

HALLIBURTON

EMI MONITOR LOG

COMPANY				STORM CAT ENERGY (USA) OPERATING CORP			
WELL				KAMALMAZ 2-13H			
FIELD				B-43			
COUNTY				VAN BUREN			
STATE				ARKANSAS			
Permanent Datum		GL		Sect. 13		Twp. 11N	
Log measured from		KB		Rge. 17W		Elev. 1635.0 ft	
Drilling measured from		KB		15.0 ft above perm. Datum		Elev. K.B. 1650.0 ft	
Date		18-Jul-08				D.F. 1649.0 ft	
Run No.		1				G.L. 1635.0 ft	
Depth - Driller		997.0 ft					
Depth - Logger		997.0 ft					
Bottom - Logged Interval		987					
Top - Logged Interval		100					
Casing - Driller		9.625 in		@ 665.0 ft		@	
Casing - Logger		664.0 ft				@	
Bit Size		8.875 in				@	
Type Fluid in Hole		WBM					
Density		9.1 ppq		1110.00 s/qt			
PH		9.60 pH		6.1 cphn			
Source of Sample		FLOWLINE					
Rm @ Meas. Temperature		2.25 ohmm		@ 89.00 degF		@	
Rmf @ Meas. Temperature		1.95 ohmm		@ 85.00 degF		@	
Rmc @ Meas. Temperature		2.41 ohmm		@ 85.00 degF		@	
Source Rmf		MEAS		MEAS			
Rm @ BHT		2.12 ohmm		@ 95.0 degF		@	
Time Since Circulation		5.0 hr					
Time on Bottom		18-Jul-08 22:54					
Max. Rec. Temperature		95.0 degF		@ 997.0 ft		@	
Equipment		336		FORT SMITH			
Recorded By		WHITLOCK					
Witnessed By		TOM MAJORS		LISA REEVES			

Fold here

Service Ticket No.: 6036952						API Serial No.: 03-141-10363						PGM Version: WL INSITE R2.2 (Build 2)																			
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE												RESISTIVITY SCALE CHANGES																			
Date		Sample No.						Date				Type Log		Depth		Scale Up Hole				Scale Down Hole											
Depth-Driller																															
Type Fluid in Hole																															
Density		Viscosity																													
Ph		Fluid Loss																													
Source of Sample												RESISTIVITY EQUIPMENT DATA																			
Rm @ Meas. Temp				@				@				Run No.		Tool Type & No.		Pad Type		Tool Pos.		Other											
Rmf @ Meas. Temp.				@				@																							
Rmc @ Meas. Temp.				@				@																							
Source Rmf		Rmc																													
Rm @ BHT				@				@																							
Rmf @ BHT				@				@																							
Rmc @ BHT				@				@																							
EQUIPMENT DATA																															
GAMMA						ACOUSTIC						DENSITY						NEUTRON													
Run No.								Run No.								Run No.								Run No.							
Serial No.								Serial No.								Serial No.								Serial No.							
Model No.								Model No.								Model No.								Model No.							
Diameter								No. of Cent.								Diameter								Diameter							
Detector Model No.								Spacing								Log Type								Log Type							
Type																Source Type								Source Type							
Length								LSA [Y/N]								Serial No.								Serial No.							
Distance to Source								FWDA [Y/N]								Strength								Strength							
LOGGING DATA																															
GENERAL						GAMMA						ACOUSTIC						DENSITY						NEUTRON							



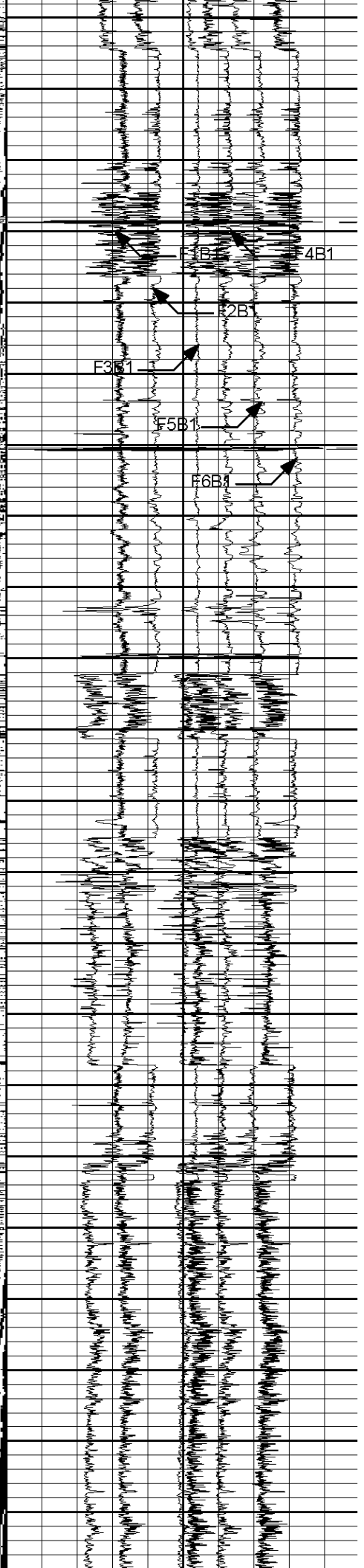
700

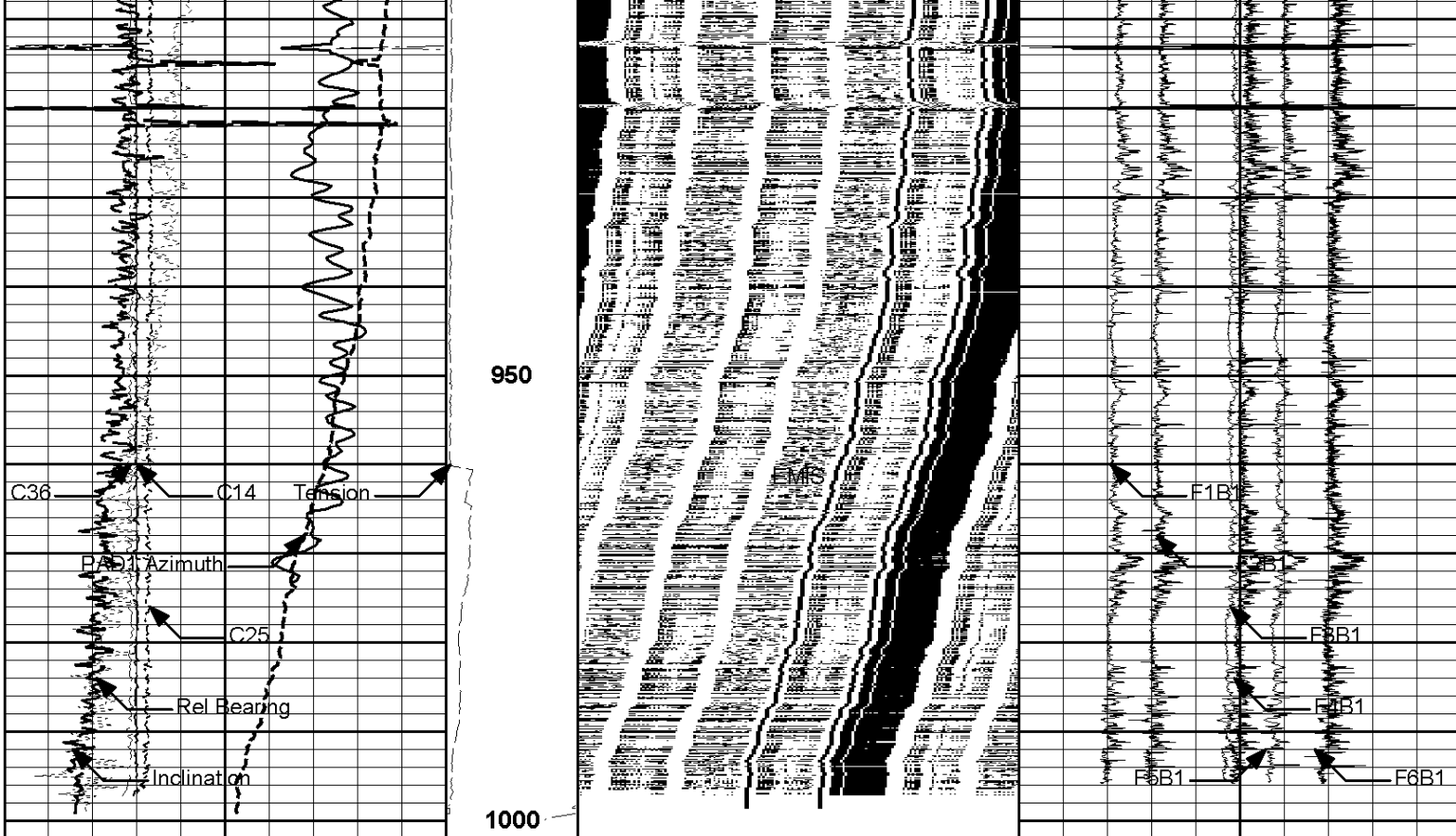
750

800

850

900





-40	PAD1 Azimuth	360	1 : 240	0	EMIS	360	800	F1B1	-1.2K
	degrees				N-E-S-W-N			mmho per metre	
6	C14	16	1K	Tension	3K		1K	F2B1	-1K
	inches			pounds				mmho per metre	
6	C25	16					1.2K	F3B1	-800
	inches							mmho per metre	
6	C36	16					1.4K	F4B1	-600
	inches							mmho per metre	
0	Rel Bearing	360					1.6K	F5B1	-400
	degrees							mmho per metre	
-1	Inclination	9					1.8K	F6B1	-200
	degrees							mmho per metre	
0	Gamma API Corrected	150							
	api								

HALLIBURTON

Plot Time: 19-Jul-08 02:36:38
Plot Range: 650 ft to 1002 ft
Data: STORM_KAMALMAZ\Well Based\DAQ-0002-001\
Plot File: \\EMI-MONITOR\EMI 1_40

HALLIBURTON

CALIBRATION REPORT

SURFACE TENSION SHOP CALIBRATION

Tool Name:	Depth Panel - PROT01	Reference Calibration Date:	12-Jan-08 20:09:44
Engineer:	ALFRED CHILAMPATH	Calibration Date:	13-Jan-08 19:31:38
Software Version:	WL INSITE R2.0 (Build 22)	Calibration Version:	1

SURFACE TENSION LOAD CELL

Measurement	Load Cell Value	Measurement	Calibrated	Units
Low	421.00	34.45	0.00	lbs
High	1354.96	3252.36	3250.00	lbs

ACCELEROMETER SHOP CALIBRATION				
Tool Name:	D4TS - 111572	Reference Calibration Date:	01-Jan-70 00:00:00	
Engineer:	Unkown	Calibration Date:	07-Nov-06 13:11:45	
Software Version:	Legacy Version	Calibration Version:	0	

Horizontal-1 Telemetry	Horizontal-2 Telemetry	Vertical Telemetry	Units
11447.73	11494.27	7342.18	cnts
Coefficient	Coefficient Value	Tolerance	
Gain	-0.000242	-0.0100 - 0.0100	
Offset	2.778	-----	
Orientation	Measured	Calibrated	
Horizontal	11471.00	0.00	
Vertical	7342.18	1.00	

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	NGRT - A076	Reference Calibration Date:	26-Feb-07 14:04:51
Engineer:	STEPHEN WEEKS	Calibration Date:	25-Dec-07 12:41:03
Software Version:	WL INSITE R2.0 (Build 18)	Calibration Version:	1

Calibrator Source S/N: 77			
Calibrator API Reference:209.60 api			
Measurement	Measured	Calibrated	Units
Background	40.6	41.1	api
Background + Calibrator	248.2	250.7	api
Calibrator	210.0	209.6	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	NGRT - A076	Reference Calibration Date:	25-Dec-07 12:41:03
Engineer:	STEPHEN WEEKS	Calibration Date:	25-Dec-07 12:44:11
Software Version:	WL INSITE R2.0 (Build 18)	Calibration Version:	1

Calibrator Source S/N: 77			
Calibrator API Reference:209.60 api			
Field Verification	Shop	Field	Units
Background	41.1	40.0	api
Background + Calibrator	250.7	252.1	api
Calibrator	209.6	212.1	api
Shop	Field	Difference	Tolerance
209.6	212.1	-2.5	+/- 0.00

DIPMETER SHOP CALIBRATION			
Tool Name:	EMID2A - EMI-03	Reference Calibration Date:	06-Jun-08 09:37:58
Engineer:	WHITLOCK	Calibration Date:	06-Jun-08 09:42:14
Software Version:	WL INSITE R2.2 (Build 2)	Calibration Version:	1

Tool Temperature: 105.80 degF

PAD RESISTIVITIES			
Measurement	Measurement	Measurement	Measurement

Measurement	Measured	Calibrated	Measured	Calibrated	Measured	Calibrated	Units
Pads #1-3:	0.450	0.450	0.450	0.450	0.449	0.450	ohmm
Pads #4-6:	0.450	0.450	0.451	0.450	0.471	0.450	ohmm
Cal0 #1-3:	0.456	----	0.457	----	0.440	----	ohmm
Cal0 #4-6:	0.455	----	0.463	----	0.000	----	ohmm
RELATIVE PAD VOLTS							
	Measurement	Measured		Calibrated			
	Air:	0.994		0.990			
	Zero:	-0.002		-0.002			
	Calibrate:	1.075		1.070			

OMI CALIPER SHOP CALIBRATION							
Tool Name:	EMID2A - EMI-03			Reference Calibration Date:	01-Jan-70 00:00:00		
Engineer:	WHITLOCK			Calibration Date:	06-Jun-08 09:21:32		
Software Version:	WL INSITE R2.2 (Build 2)			Calibration Version:	2		

CALIPERS AND RINGS				
Caliper	Large 15.000 in	Small 7.000 in	Units	
CALIPER 1-3-5:				
Measured	15.000	7.000	in	
Calibrated	15.000	7.000	in	
CALIPER 2-4-6:				
Measured	15.000	7.000	in	
Calibrated	15.000	7.000	in	
TOLERANCE CHECK				
Measurment	Difference	Tolerance	Pass/Fail	Units
Caliper 1-3-5 Large	0.00	0.25	Passed	in
Caliper 1-3-5 Small	0.00	0.25	Passed	in
Caliper 2-4-6 Large	0.00	0.25	Passed	in
Caliper 2-4-6 Small	0.00	0.25	Passed	in
PRESSURE PAD				
	Measured	Calibrated		
Closed	0.000	0.000		
Opened	1.000	1.000		

SIX ARM CALIPER FIELD CALIBRATION					
Tool Name:	EMID2A - EMI-03			Reference Calibration Date:	06-Jun-08 09:21:32
Engineer:	WHITLOCK			Calibration Date:	06-Jun-08 09:22:39
Software Version:	WL INSITE R2.2 (Build 2)			Calibration Version:	2
CALIPERS AND RINGS					
Caliper	Shop	Field	Difference	Tolerance	Units
Caliper 1-3-5	7.000	7.017	0.02	0.250	in
Caliper 2-4-6	7.000	7.041	0.04	0.250	in
PASS/FAIL SUMMARY					
Ring Check:			Passed		

LOCAL FRONTIER AND MONTGOMERY SHOP CALIBRATION					
---	--	--	--	--	--

ACCELEROMETER AND MAGNETOMETER SHOP CALIBRATION

Tool Name: EMID2A - EMI-03

Reference Calibration Date: 23-Sep-07 14:07:15

Engineer: SCHICKEDANZ

Calibration Date: 19-Nov-07 14:45:15

Software Version: WL INSITE R2.0 (Build 12)

Calibration Version: 1

Reference Gravity Field: 1.0000 g

Reference Magnetic Field: 51577.5000 nT

* QF : value of 0 is shown for bad quality if | data - reference | > (2 * standard deviation) and > (0.5% of reference value)

ACCELEROMETER CALIBRATION RAW DATA VALUE

Raw Acc X	Raw Acc Y	Raw Acc Z	Gravity	Quality %	QF
-3617305.0000	2659208.0000	12008.0000	0.9960	0.0040	1
2472458.0000	-3477186.5000	-7087.0000	0.9656	0.0344	1
-1938703.0000	-4048092.0000	7505.0000	1.0100	0.0100	1
-944177.0000	4334098.5000	11514.0000	0.9909	0.0091	1
-669656.0000	4439212.0000	9443.0000	1.0035	0.0035	1
2430935.0000	3440633.7500	764972.0000	1.0025	0.0025	1
32851.0000	4478782.0000	7068.0000	1.0024	0.0024	1
4470374.0000	-593281.0000	2090.0000	1.0141	0.0141	1
-229893.7500	-4475265.0000	-6517.0000	1.0130	0.0130	1
-4489938.0000	192455.0000	12597.0000	0.9958	0.0042	1
-1254688.5000	-825766.5000	2115587.5000	0.9994	0.0006	1
-2371596.5000	3512960.7500	-730145.0000	1.0013	0.0013	1

ACCELEROMETER QUALITY SUMMARY

Average Calculated Gravity Field	0.9996 g
Standard Deviation Calculated Gravity Field	0.0128 g

ACCELEROMETER GAIN AND OFFSET

	GAIN	OFFSET
ACC X	0.0000002232	0.0069211479
ACC Y	0.0000002250	-0.0052652950
ACC Z	0.0000004495	-0.0088383770

* QF : value of 0 is shown for bad quality if | data - reference | > (3 * standard deviation) and > (1% of reference value)

MAGNETOMETER CALIBRATION RAW DATA VALUE

Raw Mag X	Raw Mag Y	Raw Mag Z	Magnetic	Quality %	QF
2717867.0000	-909168.0000	144722.5000	44519.1758	0.1368	1
-2297641.5000	1232326.0000	135725.0000	43483.1211	0.1569	1
94145.0000	2679172.0000	139995.0000	44701.1094	0.1333	1
1520168.0000	-2531167.0000	146095.0000	41243.8945	0.2004	1
1930760.0000	-3500524.0000	943384.0000	60067.8672	0.1646	1
-2037685.0000	-2652282.5000	-436696.0000	46644.5859	0.0956	1
-992467.0000	-3351409.5000	-1629870.5000	51341.7305	0.0046	1
-3067879.7500	1090329.5000	-1637480.0000	56335.5078	0.0922	1
973934.0000	2905254.0000	-1637785.5000	53719.1406	0.0415	1
3061766.0000	-1258965.5000	-1630453.5000	54172.2852	0.0503	1
1415687.0000	484340.0000	2096646.5000	49768.0508	0.0351	1
1060696.0000	-1894100.0000	-2351433.5000	43792.7500	0.1509	1

MAGNETOMETER QUALITY SUMMARY

Average Calculated Magnetic Field	49149.1016 nT
Standard Deviation Calculated Magnetic Field	5976.8628 nT

MAGNETOMETER GAIN AND OFFSET

	GAIN	OFFSET
MAG X	0.0156716667	40.5807189941
MAG Y	0.0145755950	4624.9799804688
MAG Z	0.0171566736	6997.1357421875

CALIBRATION SUMMARY

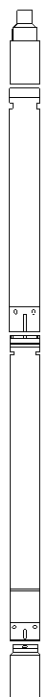
Sensor	Shop	Field	Post	Difference	Tolerance	Units
Depth Panel-PROT01						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	3250.00	-----	-----	0.00	-----	lbs
D4TS-111572						
AccZ Horizontal	0.00	-----	-----	0.00	-----	g
AccZ Vertical	1.00	-----	-----	0	-----	g
NGRT-A076						
Gamma Ray Calibrator	209.6	212.1	-----	-2.5	+/- +/- 9.0	api
EMID2A-EMI-03						
Refvl Pad 1	0.450	-----	-----	0.000	-----	-----
Refvl Pad 2	0.450	-----	-----	0.000	-----	-----
Refvl Pad 3	0.450	-----	-----	0.000	-----	-----
Refvl Pad 4	0.450	-----	-----	0.000	-----	-----
Refvl Pad 5	0.450	-----	-----	0.000	-----	-----
Refvl Pad 6	0.450	-----	-----	0.000	-----	-----
CAL 1-4	7.000	7.031	-----	-0.031	+/- -----	in
CAL 2-5	7.000	7.054	-----	-0.054	+/- -----	in
CAL 3-6	7.000	7.001	-----	-0.001	+/- -----	in

Data: STORM_KAMALMAZ\0002 D4TS-NGRT-EMI\IDLE

Date: 19-Jul-08 01:05:43

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head-PROT01 30.00 lbs	Ø 3.625 in →			1.92 ft	40.50 ft
					38.58 ft
D4TS-111572 100.00 lbs	Ø 3.625 in →			6.50 ft	
					32.08 ft
NGRT-A076 176.00 lbs	Ø 3.625 in →			8.00 ft	
			← GammaRay @ 25.41 ft		24.08 ft

0.00 ft

Date: 19-Jul-08 01:08:18