

HALLIBURTON										ARRAY COMPENSATED TRUE RESISTIVITY									
MERCHANT ENERGY PARTNERS, LLC SCHWAKE A-1 WEST PEETZ LOGAN CO										COMPANY MERCHANT ENERGY PARTNERS, LLC WELL SCHWAKE A-1 FIELD WEST PEETZ COUNTY LOGAN STATE CO									
COMPANY WELL FIELD COUNTY STATE										Sect. 6 Twp. 11 Rge. 52W Other Services: RWCH GTET BSAT DSNT									
Permanent Datum Log measured from Drilling measured from										GL KB KB Elev. 4547.0 ft above perm. Datum Elev.: K.B. D.F. G.L. 4549.0 ft 4550.0 ft 4547.0 ft									
Date										22-Feb-10									
Run No.										ONE									
Depth - Driller										5766.00 ft									
Depth - Logger										5752.0 ft									
Bottom - Logged Interval										5741 ft									
Top - Logged Interval										5350 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										8.3 ppg									
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										CHART									
Rmc										CHART									
Rm @ BHT										0.34 ohmm @ 185.0 degF @									
Time Since Circulation										3.0 hr									
Time on Bottom										22-Feb-10 15:53									
Max. Rec. Temperature										185.0 degF @ 5752.0 ft @									
Equipment										10549597									
Location										BRIGHTON									
Recorded By										C. BLUE									
Witnessed 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.		Other													
Rmf @ Meas. Temp.		@		@		@		ONE		ACRT 817-353		N/A		0.25" S.O.		N/A													
Rmc @ Meas. Temp.		@		@		@																							
Source Rmf		Rmc																											
Rm @ BHT		@		@		@																							
Rmf @ BHT		@		@		@																							
Rmc @ BHT		@		@		@																							
EQUIPMENT DATA																													
GAMMA					ACOUSTIC					DENSITY					NEUTRON														
Run No.		ONE			Run No.					Run No.					Run No.														
Serial No.		11294346			Serial No.					Serial No.					Serial No.														
Model No.		GTET			Model No.					Model No.					Model No.														
Diameter		3.625"			No. of Cent.					Diameter					Diameter														
Detector Model No.		102A			Spacing					Log Type					Log Type														
Type		SCINT								Source Type					Source Type														
Length		8"			LSA [Y/N]					Serial No					Serial No.														
Distance to Source		N/A			FWDA [Y/N]					Strength					Strength														
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	
ONE	5752	5350	REC	0	250									
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														
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.														
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HALLIBURTON

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 Upr	
	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	
	ACRt	SSFU	ACRT Short Space Array No of Frequency Used	2	

BOTTOM

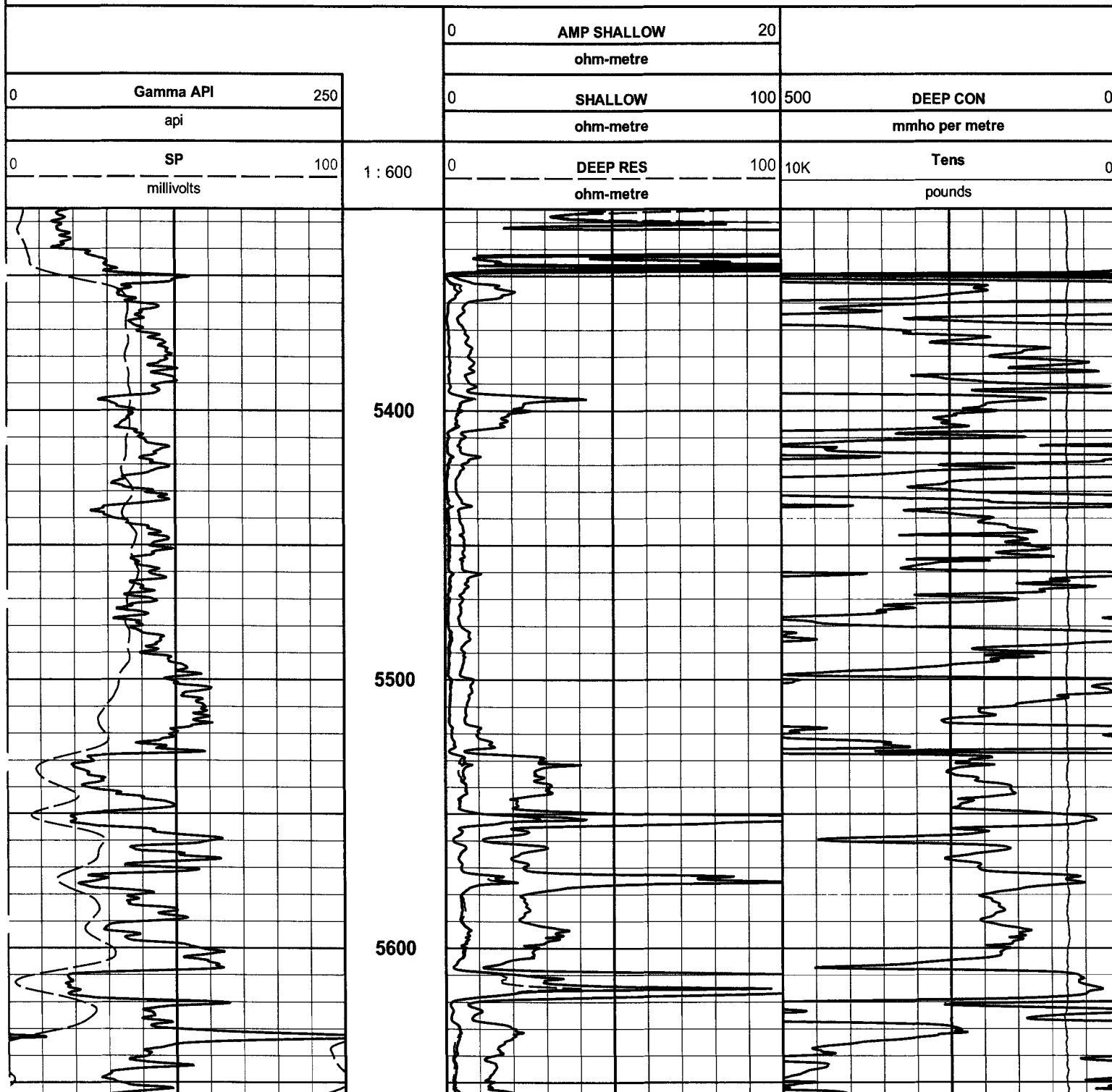
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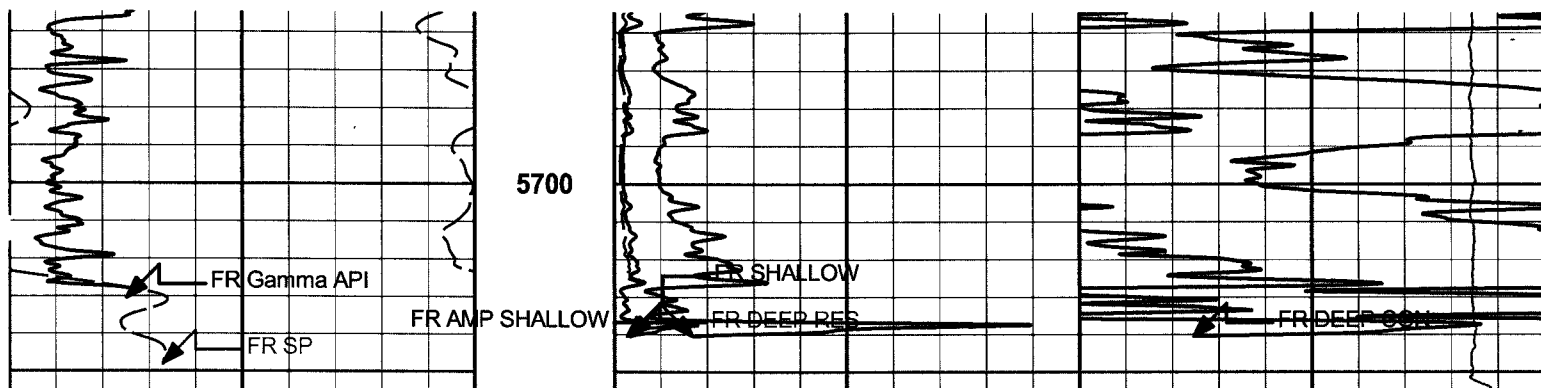
Date: 08-Mar-10 13:13:10

HALLIBURTON

Plot Time: 08-Mar-10 13:16:45
Plot Range: 5325 ft to 5755.92 ft
Data: SCHWAKE_CRAIG\Well Based\ACRT*
Plot File: \\ACRT\IQ_ACRT_2IN_RM

MAIN PASS 2" = 100'





0	SP	100	1 : 600	0	DEEP RES	100	10K	Tens	0
	millivolts				ohm-metre			pounds	
0	Gamma API	250		0	SHALLOW	100	500	DEEP CON	0
	api				ohm-metre			mmho per metre	
				0	AMP SHALLOW	20			
					ohm-metre				

HALLIBURTON

Plot Time: 08-Mar-10 13:16:46
 Plot Range: 5325 ft to 5755.92 ft
 Data: SCHWAKE_CRAIG\Well Based\ACRT\
 Plot File: \\ACRT\IQ_ACRt_2IN_RM

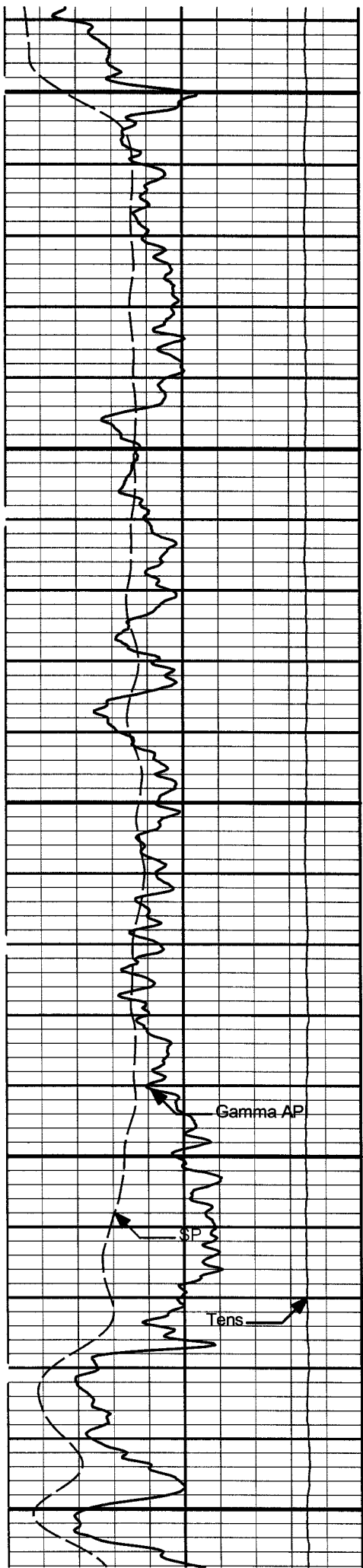
MAIN PASS 2" = 100'

HALLIBURTON

Plot Time: 08-Mar-10 13:16:46
 Plot Range: 5325 ft to 5755.92 ft
 Data: SCHWAKE_CRAIG\Well Based\ACRT\
 Plot File: \\ACRT\IQ_ACRt_5IN_RM

MAIN PASS 5" = 100'

			0.2	RT10	2K
				Ohm-m	
			0.2	RT20	2K
				Ohm-m	
10K	Tens	0	0.2	RT30	2K
	pounds			Ohm-m	
0	Gamma API	250	0.2	RT60	2K
	api			Ohm-m	
0	SP	100	0.2	RT90	2K
	millivolts			Ohm-m	
		1 : 240			



5350

5400

5450

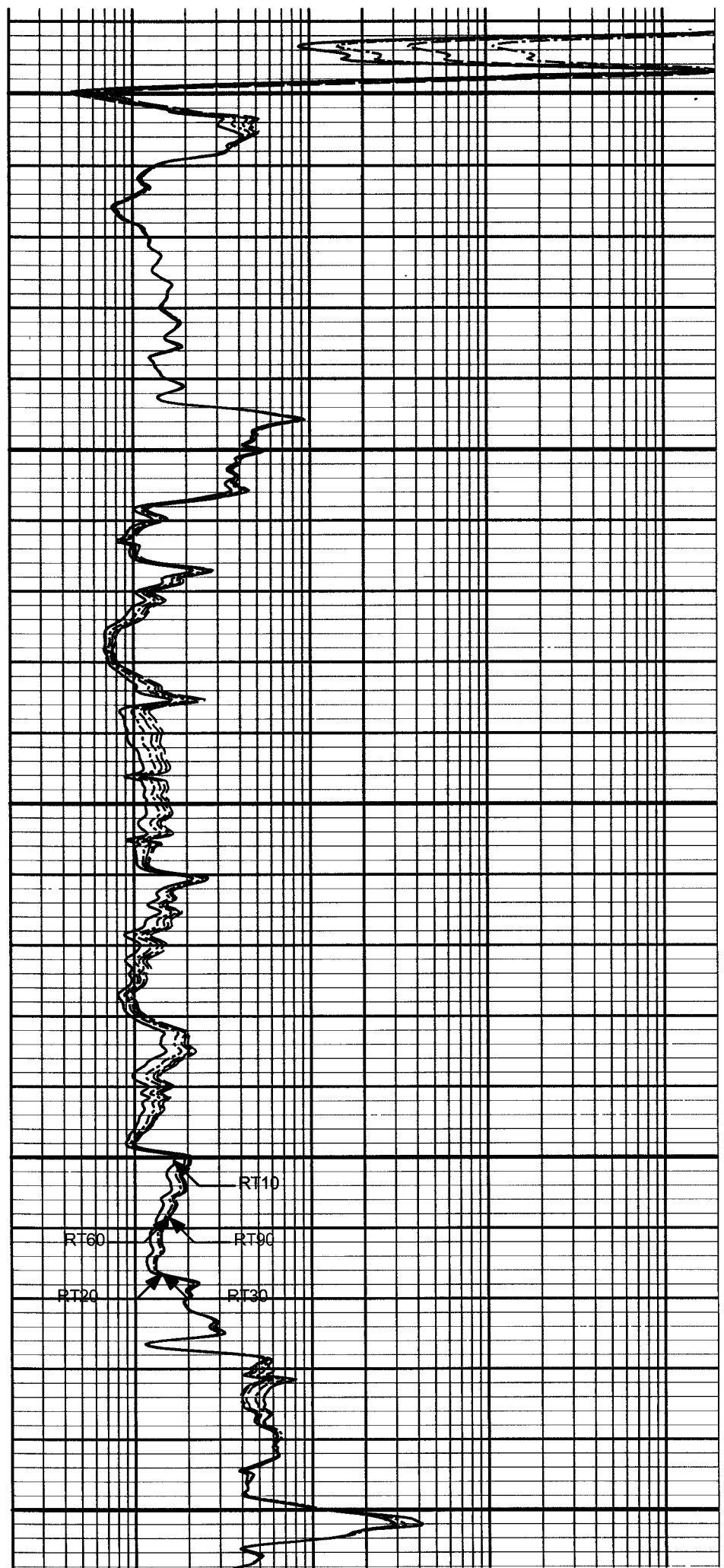
5500

5550

Gamma AP

SP

Tens



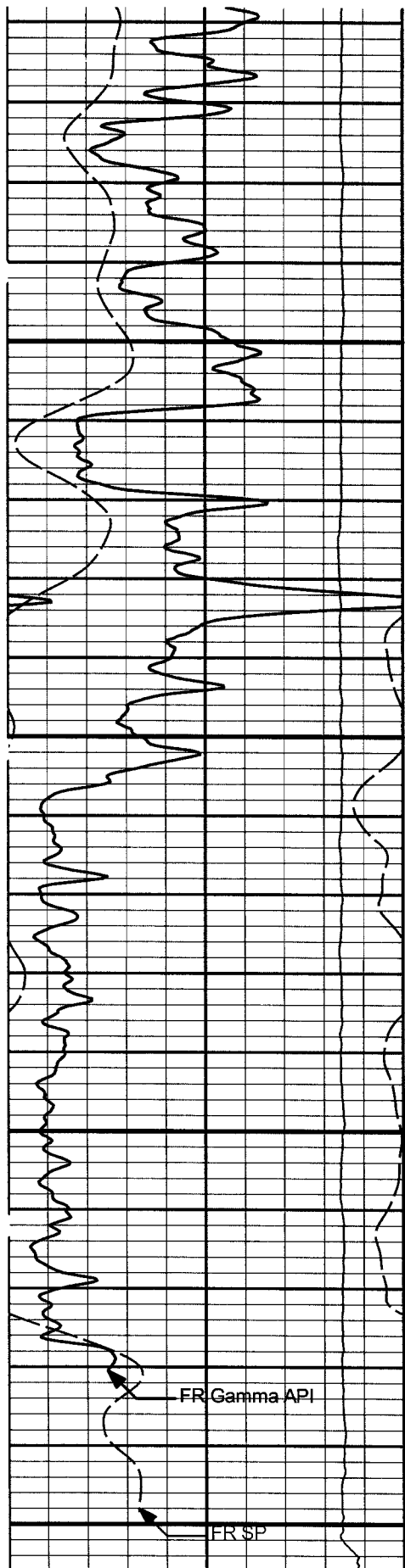
RT10

RT60

RT90

RT20

RT30



5600

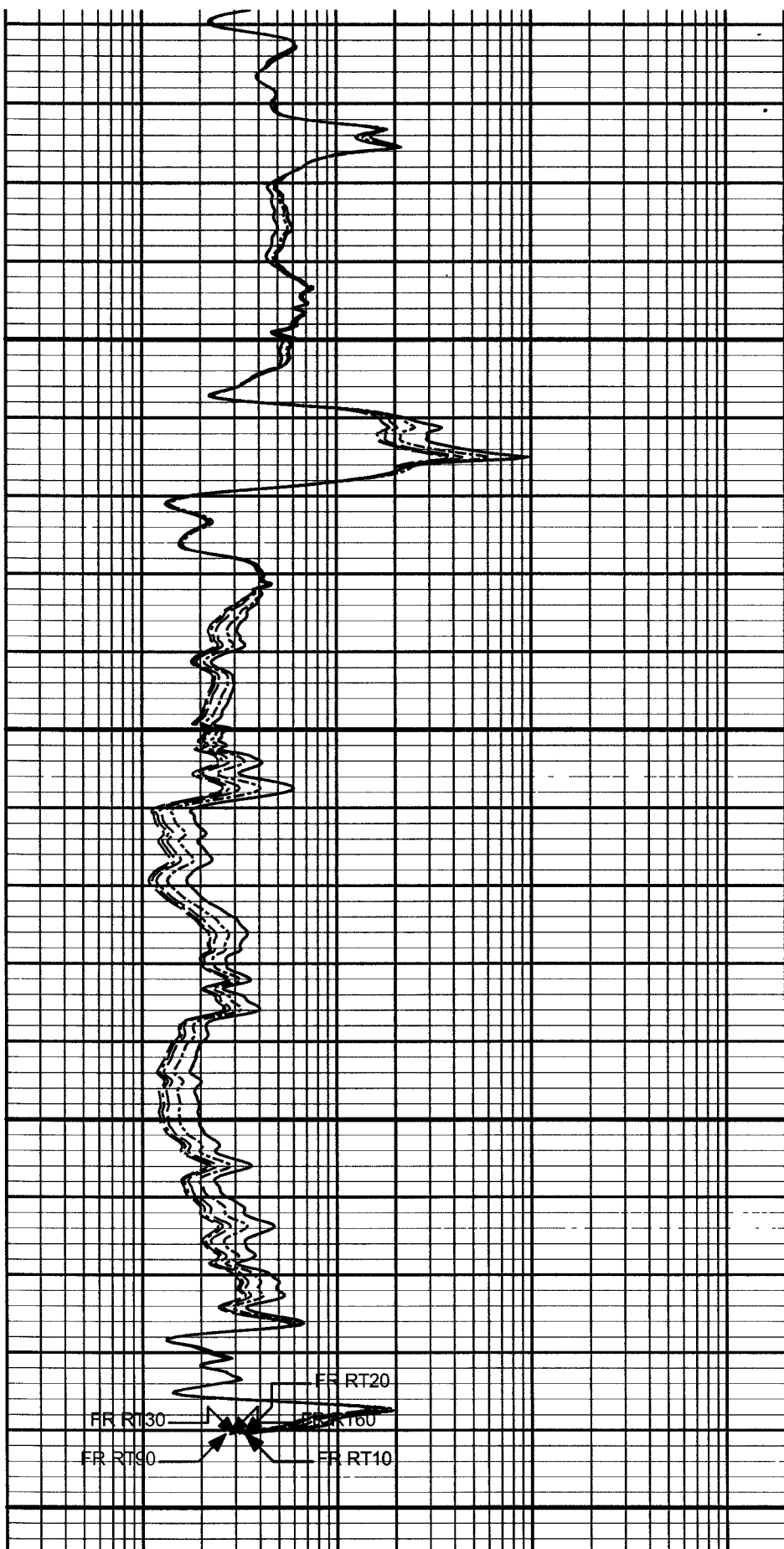
5650

5700

5750

0	SP	100
millivolts		
0	Gamma API	250
api		

1 : 240



FR RT20
FR RT30
FR RT60
FR RT90
FR RT10

0.2	RT90	2K
Ohm-m		
0.2	RT60	2K
Ohm-m		

10K	Tens	0
	pounds	

0.2	RT30	2K
	Ohm-m	
0.2	RT20	2K
	Ohm-m	
0.2	RT10	2K
	Ohm-m	

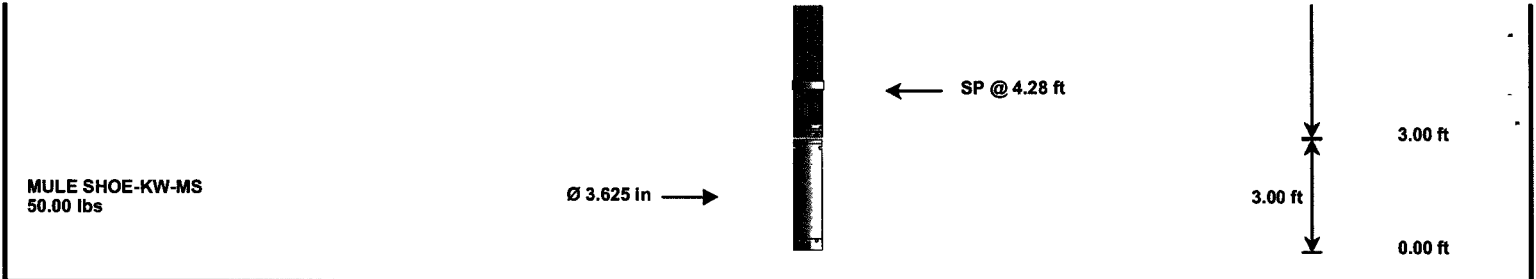
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MAIN PASS 5" = 100'

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-B097 135.00 lbs	Ø 3.625 in →		← Load Cell @ 33.34 ft ← BH Temperature @ 32.77 ft	6.25 ft	37.02 ft
GTET-11294346 165.00 lbs	Ø 3.625 in →		← GammaRay @ 24.71 ft	8.52 ft	30.77 ft
ACRT-90199477-E2817-S4353 250.00 lbs	Ø 3.625 in →		← Mud Resistivity @ 15.86 ft		22.25 ft
			← ACRT @ 11.88 ft	19.25 ft	



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
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		
			* Not included in Total Length and Length Accumulation.			
Data: SCHWAKE\0001 ACRT\IDLE			Date: 22-Feb-10 14:51:12			

COMPANY	MERCHANT ENERGY PARTNERS, LLC		
WELL	SCHWAKE A-1		
FIELD	WEST PEETZ		
COUNTY	LOGAN	STATE	CO
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY	