

Run No.	Depth From	Depth To	Speed ft/min	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
				L	R	L	R		L	R		L	R	
ONE	12477	12240	REC	0	100				0.45	-0.15	2.71	0.45	-0.15	LIME

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: NO ANNULAR HOLE VOLUME CALCULATED
PRESENTATIONS, SCALES, AND LOGGING PARAMETERS AS REQUESTED BY CUSTOMER.
HEADING INFORMATION AND TVD DATA AS PROVIDED BY CUSTOMER.
CREW: SHANKS, FOSTER, MIRE --- RIG: PRECISION 314
THANK YOU FOR USING HALLIBURTON ENERGY SERVICES, LAUREL, MS (601-649-9290)
TRIPLE COMBO LOGGED IN SEPERATE TOOL PUSHES AT CUSTOMER REQUEST.
GAMMA RAY LOGGED 500 FT INTO CASING AT CUSTOMER REQUEST.
TVD LOGS ONLY UP TO SURFACE CASING AS TVD DATA NOT PROVIDED FOR ENTIRE LOGGED INTERVAL OF 12477 FT TO 11712FT.
LOG TIED TO CASING AT CUSTOMER REQUEST.

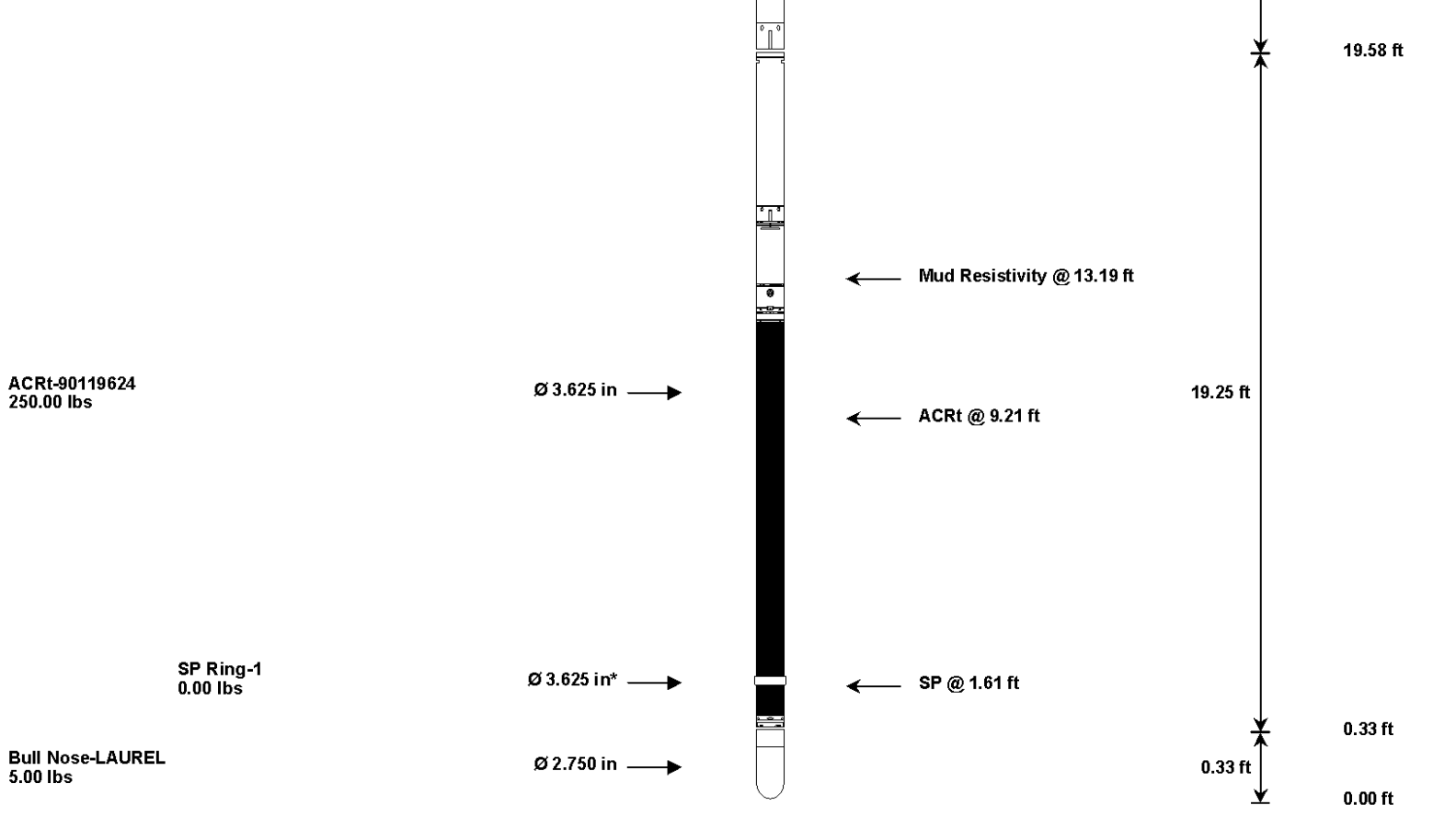
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

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TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length	
Spacer-SPACER 250.00 lbs		Ø 3.625 in →			5.17 ft	45.62 ft	
Flex Joint-NEWIBERIA 140.00 lbs		Ø 3.625 in →				5.67 ft	40.45 ft
Swivel-NEWIBERIA 70.00 lbs		Ø 3.625 in →				3.02 ft	34.78 ft
DTDD-NEWIBERIA 90.00 lbs		Ø 3.625 in →			← Load Cell @ 30.67 ft ← Pad Locator @ 29.08 ft	3.66 ft	31.76 ft
							28.10 ft
GTET-10889018 165.00 lbs		Ø 3.625 in →			← GammaRay @ 22.04 ft	8.52 ft	



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max. Log. Speed (fpm)
SPC	Test	SPACER	250.00	5.17	40.45	100.00
FLEX	Flex Joint	NEWIBERIA	140.00	5.67	34.78	300.00
SWVL	MCSA-D Multiconductor Swivel	NEWIBERIA	70.00	3.02	31.76	300.00
DTDD	Downhole Tension Device	NEWIBERIA	90.00	3.66	28.10	300.00
GTET	Gamma Telemetry Tool	10889018	165.00	8.52	19.58	60.00
ACRT	Array Compensated True Resistivity	90119624	250.00	19.25	0.33	300.00
SP	SP Ring	1	0.00	0.25	*	300.00
BLNS	Bull Nose	LAUREL	5.00	0.33	0.00	300.00
Total			970.00	45.62		

* Not included in Total Length and Length Accumulation.

Data: BREIT_27_8HL_R1\0001 ACRT GREY TPL\003 16-Aug-11 13:16 Up 12465.3f
Date: 18-Aug-11 00:02:41

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Spacer-SPACER 250.00 lbs		Ø 3.625 in			5.17 ft	46.87 ft
Flex Joint-NEWIBERIA 140.00 lbs		Ø 3.625 in			5.67 ft	41.70 ft

Swivel-NEWIBERIA
70.00 lbs

Ø 3.625 in →

3.02 ft

36.03 ft

DTDD-NEWIBERIA
90.00 lbs

Ø 3.625 in →

3.66 ft

33.01 ft

← Load Cell @ 31.92 ft

← Pad Locator @ 30.33 ft

GTET-10889018
165.00 lbs

Ø 3.625 in →

8.52 ft

29.35 ft

← GammaRay @ 23.29 ft

DSNT-10889021
174.00 lbs

Ø 3.625 in →

9.69 ft

20.83 ft

← DSN Far @ 13.90 ft

← DSN Near @ 13.15 ft

SDLT-10895159
360.00 lbs

Ø 4.500 in →

10.81 ft

11.15 ft

Ø 4.750 in →

← SDL Microlog @ 3.33 ft

← SDL Caliper @ 3.15 ft

← SDL @ 3.14 ft

Bull Nose-LAUREL
5.00 lbs

Ø 2.750 in →

0.33 ft

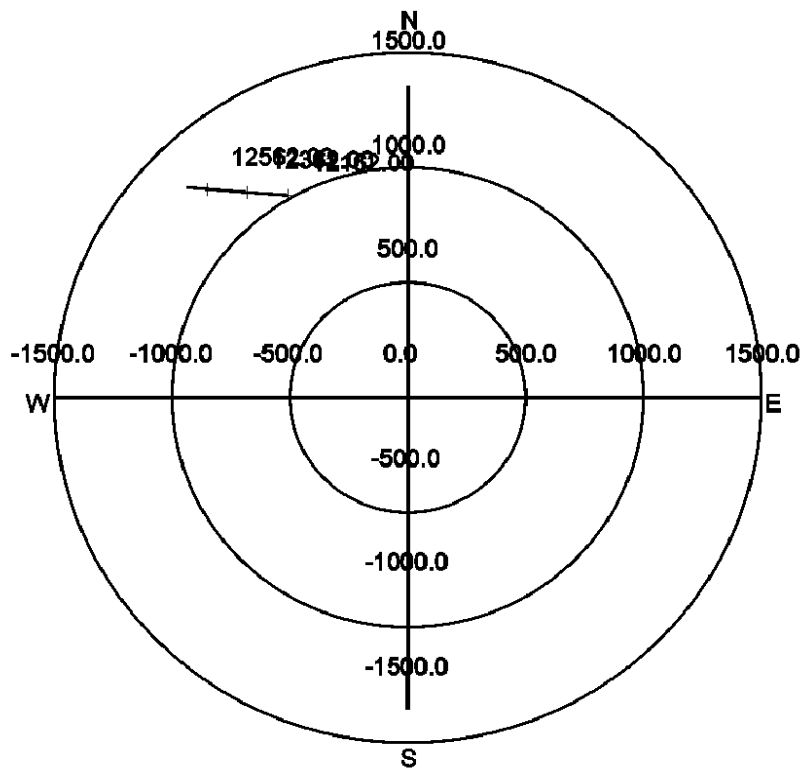
0.33 ft

0.00 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
SPC	Test	SPACER	250.00	5.17	41.70	100.00
FLEX	Flex Joint	NEWIBERIA	140.00	5.67	36.03	300.00
SWVL	MCSA-D Multiconductor Swivel	NEWIBERIA	70.00	3.02	33.01	300.00
DTDD	Downhole Tension Device	NEWIBERIA	90.00	3.66	29.35	300.00
GTET	Gamma Telemetry Tool	10889018	165.00	8.52	20.83	60.00
DSNT	Dual Spaced Neutron	10889021	174.00	9.69	11.15	60.00
SDLT	Spectral Density Tool	10895159	360.00	10.81	0.33	60.00
BLNS	Bull Nose	LAUREL	5.00	0.33	0.00	300.00
Total			1,254.00	46.87		
Data: BREIT_27_8HL_R1\0002 POROSITY GREY TPL\002 17-Aug-11 16:51 Up 12465.3f					Date: 18-Aug-11 00:04:30	

TVD CROSS SECTION LOOKING DOWN



MD : 12668.00 feet
Scale: 500 feet/division

Measured Depth (ft)	Inclination (deg)	True Vertical Depth (ft)	Azimuth (deg)	N/S Departure (ft)	E/W Departure (ft)
12162.00	60.2	11287.79	274.59	969.83	-509.77
12191.00	60.5	11302.15	274.52	971.83	-534.89
12221.00	60.4	11316.96	274.52	973.89	-560.89
12251.00	60.3	11331.81	274.75	976.00	-586.88
12281.00	60.4	11346.65	274.64	978.13	-612.86
12311.00	60.0	11361.56	274.80	980.27	-638.80
12341.00	59.5	11376.69	274.86	982.45	-664.62
12371.00	59.3	11391.96	275.01	984.68	-690.34
12401.00	59.0	11407.35	275.20	986.97	-715.99
12431.00	59.0	11422.80	275.13	989.28	-741.61
12461.00	58.9	11438.28	275.13	991.58	-767.20
12491.00	58.8	11453.79	275.16	993.88	-792.78
12522.00	58.6	11469.89	275.27	996.29	-819.16
12578.00	57.9	11499.38	275.65	1000.82	-866.54
12668.00	57.4	11547.59	275.86	1008.44	-942.16

Horizontal displacement is relative to the well head.

Horizontal displacement (closure) at 12,668.00 ft is 1,380.08 ft along 316.95 deg (Grid).

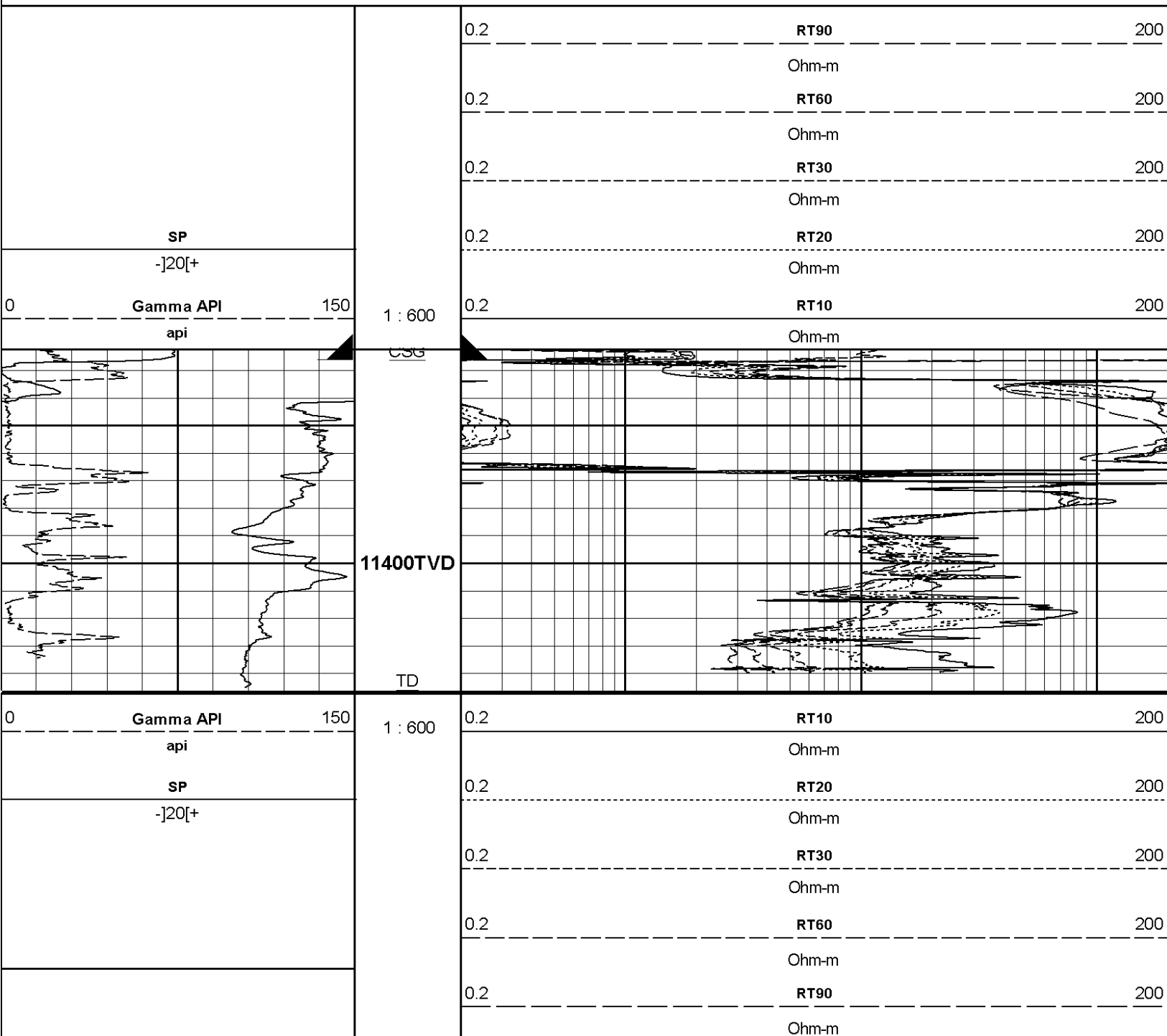
Data: BREIT_27_8HL_R1

Date: 18-Aug-11 01:06:29

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Plot Time: 26-Aug-11 10:59:58
Plot Range: 11322.4 ft to 11446.5 ft
Data: BREIT_27_8HL_R1\Well Based\DAQ-0001-003\
Plot File: \TRIPLE TVD\2 Inch Resistivity_TELLUS

MAIN PASS 2" = 100'
TRUE VERTICAL DEPTH



HALLIBURTON

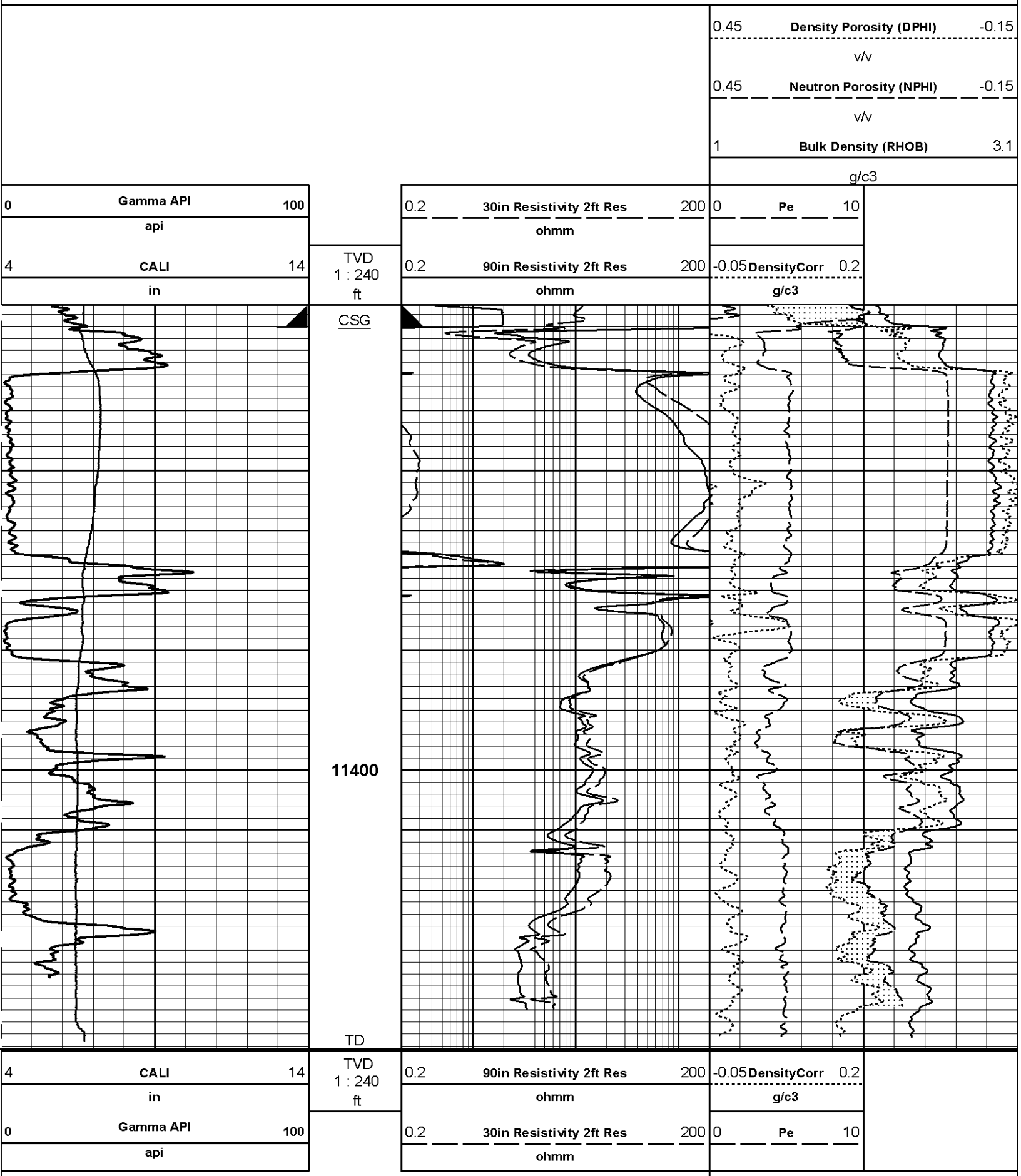
Plot Time: 26-Aug-11 11:00:02
 Plot Range: 11322.4 ft to 11446.5 ft
 Data: BREIT_27_8HL_R1Well Based\DAQ-0001-003\
 Plot File: \\TRIPLE TVD\2 Inch Resistivity_TELLUS

MAIN PASS 2" = 100'
 TRUE VERTICAL DEPTH

HALLIBURTON

Plot Time: 26-Aug-11 11:00:03
 Plot Range: 11322.4 ft to 11446.5 ft
 Data: BREIT_27_8HL_R1Well Based\
 Plot File: \\TRIPLE TVD\BREITBURN TRIPLE

MAIN PASS 5" = 100' TRUE VERTICAL DEPTH



	Bulk Density (RHOB)	3.1
	g/c3	
0.45	Neutron Porosity (NPHI)	-0.15
	v/v	
0.45	Density Porosity (DPHI)	-0.15
	v/v	

HALLIBURTON

Plot Time: 26-Aug-11 11:00:10
 Plot Range: 11322.4 ft to 11446.5 ft
 Data: BREIT_27_8HL_R1\Well Based*\n
 Plot File: \\TRIPLE TVD\BREITBURN TRIPLE

MAIN PASS 5" = 100'
 TRUE VERTICAL DEPTH

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	6.500	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	8.400	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.560	ohmm
	SHARED	TRM	Temperature of Mud	74.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	12685.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	Temperature Master Tool	NONE	
	SHARED	BHSM	Borehole Size Master Tool	NONE	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Density	
	Rwa / CrossPlot	AFAC	Archie A factor	0.8100	
	Rwa / CrossPlot	MFAC	Archie M factor	2.0000	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
	Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
	Rwa /	ADP	Use Air Porosity to calculate CrossplotPhi	No	

CrossPlot	API	See API Property to calculate CrossPlot in	NO	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position	Centered	
ACRt	RTOK	Process ACRt?	Yes	
ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt	TPOS	Tool Position	Eccentered	
ACRt	RMOP	Rmud Source	Mud Cell	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	THQY	Threshold Quality	0.50	

BOTTOM _____
 Data: BREIT_27_8HL_R1\0001 ACRT GREY TPL\IDLE Date: 18-Aug-11 00:02:25

HALLIBURTON

CUSTOMER EVENT LOG

Event Type	Time & Date	Depth (ft)	Event Description
	16-Aug-11 12:41:56	11728.25	Logging 001 16-Aug-11 12:41 Dn 11728.3f
	16-Aug-11 12:44:04	11810.29	Halting 001 16-Aug-11 12:41 Dn 11728.3f
	16-Aug-11 12:48:25	11767.25	Logging 002 16-Aug-11 12:48 Dn 11767.3f
	16-Aug-11 13:14:20	12440.19	Halting 002 16-Aug-11 12:48 Dn 11767.3f
	16-Aug-11 13:16:08	12465.25	Logging 003 16-Aug-11 13:16 Up 12465.3f
	16-Aug-11 13:50:03	11709.69	Halting 003 16-Aug-11 13:16 Up 12465.3f

Data: BREIT_27_8HL_R1\0001 ACRT GREY TPL\HW11277 Date: 17-Aug-11 23:59:18

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 10889018	Reference Calibration Date: 22-Jun-11 09:19:18
Engineer: ROLAND VALDEZ	Calibration Date: 27-Jul-11 09:30:27
Software Version: WL INSITE R3.2.1 (Build 7)	Calibration Version: 1

Calibrator Source S/N: 115
 Calibrator API Reference:225.00 api
 Equivalent Calibrator API Reference:228.9 api

Measurement	Measured	Calibrated	Units
Background	22.2	22.6	api
Background + Calibrator	247.1	251.6	api
Calibrator	229.3	228.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 10889018	Reference Calibration Date: 27-Jul-11 09:30:27
Engineer: ROLAND VALDEZ	Calibration Date: 16-Aug-11 21:11:28
Software Version: WL INSITE R3.2.5 (Build 2)	Calibration Version: 1

Calibrator Source S/N: 115
 Calibrator API Reference:225.00 api
 Equivalent Calibrator API Reference:228.9 api

Field Verification	Shop	Field	Units
Background	22.6	54.4	api
Background + Calibrator	251.6	282.8	api
Calibrator	228.9	228.3	api
Shop	Field	Difference	Tolerance
228.9	228.3	0.6	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION

Tool Name:	GTET - 10889018	Reference Calibration Date:	16-Aug-11 21:11:28
Engineer:	ROLAND VALDEZ	Calibration Date:	17-Aug-11 23:01:43
Software Version:	WL INSITE R3.2.5 (Build 2)	Calibration Version:	1

Calibrator Source S/N: 115
 Calibrator API Reference:225.00 api
 Calibrator API Reference:228.9 api

Post Verification	Field	Post	Units	
Background	54.4	132.4	api	
Background + Calibrator	282.8	354.9	api	
Calibrator	228.3	222.4	api	
Shop	Field	Post	Difference	Tolerance
228.9	228.3	222.4	5.9	+/- 9.00

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	ACRt - 90119624	Reference Calibration Date:	29-Apr-11 09:52:23
Engineer:	ROLAND VALDEZ	Calibration Date:	22-Jun-11 10:20:59
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	0.9995	1.05	0.95	1.0012	1.05	0.95	0.9981	1.05
A2 (50")	0.95	1.0125	1.05	0.95	1.0132	1.05	0.95	1.0110	1.05
A3 (29")	0.95	1.0113	1.05	0.95	1.0116	1.05	0.95	1.0099	1.05
A4 (17")	0.95	0.9974	1.05	0.95	0.9964	1.05	0.95	0.9974	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9923	1.05	0.95	0.9929	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9852	1.05	0.95	0.9865	1.05

TYPICAL SONDE OFFSET RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-5	-1.339	2	-6	-4.346	-2	-8	-4.904	-2
A2 (50")	-7	-1.665	-1	-6	-3.385	-2	-7	-5.158	-2
A3 (29")	-27	-12.893	-9	-9	-3.664	-3	-7	-3.361	-1
A4 (17")	-180	-104.555	-60	-45	-33.392	-15	-39	-26.504	-13
A5 (10")	N/A	N/A	N/A	-150	-113.044	-50	-80	-54.545	-10
A6 (6")	N/A	N/A	N/A	175	316.445	525	90	153.783	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.8644	1.3	Mud Cell	0.95	0.997	1.05

R-MUD VERIFICATION

36K	1.0	1.2236	2.0
72K	1.0	1.5135	2.0

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10889018						
Gamma Ray Calibrator	228.9	228.3	222.4	5.9	+/- 9.00	api
ACRt-90119624						
Mud Cell	0.997	-----	-----	0.000	-----	ohm-m

Data: BREIT_27_8HL_R1\0001 ACRT GREY TPL\IDLE Date: 18-Aug-11 00:02:00

HALLIBURTON

DEPTH SUMMARY REPORT

Depth Measuring System			
Depth Panel Type:	WSDP 2.04	Software Version:	JUN 24 2009 01:01:01
Encoder 1 Enabled?:	Yes	Encoder 2 Enabled?:	Yes
Encoder 1 Correction Enabled?:	Yes	Encoder 2 Correction Enabled?:	Yes
Encoder 1 Correction Factor:	0.000 ft / 1000 ft	Encoder 2 Correction Factor:	0.000 ft / 1000 ft

Logging Cable Information			
Cable Type:	7H47RX	Stretch Coefficient:	0.065 ft/100ft/1000lb
Cable Weight:	392.00 lbsp1000ft	Cable Maximum Safe Pull:	11,550 lbs
Breaking Strength:	23,100 lbs	Mechanical Weakpoint:	8,000 lbs
Tool String Weight in Fluid:	970.00 lbs		

Depth Control - Logging Up			
Conveyance:	Wireline	Magnetic Mark Correction Applied?	Yes
Cable Stretch Correction Applied?	Standard	Magnetic Mark Interval:	100 ft
Corrected to:	Pipe Depth	Top Depth:	11,707.41 ft
Bottom Depth:	12,465.00 ft	Stretch Applied:	7.96 ft
Stretch Applied:	9.04 ft		

Mark Information			
No FIRST MARK Found			
Deepest Mark found at:	12463.46 ft	Shallowest Mark found at:	12463.46 ft
Tension at Mark Depth:	667.0 lbs	Tension at Mark Depth:	667.0 lbs
Stretch Applied at Mark Depth:	9.0 ft	Stretch Applied at Mark Depth:	9.0 ft

Data: BREIT_27_8HL_R1\0001 ACRT GREY TPL\003 16-Aug-11 13:16 Up 12465.3f Date: 18-Aug-11 00:03:11

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP	-----	-----	-----	-----	-----
	SHARED	BS	Bit Size	6.500	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	8.400	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm

SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
SHARED	RMUD	Mud Resistivity	1.560	ohmm
SHARED	TRM	Temperature of Mud	74.0	degF
SHARED	CSD	Logging Interval is Cased?	No	
SHARED	ICOD	AHV Casing OD	5.500	in
SHARED	ST	Surface Temperature	75.0	degF
SHARED	TD	Total Well Depth	12685.00	ft
SHARED	BHT	Bottom Hole Temperature	180.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	NONE	
SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
SHARED	TEMM	Temperature Master Tool	NONE	
SHARED	BHSM	Borehole Size Master Tool	NONE	
Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
Rwa / CrossPlot	FCHO	Select Source of F	Density	
Rwa / CrossPlot	AFAC	Archie A factor	0.8100	
Rwa / CrossPlot	MFAC	Archie M factor	2.0000	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position	Centered	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNOS	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	DMA	Formation Density Matrix	2.710	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	MLOK	Process MicroLog Outputs?	Yes	

BOTTOM

Data: BREIT_27_8HL_R1\0002 POROSITY GREY TPL\IDLE

Date: 17-Aug-11 18:11:30

HALLIBURTON

CUSTOMER EVENT LOG

Event	Time & Date	Depth	Event Description
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Type	Time & Date	(ft)	Event Description
	17-Aug-11 16:21:50	11701.25	Logging 001 17-Aug-11 16:21 Dn 11701.3f
	17-Aug-11 16:49:58	12506.08	Halting 001 17-Aug-11 16:21 Dn 11701.3f
	17-Aug-11 16:51:06	12465.25	Logging 002 17-Aug-11 16:51 Up 12465.3f
	17-Aug-11 17:25:06	11806.73	Halting 002 17-Aug-11 16:51 Up 12465.3f

Data: BREIT_27_8HL_R1\0002 POROSITY GREY TPL\HW11277 Date: 17-Aug-11 18:11:52

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 10889018	Reference Calibration Date: 22-Jun-11 09:19:18
Engineer: ROLAND VALDEZ	Calibration Date: 27-Jul-11 09:30:27
Software Version: WL INSITE R3.2.1 (Build 7)	Calibration Version: 1

Calibrator Source S/N: 115
 Calibrator API Reference:225.00 api
 Equivalent Calibrator API Reference:228.9 api

Measurement	Measured	Calibrated	Units
Background	22.2	22.6	api
Background + Calibrator	247.1	251.6	api
Calibrator	229.3	228.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 10889018	Reference Calibration Date: 27-Jul-11 09:30:27
Engineer: ROLAND VALDEZ	Calibration Date: 16-Aug-11 21:11:28
Software Version: WL INSITE R3.2.5 (Build 2)	Calibration Version: 1

Calibrator Source S/N: 115
 Calibrator API Reference:225.00 api
 Equivalent Calibrator API Reference:228.9 api

Field Verification	Shop	Field	Units
Background	22.6	54.4	api
Background + Calibrator	251.6	282.8	api
Calibrator	228.9	228.3	api

Shop	Field	Difference	Tolerance
228.9	228.3	0.6	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION

Tool Name: GTET - 10889018	Reference Calibration Date: 16-Aug-11 21:11:28
Engineer: ROLAND VALDEZ	Calibration Date: 17-Aug-11 23:01:43
Software Version: WL INSITE R3.2.5 (Build 2)	Calibration Version: 1

Calibrator Source S/N: 115
 Calibrator API Reference:225.00 api
 Calibrator API Reference:228.9 api

Post Verification	Field	Post	Units
Background	54.4	132.4	api
Background + Calibrator	282.8	354.9	api
Calibrator	228.3	222.4	api

Shop	Field	Post	Difference	Tolerance
228.9	228.3	222.4	5.9	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 10889021

Reference Calibration Date: 01-Aug-11 12:42:00

Engineer: ROLAND VALDEZ

Calibration Date: 01-Aug-11 12:55:02

Software Version: WL INSITE R3.2.5 (Build 2)

Calibration Version: 1

Logging Source S/N: DSN 356

Tank Serial Number: 105025

Reference value assigned to Tank: 52.800

Snow Block S/N: 100132479D

Calibration Tank Water Temperature: 90 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.957	0.958	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2169	0.2172	0.0004	+/- 0.0020
Calibrated Ratio:	9.93	9.94	0.012	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0763	0.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name: DSNT - 10889021

Reference Calibration Date: 01-Aug-11 12:55:02

Engineer: ROLAND VALDEZ

Calibration Date: 17-Aug-11 22:54:53

Software Version: WL INSITE R3.2.5 (Build 2)

Calibration Version: 1

Logging Source S/N: DSN 356

Snow Block S/N: 100132479D

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0763	0.0647	-0.0116	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DUAL SPACED NEUTRON POST CALIBRATION

Tool Name: DSNT - 10889021

Reference Calibration Date: 17-Aug-11 22:54:53

Engineer: ROLAND VALDEZ

Calibration Date: 17-Aug-11 22:56:08

Software Version: WL INSITE R3.2.5 (Build 2)

Calibration Version: 1

NEUTRON POST-CHECK SUMMARY

	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0647	0.0649	0.0002	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT - 10895159	Reference Calibration Date: 27-Apr-11 10:44:21
Engineer: ROLAND VALDEZ	Calibration Date: 22-Jun-11 12:27:12
Software Version: WL INSITE R3.2.1 (Build 7)	Calibration Version: 1

Logging Source S/N: 5108 GW

Aluminum Block S/N: 63075

Density: 2.599g/cc

Pe: 3.170

Magnesium Block S/N: 63366

Density: 1.683g/cc

Pe: 2.650

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0594	1.0628	0.90 - 1.10
Near Dens Gain	1.0242	1.0281	0.90 - 1.10
Near Peak Gain	1.0091	1.0222	0.90 - 1.10
Near Lith Gain	1.0021	1.0139	0.90 - 1.10
Far Bar Gain	1.0177	1.0150	0.90 - 1.10
Far Dens Gain	1.0048	1.0035	0.90 - 1.10
Far Peak Gain	0.9995	0.9977	0.90 - 1.10
Far Lith Gain	0.9724	0.9691	0.90 - 1.10
Near Bar Offset	-0.4916	-0.5180	NONE
Near Dens Offset	-0.2002	-0.2295	NONE
Near Peak Offset	-0.0865	-0.1901	NONE
Near Lith Offset	-0.0487	-0.1439	NONE
Far Bar Offset	-0.1973	-0.1717	NONE
Far Dens Offset	-0.0887	-0.0765	NONE
Far Peak Offset	-0.0875	-0.0682	NONE
Far Lith Offset	0.0549	0.0832	NONE
Near Bar Background	861.15	861.77	700 - 1450
Near Dens Background	282.48	282.69	230 - 480
Near Peak Background	122.73	121.00	100 - 210
Near Lith Background	152.39	152.75	125 - 260
Far Bar Background	518.86	515.69	450 - 900
Far Dens Background	204.22	201.86	175 - 345
Far Peak Background	80.98	80.35	70 - 140
Far Lith Background	85.41	84.80	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.677	1.683	0.006	+/- 0.015

Pe	2.627	2.611	-0.016	+/- 0.150
ALUMINUM				
Density (g/cc)	2.596	2.599	0.004	+/- 0.01500
Pe	3.124	3.131	0.007	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0016	+/- 0.0110	-0.0016	+/- 0.0140
Magnesium Block	-0.0015	+/- 0.0110	-0.0009	+/- 0.0140
Aluminum Block	-0.0006	+/- 0.0110	0.0012	+/- 0.0140
Resolution	9.84	6.00 - 11.50	9.18	6.00 - 11.50
Internal Verifier(B+D+P+L)	1418	1200 - 2700	883	800 - 1700

PASS/FAIL SUMMARY

Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

SPECTRAL DENSITY FIELD CHECK

Tool Name:	SDLT - 10895159	Reference Calibration Date:	22-Jun-11 12:27:12
Engineer:	ROLAND VALDEZ	Calibration Date:	16-Aug-11 21:07:56
Software Version:	WL INSITE R3.2.5 (Build 2)	Calibration Version:	1

Pad Temperature: 89.3 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1418.213	1413.569	-4.644	15.202
Far (B+D+P+L) cps	882.708	880.812	-1.896	16.204
Near Resolution	9.84	9.87	0.030	0.50
Far Resolution	9.18	9.34	0.160	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

SPECTRAL DENSITY POST CHECK

Tool Name:	SDLT - 10895159	Reference Calibration Date:	16-Aug-11 21:07:56
Engineer:	ROLAND VALDEZ	Calibration Date:	17-Aug-11 22:52:13
Software Version:	WL INSITE R3.2.5 (Build 2)	Calibration Version:	1

Pad Temperature: 89.3 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1413.569	1414.431	0.862	15.202
Far (B+D+P+L) cps	880.812	879.959	-0.853	16.204
Near Resolution	9.87	9.84	-0.030	0.50
Far Resolution	9.34	9.18	-0.160	1.00

Far (B+D+P+L) cps	880.812	876.956	-3.856	16.204
Near Resolution	9.87	9.83	-0.040	0.50
Far Resolution	9.34	9.29	-0.050	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10895159	Reference Calibration Date: 27-Apr-11 10:00:25
Engineer: ROLAND VALDEZ	Calibration Date: 22-Jun-11 12:50:10
Software Version: WL INSITE R3.2.1 (Build 7)	Calibration Version: 1

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2166.31	-2064.20	-7000.00 - -1000.00
Pad Gain	0.0003904	0.0003832	0.000200 - 0.000600
Arm Offset	-1441.17	-1047.38	-5000.00 - 3000.00
Arm Gain	0.0005276	0.0005002	0.000300 - 0.000700
Arm Power	-0.000006227	-0.000004210	-0.000010 - 0.000010

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

CALIBRATION RINGS

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.78	3.75	-0.03	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.35	6.50	0.15	+/- 0.20
Medium Ring (in)	8.16	8.25	0.09	+/- 0.20
Large Ring (in)	14.83	15.00	0.17	+/- 0.20

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
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SDLT CALIPER FIELD CALIBRATION

Tool Name: SDLT - 10895159	Reference Calibration Date: 22-Jun-11 12:50:10
Engineer: ROLAND VALDEZ	Calibration Date: 17-Aug-11 23:02:30
Software Version: WL INSITE R3.2.5 (Build 2)	Calibration Version: 1

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.69	-0.06	+/- 0.10
Ring Diameter	8.25	8.17	-0.08	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
Diameter Check:	Passed

SDLT CALIPER POST CALIBRATION

Tool Name: SDLT - 10895159

Reference Calibration Date: 17-Aug-11 23:02:30

Engineer: ROLAND VALDEZ

Calibration Date: 17-Aug-11 23:04:07

Software Version: WL INSITE R3.2.5 (Build 2)

Calibration Version: 1

MEASURED CALIPER VALUES

Measurement	Field	Post	Change	Control Limit On New Value
Pad Extension	3.69	3.69	-0.00	+/- 0.10
Ring Diameter	8.17	8.17	-0.00	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check: Passed
Diameter Check: Passed

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10889018						
Gamma Ray Calibrator	228.9	228.3	222.4	5.9	+/- 9.00	api
DSNT-10889021						
Snow-Block Porosity	0.0763	0.0647	0.0649	-0.0002	+/- 0.0150	decp
SDLT-10895159						
Near(B+D+P+L)	1418.213	1413.569	1414.431	-0.862	+/-15.202	cps
Far(B+D+P+L)	882.708	880.812	876.956	3.856	+/-16.204	cps
Pad Extension	3.75	3.69	3.69	0.00	+/-0.10	in
Ring Diameter	8.25	8.17	8.17	0.000	+/-0.15	in

Data: BREIT_27_8HL_R1\0002 POROSITY GREY TPL\IDLE

Date: 17-Aug-11 23:05:11

HALLIBURTON

DEPTH SUMMARY REPORT

Depth Measuring System

Depth Panel Type: WSDP 2.04 Software Version: JUN 24 2009 01:01:01
Serial Number:
Encoder 1 Enabled?: Yes Encoder 2 Enabled?: Yes
Encoder 1 Correction Enabled?: Yes Encoder 2 Correction Enabled?: Yes
Encoder 1 Correction Factor: 0.000 ft / 1000 ft Encoder 2 Correction Factor: 0.000 ft / 1000 ft

Logging Cable Information

Cable Type: Unknown
Cable Weight: 392.00 lbsp1000ft Stretch Coefficient: 0.065 ft/100ft/1000lb
Breaking Strength: 23,100 lbs Cable Maximum Safe Pull: 11,550 lbs
Tool String Weight in Fluid: 1254.00 lbs Mechanical Weakpoint: 8,000 lbs

Depth Control - Logging Up

Conveyance: Wireline
Cable Stretch Correction Applied? Standard Magnetic Mark Correction Applied? Yes
Corrected to: Pipe Depth Magnetic Mark Interval: 100 ft
Bottom Depth: 12,465.00 ft Top Depth: 11,806.73 ft
Stretch Applied: 11.30 ft Stretch Applied: 10.24 ft

Mark Information

No FIRST MARK Found
Deepest Mark found at: 12423.27 ft Shallowest Mark found at: 11922.32 ft
Tension at Mark Depth: 582.7 lbs Tension at Mark Depth: 553.1 lbs

COMPANY BREITBURN FLORIDA, LLC

WELL CL & CC 27-8HL PILOT

FIELD RACCOON POINT

COUNTY COLLIER

STATE

FL

HALLIBURTON

ARRAY INDUCTION
SPECTRAL DENSITY
DUAL SPACED NEUTRON

*** TVD LOG ***