HALLIBURTON

ANNULAR HOLE VOLUME PLOT

COMPANY	RAYDON EXPLORATION INC.
WELL	K&G 1-29
FIELD/BLOCK	WILDCAT
COUNTY	HASKELL
STATE	KANSAS

API No. 15-081-22122

Location (SHL) 990' FNL & 2290' FWL

Sect. 29 Twp. 27S Rge. 32W

Other Services:
DSN / SDL
MICROLOG
WAVESONIC
XRMI
ACRT

Permanent Datum	GL	Elev. 2918.0 ft	Elev.: K.B. 2929.0 ft
Log measured from	KB	11.0 ft above perm. Datum	D.F. 2928.0 ft
Drilling measured from	KB		G.L. 2918.0 ft

Date		08-Sep-15					
Run No.		ONE					
Depth - Driller		5557.00 ft					
Depth - Logger		5557.0 ft					
Bottom - Logged Interval		5468					
Top - Logged Interval		1673					
Casing - Driller		8.625 in	@ 1680.0 ft	@		@	
Casing - Logger		1673.0 ft					
Bit Size		7.875 in		@		@	
Type Fluid in Hole		Water Based Mud					
Density	Viscosity	8.9 ppg	73.00 s/qt				
PH	Fluid Loss	12.00 pH	6.0 cptm				
Source of Sample		MUD PIT					
Rm @ Meas. Temperature		1.040 ohmm	@ 75.00 degF	@		@	
Rmf @ Meas. Temperature		0.98 ohmm	@ 67.00 degF	@		@	
Rmc @ Meas. Temperature		1.360 ohmm	@ 67.00 degF	@		@	
Source Rmf	Rmc	MEASURED	MEASURED				
Rm @ BHT		0.58 ohmm	@ 139.0 degF	@		@	
Time Since Circulation		6.5000 hr					
Time on Bottom		08-Sep-15 20:58:10.000					
Max. Rec. Temperature		139.0 degF	@ 5557.0 ft	@		@	
Equipment	Location	11230668	LIBERAL				
Recorded By		SHELDON INGERSOLL					
Witnessed By		E. GRIEVES					

RAYDON EXPLORATION INC. | K&G 1-29 | WILDCAT | HASKELL | KANSAS

Fold here

Service Ticket No.: 902658042 | API Serial No.: 15-081-22122 | PGM Version: WL INSITE R4.6.4 (Build 3)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

	Sample No.					
Date						
Depth-Driller						
Type Fluid in Hole						
Density	Viscosity					
Ph	Fluid Loss					
Source of Sample						
Rm @ Meas. Temp		@	@	@	@	@
Rmf @ Meas. Temp.		@	@	@	@	@
Rmc @ Meas. Temp.		@	@	@	@	@
Source Rmf	Rmc					
Rm @ BHT		@	@	@	@	@
Rmf @ BHT		@	@	@	@	@
Rmc @ BHT		@	@	@	@	@

RESISTIVITY SCALE CHANGES

	Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

	Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
	@				
	ONE	ACRT	N/A	1.5" S.O.	
		10800784			
	ONE	MICROLOG	RUBBER	ADJACENT	
		10673790			
	ONE	XRMI		ADJACENT	
		10967400			

EQUIPMENT DATA

GAMMA		ACOUSTIC				DENSITY				NEUTRON			
			Scale				Scale				Scale		
Run No.	ONE	Run No.	ONE	L	R	Run No.	ONE	L	R	Run No.	ONE	L	R
Serial No.	10811258	Serial No.	10855599	L	R	Serial No.	10673790	L	R	Serial No.	10735145	L	R
Model No.	GTET	Model No.	WAVESONIC	L	R	Model No.	SDLT	L	R	Model No.	DSNT	L	R
Diameter	3.625"	No. of Cent.	2	L	R	Diameter	5.3"	L	R	Diameter	3.625"	L	R
Detector Model No.	T-102	Spacing	.5'	L	R	Log Type	GAM-GAM	L	R	Log Type	NEU-NEU	L	R
Type	SCINT					Source Type	CS-137	L	R	Source Type	AM-241BE	L	R
Length	8"	LSA [Y/N]	YES	L	R	Serial No.	5073GW	L	R	Serial No.	DSN-436	L	R
Distance to Source	N/A	FWDA [Y/N]	YES	L	R	Strength	1.5 CI	L	R	Strength	15 CI	L	R
		Strength	YES	L	R								

LOGGING DATA

GENERAL					GAMMA			ACOUSTIC			DENSITY			NEUTRON			
Run No.	Depth From	Depth To	Speed ft/min		Scale L	Scale R		Scale L	Scale R	Matrix	Scale L	Scale R	Matrix	Scale L	Scale R	Matrix
ONE	TD	CSG	REC		0	150		30	-10	47.6 us/ft	30	-10	2.71 gm/cc	30	-10	LIME

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.

CHLORIDES REPORTED AT 2800 mg/L.

LCM REPORTED AT 4#/bbl.

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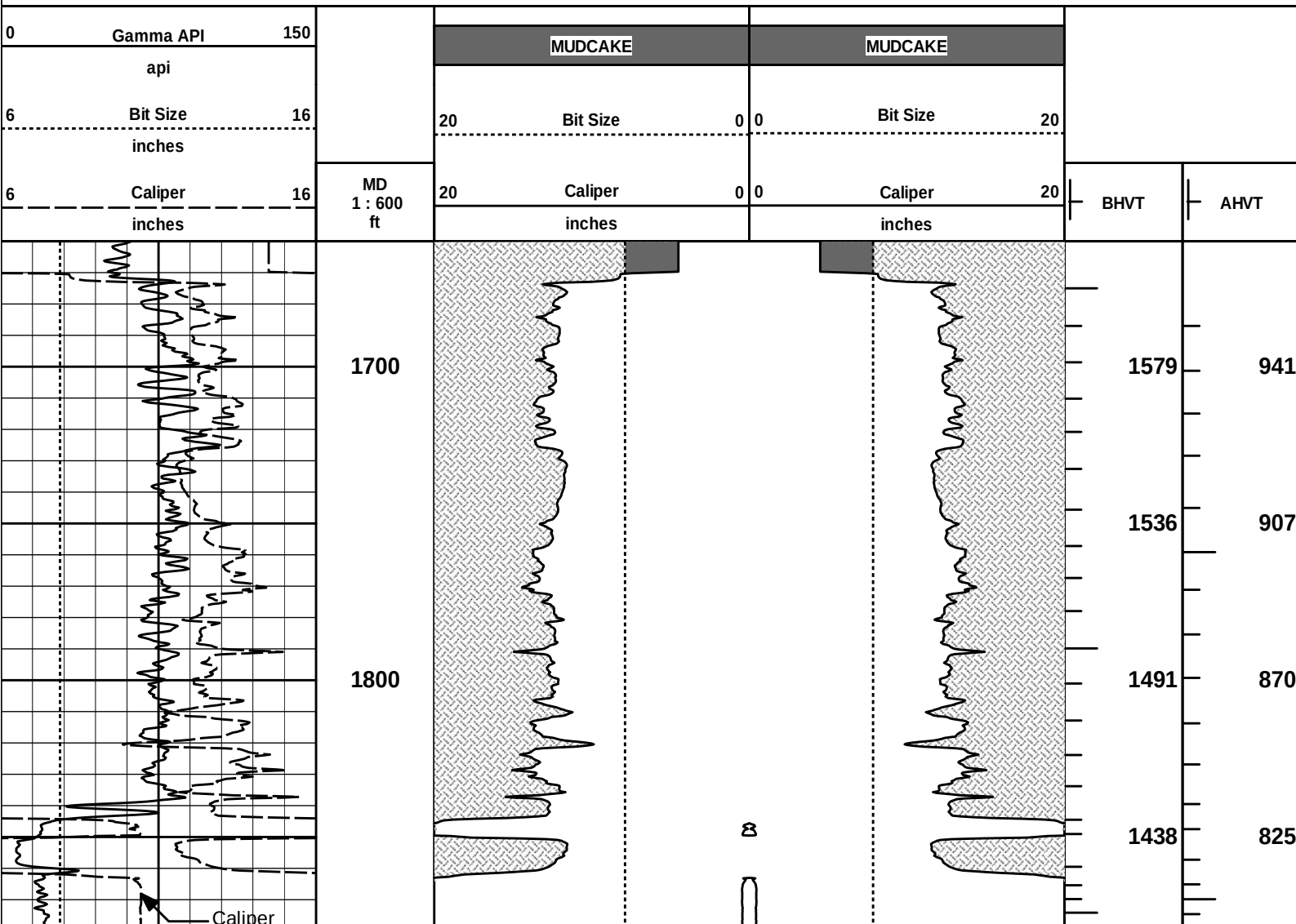
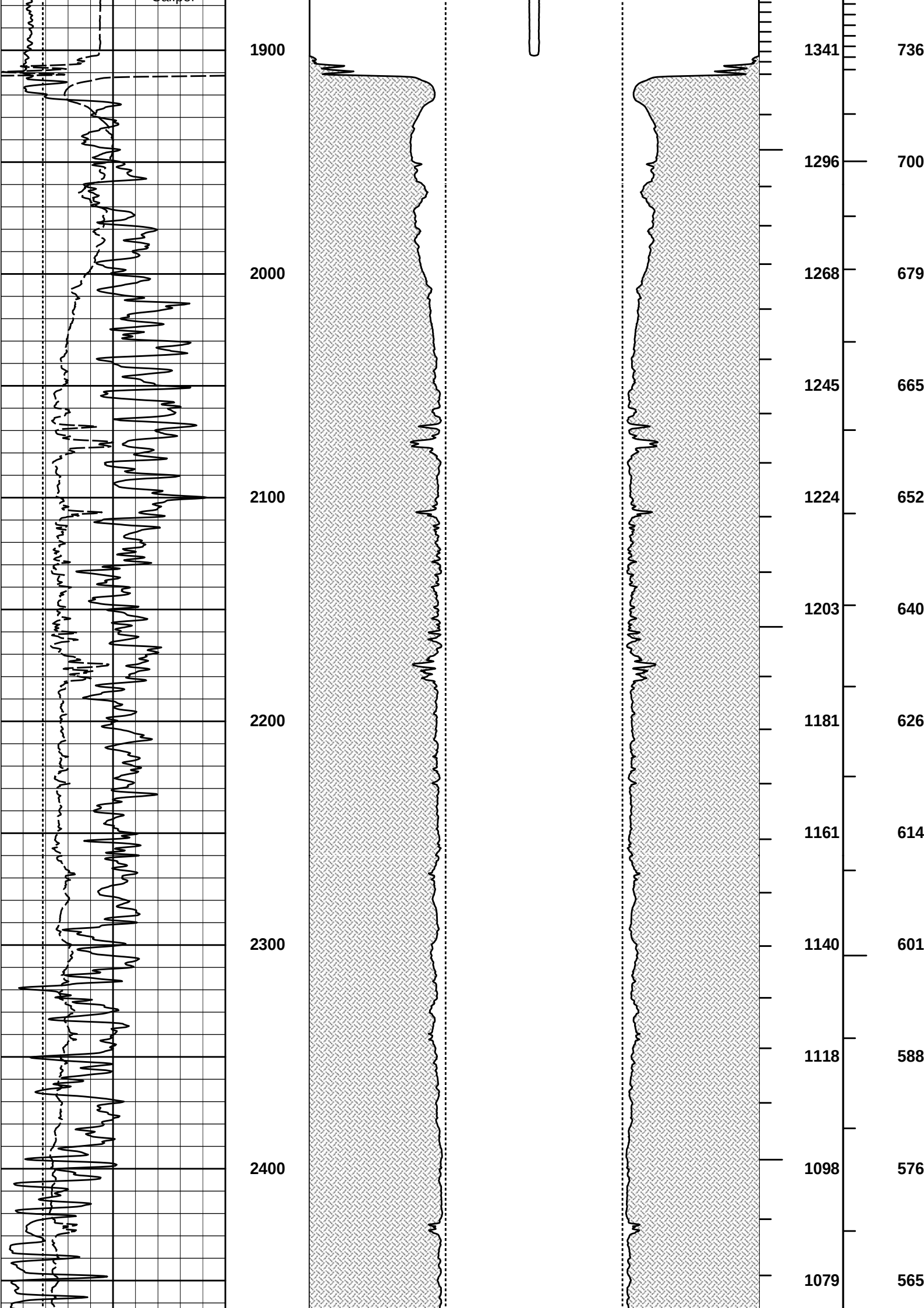
Plot Time: 08-Sep-15 22:19:26
Plot Range: 1660 ft to 5563.25 ft
Data: K&G_1-29\Well Based\R1 CASING
Plot File: \\-LOCAL-\K&G_1-29\Well Based\AHV\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

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2100
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2300
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601
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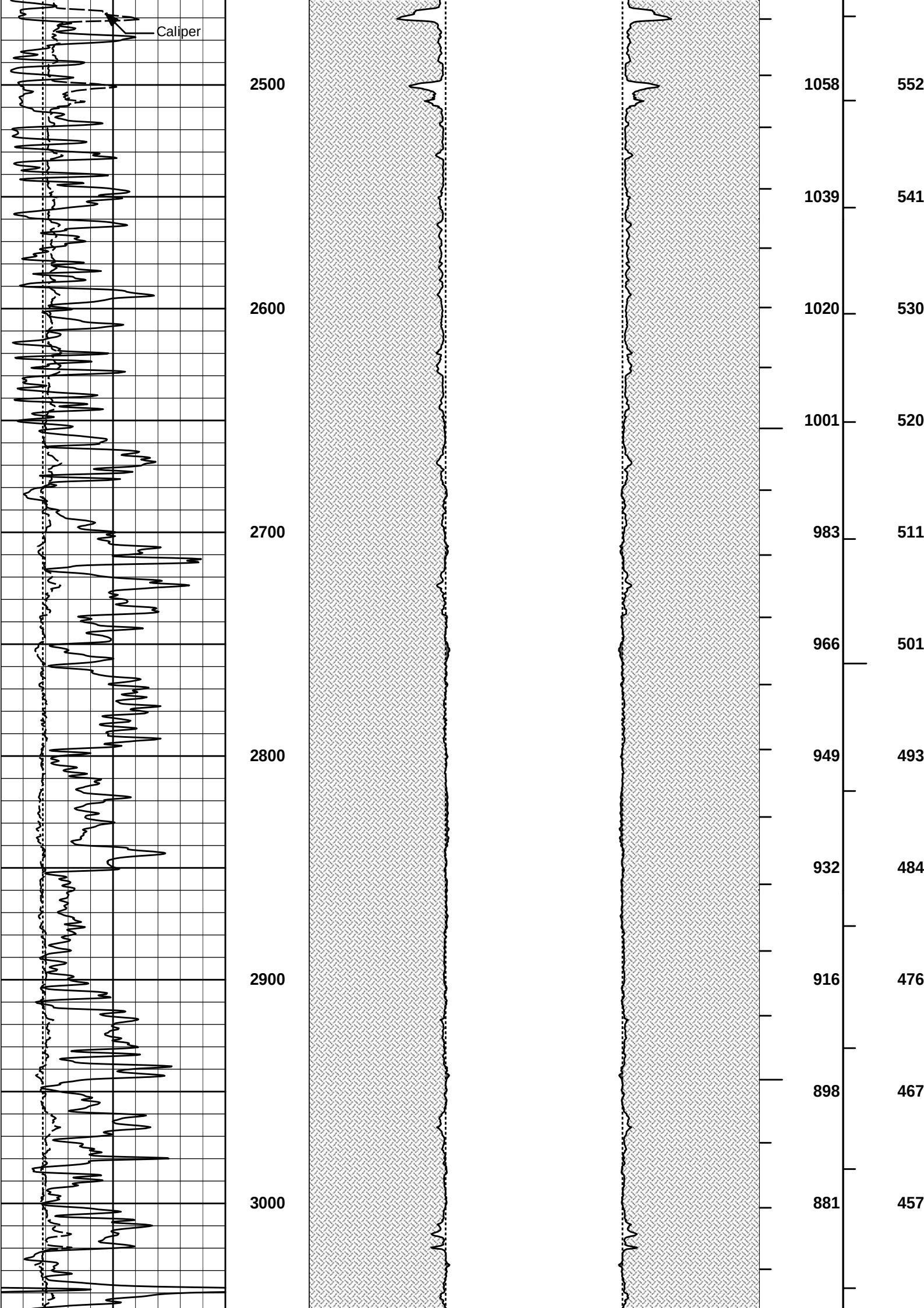
576
565


Caliper
2500
2600
2700
2800
2900
3000
1058
1039
1020
1001
983
966
949
932
916
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881
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530
520
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501
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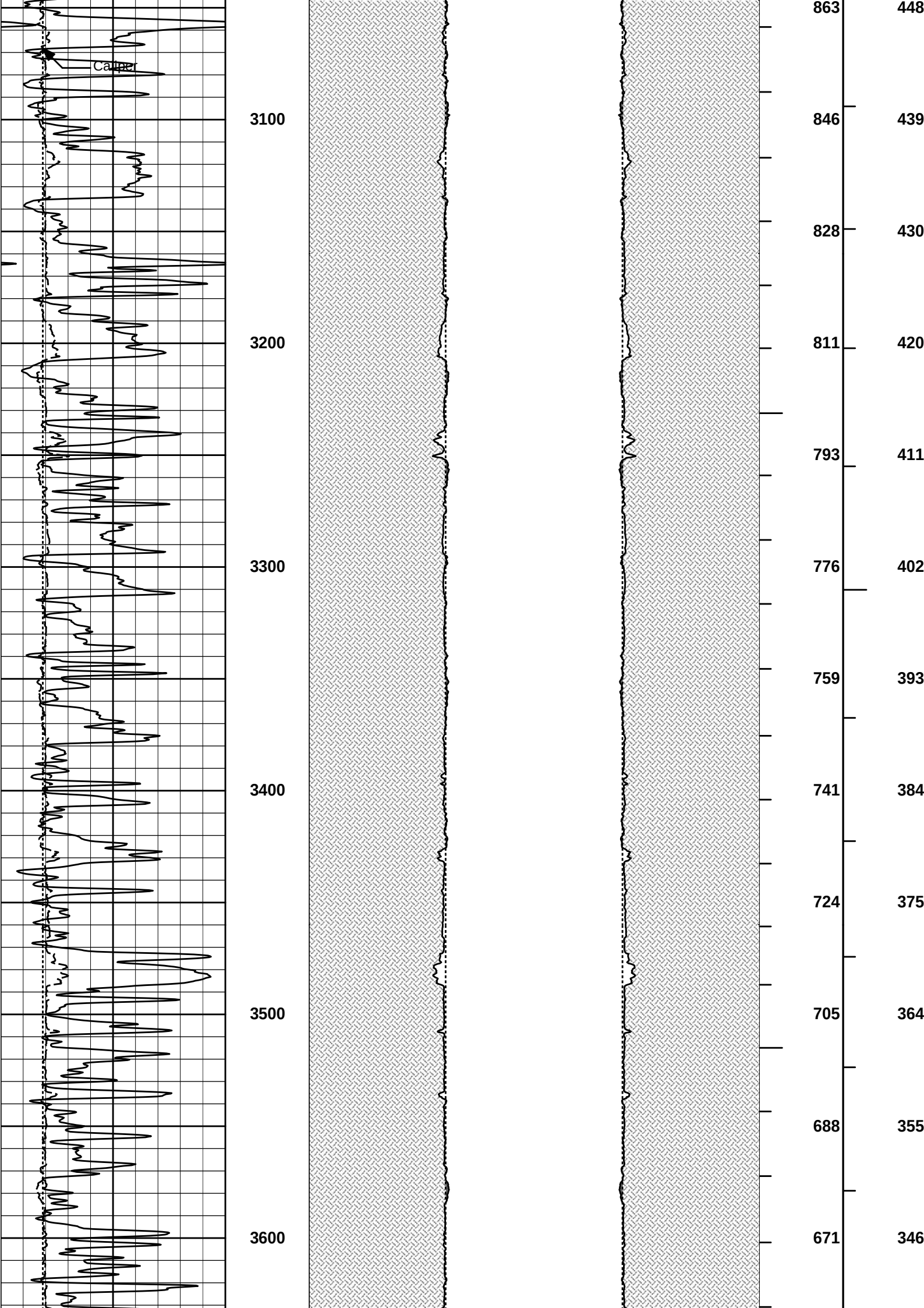
457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3200
3300
3400
3500
3600
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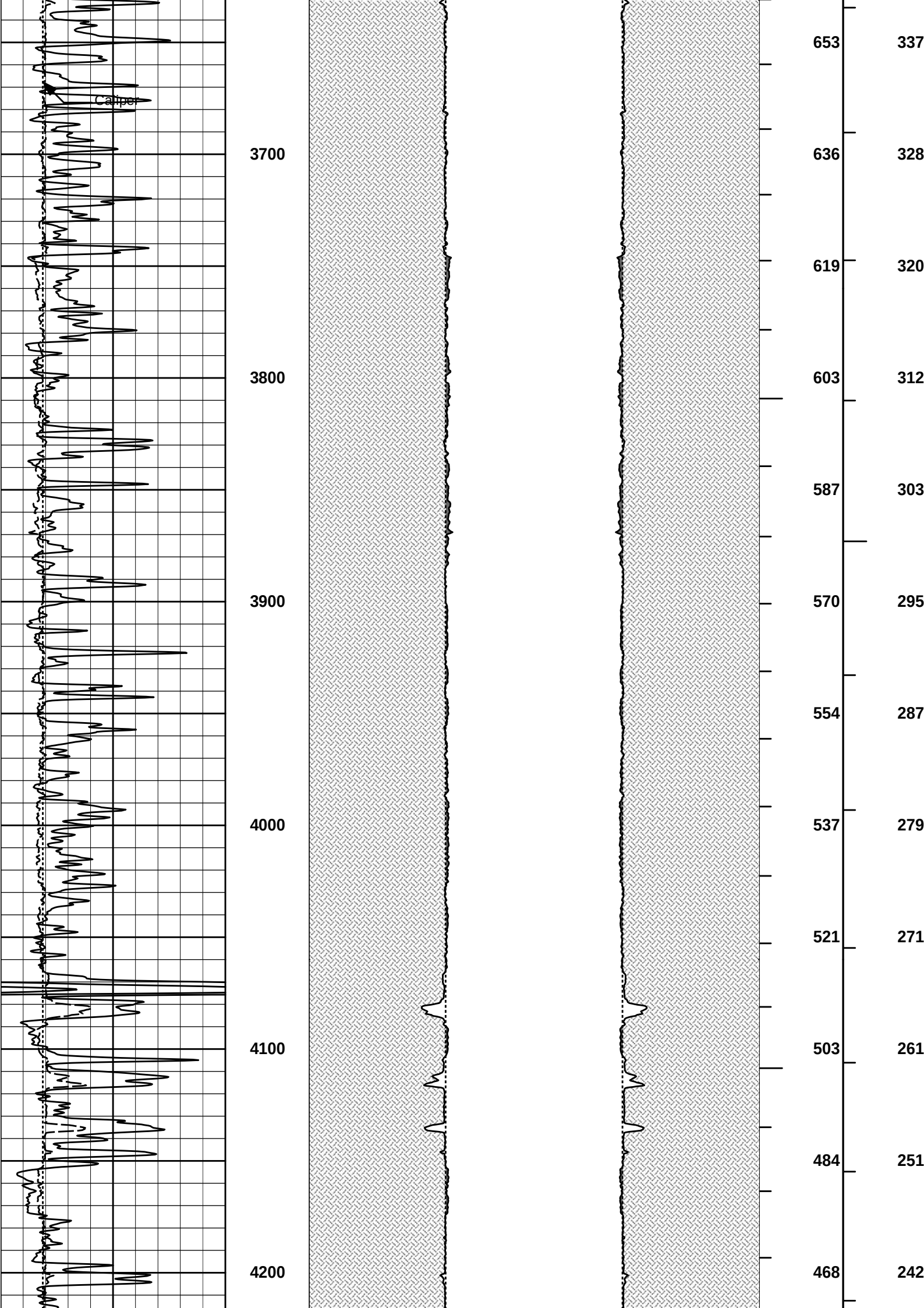
448
846
439
828
430
811
420
793
411
776
402
759
393
741
384
724
375
705
364
688
355
671
346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3800
3900
4000
4100
4200
653
636
619
603
587
570
554
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521
503
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337
328
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303
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287
279
271
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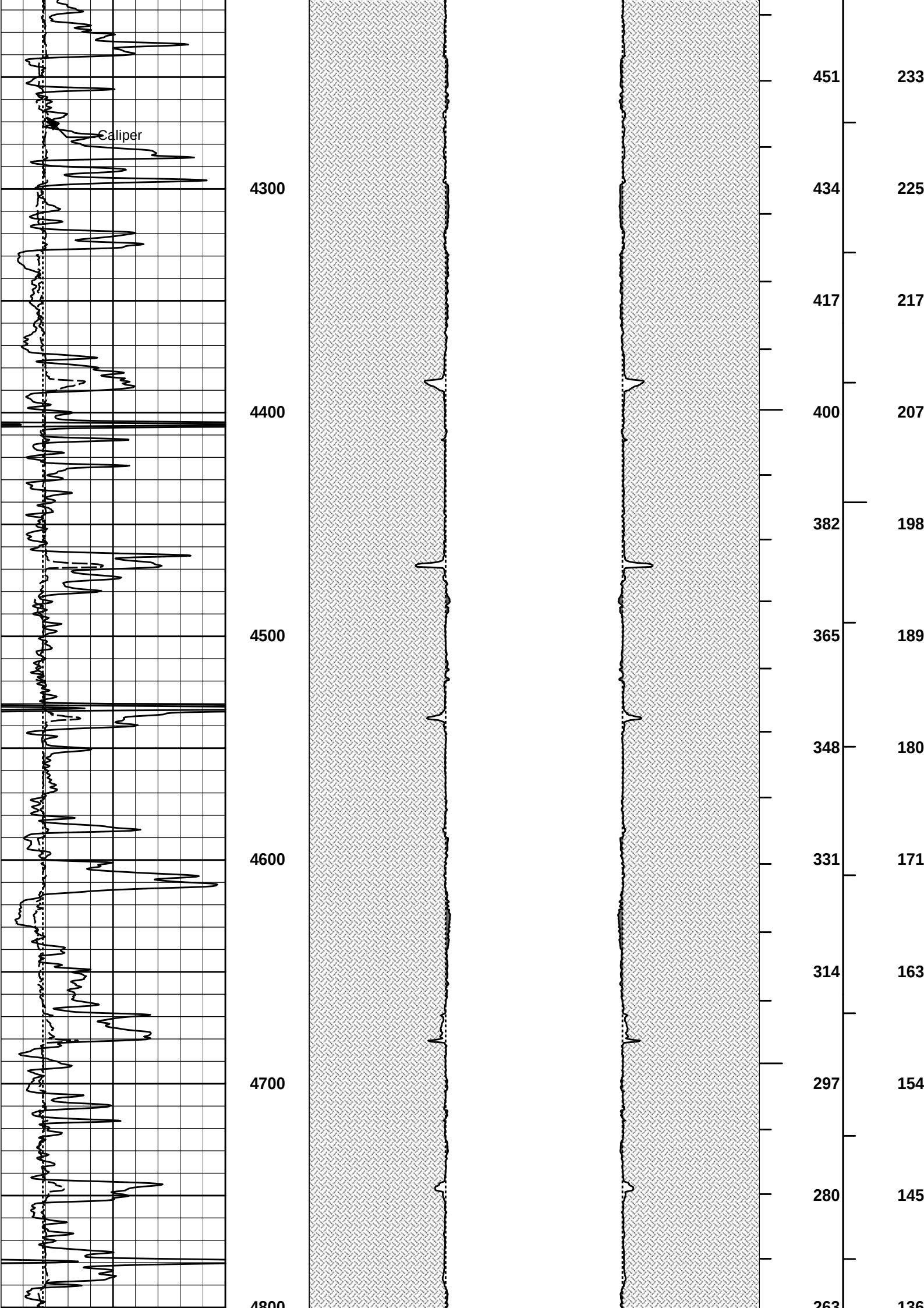
251
242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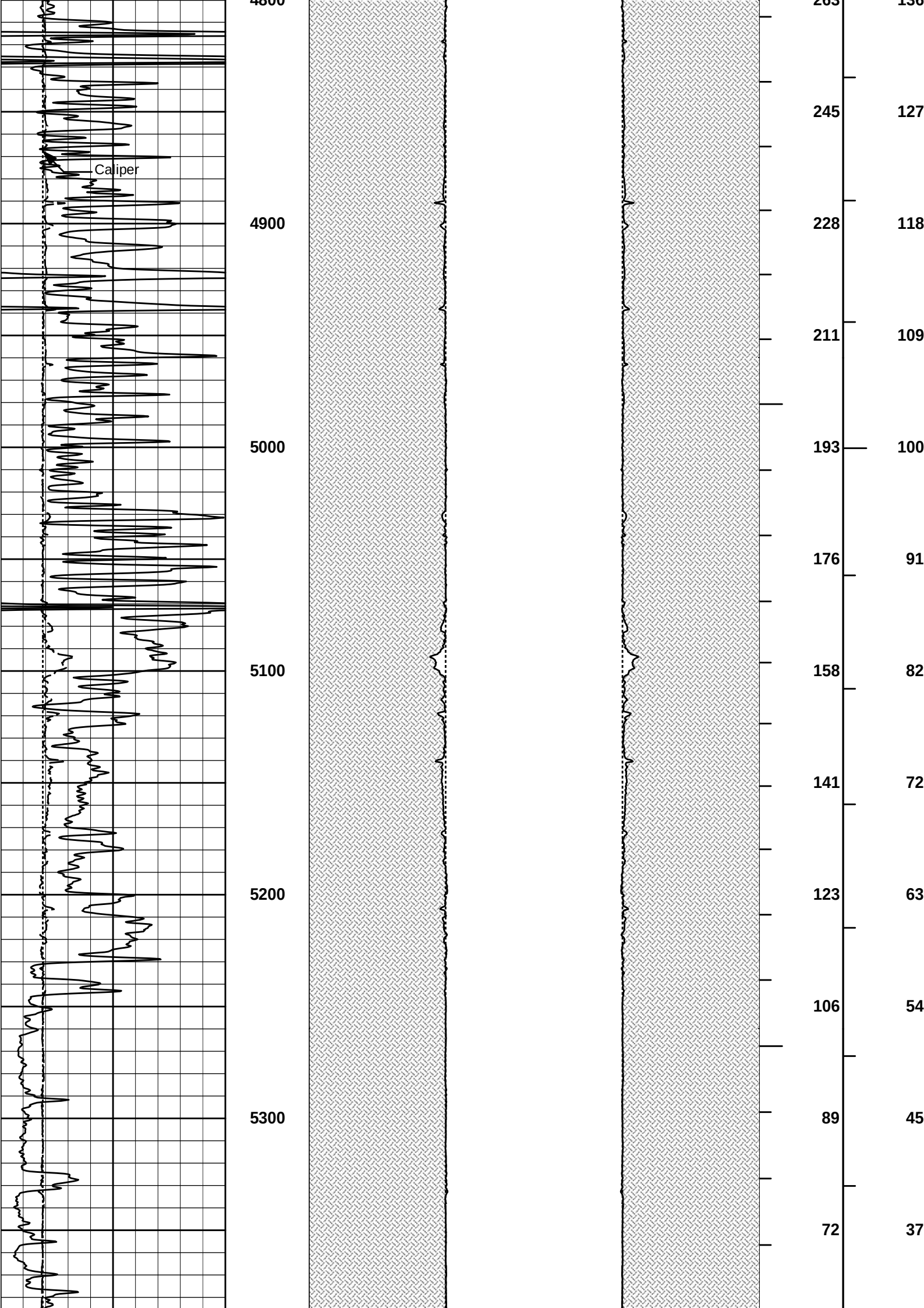
4400
4500
4600
4700
4800
451
233
434
225
417
217
400
207
382
198
365
189
348
180
331
171
314
163
297
154
280
145
263
136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4900
5000
5100
5200
5300
263
245
228
211
193
176
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123
106
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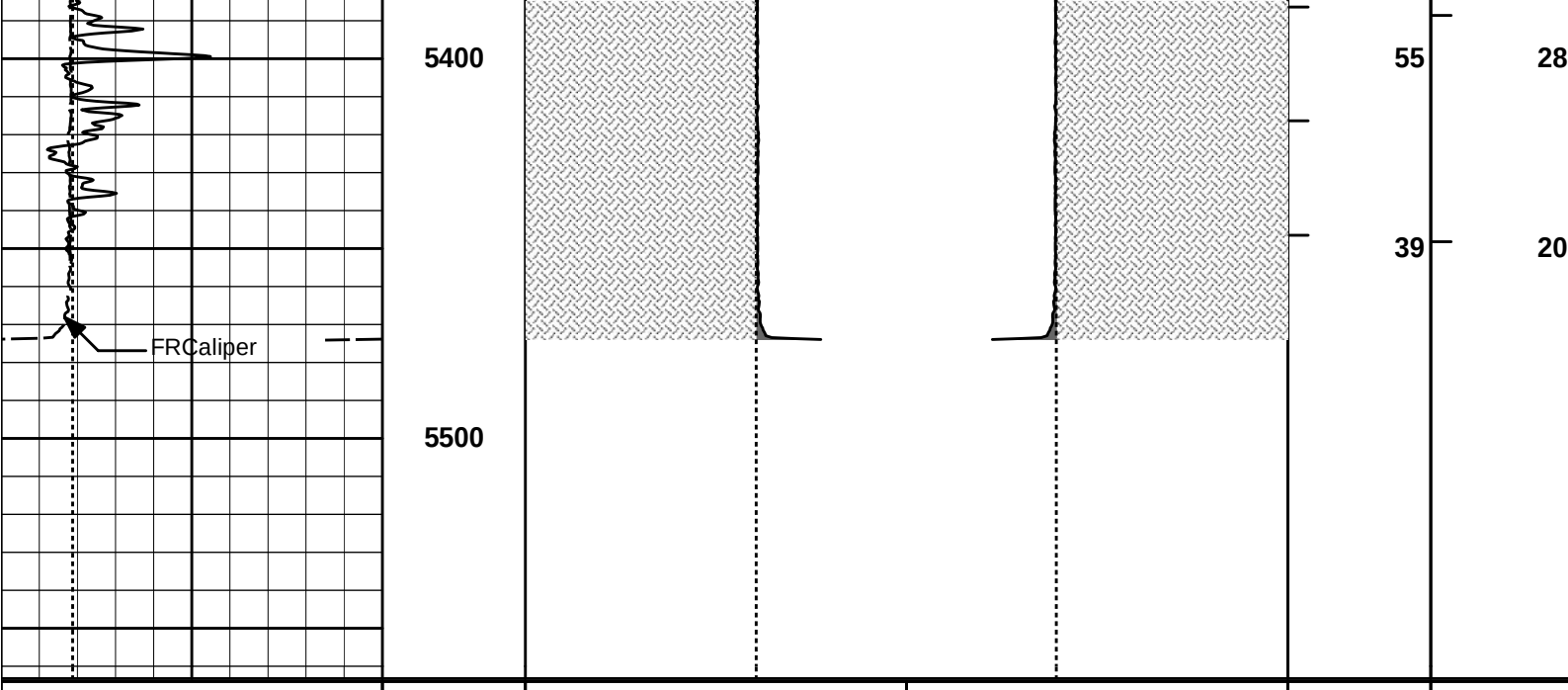
72
130
127
118
109
100
91
82
72
63
54
45
37



6 Caliper 16 inches	MD 1 : 600 ft	20 Caliper 0 inches / 0 Caliper 20 inches
6 Bit Size 16 inches		20 Bit Size 0 / 0 Bit Size 20
0 Gamma API 150 api		MUDCAKE / MUDCAKE

BHVT AHVT

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Plot Time: 08-Sep-15 22:19:28
Plot Range: 1660 ft to 5563.25 ft
Data: K&G_1-29\Well Based\R1 CASING\
Plot File: \\-LOCAL-\K&G_1-29\Well Based\AHV\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

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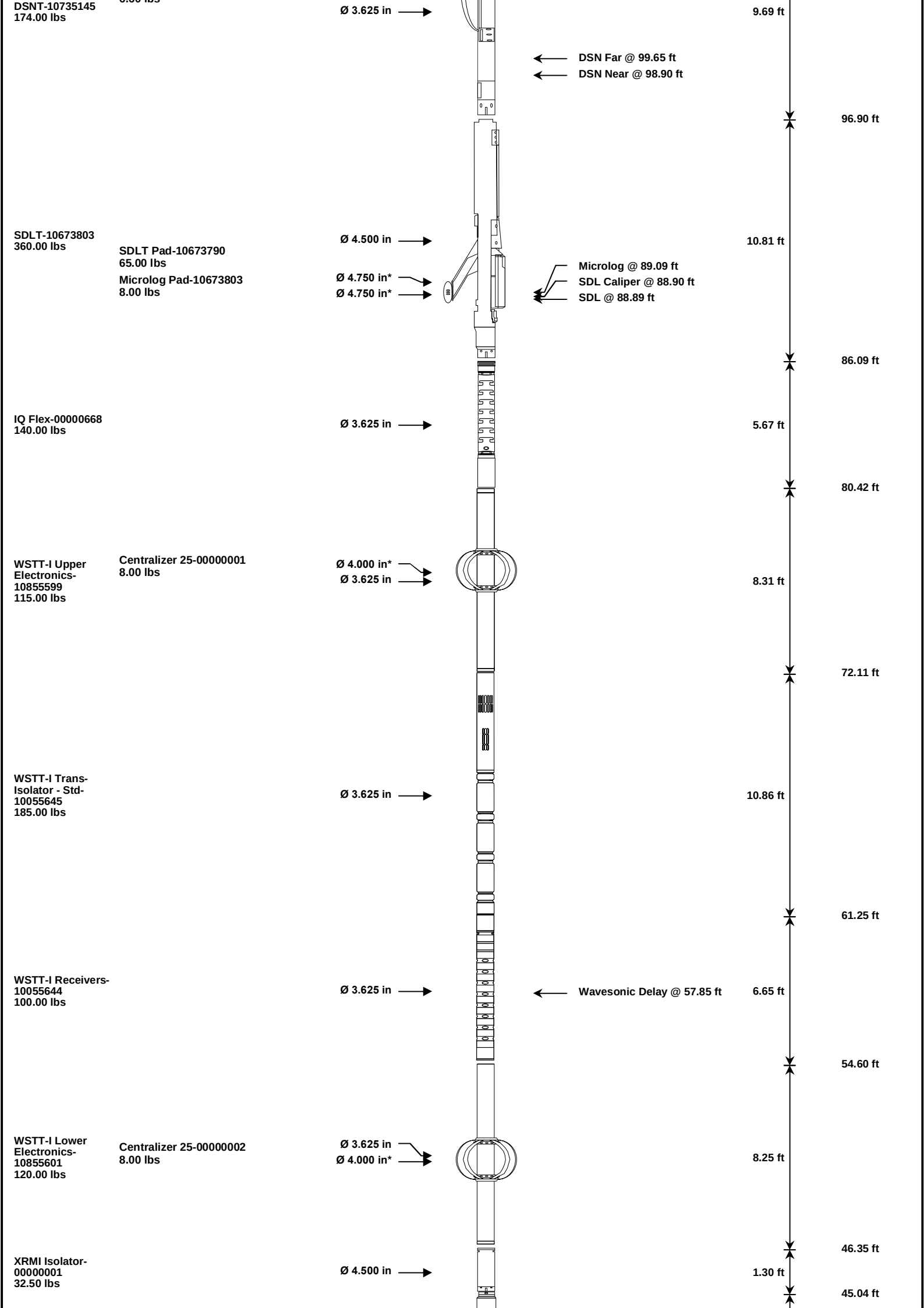
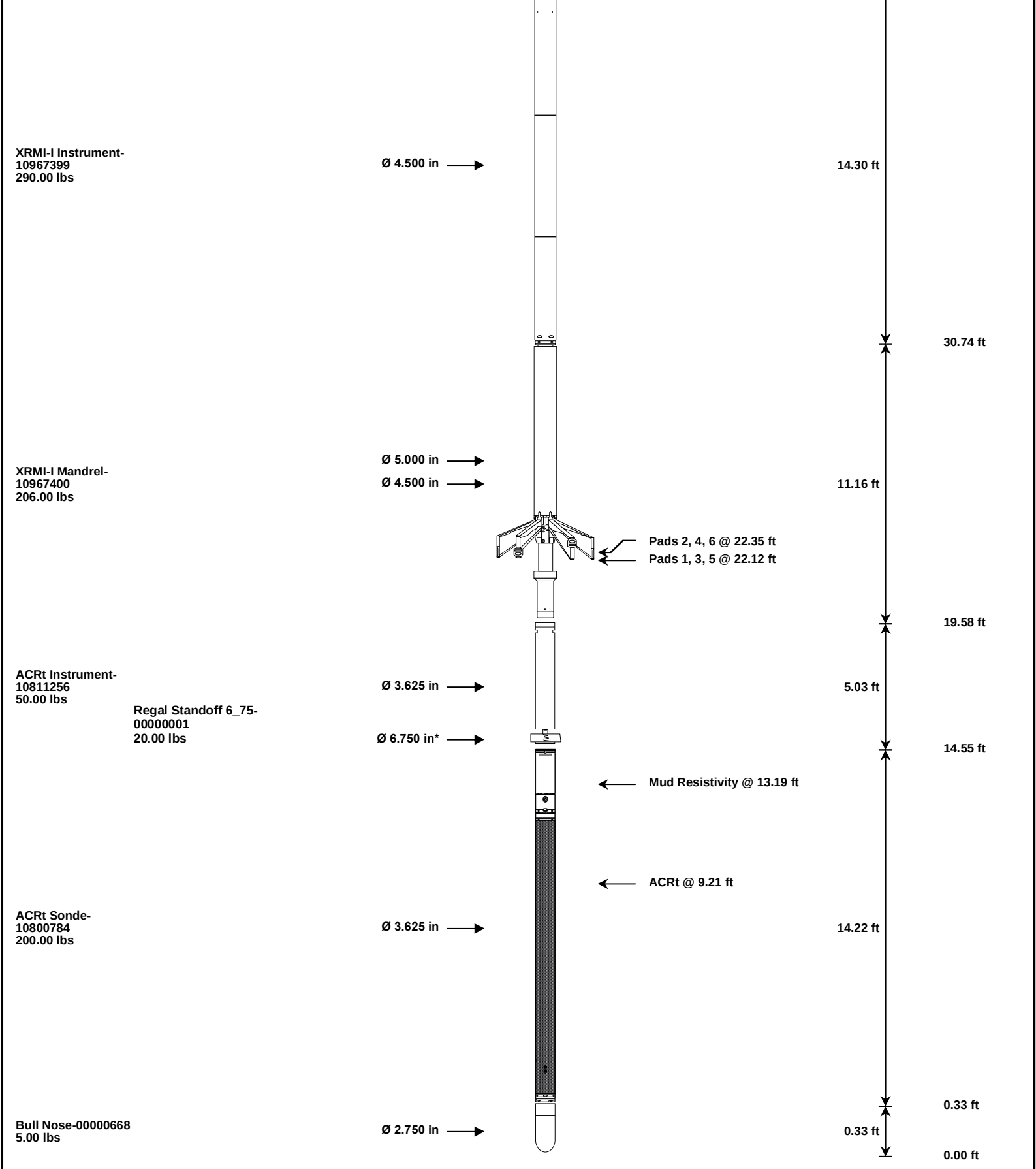
TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head-12345678 30.00 lbs		Ø 3.625 in			1.92 ft	120.77 ft
						118.85 ft
SP Sub-12345678 60.00 lbs		Ø 3.625 in		SP @ 117.07 ft	3.74 ft	
						115.11 ft
GTET-10811258 165.00 lbs		Ø 3.625 in		GammaRay @ 109.04 ft	8.52 ft	
						106.59 ft
DSN Decentralizer-10735145 6.60 lbs		Ø 5.000 in*				


DSNT-10735145
174.00 lbs
Ø 3.625 in
9.69 ft
DSN Far @ 99.65 ft
DSN Near @ 98.90 ft
96.90 ft
SDLT-10673803
360.00 lbs
Ø 4.500 in
10.81 ft
SDLT Pad-10673790
65.00 lbs
Microlog Pad-10673803
8.00 lbs
Ø 4.750 in*
Ø 4.750 in*
Microlog @ 89.09 ft
SDL Caliper @ 88.90 ft
SDL @ 88.89 ft
86.09 ft
IQ Flex-00000668
140.00 lbs
Ø 3.625 in
5.67 ft
80.42 ft
WSTT-I Upper Electronics-10855599
115.00 lbs
Centralizer 25-00000001
8.00 lbs
Ø 4.000 in*
Ø 3.625 in
8.31 ft
72.11 ft
WSTT-I Trans-Isolator - Std-10055645
185.00 lbs
Ø 3.625 in
10.86 ft
61.25 ft
WSTT-I Receivers-10055644
100.00 lbs
Ø 3.625 in
Wavesonic Delay @ 57.85 ft
6.65 ft
54.60 ft
WSTT-I Lower Electronics-10855601
120.00 lbs
Centralizer 25-00000002
8.00 lbs
Ø 3.625 in
Ø 4.000 in*
8.25 ft
46.35 ft
XRMI Isolator-00000001
32.50 lbs
Ø 4.500 in
1.30 ft
45.04 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)		Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head	12345678	30.00	1.92		118.85	300.00
SP	SP Sub	12345678	60.00	3.74		115.11	300.00
GTET	Gamma Telemetry Tool	10811258	165.00	8.52		106.59	60.00
DSNT	Dual Spaced Neutron	10735145	174.00	9.69		96.90	60.00
DCNT	DSN Decentralizer	10735145	6.60	5.13	*	100.23	300.00
SDLT	Spectral Density Tool	10673803	360.00	10.81		86.09	60.00
SDLP	Density Insite Pad	10673790	65.00	2.55	*	88.30	60.00
MICP	Microlog Pad	10673803	8.00	1.00	*	88.59	60.00
IQF	IQ Flex tool	00000668	140.00	5.67		80.42	300.00
WSTT	WaveSonic Insite - Upper Electronics	10855599	115.00	8.31		72.11	100.00
OBCEN	Centralizer - 25 in. Overbody	00000001	8.00	2.08	*	75.54	300.00
WSTT	WaveSonic Insite - Trans-Isolator - Std	10055645	185.00	10.86		61.25	100.00

WSTT	WaveSonic Insite - Receivers	10055644	100.00	6.65		54.60	30.00
WSTT	WaveSonic Insite - Lower Electronics	10855601	120.00	8.25		46.35	100.00
OBCEN	Centralizer - 25 in. Overbody	00000002	8.00	2.08	*	49.27	300.00
	Isolator for the XRMI tool	00000001	32.50	1.30		45.04	300.00
XRMI	XRMI Navigation - Insite	10967399	290.00	14.30		30.74	30.00
XRMI-I	XRMI Imager - Insite	10967400	206.00	11.16		19.58	30.00
ACRt	Array Compensated True Resistivity Instrument Section	10811256	50.00	5.03		14.55	120.00
RSOF	Regal Standoff 6.75in	00000001	20.00	0.52	*	14.71	300.00
ACRt	Array Compensated True Resistivity Sonde Section	10800784	200.00	14.22		0.33	120.00
BLNS	Bull Nose	00000668	5.00	0.33		0.00	300.00
Total			**2,348.10**	**120.77**			

* Not included in Total Length and Length Accumulation.

Data: K&G_1-29\0002 SP-GTET-DSNT-SDLT-FLEX-WAVE-XRMI-ACRT-BN\IDLE **Date: 08-Sep-15 17:27:31**

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	8.900	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	2803.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.040	ohmm
	SHARED	TRM	Temperature of Mud	75.0	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	5557.00	ft
	SHARED	BHT	Bottom Hole Temperature	135.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	XRMI-I Instrument	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	XRMI-I Instrument	
	SHARED	TEMM	Temperature Master Tool	NONE	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	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	
	Rwa / CrossPlot	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
	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 for Gamma Ray Tools.	Eccentered	
	GTET	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	

DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	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	
DSNT	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
WSTT-I Receivers	WSOK	Process WSTT?	Yes	
WSTT-I Receivers	AFIL	Adaptive Filtering?	No	
WSTT-I Receivers	PINT	Process 1 Sample and Skip	0	
WSTT-I Receivers	PROM	Process Mode: M=1,MX=2,MY=3,MXY=4	4	
WSTT-I Receivers	DTSH	Delta -T Shale	100.00	uspf
WSTT-I Receivers	DTMT	Delta -T Matrix Type	User define	
WSTT-I Receivers	DTMA	Delta -T Matrix	47.60	uspf
WSTT-I Receivers	DTFL	Delta -T Fluid	189.00	uspf
WSTT-I Receivers	RHOM	Matrix Density	2.7100	g/cc
WSTT-I Receivers	RHOF	Fluid Density	1.0000	g/cc
WSTT-I Receivers	SMTH	Semblance Threshold	0.25	
WSTT-I Receivers	VPVS	VPVS Ratio for Porosity	1.40	
WSTT-I Receivers	APEQ	Acoustic Porosity Equation	Wylie	
WSTT-I Receivers	NAVS	Navigation Source Tool	XRMI-I Instrument	
XRMI-I Instrument	WRTI	Survey Writing Interval	30	ft
XRMI-I Instrument	SOPT	Smoothing Option	None	
XRMI-I Mandrel	DIMG	Process XRMI?	Yes	
XRMI-I Mandrel	ALMT	Image Alignment Method	TOOL	
XRMI-I Mandrel	AGN	Use Button Auto Gain?	Yes	
XRMI-I Mandrel	BCLR	Button Auto Gain Color	127	
XRMI-I Mandrel	BFIL	Button Auto Gain Filter	0.020	
XRMI-I Mandrel	BGAN	Button Gain Value	0.001	
XRMI-I Mandrel	BOFF	Button Offset	0	
XRMI-I Mandrel	DIPE	Process Dipmeter Calculations?	Yes	
XRMI-I Mandrel	BHCS	Process Borehole Corrections?	Yes	
XRMI-I Mandrel	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
XRMI-I Mandrel	CLOK	Process Caliper Outputs?	Yes	
XRMI-I Mandrel	CMAX	Caliper Maximum Limit	100.0	in
XRMI-I Mandrel	CMIN	Caliper Mimimum Limit	3.5	in
XRMI-I Mandrel	NAVS	Navigation Source Tool	XRMI-I Instrument	
XRMI-I Mandrel	BHVC	Radius type for borehole volume calcuations	Elliptical	

XRMI-I Mandrel	BHVC	Radius type for borehole volume calculations	Elliptical	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	XRMI-I Mandrel	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

BOTTOM

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	**GTET - 10811258**	**Reference Calibration Date:**	**27-Aug-15 10:08:00**
Engineer:	**SHELDON INGERSOLL**	**Calibration Date:**	**08-Sep-15 09:16:34**
Software Version:	**WL INSITE R4.6.4 (Build 3)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-185
Calibrator API Reference:228.00 api
Equivalent Calibrator API Reference:232.0 api

Measurement	Measured	Calibrated	Units
Background	67.9	69.0	api
Background + Calibrator	296.3	301.0	api
Calibrator	228.3	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	**GTET - 10811258**	**Reference Calibration Date:**	**08-Sep-15 09:16:34**
Engineer:	**SHELDON INGERSOLL**	**Calibration Date:**	**08-Sep-15 09:21:05**
Software Version:	**WL INSITE R4.6.4 (Build 3)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-185
Calibrator API Reference:228.00 api
Equivalent Calibrator API Reference:232.0 api

Field Verification	Shop	Field	Units
Background	69.0	70.3	api
Background + Calibrator	301.0	302.9	api
Calibrator	232.0	232.5	api

Shop	Field	Difference	Tolerance
232.0	232.5	-0.5	+/- 9.00

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	**SDLT - 10673803**	**Reference Calibration Date:**	**29-Jul-15 15:46:17**
Engineer:	**SHELDON INGERSOLL**	**Calibration Date:**	**27-Aug-15 11:01:05**
Software Version:	**WL INSITE R4.6.4 (Build 3)**	**Calibration Version:**	**1**
Host Tool Name:	**DSNT - 10735145**		

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2347.51	-1630.65	-7000.00 - -1000.00
Pad Gain	0.0004026	0.0003831	0.000200 - 0.000600
Arm Offset	-3093.27	-3715.35	-5000.00 - 3000.00
Arm Gain	0.0005330	0.0005277	0.000300 - 0.000700
Arm Power	-0.000005649	-0.000005650	-0.000010000 - 0.000010000

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)	1.81	2.00	0.19	+/- 0.20
Medium Ring (in)	3.65	3.75	0.10	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.54	6.50	-0.04	+/- 0.20
Medium Ring (in)	8.30	8.25	-0.05	+/- 0.20
Large Ring (in)	15.06	15.00	-0.06	+/- 0.20

PASS/FAIL SUMMARY

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

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed

SDLT CALIPER FIELD CALIBRATION

Tool Name:	**SDLT - 10673803**	**Reference Calibration Date:**	**27-Aug-15 11:01:05**
Engineer:	**SHELDON INGERSOLL**	**Calibration Date:**	**08-Sep-15 17:16:45**
Software Version:	**WL INSITE R4.6.4 (Build 3)**	**Calibration Version:**	**1**

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.76	0.01	+/- 0.10
Ring Diameter	8.25	8.24	-0.01	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
Diameter Check:	Passed

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10811258						
Gamma Ray Calibrator	232.0	232.5	----------	-0.5	+/- 9.00	api
SDLT-10673803						
Pad Extension	3.75	3.76	----------	-0.01	+/-0.10	in
Ring Diameter	8.25	8.24	----------	0.01	+/-0.15	in

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INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
	Depth Panel			

TENS	Tension	0.00	NO	

Rwa / CrossPlot

TPUL	Tension Pull	120.76	NO	
BS	Bit Size	120.76	NO	
HDIA	Measured Hole Diameter	0.00	NO	

SP Sub

PLTC	Plot Control Mask	117.07	NO	
SP	Spontaneous Potential	117.07	BLK	1.250
SPR	Raw Spontaneous Potential	117.07	NO	
SPO	Spontaneous Potential Offset	117.07	NO	

GTET

TPUL	Tension Pull	109.04	NO	
GR	Natural Gamma Ray API	109.04	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	109.04	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	109.04	W	1.416 , 0.750
HDIA	Measured Hole Diameter	0.00	NO	
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	

DSNT

TPUL	Tension Pull	98.80	NO	
RNDS	Near Detector Telemetry Counts	98.90	BLK	1.417
RFDS	Far Detector Telemetry Counts	99.65	TRI	0.583
DNTT	DSN Tool Temperature	98.90	NO	
DSNS	DSN Tool Status	98.80	NO	
ERND	Near Detector Telemetry Counts EVR	98.90	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	99.65	BLK	0.000
ENTM	DSN Tool Temperature EVR	98.90	NO	
HDIA	Measured Hole Diameter	0.00	NO	

SDLT

TPUL	Tension Pull	88.90	NO	
PCAL	Pad Caliper	88.90	TRI	0.250
ACAL	Arm Caliper	88.90	TRI	0.250

WSTT-I Receivers

TPUL	Tension Pull	57.85	NO	
DPSX	Dipole Source X Structurel	54.60	NO	
DPSY	Dipole Source Y Structurel	54.60	NO	
DPSM	Monopole Source Structure	54.60	NO	
WVST	Wavesonic Compressed Data	57.85	NO	
TPUL	Tension Pull	57.85	NO	
XMS1	Wave Sonic Status Word 1	54.60	NO	
XMS2	Wave Sonic Status Word 2	54.60	NO	
XMS1	Wave Sonic XMITStatus Word 1	54.60	NO	
XMS1	Wave Sonic XMITStatus Word 2	54.60	NO	
F1HA	Dipole 1 HV After	54.60	NO	
F1HB	Dipole 1 HV Before	54.60	NO	
F2HA	Dipole 2 HV After	54.60	NO	
F2HB	Dipole 2 HV Before	54.60	NO	
F3HA	Monopole HV After	54.60	NO	
F3HB	Monopole HV Before	54.60	NO	
INVT	Input Voltage	54.60	NO	
5VOL	5 Volts	54.60	NO	
MI5A	Minus 5 Volts Analog	54.60	NO	
ITMP	Instrument Temperature	54.60	NO	

PL5A	Plus 5 Volts Analog	54.60	NO
5VD	Plus 5 Volts Digital	54.60	NO
TCUR	Tool Current	54.60	NO
SUPV	Supply Voltage	54.60	NO
PRVT	Preregulated voltage	54.60	NO
PRVT	Pre-regulated voltage Xmter	54.60	NO
TEMP	Temperature	54.60	NO
ACQN	Acquisition Number	54.60	NO
XDP	Delay Reference	57.85	NO
MITM	MIT Mode	57.85	NO
VERS	Version	54.60	NO
D1CT	Dipole 1 Compressed Word Count	57.85	NO
D2CT	Dipole 2 Compressed Word Count	57.85	NO
MCNT	Monopole Compressed Word Count	57.85	NO
SEQN	Sequence Number	54.60	NO
FREV	Firmware Revision	54.60	NO
MSMP	Monopole Sample Rate	54.60	NO
MSMP	Dipole Sample Rate	54.60	NO
MFWF	Monopole Firing Waveform	54.60	NO
MFRQ	Monopole Frequency	54.60	NO
MDLY	Monopole Delay	54.60	NO
DXWF	Dipole X Firing Waveform	54.60	NO
XFRQ	Dipole X Frequency	54.60	NO
XDLY	Dipole X Delay	54.60	NO
DYWF	Dipole Y Firing Waveform	54.60	NO
YFRQ	Dipole Y Frequency	54.60	NO
YDLY	Dipole Y Delay	54.60	NO
DPSX	Dipole Source X Structurel	54.60	NO
DPSY	Dipole Source Y Structurel	54.60	NO
DPSM	Monopole Source Structure	54.60	NO
WVST	Wavesonic Compressed Data	57.85	NO
AUTM	Auto Mode	54.60	NO
SONM	tool mode for sonic - 0 for normal or 3 for calibration	54.60	NO
MSL	Monopole Lower Travel Time	57.85	NO
MSH	Monopole Upper Travel Time	57.85	NO
MLFC	Monopole-1 Lower Filter Bandpass Frequency Cut-off	54.60	NO
MUFC	Monopole-1 Upper Filter Bandpass Frequency Cut-off	54.60	NO
DLTT	Dipole Lower Travel Time	54.60	NO
DUTT	Dipole Upper Travel Time	54.60	NO
DLFC	Dipole Lower Filter Bandpass Frequency Cut-off	54.60	NO
DUFC	Dipole Upper Filter Bandpass Frequency Cut-off	54.60	NO
MUTE	WaveSonic Mute/Enable Channels and Sides map	54.60	NO
MUTS	Mute/Enable Sides	54.60	NO
WSRB	Relative Bearing	57.85	NO
WSAZ	WSX Azimuth Pad 1	57.85	NO
TPUL	Tension Pull	57.85	NO
WMP	Summed array of Monopole for SIDES - A,B,C,D	57.85	NO
WXX	Dipole X for SIDES - A-C	57.85	NO
WYY	Dipole Y for SIDES - B-D	57.85	NO
WXY	Dipole X for SIDES - B-D	57.85	NO
WYX	Dipole Y for SIDES - A-C	57.85	NO
TPUL	Tension Pull	57.85	NO
WMA	Monopole Waveform Side A - Channel 1 to Channel 8 Receivers	57.85	NO
WMB	Monopole Waveform Side B - Channel 1 to Channel 8 Receivers	57.85	NO
WMC	Monopole Waveform Side C - Channel 1 to Channel 8 Receivers	57.85	NO
WMD	Monopole Waveform Side D - Channel 1 to Channel 8 Receivers	57.85	NO
WXA	Dipole X Waveform Side A - Channel 1 to Channel 8	57.85	NO

WXA	Receivers		
WXB	Dipole X Waveform Side B - Channel 1 to Channel 8 Receivers	57.85	NO
WXC	Dipole X Waveform Side C - Channel 1 to Channel 8 Receivers	57.85	NO
WXD	Dipole X Waveform Side D - Channel 1 to Channel 8 Receivers	57.85	NO
WYA	Dipole Y Waveform Side A - Channel 1 to Channel 8 Receivers	57.85	NO
WYB	Dipole Y Waveform Side B - Channel 1 to Channel 8 Receivers	57.85	NO
WYC	Dipole Y Waveform Side C - Channel 1 to Channel 8 Receivers	57.85	NO
WYD	Dipole Y Waveform Side D - Channel 1 to Channel 8 Receivers	57.85	NO
GAR1	Gain Side A Receiver 1	54.60	NO
GAR2	Gain Side A Receiver 2	54.60	NO
GAR3	Gain Side A Receiver 3	54.60	NO
GAR4	Gain Side A Receiver 4	54.60	NO
GAR5	Gain Side A Receiver 5	54.60	NO
GAR6	Gain Side A Receiver 6	54.60	NO
GAR7	Gain Side A Receiver 7	54.60	NO
GAR8	Gain Side A Receiver 8	54.60	NO
GBR1	Gain Side B Receiver 1	54.60	NO
GBR2	Gain Side B Receiver 2	54.60	NO
GBR3	Gain Side B Receiver 3	54.60	NO
GBR4	Gain Side B Receiver 4	54.60	NO
GBR5	Gain Side B Receiver 5	54.60	NO
GBR6	Gain Side B Receiver 6	54.60	NO
GBR7	Gain Side B Receiver 7	54.60	NO
GBR8	Gain Side B Receiver 8	54.60	NO
GCR1	Gain Side C Receiver 1	54.60	NO
GCR2	Gain Side C Receiver 2	54.60	NO
GCR3	Gain Side C Receiver 3	54.60	NO
GCR4	Gain Side C Receiver 4	54.60	NO
GCR5	Gain Side C Receiver 5	54.60	NO
GCR6	Gain Side C Receiver 6	54.60	NO
GCR7	Gain Side C Receiver 7	54.60	NO
GCR8	Gain Side C Receiver 8	54.60	NO
GDR1	Gain Side D Receiver 1	54.60	NO
GDR2	Gain Side D Receiver 2	54.60	NO
GDR3	Gain Side D Receiver 3	54.60	NO
GDR4	Gain Side D Receiver 4	54.60	NO
GDR5	Gain Side D Receiver 5	54.60	NO
GDR6	Gain Side D Receiver 6	54.60	NO
GDR7	Gain Side D Receiver 7	54.60	NO
GDR8	Gain Side D Receiver 8	54.60	NO

XRMI-I Mandrel

TPUL	Tension Pull	22.35	NO
PAD1	XRMI Pad 1 values	22.12	NO
PAD2	XRMI Pad 2 values	22.12	NO
PAD3	XRMI Pad 3 values	22.12	NO
PAD4	XRMI Pad 4 values	22.12	NO
PAD5	XRMI Pad 5 values	22.12	NO
PAD6	XRMI Pad 6 values	22.12	NO
OD1	EMI Odd Button Values Pad 1	22.12	NO
OD2	EMI Odd Button Values Pad 2	22.35	NO
OD3	EMI Odd Button Values Pad 3	22.12	NO
OD4	EMI Odd Button Values Pad 4	22.35	NO
OD5	EMI Odd Button Values Pad 5	22.12	NO
OD6	EMI Odd Button Values Pad 6	22.35	NO
EV1	EMI Even Button Values Pad 1	22.14	NO

EV1	EMI Even Button Values Pad 1	22.14	NO	
EV2	EMI Even Button Values Pad 2	22.32	NO	
EV3	EMI Even Button Values Pad 3	22.14	NO	
EV4	EMI Even Button Values Pad 4	22.32	NO	
EV5	EMI Even Button Values Pad 5	22.14	NO	
EV6	EMI Even Button Values Pad 6	22.32	NO	
ITMP	Instrument Temperature	19.58	NO	
EMIM	Tool Mode	19.58	NO	
HAZI	Hole Azimuth	21.87	NO	
HAZI	Hole Azimuth - Down Delay	22.37	NO	
ZACC	Accelerometer Z	22.12	NO	
RB	Relative Bearing	21.87	NO	
RBD	Relative Bearing Down	22.37	NO	
TPUL	Tension Pull	22.35	NO	
FIR1	Current Button R - Pad 1	22.12	NO	
FIR2	Current Button R - Pad 2	22.35	NO	
FIR3	Current Button R - Pad 3	22.12	NO	
FIR4	Current Button R - Pad 4	22.35	NO	
FIR5	Current Button R - Pad 5	22.12	NO	
FIR6	Current Button R - Pad 6	22.35	NO	
FIX1	Current Button X - Pad 1	22.12	NO	
FIX2	Current Button X - Pad 2	22.35	NO	
FIX3	Current Button X - Pad 3	22.12	NO	
FIX4	Current Button X - Pad 4	22.35	NO	
FIX5	Current Button X - Pad 5	22.12	NO	
FIX6	Current Button X - Pad 6	22.35	NO	
SIR1	Current Slow Button R - Pad 1	22.12	BLK	3.000
SIR2	Current Slow Button R - Pad 2	22.35	BLK	3.000
SIR3	Current Slow Button R - Pad 3	22.12	BLK	3.000
SIR4	Current Slow Button R - Pad 4	22.35	BLK	3.000
SIR5	Current Slow Button R - Pad 5	22.12	BLK	3.000
SIR6	Current Slow Button R - Pad 6	22.35	BLK	3.000
SIX1	Current Slow Button X - Pad 1	22.12	BLK	3.000
SIX2	Current Slow Button X - Pad 2	22.35	BLK	3.000
SIX3	Current Slow Button X - Pad 3	22.12	BLK	3.000
SIX4	Current Slow Button X - Pad 4	22.35	BLK	3.000
SIX5	Current Slow Button X - Pad 5	22.12	BLK	3.000
SIX6	Current Slow Button X - Pad 6	22.35	BLK	3.000
EMMR	Phasor Voltage - Real Part	22.12	NO	
EMMX	Phasor Voltage - Imaginary Part	22.12	NO	
PADV	Pad Voltage	19.58	BLK	0.250
ITMP	Instrument Temperature	19.58	BLK	0.000
CON1	Conductivity Pad 1	22.12	BLK	3.000
CON2	Conductivity Pad 2	22.35	BLK	3.000
CON3	Conductivity Pad 3	22.12	BLK	3.000
CON4	Conductivity Pad 4	22.35	BLK	3.000
CON5	Conductivity Pad 5	22.12	BLK	3.000
CON6	Conductivity Pad 6	22.35	BLK	3.000
UIR2	Current Button R No Delay - Pad 2	22.12	NO	
UIR4	Current Button R No Delay - Pad 4	22.12	NO	
UIR6	Current Button R No Delay - Pad 6	22.12	NO	
UIX2	Current Button X No Delay - Pad 2	22.12	NO	
UIX4	Current Button X No Delay - Pad 4	22.12	NO	
UIX6	Current Button X No Delay - Pad 6	22.12	NO	
HDIA	Measured Hole Diameter	0.00	NO	
TPUL	Tension Pull	22.35	NO	
ARM1	Caliper 1 measurement	22.12	BLK	0.000
ARM2	Caliper 2 measurement	22.12	BLK	0.000
ARM3	Caliper 3 measurement	22.12	BLK	0.000

ARM4	Caliper 4 measurement	22.12	BLK	0.000
ARM5	Caliper 5 measurement	22.12	BLK	0.000
ARM6	Caliper 6 measurement	22.12	BLK	0.000
MOTV	Motor Voltage Monitor 1	22.12	BLK	0.000
PRES	Caliper percentage of total compression of the spring	19.58	BLK	0.000
HAZI	Hole Azimuth	22.12	NO	
RB	Relative Bearing	22.12	NO	
AZI1	PAD1 Azimuth	22.12	NO	
DEVI	Inclination	22.12	NO	

ACRt Sonde

TPUL	Tension Pull	2.73	NO	
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.73	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000
ITMP	Instrument Temperature	2.73	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.73	NO	

TIDV	Instrument Temperature Derivative	2.73	NO	
TUDV	Upper Temperature Derivative	2.73	NO	
TLDV	Lower Temperature Derivative	2.73	NO	
TRBD	Receiver Board Temperature	2.73	NO	
HDIA	Measured Hole Diameter	0.00	NO	

SDLT Pad

TPUL	Tension Pull	88.89	NO	
NAB	Near Above	88.72	BLK	0.920
NHI	Near Cesium High	88.72	BLK	0.920
NLO	Near Cesium Low	88.72	BLK	0.920
NVA	Near Valley	88.72	BLK	0.920
NBA	Near Barite	88.72	BLK	0.920
NDE	Near Density	88.72	BLK	0.920
NPK	Near Peak	88.72	BLK	0.920
NLI	Near Lithology	88.72	BLK	0.920
NBAU	Near Barite Unfiltered	88.72	BLK	0.250
NLIU	Near Lithology Unfiltered	88.72	BLK	0.250
FAB	Far Above	89.07	BLK	0.250
FHI	Far Cesium High	89.07	BLK	0.250
FLO	Far Cesium Low	89.07	BLK	0.250
FVA	Far Valley	89.07	BLK	0.250
FBA	Far Barite	89.07	BLK	0.250
FDE	Far Density	89.07	BLK	0.250
FPK	Far Peak	89.07	BLK	0.250
FLI	Far Lithology	89.07	BLK	0.250
PTMP	Pad Temperature	88.90	BLK	0.920
NHV	Near Detector High Voltage	88.30	NO	
FHV	Far Detector High Voltage	88.30	NO	
ITMP	Instrument Temperature	88.30	NO	
DDHV	Detector High Voltage	88.30	NO	
HDIA	Measured Hole Diameter	0.00	NO	

Microlog Pad

TPUL	Tension Pull	89.09	NO	
MINV	Microlog Lateral	89.09	BLK	0.750
MNOR	Microlog Normal	89.09	BLK	0.750

Data: K&G_1-29\0002 SP-GTET-DSNT-SDLT-FLEX-WAVE-XRMI-ACRT-BN\IDLE **Date: 08-Sep-15 21:58:14**

COMPANY	**RAYDON EXPLORATION INC.**		
WELL	**K&G 1-29**		
FIELD	**WILDCAT**		
COUNTY	**HASKELL**	STATE	**KANSAS**

HALLIBURTON

ANNULAR HOLE VOLUME PLOT