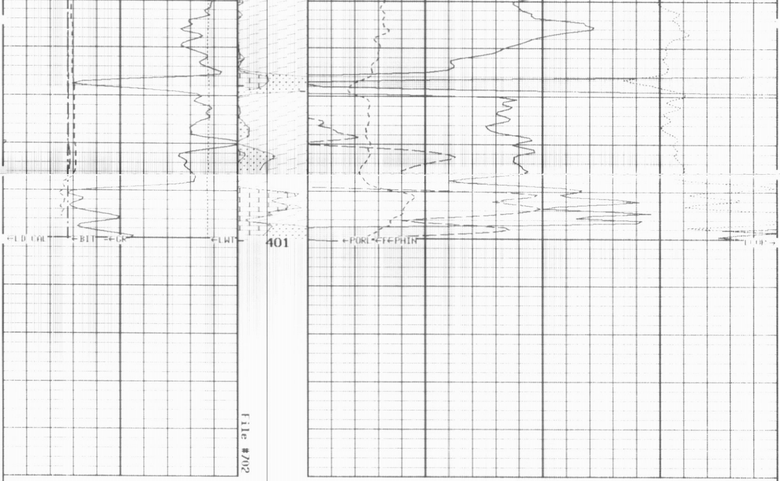
NEUTRON (Y) CALIPER INCHES (IN)	Volume Dolo/Shale	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)
14 24 4 14		30 10

GAMMA RAY API UNITS	-BHV AHV- CU.FT	DENSITY POROSITY PERCENT (2.71 g/cc)
200 400 0 200		70 30 30 10 -10 50

1:240 MAIN SECTION







1:240 MAIN SECTION

GAMMA RAY
API UNITS
200 400
0 200

-BHV AHV-
CU.FT

DENSITY POROSITY
PERCENT (2.71 g/cc)
70 30
30 10
-10 50

NEUTRON (Y) CALIPER
INCHES (IN)
14 24
4 14

Volume
Dolo/Shale

NEUTRON POROSITY
PERCENT (LIMESTONE MATRIX)
30 10

DENSITY (X) CALIPER
INCHES (IN)
14 24
4 14

Volume
Calcite

PE CROSS-SECTION
BARNS/ELECTRON
0 10

DENSITY CORRECTION
G/CC
-0.25 0.25

BIT SIZE
INCHES (IN)
4 14

Volume
Quartz

TENSION
LBS
10000 0

* Borehole Zone Factors *

Zone 1 99999.0 to 402.0 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.125	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

Zone 2 402.0 to 0.0 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

TENSION
LBS
10000 0

BIT SIZE
INCHES (IN)
4 14

Volume
Quartz

DENSITY (X) CALIPER
INCHES (IN)
14 24
4 14

Volume
Calcite

PE CROSS-SECTION
BARNS/ELECTRON
0 10

DENSITY CORRECTION
G/CC
0.25 0.25

NEUTRON (Y) CALIPER
INCHES (IN)
14 24
4 14

Volume
Dolo/Shale

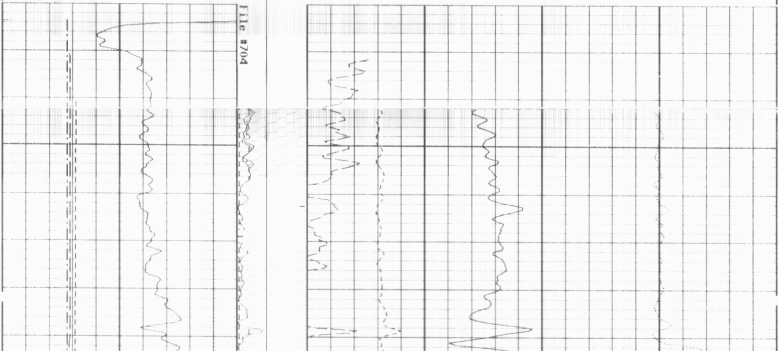
NEUTRON POROSITY
PERCENT (LIMESTONE MATRIX)
30 10

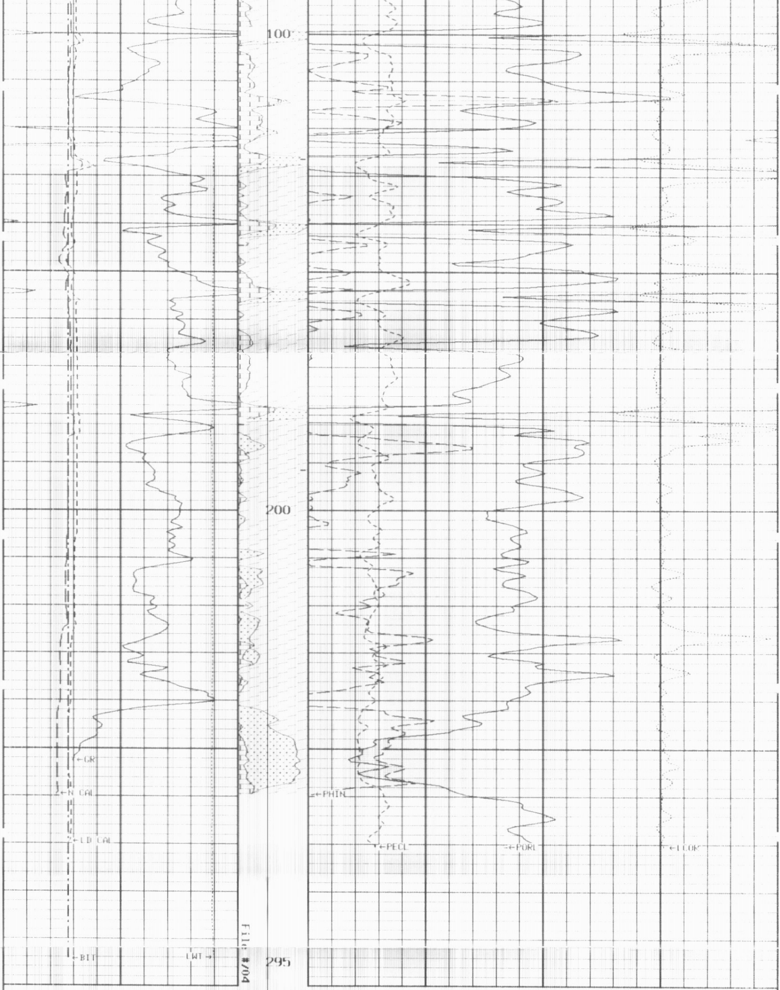
GAMMA RAY
API UNITS
200 400
0 200

-BHV AHV-
CU.FT

DENSITY POROSITY
PERCENT (2.71 g/cc)
70 30
30 10
-10 50

1:240 REPEAT SECTION





1:240 REPEAT SECTION

GAMMA RAY
API UNITS
200 400
0 200

-BHV AHV-
CU.FT

DENSITY POROSITY
PERCENT (2.71 g/cc)
70 30
30 10
-10 50

NEUTRON (Y) CALIPER
INCHES (IN)
14 24
4 14

Volume
Dolo/Shale

NEUTRON POROSITY
PERCENT (LIMESTONE MATRIX)
30 10

DENSITY (X) CALIPER
INCHES (IN)
14 24
4 14

Volume
Calcite

PE CROSS SECTION
BARNS/ELECTRON
0 10

DENSITY CORRECTION
G/CC
-0.25 0.25

BIT SIZE
INCHES (IN)
4 14

Volume
Quartz

TENSION
LBS
10000 0

* Borehole Zone Factors *

Zone 1 99999.0 to 402.0 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.125	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

Zone 2 402.0 to 0.0 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

TENSION
LBS
10000 0

BIT SIZE
INCHES (IN)
4 14

DENSITY (X) CALIPER
INCHES (IN)
14 24
4 14

PE CROSS-SECTION
BARNS/ELECTRON
0 10

DENSITY CORRECTION
G/CC
-0.25 0.25

NEUTRON (Y) CALIPER
INCHES (IN)
14 24
4 14

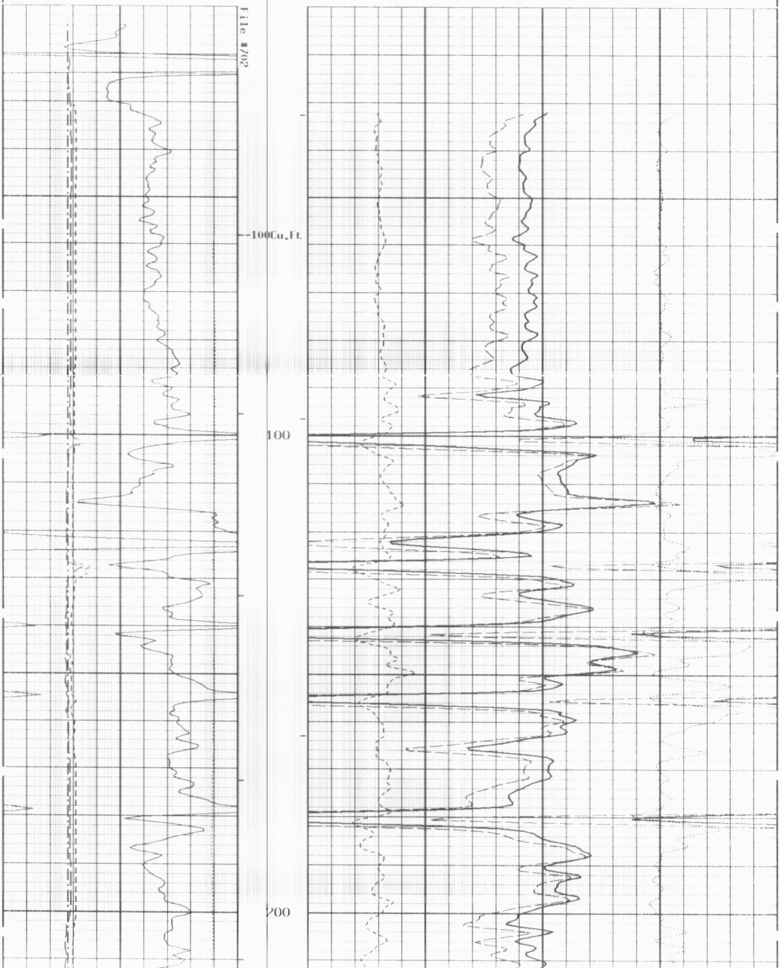
DENSITY POROSITY
PERCENT (2.71 g/cc)
70 30
30 10
-10 50

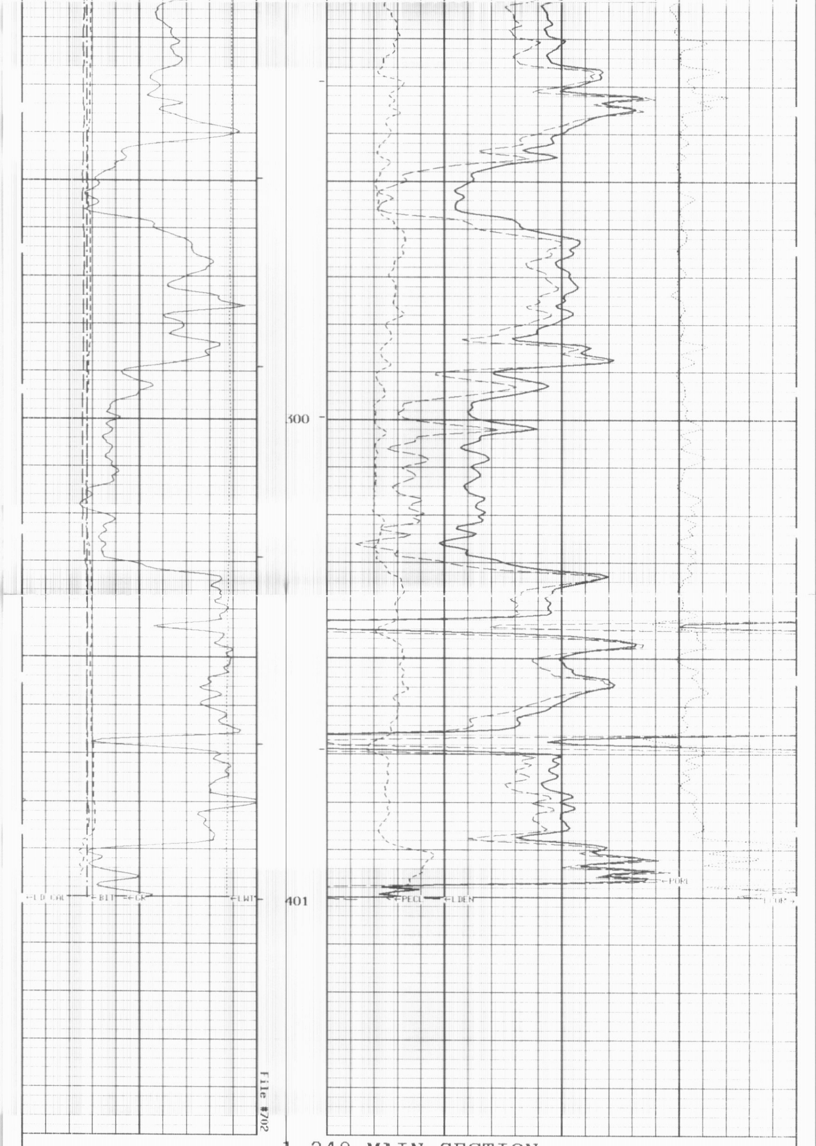
GAMMA RAY
API UNITS
200 400
0 200

-BHV AHV-
CU.FT

COMPENSATED BULK DENSITY
G/CC
3.0 4.0
2.0 3.0
1.0 2.0

1:240 MAIN SECTION
BULK DENSITY





1:240 MAIN SECTION

BULK DENSITY

GAMMA RAY
API UNITS
200 400
0 200

-BHV AHV-
CU.FT

COMPENSATED BULK DENSITY
G/CC
3.0 4.0
2.0 3.0
1.0 2.0

NEUTRON (Y) CALIPER
INCHES (IN)
14 24
4 14

DENSITY POROSITY
PERCENT (2.71 g/cc)
70 30
30 10
10 50

DENSITY (X) CALIPER
INCHES (IN)
14 24
4 14

PE CROSS SECTION
BARNS/ELECTRON
0 10

DENSITY CORRECTION
G/CC
-0.25 0.25

BIT SIZE
INCHES (IN)
4 14

TENSION
LBS
10000 0

* Borehole Zone Factors *

Zone 1 99999.0 to 402.0 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.125	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

Zone 2 402.0 to 0.0 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

* Calibration Summary *

Shop Calibration
GRTB

Performed : 21 Aug 2009 Time : 15:26
Sensor Suite : GR GRS ID : GRT-BA-14

	Background	Measured Jig	Units	Calibrated Jig	Units
GR	48	347	CPS	175	GRAPI

Shop Calibration
CNT

Performed : 30-Jun-2010 Time : 12:50
Sensor Suite : BHC NEUT ID : CNP-AA-111
Source ID : N-1044

	Tank Measured	Tank Calibrated	Verification Jig	Units
N/F	3.6595	3.6895	3.6896	
Porosity	20.1	20.5	20.5	%

Performed : 16-AUG-2009 Time : 10:24
Sensor Suite : CALI-BCN ID : CNP-AA-111

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	8.7	14.7	6.0	12.0	IN.

Shop Calibration
LDTNG

Performed : 19-OCT-2009 Time : 10:55
Sensor Suite : CALIPEL ID : LDP-DA-01

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	6.6	12.6	6.0	12.0	IN.

Performed : 30-Jun-2010 Time : 10:25
Sensor Suite : BHCPELNG ID : LDP-DA-01
Source ID : CSV-587

Short Space

	BKGD	Al	Mg	Al+Fe	Units
LSW1	66	497	806	332	CPS
LSW2	70	582	933	416	CPS
LSW3	262	1378	2184	1180	CPS
LSW4	318	1265	1764	1123	CPS
LSW5	30	40	41	39	CPS
LSW6	81	81	81	80	CPS
LSW7	51	52	52	53	CPS
LSW8	2	2	3	2	CPS
QS	0.227	0.218	0.218	0.203	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC

Long Space

	BKGD	Al	Mg	Al+Fe	Units
LLW1	115	623	2559	394	CPS
LLW2	128	1063	4403	774	CPS
LLW3	485	2069	7572	1797	CPS
LLW4	617	1201	3032	1116	CPS
LLW5	71	72	86	72	CPS
LLW6	196	193	188	194	CPS
LLW7	123	124	119	126	CPS
LLW8	4	6	11	6	CPS
QL	0.229	0.218	0.225	0.213	
PEL			2.697	5.458	
LSDN		2.600	1.690		G/CC