217-22662

Tucker
WIRELINE SERVICES

DUAL INDUCTION RESISTIVITY LOG

RECEIVED
OCT 03 2011
Mo Oil & Gas Council

9/7/12

File No : TUL-56777
Company : RUNNING FOXES PETROLEUM, INC
Well : EMMERSON 5-6A-3
Field :
County : VERNON
State : MISSOURI
Country : USA
API No :

Location : 1780' FNL & 870' FWL

LSD : Sect : 6 Twp : 36N Rge : 33W

Company RUNNING FOXES PETROLEUM,
Well EMMERSON 5-6A-3
Field
County VERNON
State MISSOURI
Country USA
API No.

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	880.00 Ft	PIT

Date	2011-07-11		
Run Number	1		
Depth--Driller	448.0 Ft		
Depth--Logger	448.0 Ft		
First Reading	447.0 Ft		
Last Reading	20.0 Ft		
Casing--Driller	20.0 Ft		
Casing--Logger	20.0 Ft		
Bit Size	5.625 In		
Casing Size	7.000 In		
Hole Fluid Type	FRESH		
Density	0.0 LBS/GAL		
Fluid Loss	0.0 CC		
PH/Viscosity	0.0 | 0.0 SEC		
Sample Source	MEASURED		
RM@Measured Temp.	3.000 @ 80 F		
RMF@Measured Temp	2.400 @ 80 F		
RMC@Measured Temp.	3.600 @ 80 F		
Source RMF/RMC	CALCULATED | CALCULATED		
RM@BHT	2.664 @ 90 F		
Time Circulation Stopped	2011-07-11 07:30		
Max Recorded Temp.	90 F		
Equipment/Base	TRK 127 | TULSA		
Recorded By	B. BAILEY, R. AUSTIN		
Witnessed By			

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)
5.625	448.00	7.000	32.00	20.00

Run Number	1		
Date	2011-07-11		
Date/Time On Bottom	2011-07-11 09:45		
Depth to Fluid	0.0 Ft		
Salinity	0.000 PPM		
RMF@BHT	2.131 @ 90 F		
RMC@BHT	3.196 @ 90 F		

Run Number 1

Comments

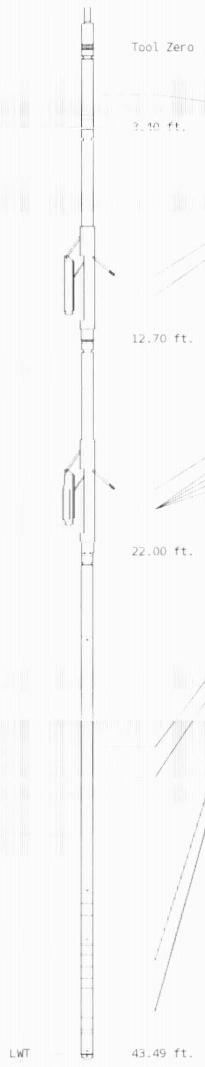
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
GRT, CNT, LDT, AND PIT RUN IN COMBINATION.
CALIPERS ORIENTED ON X-Y AXIS.
2.71 G/CC USED TO CALCULATED POROSITY.
ANNULAR HOLE VOLUME CALCULATED UISING 2.875' PRODUCTION CASING.

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

OPERATORS:
J.TORBERT
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-CA-075

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: RFP_EMMERSON_5-6A-3_JUL11_STK
Segment: V1.D1.S6 Re main
Reference: 0

Scale: 1:600
Acquired: 2011-07/11 09:51 3.2.0-10140
Processed: 2011-07/11 10:03 3.2.0-10140

TENSION
LBS
10000 0

SPONTANEOUS POTENTIAL
mV
→| |←20

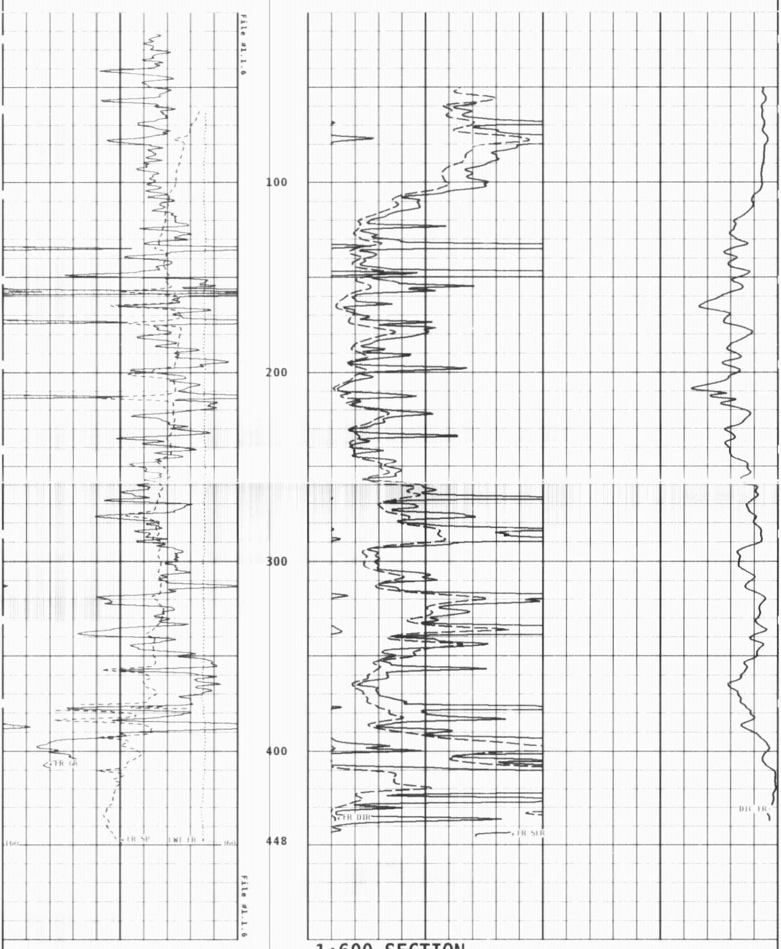
GAMMA RAY
API UNITS
200 400
0 200

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
200 400
0 200

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: RFP_EMMERSON_5-6A-3_JUL11_STK
Segment: V1.D1.S6 Re main
Reference: 0

Scale: 1:240
Acquired: 2011-07/11 09:51 3.2.0-10140
Processed: 2011-07/11 10:03 3.2.0-10140

TENSION
LBS
10000 0

SPONTANEOUS POTENTIAL
mV
→| |←20

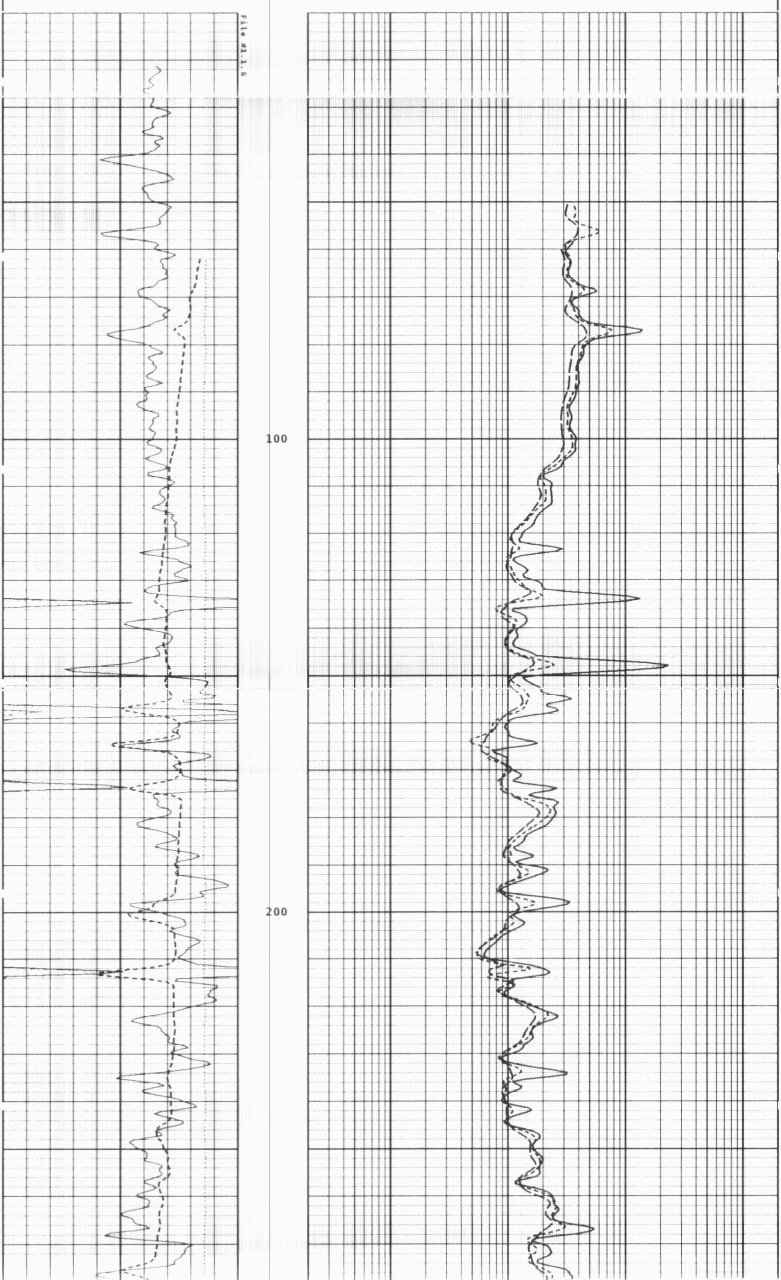
GAMMA RAY
API UNITS
200 400
0 200

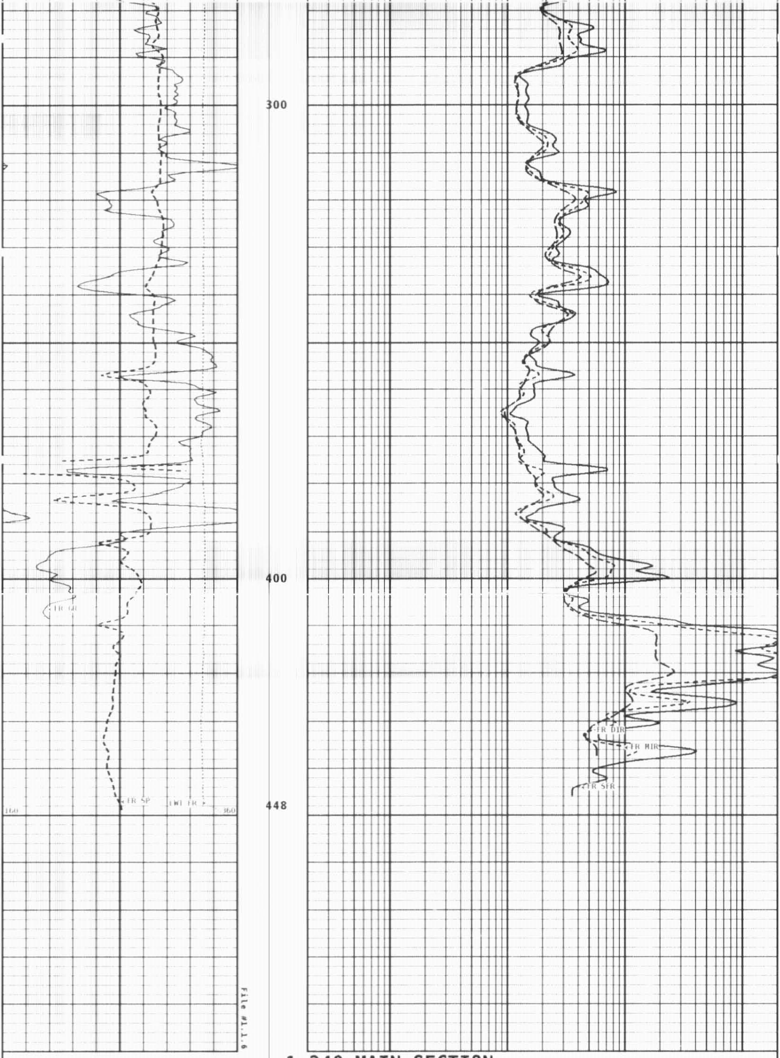
SHALLOW FOCUSED RESISTIVITY
OHMM
0.2 2000.0

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	DEEP INDUCTION OHMM
200 400 0 200	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 Feet		
Drill Bit Size	5.625	in
BHT Depth	448.000	ft
Borehole Temperature	90.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	3.000	ohm/m
Standoff	0.0	
Resistivity Of Mud Temperature	80.00	degF

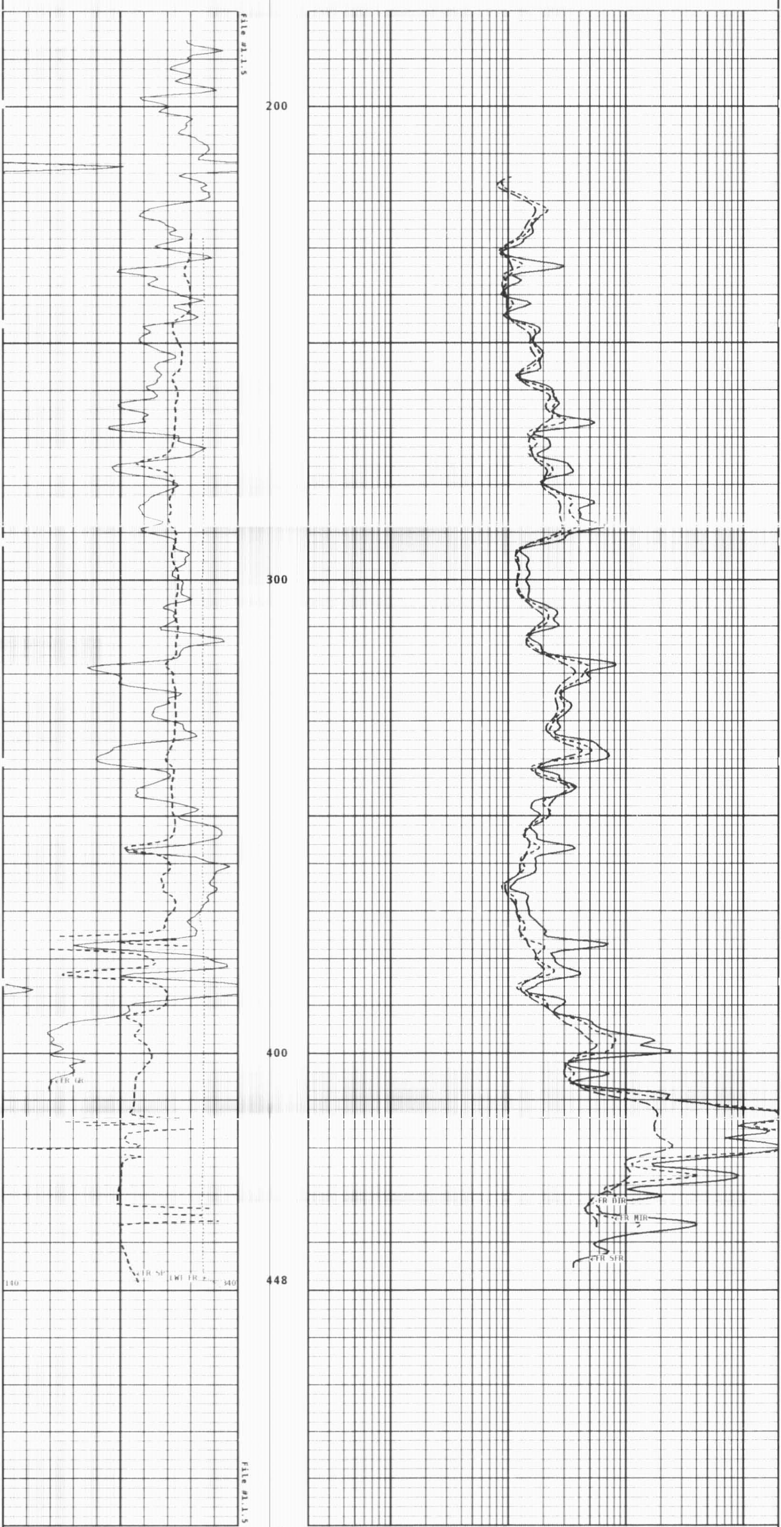
Well File: RFP_EMMERSON_5-6A-3_JUL11_STK
Segment: V1.D1.S5 Re repeat
Reference: 0
Scale: 1:240
Acquired: 2011-07/11 09:41 3.2.0-10140
Processed: 2011-07/11 10:02 3.2.0-10140

TENSION LBS	SHALLOW FOCUSED RESISTIVITY OHMM
10000 0	0.2 2000.0

SPONTANEOUS POTENTIAL mV	MEDIUM INDUCTION OHMM
→| |←20	0.2 2000.0

GAMMA RAY API UNITS	DEEP INDUCTION OHMM
200 400 0 200	0.2 2000.0

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 Feet

Drill Bit Size	5.625	in
BHT Depth	448.000	ft
Borehole Temperature	90.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	3.000	ohm/m
Standoff	0.0	
Resistivity Of Mud Temperature	80.00	degF

*** Calibration Summary ***

Shop Calibration
GRT-B

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

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

Shop Calibration
PIT-CA

Performed : 17-JUN-2011 Time : 11:33
Sensor Suite : P-IND-T ID : PIT-CA-075

Medium

	Measured R	X	Calibrated R	X	Units
Air	131444	129932	1.1	0.1	MMHOS
Zero	131073	131070	-10.4	44.9	MMHOS
Reference	249867	250442	4989.6	5044.9	MMHOS
Loop	151911	174389	2724.7	1000.8	MMHOS
Sonde Error			1.4	-8.1	MMHOS
Cond			4989.6	5044.9	MMHOS

Deep

	Measured R	X	Calibrated R	X	Units
Air	128062	131940	0.2	-0.9	MMHOS
Zero	131069	131076	52.2	-18.5	MMHOS
Reference	237814	237749	2052.2	1981.5	MMHOS
Loop	149745	178375	1277.1	463.5	MMHOS
Sonde Error			-6.7	2.7	MMHOS
Cond			2052.2	1981.5	MMHOS

Temperature

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

Performed : 28-Apr-2011 Time : 10:48
Sensor Suite : SFL ID : PIT-CA-075

Internal

	Measured Zero	Reference	Calibrated Zero	Reference	Units
Im	32769.1	48108.3	0.0	7028.0	uA
Ib	32771.9	48750.3	0.0	1750.0	mA
MOM1	32792.0	56996.0	0.0	175.0	mV
Equivalent SFL				43.97	OHMM

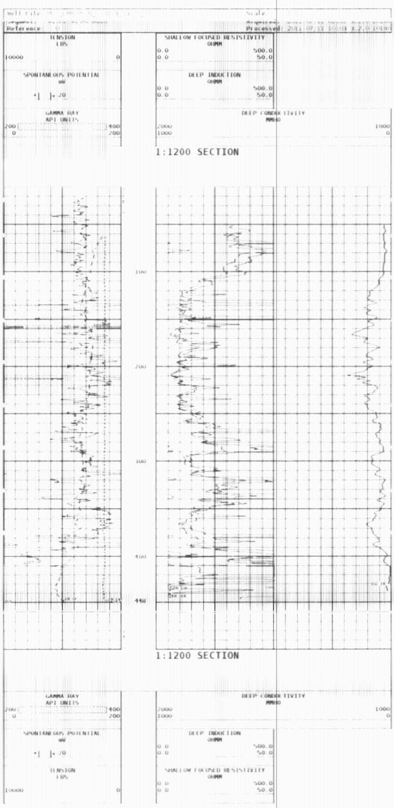
Performed : 28-Apr-2011 Time : 10:49
Sensor Suite : P-SP ID : PIT-CA-075

Internal

Measured Zero	Reference	Calibrated Zero	Reference	Units
32769.0	58903.2	0.0	1000.0	mV

Performed : 28-APR-2011 Time : 10:53
Sensor Suite : P-RMUD ID : PIT-CA-075

Internal

	Measured Zero	Reference	Calibrated Zero	Reference	Units
Rmi	0.0	65535.0	0.0	290.6	mA
Rmv	0.0	65535.0	0.0	290.6	mV
Equivalent Rm				0.9037	OHMM