Tucker WIRELINE SERVICES

DUAL INDUCTION RESISTIVITY LOG

CONFIDENTIAL 1/19/2012

RECEIVED
FEB 01 2011
Mo Oil & Gas Council

File No.	: TUL-56722
Company	: RUNNING FOXES PETROLEUM, LLC
Well	: EMMERSON 5-6D-1
Field	:
County	: VERNON
State	: MISSOURI
Country	: USA

Location : PERMIT#: 22580
2110' FNL & 1200' FEL

Sect : 6 Twp : 36N Rge : 33W

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

Date : DEC 11 2010
Run No. : 1

Elevations :
KB : FT
DF : FT
GL : 879.00 FT

Permanent Datum :	GL	
Drilling Measured From :	GL	
Log Measured From:	GL	
Above Permanent Datum :	0.00	FT
Depth--Driller :	441.0	FT
Depth--Logger :	440.0	FT
Bottom Log Interval :	439.0	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. :	127	
Location :	TULSA	

Additional Services
CNT
LDT

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 :	NATIVE			
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	41	F
RM at BHT :	6.656	OHMM at	64	F
RMF Source :	CALCULATED			
RMF :	8.500	OHMM at	41	F
RMF at BHT :	5.658	OHMM at	64	F
RMC Source :	CALCULATED			
RMC :	11.500	OHMM at	41	F
RMC at BHT :	7.654	OHMM at	64	F
Max Recorded Temp. :			64	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_B PIT-CA-074

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 2.875" PRODUCTION CASING.

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

OPERATORS:
M.BURKE
R.AUSTIN

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 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	41.49

Tool: CNT Length: 9.30 ft. O.D.: 4.30 in.
Sonde ID : CNP-AA-111
Source ID : N-1044
Pad ID : CNP-AA-111

Measure Point	Stack Offset	Tool Offset	Bottom Offset
[illegible]	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 : LDP-DA-01
Source ID : CSV-587
Pad ID : LDP-DA-01

Measure Point	Stack Offset	Tool Offset	Bottom Offset
[illegible]	18.70	6.00	24.79
[illegible]	19.70	7.00	23.79
PES	20.10	7.40	23.39
LDEN	19.70	7.00	23.79
[illegible]	19.70	7.00	23.79

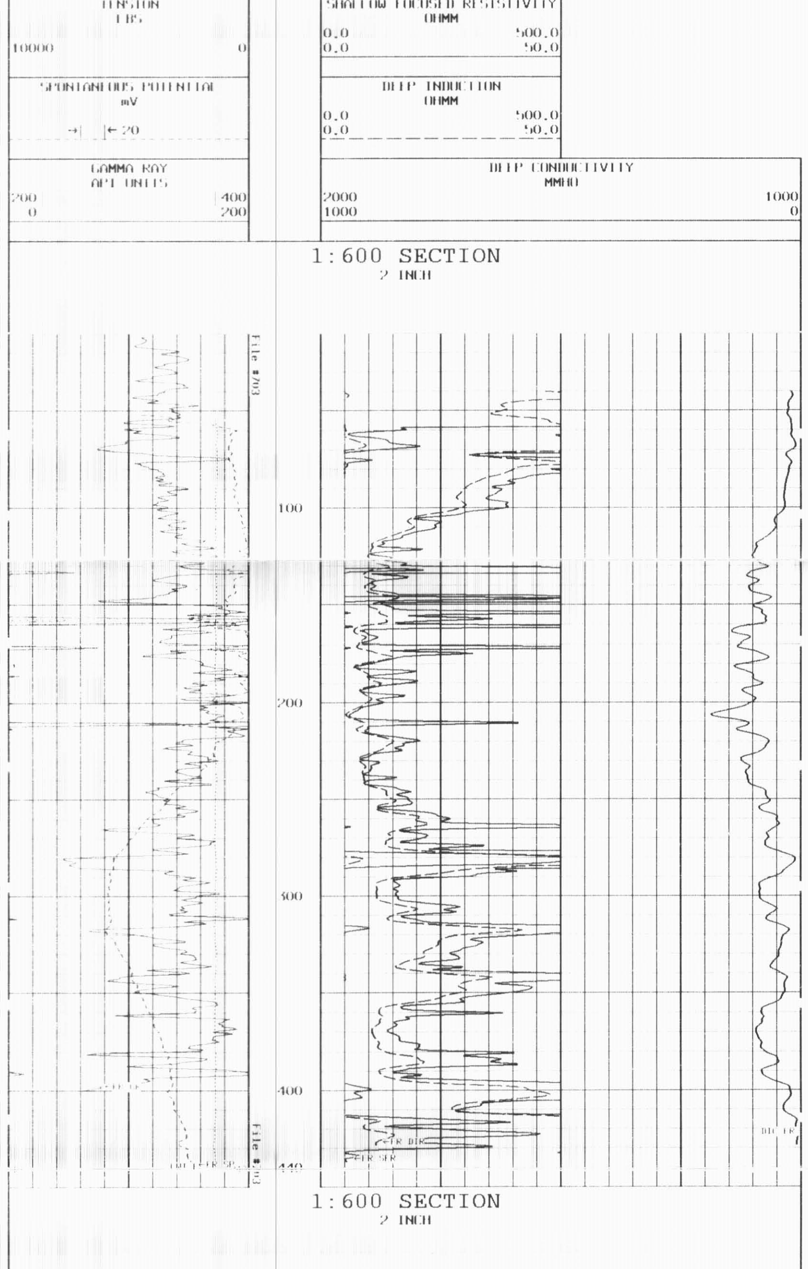
Tool: PIT Length: 21.49 ft. O.D.: 3.62 in.
Sonde ID : PIT-CA-074

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		SHALLOW FOCUSED RESISTIVITY OHMM	
10000	0	0.0 / 0.0	500.0 / 50.0
SPONTANEOUS POTENTIAL mV		DEEP INDUCTION OHMM	
→ | |← 20		0.0 / 0.0	500.0 / 50.0
GAMMA RAY API UNITS		DEEP CONDUCTIVITY MMHO	
200 / 0	400 / 200	2000 / 1000	1000 / 0

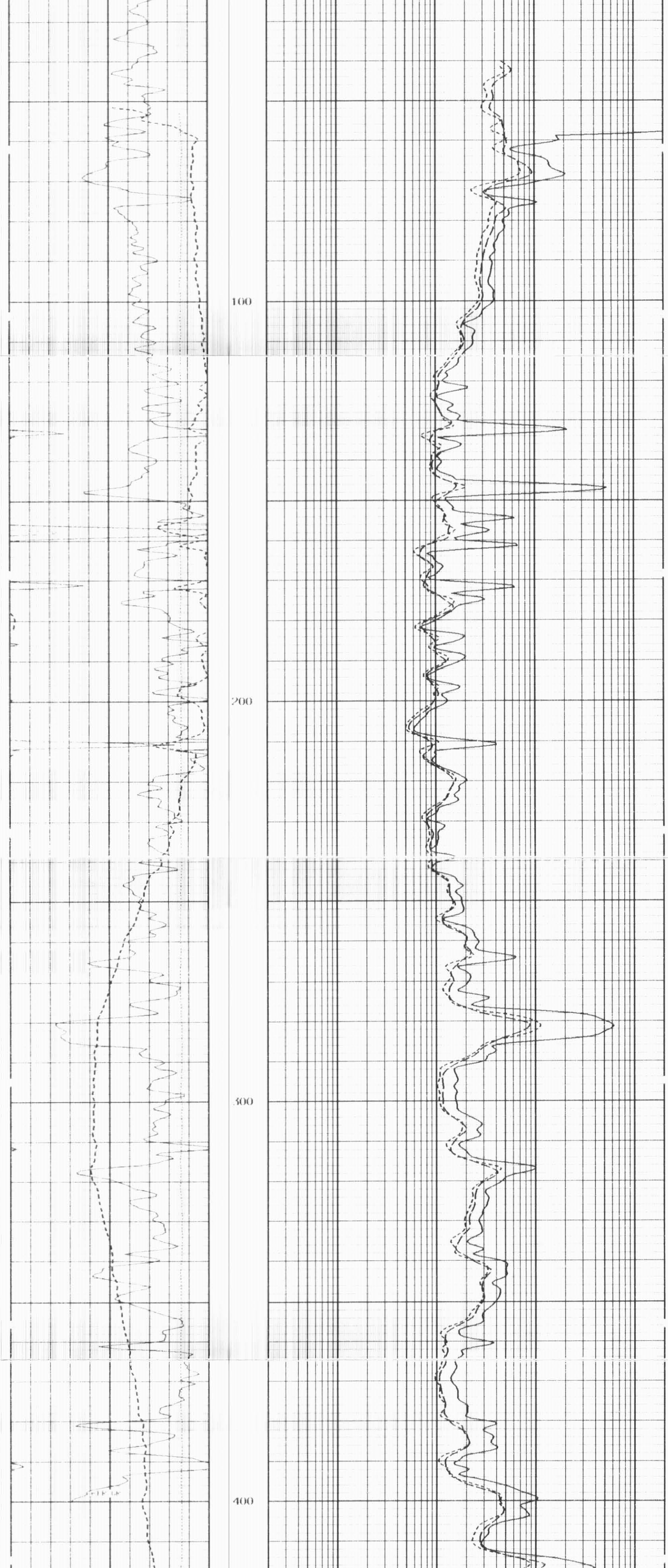
1:600 SECTION

2 INCH



1:600 SECTION

1:240 MAIN SECTION



1:240 MAIN SECTION

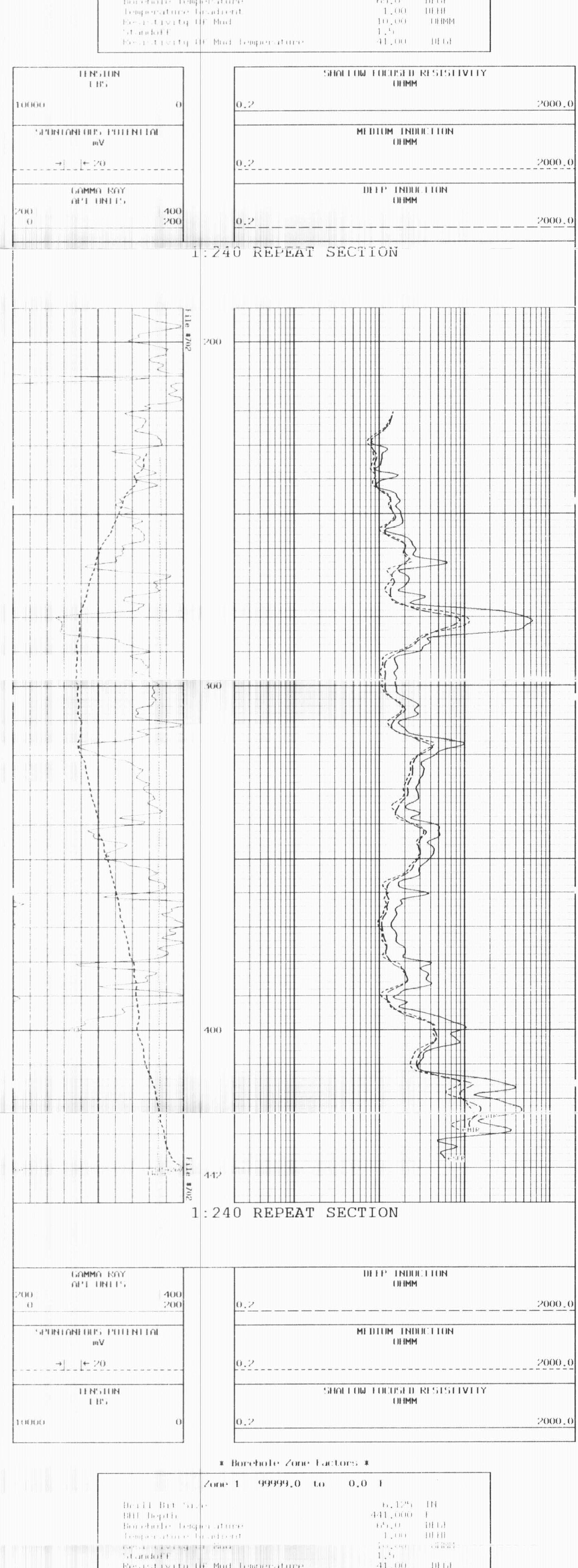
GAMMA RAY API UNITS		DEEP INDUCTION OHMM	
200 / 0	400 / 200	0.2	2000.0
SPONTANEOUS POTENTIAL mV		MEDIUM INDUCTION OHMM	
→ | |← 20		0.2	2000.0
TENSION LBS		SHALLOW FOCUSED RESISTIVITY OHMM	
10000	0	0.2	2000.0

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 F

Drill Bit Size	6.125	IN
BHT Depth	441.000	F
Borehole Temperature	65.0	DEGF
Temperature Gradient	1.00	DEGF
Resistivity Of Mud	10.00	OHMM
Standoff	1.5	
Resistivity Of Mud Temperature	41.00	DEGF

1:240 REPEAT SECTION



1:240 REPEAT SECTION

GAMMA RAY API UNITS		DEEP INDUCTION OHMM	
200 / 0	400 / 200	0.2	2000.0
SPONTANEOUS POTENTIAL mV		MEDIUM INDUCTION OHMM	
→ | |← 20		0.2	2000.0
TENSION LBS		SHALLOW FOCUSED RESISTIVITY OHMM	
10000	0	0.2	2000.0

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 F

Drill Bit Size	6.125	IN
BHT Depth	441.000	F
Borehole Temperature	65.0	DEGF
Temperature Gradient	1.00	DEGF
Resistivity Of Mud	[illegible]	[illegible]
Standoff	1.5	
Resistivity Of Mud Temperature	41.00	DEGF

* Calibration Summary *

Shop Calibration
GRTB

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

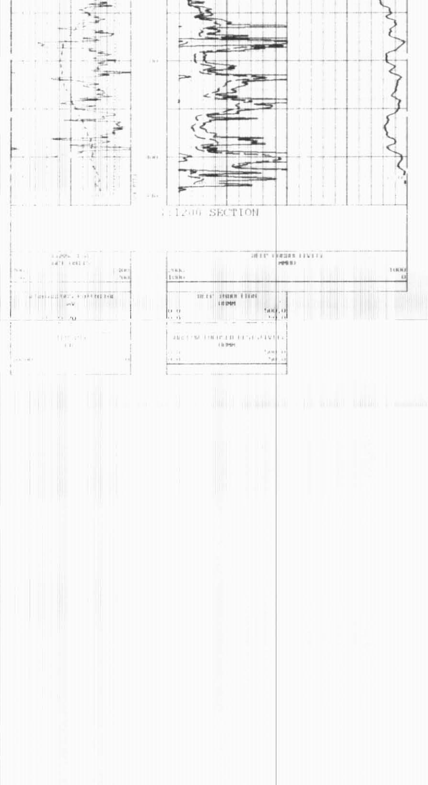
Shop Calibration
PIT B

Performed : 26 Oct 2010 Time : 15:00
Sensor Suite : [illegible] ID : PIT-CA-074

Medium

	Measured R	Measured X	Calibrated R	Calibrated X	Units
Air	[illegible]	131631	1.8	0.9	MMHOS
Zero	[illegible]	131069	0.0	0.0	MMHOS
Reference	[illegible]	[illegible]	5000.0	5000.0	MMHOS
Loop	[illegible]	177054	[illegible]	1005.1	MMHOS
Sonde Error			0.2	17.5	MMHOS
Load			5000.0	5000.0	MMHOS

Deep

	Measured R	Measured X	Calibrated R	Calibrated X	Units
Air	[illegible]	131229	0.2	0.5	MMHOS
Zero	[illegible]	131069	0.0	0.0	MMHOS
Reference	[illegible]	[illegible]	2000.0	2000.0	MMHOS
Loop	[illegible]	177126	1307.0	465.5	MMHOS
Sonde Error			5.0	6.0	MMHOS
Load			2000.0	2000.0	MMHOS

1:1200 SECTION