217-22582

Tucker
WIRELINE SERVICES

COMPENSATED NEUTRON
PEL DENSITY LOG

RECEIVED
DEC 20 2010
Mo Oil & Gas Council

12/20/11

File No. : TUL-56617
Company : RUNNING FOXES PETROLEUM, INC.
Well : EMMERSON #5-6D-3
Field :
County : VERNON
State : MISSOURI
Country : USA

Location : PERMIT #22582
2440' FNL & 860' FWL

Sect : 06 Twp : 36N Rge : 33W

Recorded By : R. FRANKLIN
Witnessed By : C. COUNTS

Date : OCT 29 2010
Run No. : 1

Permanent Datum :	GL	
Drilling Measured From :	GL	
Log Measured From:	GL	
Above Permanent Datum :	0.00	FT
Depth--Driller :	452.0	FT
Depth--Logger :	451.0	FT
Bottom Log Interval :	428.0	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. : 123
Location : TULSA

Elevations :

KB :		FT
DF :		FT
GL :	876.00	FT

Additional Services

PIT

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 :	10.000	OHMM at	70	F
RM at BHT :	10.000	OHMM at	70	F
RMF Source :	CALCULATED			
RMF :	8.500	OHMM at	70	F
RMF at BHT :	8.500	OHMM at	70	F
RMC Source :	CALCULATED			
RMC :	11.500	OHMM at	70	F
RMC at BHT :	11.500	OHMM at	70	F
Max Recorded Temp. :			70	F
Time Circulation Stopped :				
Operating Rig Time, Hrs. :			1.5	

- Source Serial Numbers -

Gamma	2991GW
Neutron	N-1046

- Sonde Serial Numbers -

GRTB	GRT-BC-41
CNT	CNP-AE-42
LDTNG	LDP-DA-067
PIT B	PIT-BA-20

Casing Strings

Size (IN)	Weight (LB/FT)	Bottom (FT)
8.625	18.00	20.00

- Comments -

ALL PRESENTATIONS AS PER CUSTOMER REQUEST.

GRT, CNT, LDT, AND PIT RUN 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 2.875" PRODUCTION CASING.

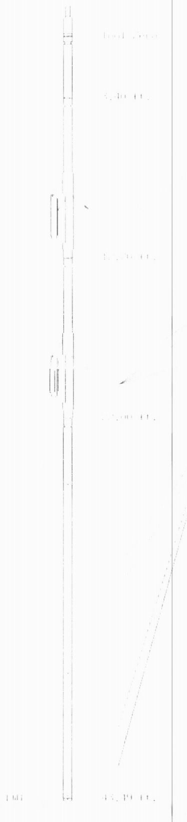
GRT: GRP.
CNT: CLCNIN, PHIN, PHINLS.
LDT: PORL, LCORN, PEFIN, CLLDIN, LDENN, PORLLS.
PIT: ILD, ILM, CIRD, SFLAEC, SPU.

OPERATORS:
S. DAVIS

THANK YOU FOR USING TUCKER WIRELINE SERVICES!

Tool String Schematic

Total Tool Length 43.49 ft.
Maximum Outside diameter 4.80 in.
Net Weight in Air 245.00 lbs.



Tool: GRTB Length: 3.40 ft. O.D.: 3.60 in.
Sonde ID : GRT 88 41

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

Tool: CNT Length: 9.30 ft. O.D.: 4.36 in.
Sonde ID : CNT 6B 42
Source ID : N 1046
Pad ID : CNT 6B 42

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLCN	9.40	6.00	34.09
PHIN	10.24	6.84	33.25

Tool: LDTNG Length: 9.30 ft. O.D.: 4.80 in.
Sonde ID : LDT 86 062
Source ID : 2991GW
Pad ID : LDT 86 062

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLLD	18.70	6.00	24.79
PEL	19.70	7.00	23.79
PES	20.10	7.40	23.39
LDEN	19.70	7.00	23.79
LDOR	19.70	7.00	23.79

Tool: PIT Length: 21.49 ft. O.D.: 3.62 in.
Sonde ID : PIT B6 20

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

TENSION
LBS
10000 0

BIT SIZE
INCHES (IN)
4 14

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

Volume
Quartz

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
Calcite

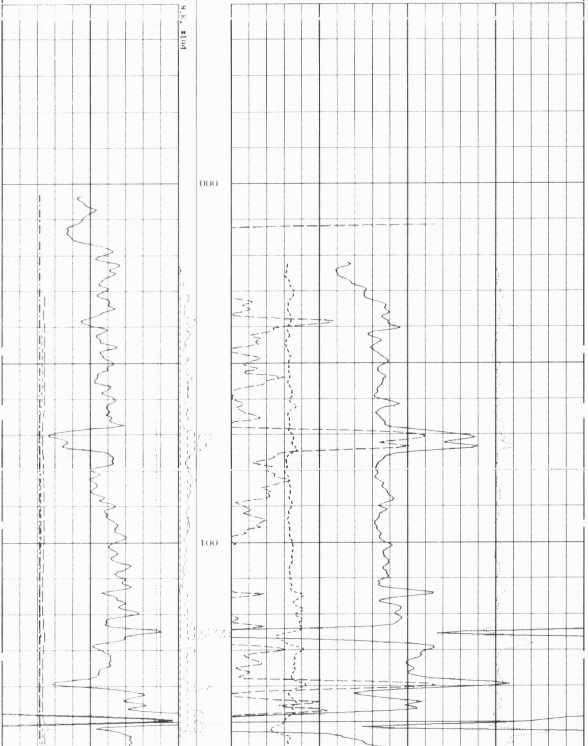
NEUTRON POROSITY
PERCENT (LIMESTONE MATRIX)
30 10

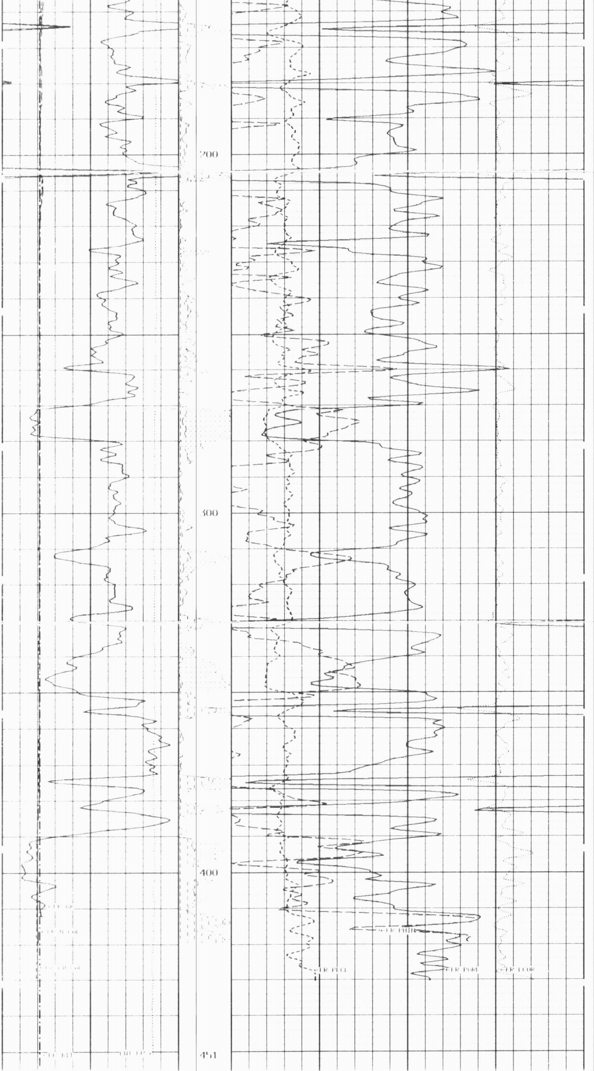
GAMMA RAY
API UNITS
200 400
0 200

Volume
Dolo/Shale

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

1:240 MAIN SECTION





N.R. #104

1:240 MAIN SECTION

GAMMA RAY API UNITS 200 400 0 200	Volume Dolo/Shale	DENSITY POROSITY PERCENT (2.71 g/cc) 70 30 30 10
NEUTRON (Y) CALIPER INCHES (IN) 14 24 4 14	Volume Calcite	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX) 30 10
DENSITY (X) CALIPER INCHES (IN) 14 24 4 14	Volume Quartz	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		

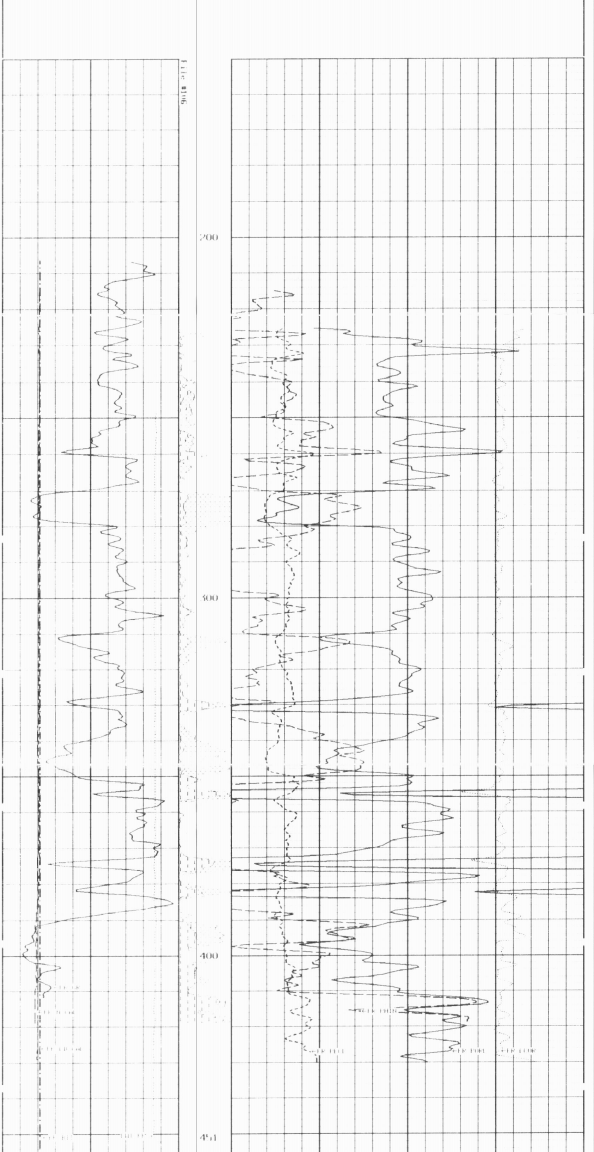
* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 F

Matrix Density	2.71 G/C3
Fluid Density	1.00 G/C3
Formation Matrix	Limestone
Depth Bit Size	6.125 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	Volume Quartz	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 Calcite	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX) 30 10
GAMMA RAY API UNITS 200 400 0 200	Volume Dolo/Shale	DENSITY POROSITY PERCENT (2.71 g/cc) 70 30 30 10

1:240 REPEAT SECTION



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1:240 REPEAT SECTION

GAMMA RAY
API UNITS
200 — 400
0 — 200

Volume
Dolo/Shale

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

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

Volume
Calcite

NEUTRON POROSITY
PERCENT (LIMESTONE MATRIX)
30 — 10

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

Volume
Quartz

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 0.0 F

Matrix Density	2.71 G/C3
Fluid Density	1.00 G/C3
Formation Matrix	Limestone
Drill Bit Size	6.125 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

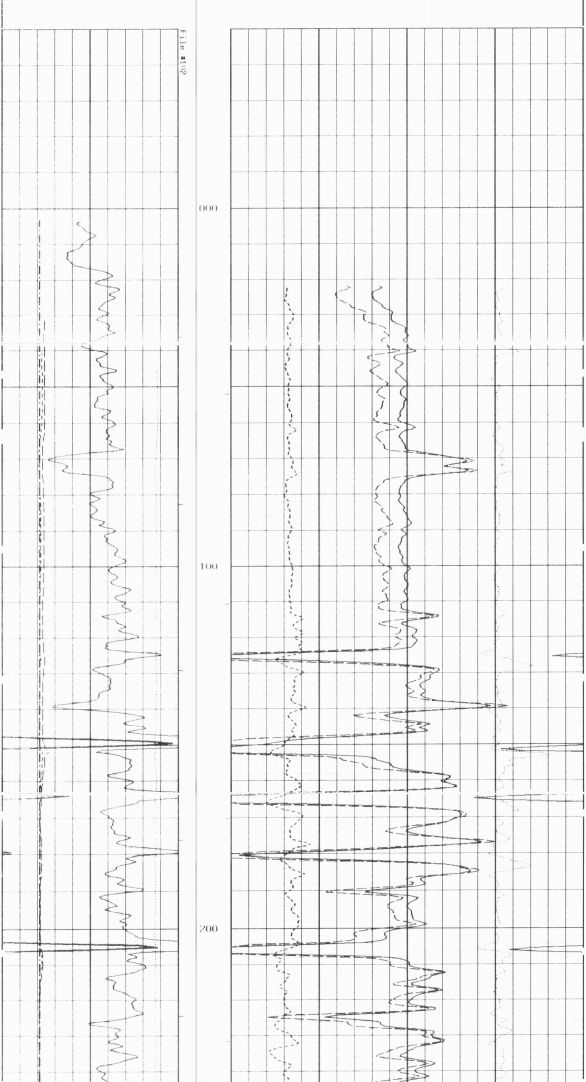
DENSITY POROSITY
PERCENT (2.71 g/cc)
30 — 10

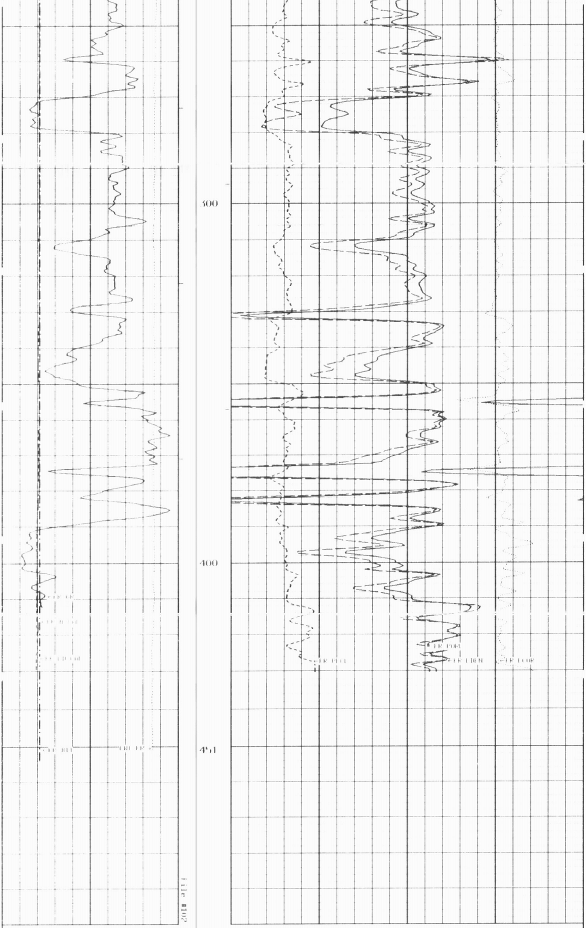
GAMMA RAY
API UNITS
200 — 400
0 — 200

-BHV AHV-
10.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              -BHV BHV-        COMPENSATED BULK DENSITY
            API UNITS                COLL                     G/CC
200                        400              3.0                                        4.0
  0                        200              2.0                                        3.0
                                            1.0                                        2.0

       NEUTRON (Y) CALIPER                          DENSITY POROSITY
           INCHES (IN)                          PERCENT (2.71 g/cc)
14                          24
 4                          14              30                                          10

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

            BIT SIZE
           INCHES (IN)

4                           14

             TENSION
               LBS

10000                        0
```

* Borehole Zone Factors *

```
                Zone 1    99999.0  to     0.0  F

   Matrix Density                               2.71   G/C3
   Fluid Density                                1.00   G/C3
   Formation Matrix                          Limestone
   Drill Bit Size                               6.125  IN
   Casing Correction (PHI ND)                  Disable
```

* Calibration Summary *

```
                        Shop Calibration
                              GRTB
     Performed : 22 Apr 2010              Time : 11:02
 Sensor Serial : 88 GR5                     ID : GRT 8B 41

                     Measured       Units        Calibrated       Units
          Background         Jig                    Jig
GR                  46        546    CPS            175           GAPI

                        Shop Calibration
                              CNT
     Performed : 20 Oct 2010              Time : 10:52
 Sensor Serial : 880 NEUT                   ID : CNP 6B 42
     Source ID : N 1046

                    Tank                    Verification         Units
             Measured    Calibrated              Jig
RAT             3.6750       3.6820            3.7001
Porosity          20.5         20.5              20.7                %

     Performed : 05 SEP 2010              Time : 11:38
 Sensor Serial : 2nd I 80N                  ID : CNP 6B 42

                  Jig    Measured             Jig    Calibrated   Units
              Ring#1   Ring#2             Ring#1   Ring#2
Cal #1           6.1     11.6                6.0     12.0        IN.

                        Shop Calibration
                              LDTNG
     Performed : 15 JUN 2010              Time : 12:11
 Sensor Serial : 2nd IFII                   ID : LDP 8B 062

                  Jig    Measured             Jig    Calibrated   Units
              Ring#1   Ring#2             Ring#1   Ring#2
Cal #1           6.9     12.9                6.0     12.0        IN.

     Performed : 26 Oct 2010              Time : 12:22
 Sensor Serial : 880PELNG                   ID : LDP 8B 062
     Source ID : 2991GB

                           Short Space
                BKGD          Al           Mg          Alite        Units
LSAl              68        1129         1908            259          CPS
[illegible]       73        1362         2151            954          CPS
```

12003	263	5096	5007	2616	LE%
12004	377	2294	4057	2443	LE%
12005	38	66	74	62	LE%
12006	80	83	84	83	LE%
12007	57	60	60	59	LE%
12008	5	8	10	8	LE%
US	0.168	0.161	0.167	0.169	
EE%			2.778	5.967	
12000		2.600	1.680		6/11

Long Space

	[illegible]	nl	Mg	nl+le	Units
11001	96	1501	5229	788	LE%
11002	107	2506	8887	1630	LE%
11003	410	4254	16046	5655	LE%
11004	550	2006	6461	1807	LE%
11005	57	68	131	66	LE%
11006	127	127	164	127	LE%
11007	109	106	101	108	LE%
11008	3	7	19	6	LE%
UL	0.288	0.287	0.258	0.279	
EEl			2.607	5.458	
11000		2.600	1.680		6/11