

HALLIBURTON

DUAL SPACED NEUTRON BOREHOLE COMPENSATED SONIC ARRAY COMPENSATED TRUE RESISTIVITY

COMPANY		MERCHANT ENERGY PARTNERS, LLC	
WELL	SCHWAKE A-1		
FIELD	WEST PEETZ		
COUNTY	LOGAN		
STATE	CO		
COMPANY		MERCHANT ENERGY PARTNERS, LLC	
WELL	SCHWAKE A-1		
FIELD	WEST PEETZ		
COUNTY	LOGAN		
STATE	CO		
Permanent Datum	GL	Elev. 4547.0 ft	Elev. K.B. 4549.0 ft
Log measured from	KB	above perm. Datum	D.F. 4550.0 ft
Drilling measured from	KB		G.L. 4547.0 ft
Date	22-Feb-10		
Run No.	THREE		
Depth - Driller	5766.00 ft		
Depth - Logger	5762.0 ft		
Bottom - Logged Interval	5746 ft		
Top - Logged Interval	5100 ft		
Casing - Driller	5.500 in @ 5350.0 ft		
Casing - Logger	5350.0 ft		
Bit Size	4.750 in		
Type Fluid in Hole	WBM		
Density	Viscosity		
PH	Fluid Loss		
Source of Sample			
Rm @ Meas. Temperature	0.80 ohmm @ 75.00 degF		
Rmf @ Meas. Temperature	0.67 ohmm @ 75.00 degF		
Rmc @ Meas. Temperature	0.74 ohmm @ 75.00 degF		
Source Rmf	Rmc	CHART	
Rm @ BHT	0.34 ohmm @ 185.0 degF		
Time Since Circulation	3.0 hr		
Time on Bottom	22-Feb-10 17:29		
Max. Rec. Temperature	185.0 degF @ 5752.0 ft		
Equipment	Location	10549597 BRIGHTON	
Recorded By	C. BLUE		
Used By	JEFF SCHNEIDER		

Fold here

Service Ticket No.: N/A		API Serial No.: 0507507167		PGM Version: WL INSITE R2.4 (Build 20)	
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.	@	ONE	ACRT-S4353	N/A	FREE
Rmc @ Meas. Temp.	@				
Source Rmf	Rmc				
Rm @ BHT	@				
Rmf @ BHT	@				
Rmc @ BHT	@				
EQUIPMENT DATA					
GAMMA		ACOUSTIC		DENSITY	
Run No.	THREE	Run No.	TWO	Run No.	THREE
Serial No.	11294346	Serial No.	1105781	Serial No.	1301132
Model No.	GTET	Model No.	BSAT	Model No.	NEUT
Diameter	3.625"	No. of Cent.	0	Diameter	3.625"
Detector Model No.	102A	Spacing	0.5'	Log Type	NEU/NEU
Type	SCINT			Source Type	Am241Be
Length	8"	LSA [Y/N]	NO	Serial No.	DSN 434
Distance to Source	10'	FWDA [Y/N]	NO	Strength	15 Ci
LOGGING DATA					

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	
THREE	5752	5100	REC	0	250							30%	-10%	SAND
DIRECTIONAL INFORMATION														
Maximum Deviation					@		KOP					@		
Remarks: RUN ONE: RWCH/GTET/ACRT RAN IN COMBINATION														
RUN TWO: RWCH/GTET/BSAT RAN IN COMBINATION														
RUN THREE: RWCH/GTET/DSNT RAN IN COMBINATION														
TENSION PULLS AFFECT TOOL RESPONSE														
NO MUD DATA PROVIDED														
DSNT RAN WITHOUT DECENTRALIZER DUE TO HOLE SIZE														
CREW: A. LEWIS, J. WALKER														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES -- BRIGHTON, CO -- (303) 825-4346														
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.														
HALLIBURTON														

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PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	4.750	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDWT	Borehole Fluid Weight	8.333	ppg
	SHARED	OBM	Oil Based Mud System?	No	
	SHARED	RMUD	Mud Resistivity	2.000	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	40.0	degF
	SHARED	TD	Total Well Depth	5752.00	ft
	SHARED	BHT	Bottom Hole Temperature	185.0	degF
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	No	
	ACRt	RTOK	Process ACRt?	Yes	
	ACRt	MNSO	Minimum Tool Standoff	0.25	in
	ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Up	
	ACRt	TPOS	Tool Position	Free Hanging	
	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	LSFU	ACRT Long Space Array No of Frequency Used	3	
	ACRt	MSFU	ACRT Middle 17 Space Array No of Frequency Used	3	

BOTTOM

Data: SCHWAKE_CRAIG\0001 ACRT\002.03 08-Mar-10 13:04 Up

Date: 08-Mar-10 13:13:10

HALLIBURTON**PARAMETERS REPORT**

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	4.350	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDWT	Borehole Fluid Weight	8.333	ppg
	SHARED	OBM	Oil Based Mud System?	No	
	SHARED	RMUD	Mud Resistivity	2.000	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	50.0	degF
	SHARED	TD	Total Well Depth	5752.00	ft
	SHARED	BHT	Bottom Hole Temperature	185.0	degF
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	No	
	BSAT	MBOK	Compute BCAS Results?	Yes	
	BSAT	FLLO	Semblance Filter Low Pass Value?	5000	Hz
	BSAT	FLHI	Semblance Filter High Pass Value?	27000	Hz
	BSAT	DTFL	Delta -T Fluid	189.00	uspf
	BSAT	DTMT	Delta -T Matrix Type	Sandstone 55.5	
	BSAT	DTSH	Delta -T Shale	100.00	uspf
	BSAT	SPEQ	Acoustic Porosity Equation	Wyllie	
BOTTOM					

Data: SCHWAKE_CRAIG\0002 BSAT\002.03 08-Mar-10 13:12 Up

Date: 08-Mar-10 13:13:51

HALLIBURTON**PARAMETERS REPORT**

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	4.750	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDWT	Borehole Fluid Weight	8.333	ppg
	SHARED	OBM	Oil Based Mud System?	No	
	SHARED	RMUD	Mud Resistivity	2.000	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	50.0	degF
	SHARED	TD	Total Well Depth	5752.00	ft
	SHARED	BHT	Bottom Hole Temperature	185.0	degF
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in

GTET	GEOK	Process Gamma Ray EVR?	No	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Sandstone	
DSNT	DNSO	DSNTool Standoff	0.000	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	

BOTTOM

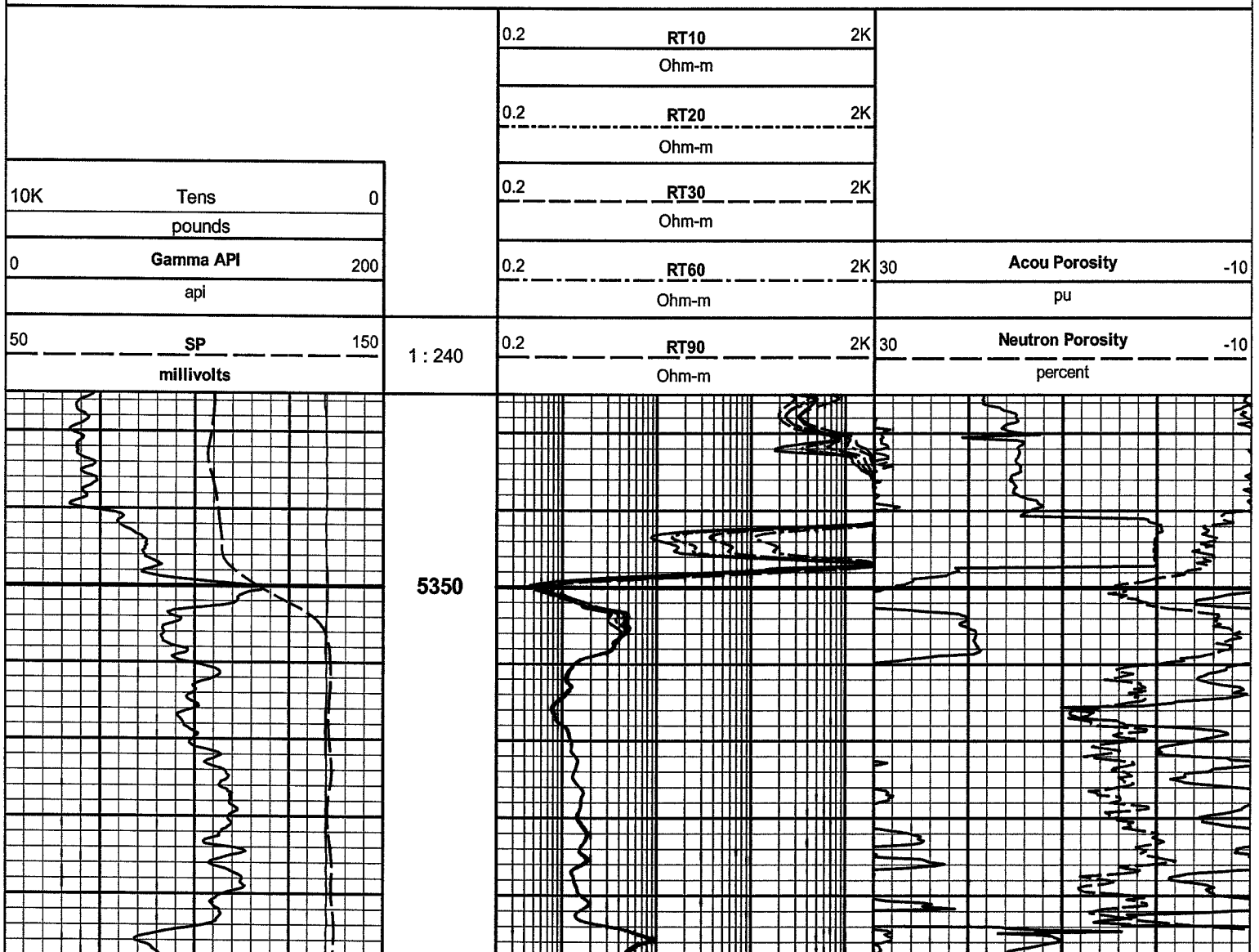
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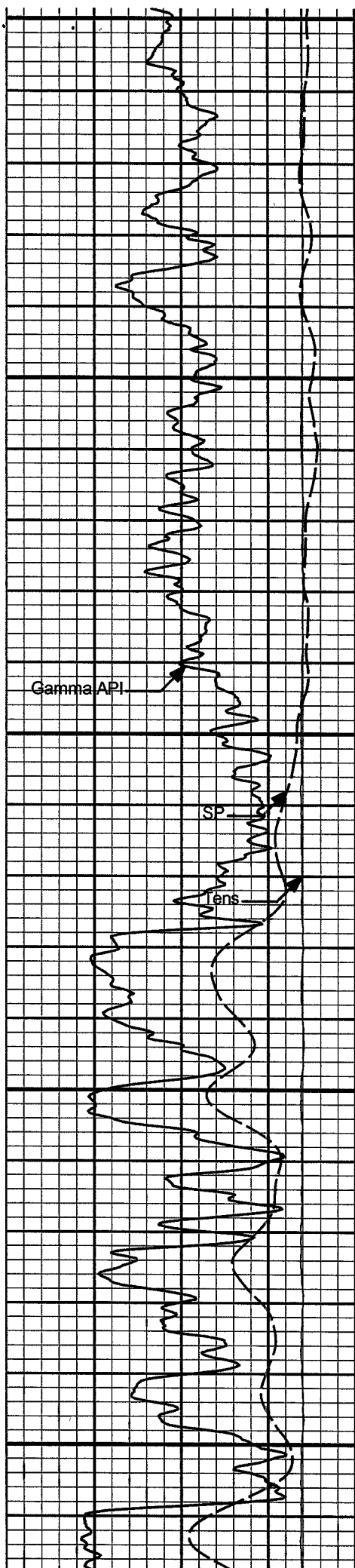
Date: 08-Mar-10 13:17:33

HALLIBURTON

Plot Time: 08-Mar-10 13:26:38
Plot Range: 5325 ft to 5755.92 ft
Data: SCHWAKE_CRAIG\Well Based\1*
Plot File: \\COMPMAIN PASS

MAIN PASS 5" = 100'





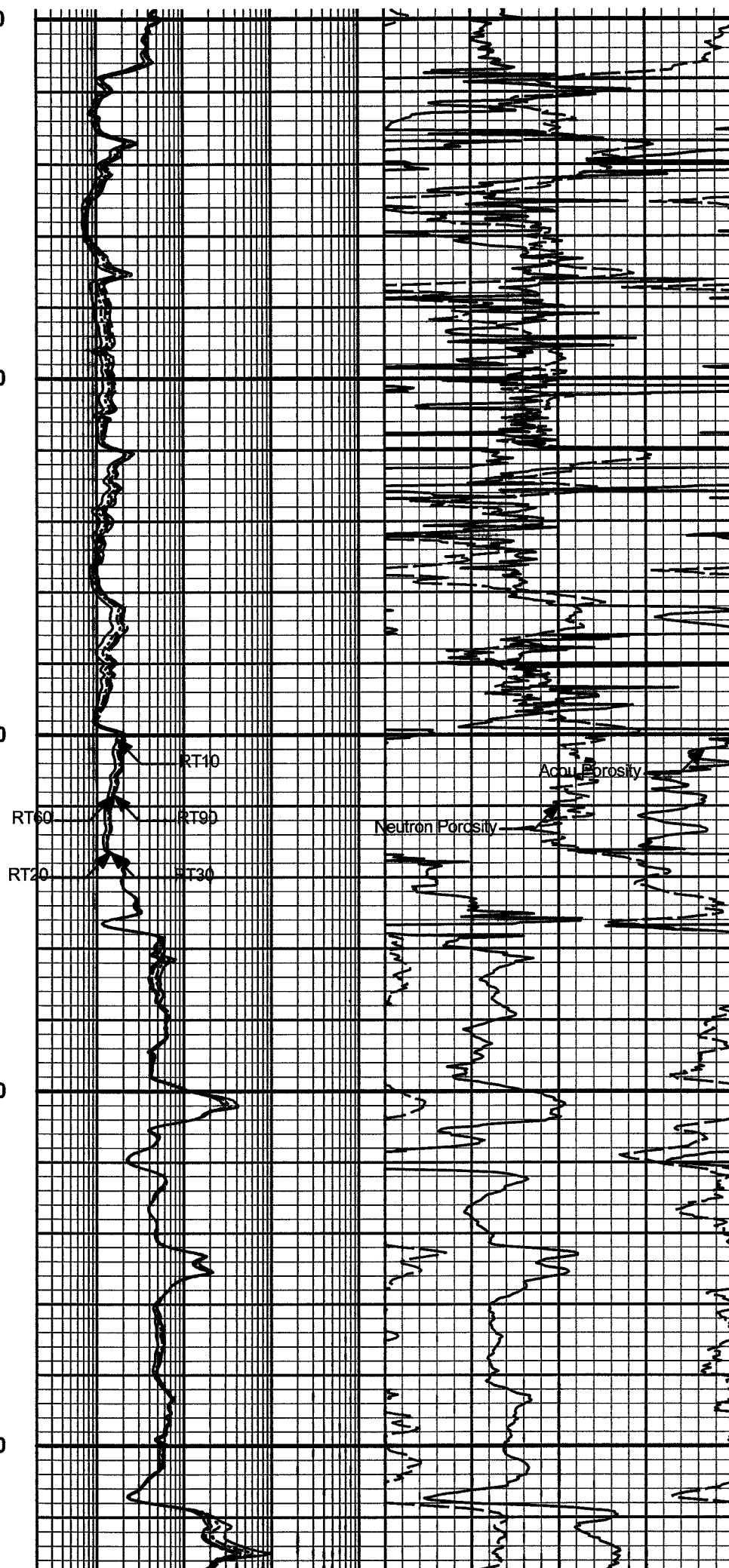
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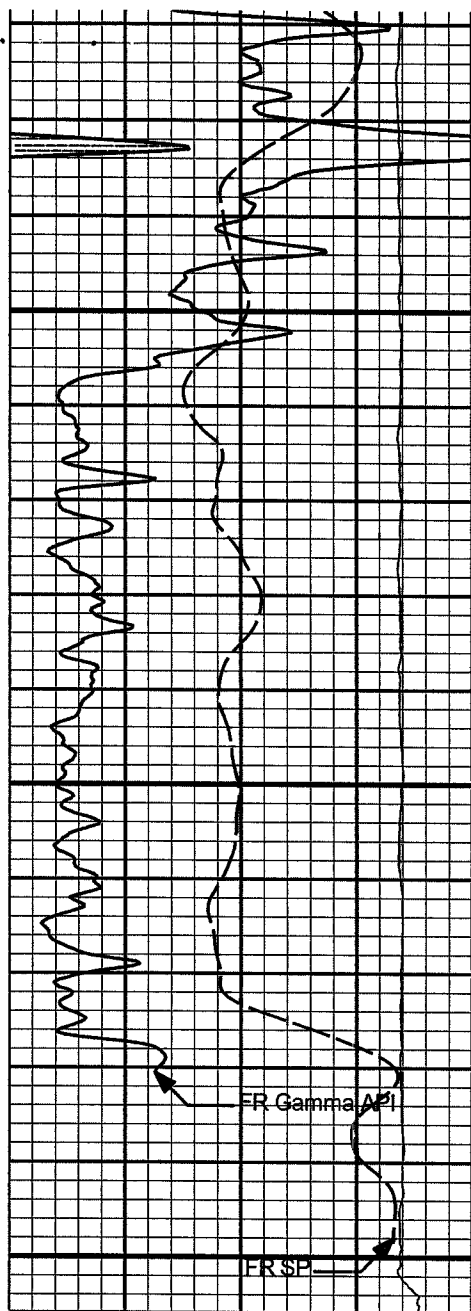
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5550

5600





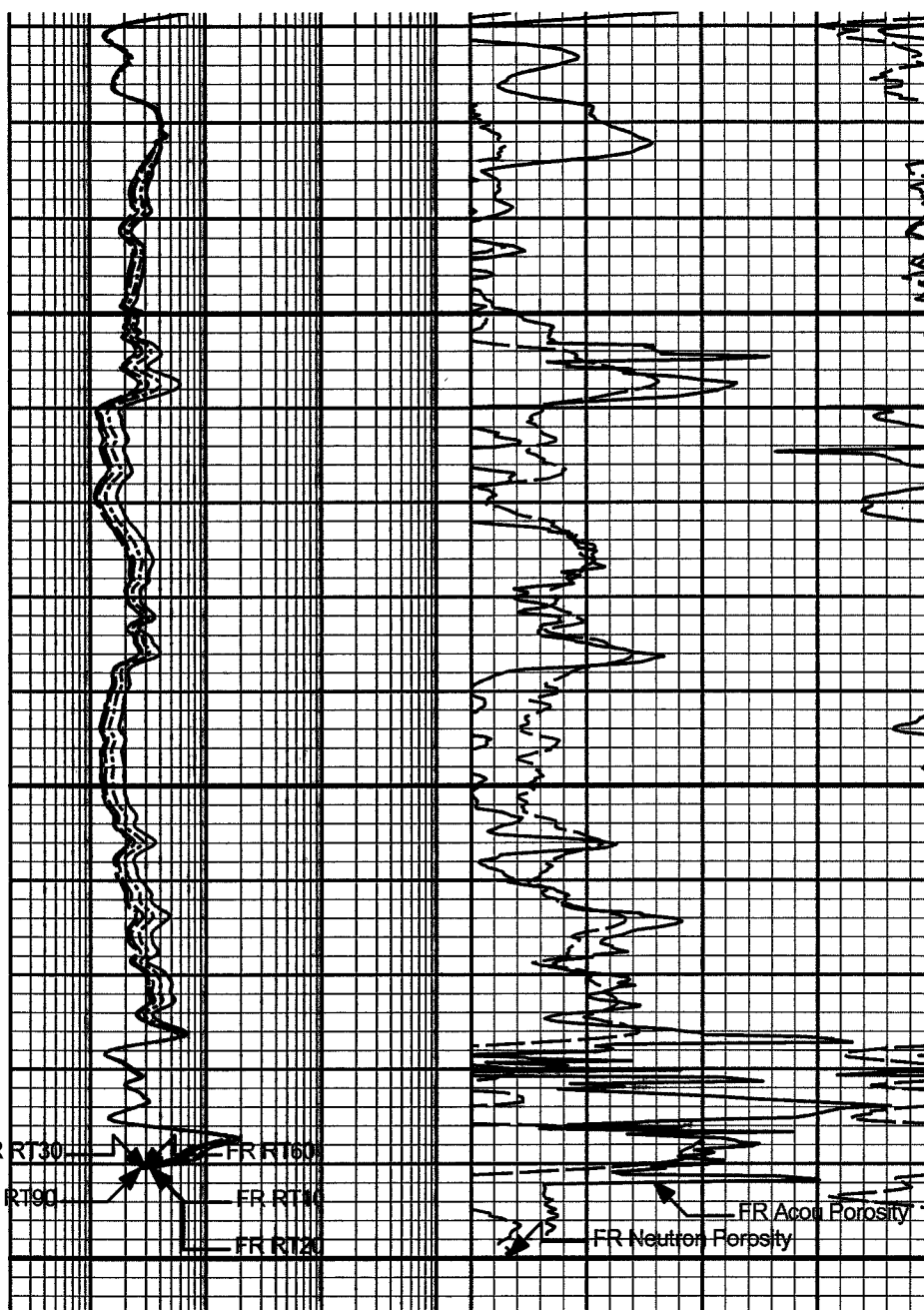
5650

5700

5750

50	SP	150
millivolts		
0	Gamma API	200
api		
10K	Tens	0
pounds		

1 : 240



FR RT30

FR RT90

FR RT60

FR RT10

FR RT20

FR Acou Porosity

FR Neutron Porosity

0.2	RT90	2K	30	Neutron Porosity	-10
Ohm-m			percent		
0.2	RT60	2K	30	Acou Porosity	-10
Ohm-m			pu		
0.2	RT30	2K			
Ohm-m					
0.2	RT20	2K			
Ohm-m					
0.2	RT10	2K			
Ohm-m					

HALLIBURTON

Plot Time: 08-Mar-10 13:26:39

Plot Range: 5325 ft to 5755.92 ft

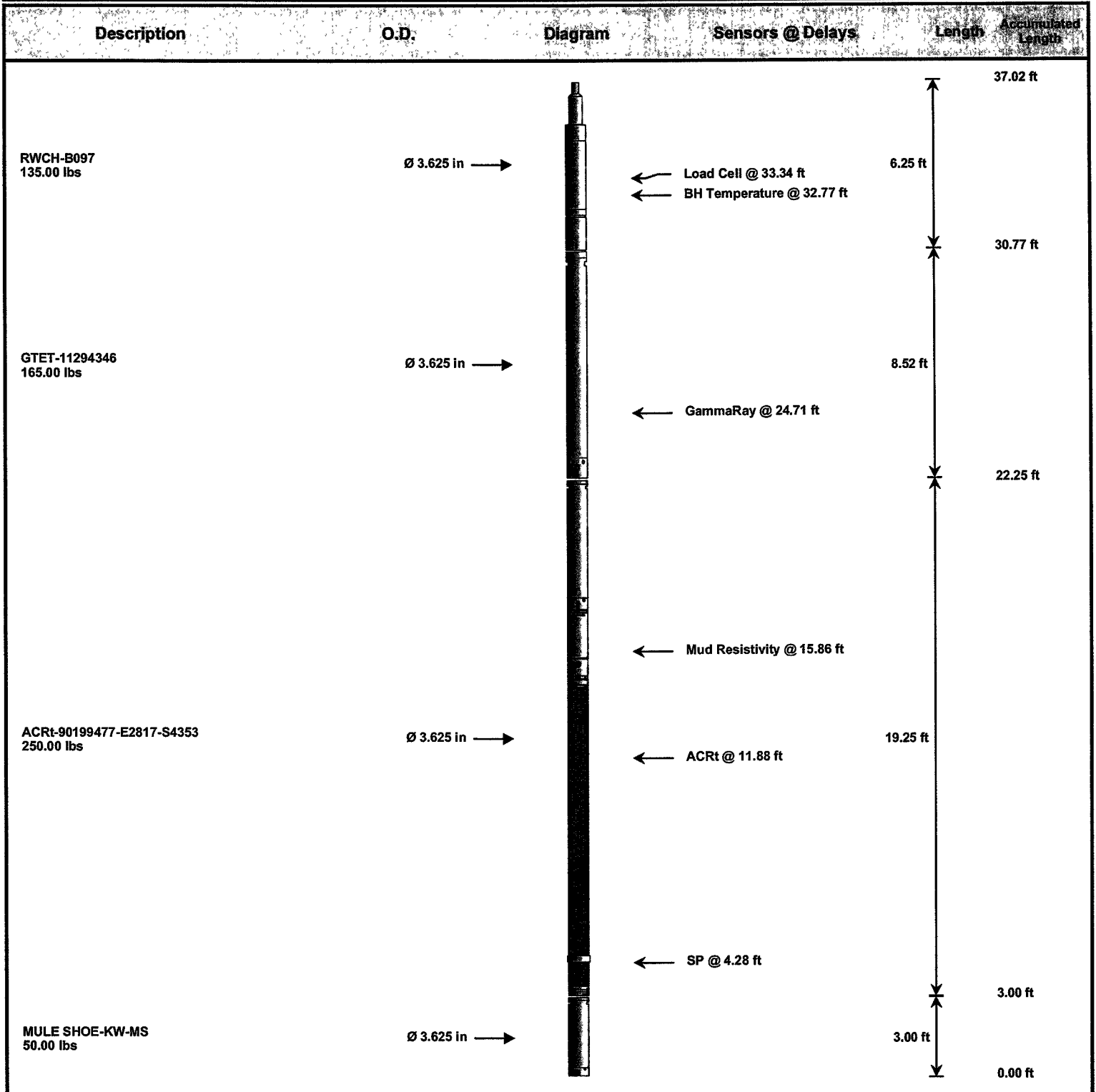
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Plot File: \\COMPMAIN PASS

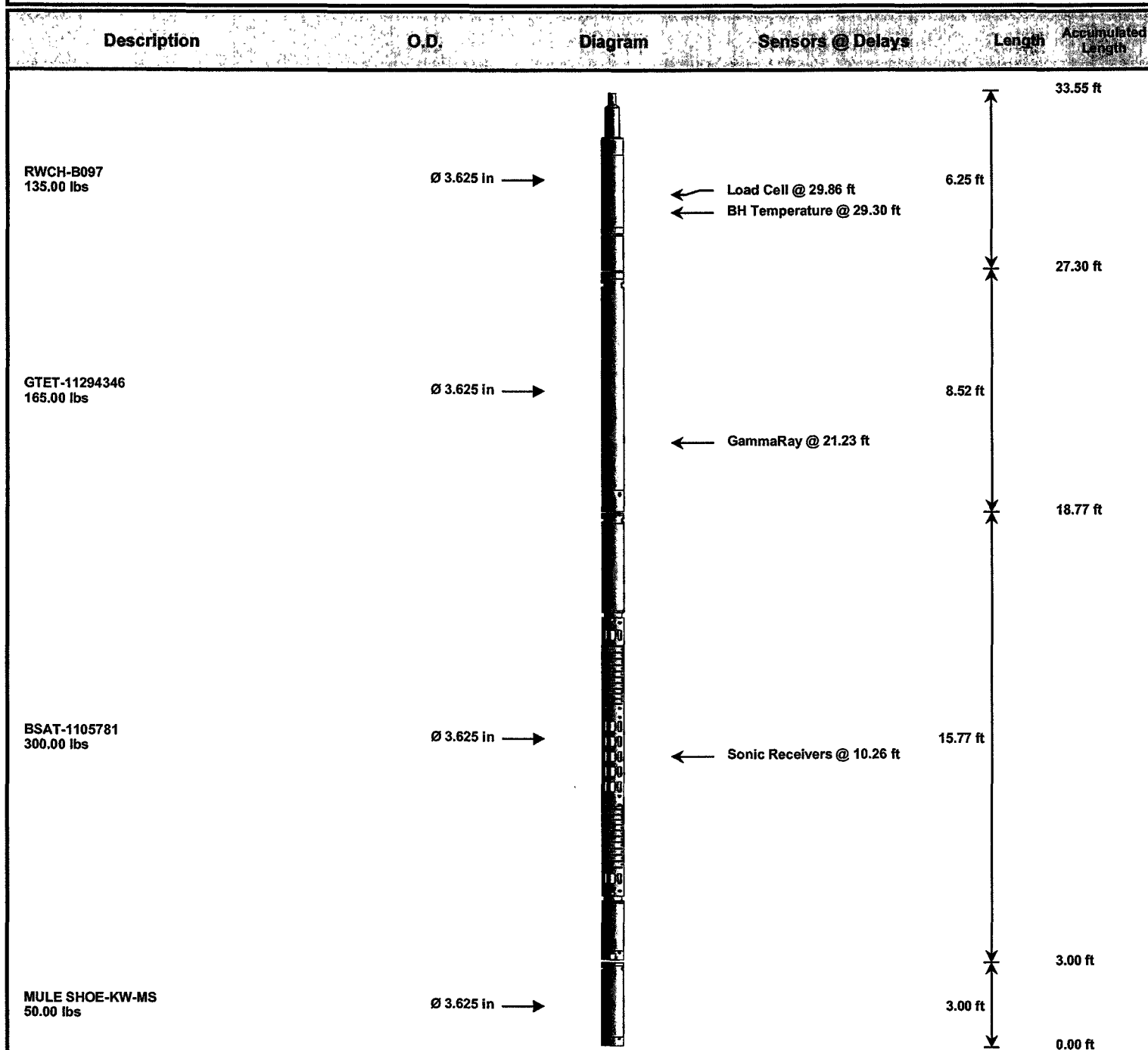
MAIN PASS 5" = 100'

HALLIBURTON

TOOL STRING DIAGRAM REPORT



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max Log Speed (ft/min)
RWCH	Releasable Wireline Cable Head	B097	135.00	6.25	30.77	300.00
GTET	Natural Gamma Ray Tool	11294346	165.00	8.52	22.25	60.00
ACRt	Array Compensated True Resistivity	90199477-E2817-S4353	250.00	19.25	3.00	300.00
SP	SP Ring	PROTO1	0.00	0.25	4.28	300.00
MS	MS	KW-MS	50.00	3.00	0.00	100.00
Total			600.00	37.02		

HALLIBURTON**TOOL STRING DIAGRAM REPORT**

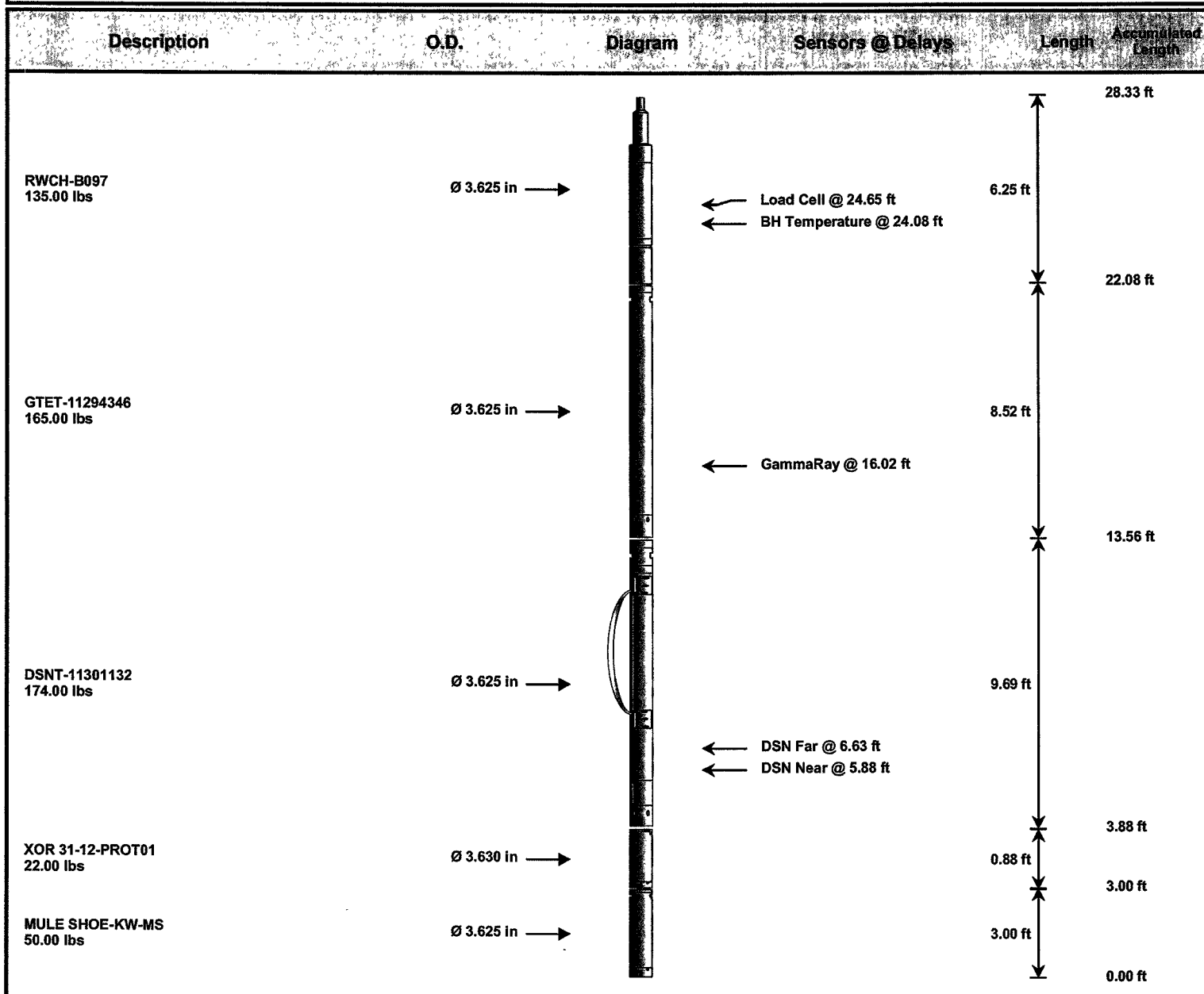
Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max Log Speed (ft/min)
RWCH	Releasable Wireline Cable Head	B097	135.00	6.25	27.30	300.00
GTET	Natural Gamma Ray Tool	11294346	165.00	8.52	18.77	60.00
BCAS	Borehole Sonic Array Tool	1105781	300.00	15.77	3.00	60.00
MS	MS	KW-MS	50.00	3.00	0.00	100.00

Total

650.00

33.55

TOOL STRING DIAGRAM REPORT



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max Log Speed (rpm)
RWCH	Releasable Wireline Cable Head	B097	135.00	6.25	22.08	300.00
GTET	Natural Gamma Ray Tool	11294346	165.00	8.52	13.56	60.00
DSNT	Dual Spaced Neutron	11301132	174.00	9.69	3.88	60.00
DCNT	DSN Decentralizer	11277440	50.00	5.13 *	7.21	300.00
XOR	Crossover DSNT 31 to 12 Pins	PROT01	22.00	0.88	3.00	300.00
MS	MS	KW-MS	50.00	3.00	0.00	100.00
Total			596.00	28.33		
Data: SCHWAKE\0003 DSNTIDLE						* Not included in Total Length and Length Accumulation. Date: 22-Feb-10 17:24:36

COMPANY **MERCHANT ENERGY PARTNERS, LLC**

WELL **SCHWAKE A-1**

FIELD **WEST PEETZ**

COUNTY

LOGAN

STATE

CO

HALLIBURTON

DUAL SPACED NEUTRON
BOREHOLE COMPENSATED
SONIC
ARRAY COMPENSATED
TRUE RESISTIVITY