

HALLIBURTON

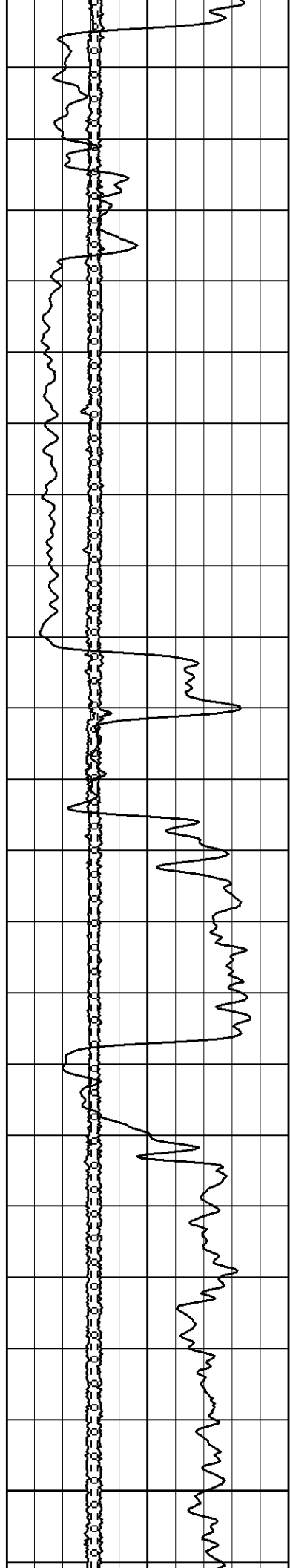
SIX ARM DIPMETER SHIVA COMPUTATION LOG 9 X 3 X 80

COMPANY				STORM CAT ENERGY (USA) OPERATING CORP			
WELL				KAMALMAZ 2-13H			
FIELD				B-43			
COUNTY				VAN BUREN			
STATE				ARKANSAS			
Permanent Datum				GL			
Log measured from				KB			
Drilling measured from				KB			
Date				18-Jul-08			
Run No.				1			
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 ppg			
Viscosity				110.00 s/cf			
PH				9.60 pH			
Fluid Loss				6.1 cph			
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			
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			
Location				FORT SMITH			
Recorded By				WHITLOCK			
Witnessed By				TOM MAJORS			
LISA REEVES							

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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.						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.	
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			

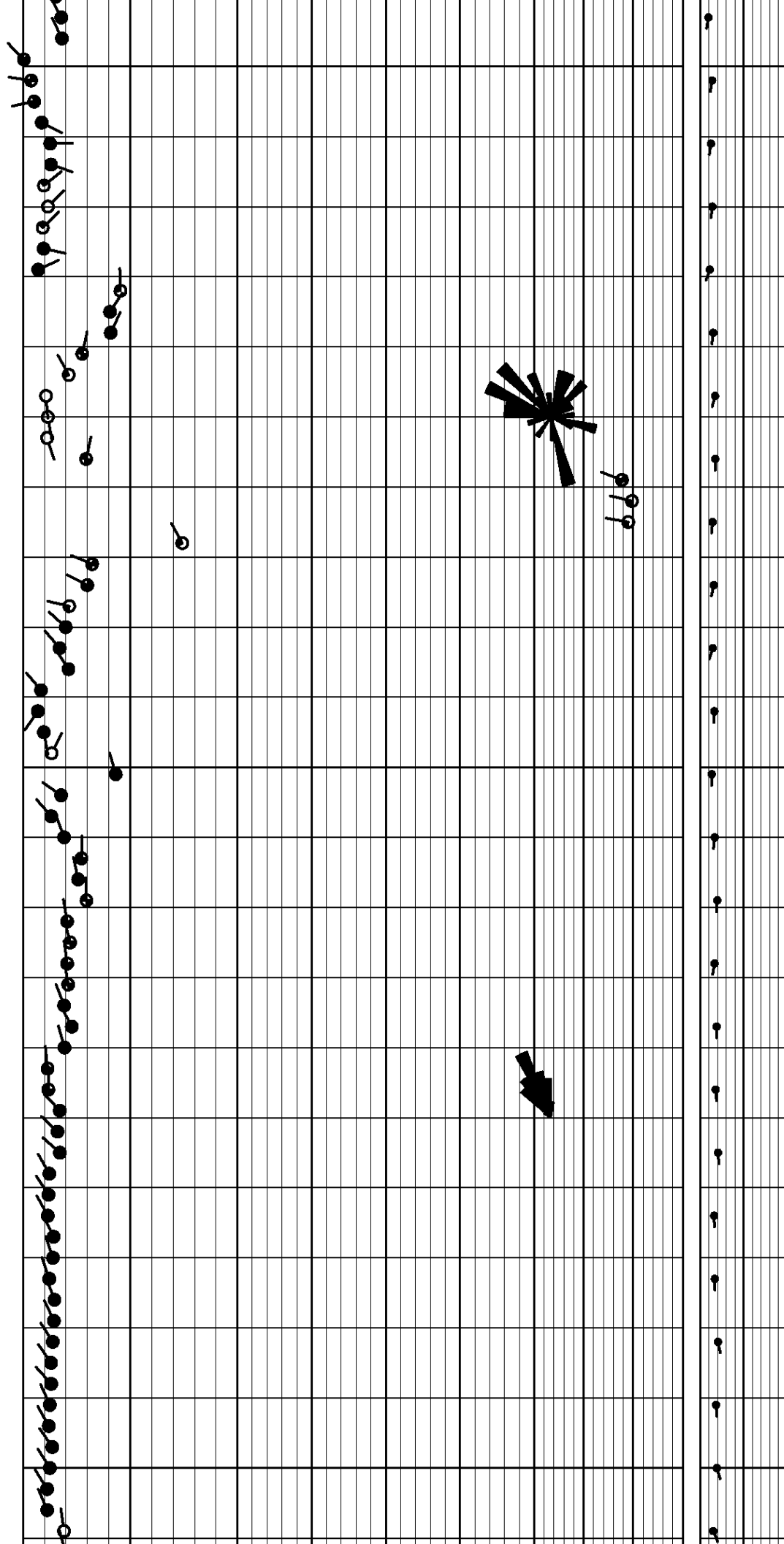
GENERAL			GAMMA			ACOUSTIC			DENSITY		NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
DIRECTIONAL INFORMATION														
Maximum Deviation								@	KOP				@	
Remarks: 5 1/2 INCH CASING USED FOR ANNULAR HOLE VOLUME														

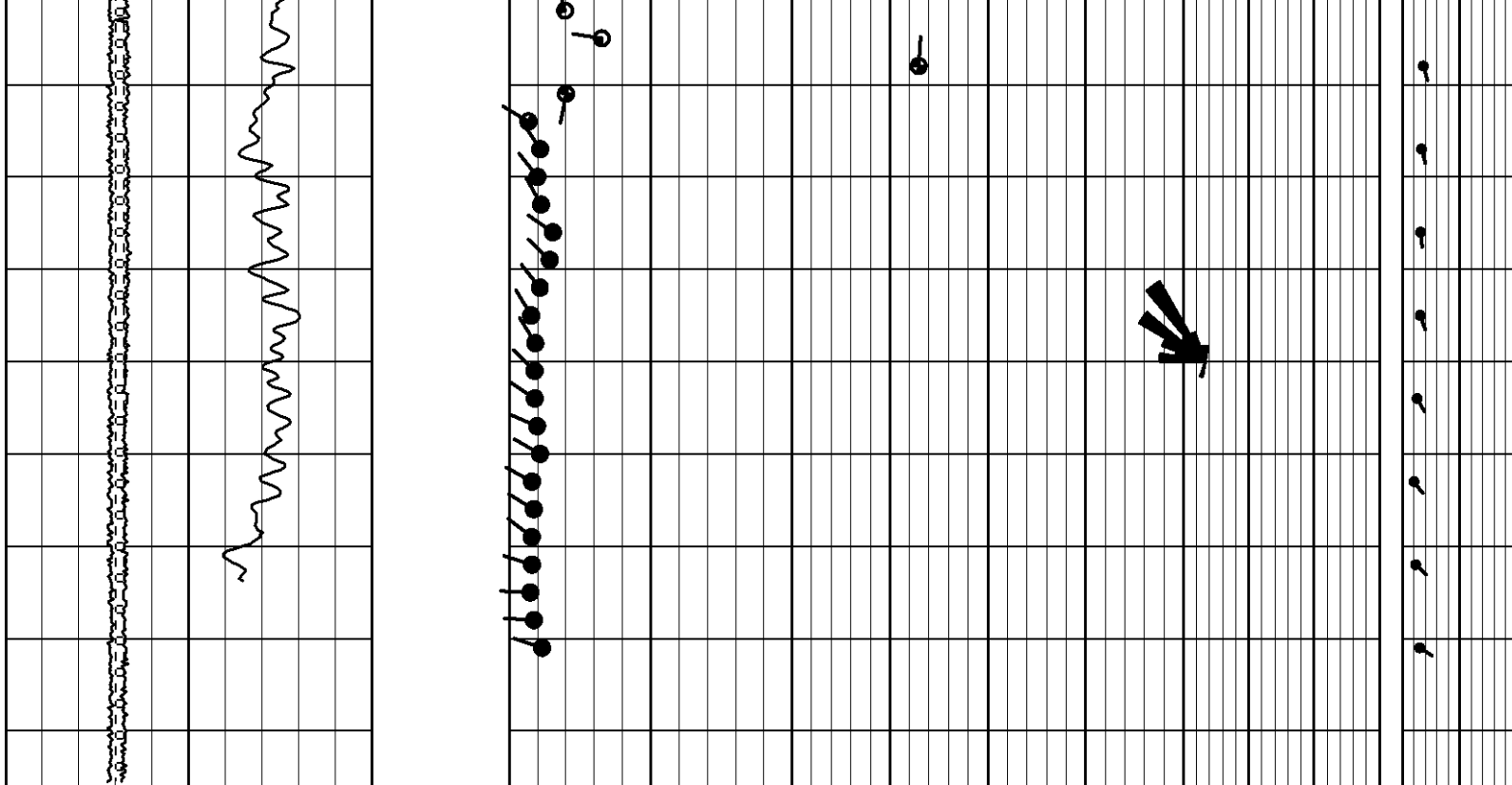






700

800

900





		Depth 1 : 240	Dip Azimuth		
CALIPER					
			degrees		
Gamma API		AZI1	Dip Angle		DRIFT
0	150		0		
api		degrees	degrees		degrees
Max Caliper					
6	16				
inches					
Min Caliper					
6	16				

HALLIBURTON

Plot File: \\LOCAL-ISTORM_KAMALMAZ0002 D4TS-NGRT-EMI\EMI-SHIVA\SED_SHIVA_STANDARD Version: R4.2

Plot Time: 19-Jul-08 02:38:27

Plot Range: 668 ft to 996 ft

Data: STORM_KAMALMAZ0002 D4TS-NGRT-EMI001 19-Jul-08 01:41 Up @1000.3ft*

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: WI 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			
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PAD RESISTIVITIES

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

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 $| \text{data} - \text{reference} | > (2 * \text{standard deviation})$ and $> (0.5\% \text{ of reference value})$ **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 $| \text{data} - \text{reference} | > (3 * \text{standard deviation})$ and $> (1\% \text{ of reference value})$ **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						
RefVI Pad 1	0.450	-----	-----	0.000	-----	-----
RefVI Pad 2	0.450	-----	-----	0.000	-----	-----
RefVI Pad 3	0.450	-----	-----	0.000	-----	-----
RefVI Pad 4	0.450	-----	-----	0.000	-----	-----
RefVI Pad 5	0.450	-----	-----	0.000	-----	-----
RefVI 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-EMIDLE

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

