

BOREHOLE COMPENSATED SONIC

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		GL KB KB		Sect. 6 Twp. 11 Rge. 52W		API No. 0507507167 Location		Other Services: RWCH GTET ACRT 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.		TWO							
Depth - Driller		5766.00 ft							
Depth - Logger		5752.0 ft							
Bottom - Logged Interval		5742 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 ppq							
PH		Fluid Loss							
Source of Sample									
Rm @ Meas. Temperature		0.80 ohmm @ 75.00 degF		@				@	
Rmt @ Meas. Temperature		0.67 ohmm @ 75.00 degF		@				@	
Rmt @ Meas. Temperature		0.74 ohmm @ 75.00 degF		@				@	
Source Rmt		CHART		CHART					
Rm @ BHT		0.34 ohmm @ 185.0 degF		@				@	
Time Since Circulation		3.0 hr							
Time on Bottom		22-Feb-10 16:49							
Max. Rec. Temperature		185.0 degF @ 5752.0 ft		@				@	
Equipment		10549597		BRIGHTON					
Recorded By		C. BLUE							
Witnessed By		JEFF SCHNEIDER							

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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.		@		@							
Rmc @ Meas. Temp.		@		@							
Source Rmf	Rmc										
Rm @ BHT		@		@							
Rmf @ BHT		@		@							
Rmc @ BHT		@		@							
EQUIPMENT DATA											
GAMMA		ACOUSTIC		DENSITY		NEUTRON					
Run No.	TWO	Run No.	TWO	Run No.		Run No.					
Serial No.	11294346	Serial No.	1105781	Serial No.		Serial No.					
Model No.	GTET	Model No.	BSAT	Model No.		Model No.					
Diameter	3.625	No. of Cent.	0	Diameter		Diameter					
Detector Model No.	102A	Spacing	0.5 ft	Log Type		Log Type					
Type	SCINT			Source Type		Source Type					
Length	8"	LSA [Y/N]	N	Serial No.		Serial No.					
Distance to Source	N/A	FWDA [Y/N]	N	Strength		Strength					
LOGGING DATA											

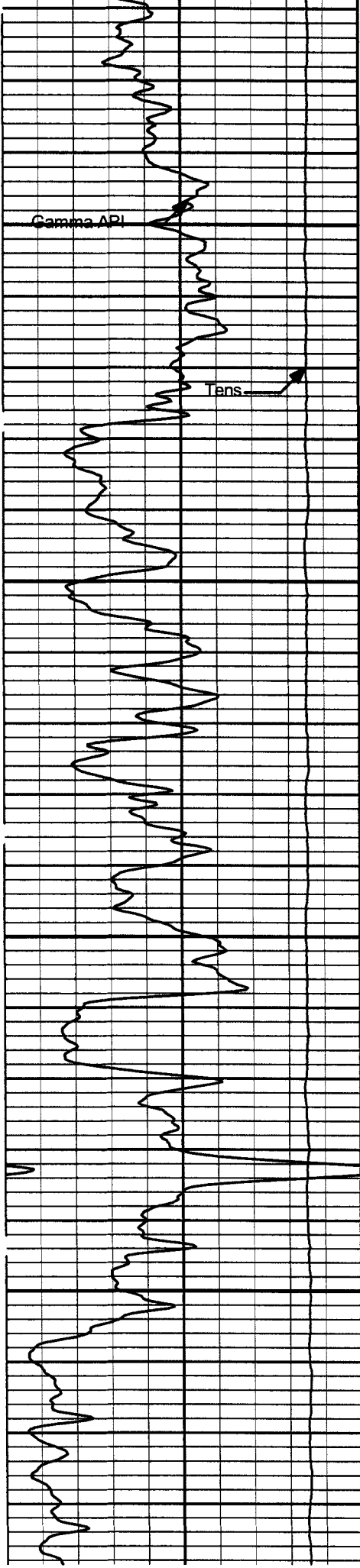
[illegible]

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 13:13:5

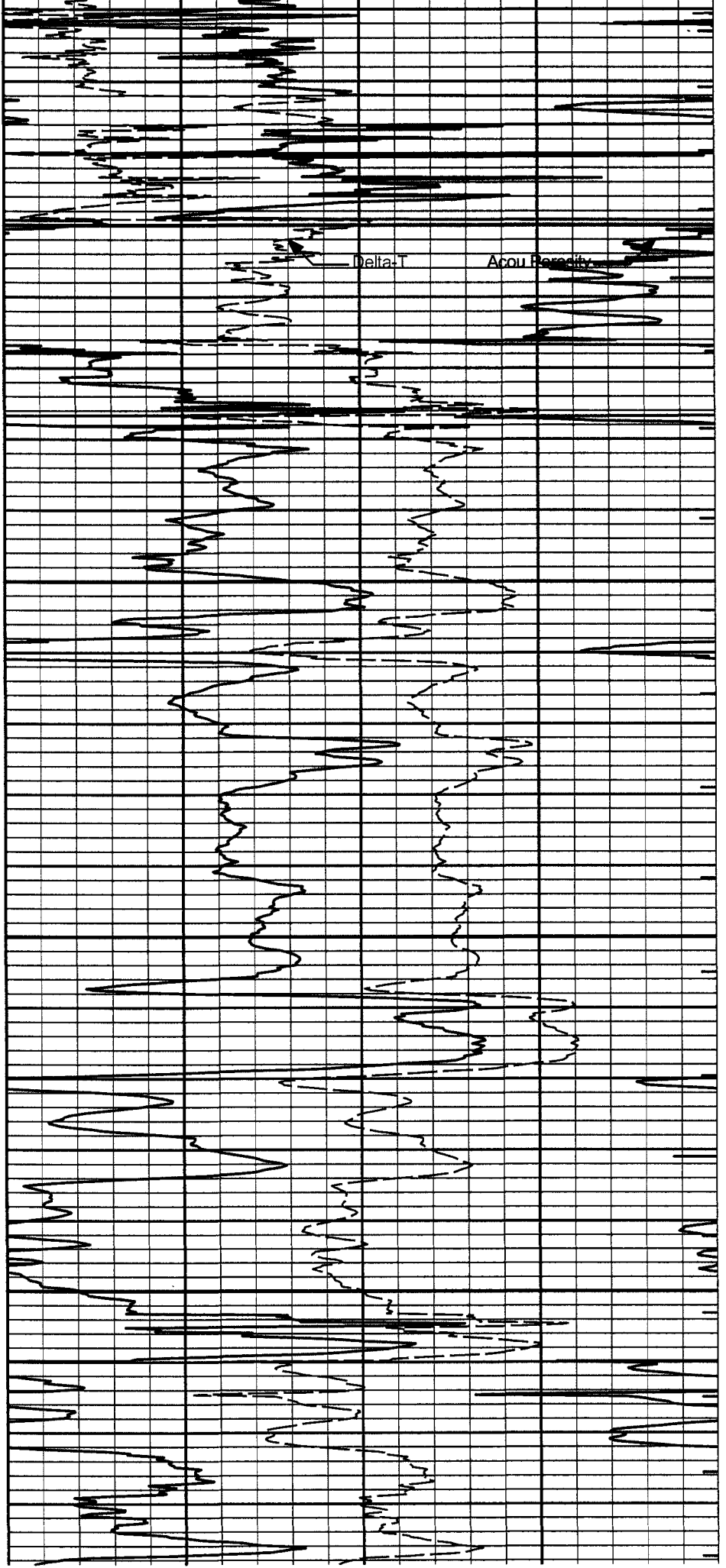
Plot Time: 08-Mar-10 13:20:20
Plot Range: 5325 ft to 5758.5 ft
Data: SCHWAKE_CRAIG\Well Based\BSAT\
Plot File: \\BSAT\IQ_BSAT_DT_5IN_RM

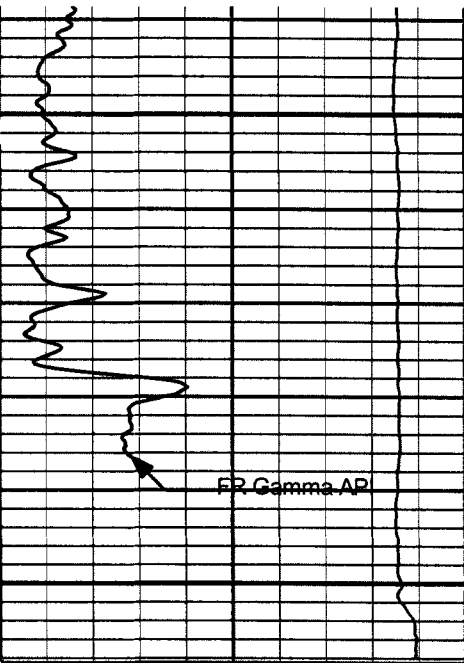
		30	Acou Porosity	-10	
			percent		
0	Gamma API	250	140	Delta-T	40
	api			microsec per ft	
10K	Tens	0	1 : 240	ITTTotat	+
	pounds				



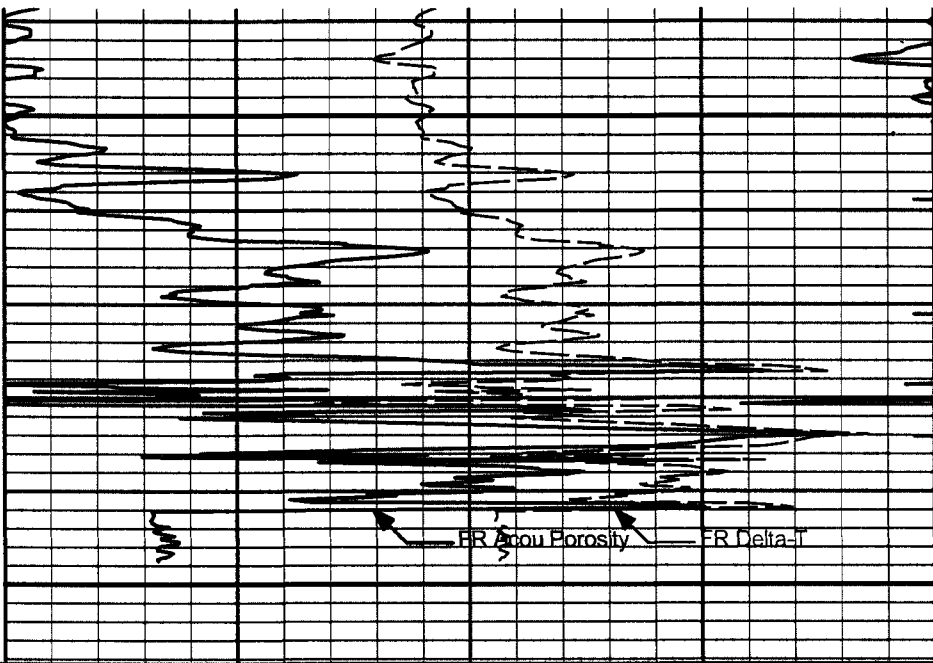
5500

5600





5700



10K	Tens	0
	pounds	
0	Gamma API	250
	api	

1 : 240

ITTTot



140	Delta-T	40
	microsec per ft	
30	Acou Porosity	-10
	percent	

HALLIBURTON

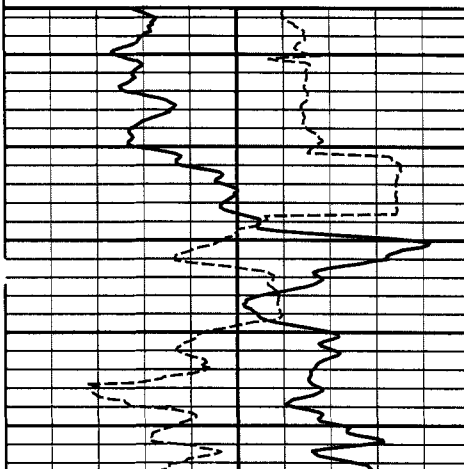
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Plot Range: 5325 ft to 5758.5 ft
Data: SCHWAKE_CRAIGWell Based\BSAT\
Plot File: \\BSAT\IQ_BSAT_DT_5IN_RM

HALLIBURTON

Plot Time: 08-Mar-10 13:20:21
Plot Range: 5325 ft to 5758.16 ft
Data: SCHWAKE_CRAIGWell Based\BSAT\
Plot File: \\BSAT\BSAT Waveform & VDL - color

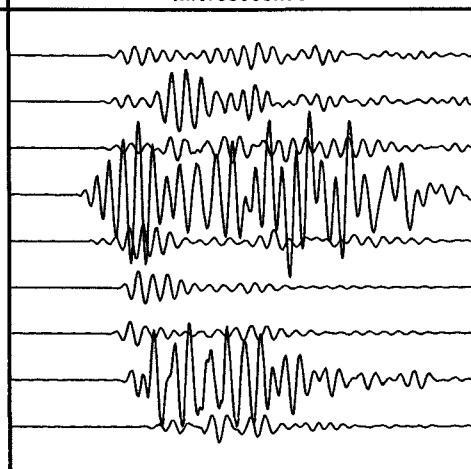
	2K Tens 3K	
	pounds	
Minute Mark	2K DHTen 3K	
	pounds	
140	Delta-T	40
	microsec per ft	
0	Gamma API	150
	api	

1 : 240

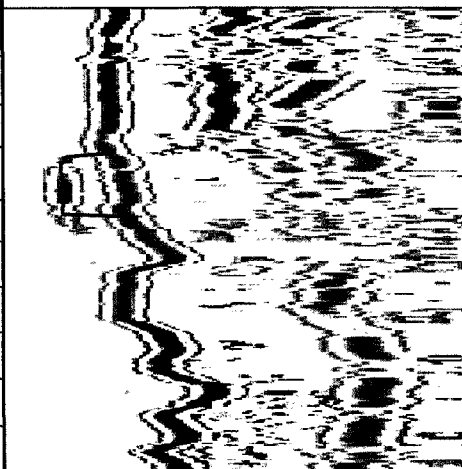


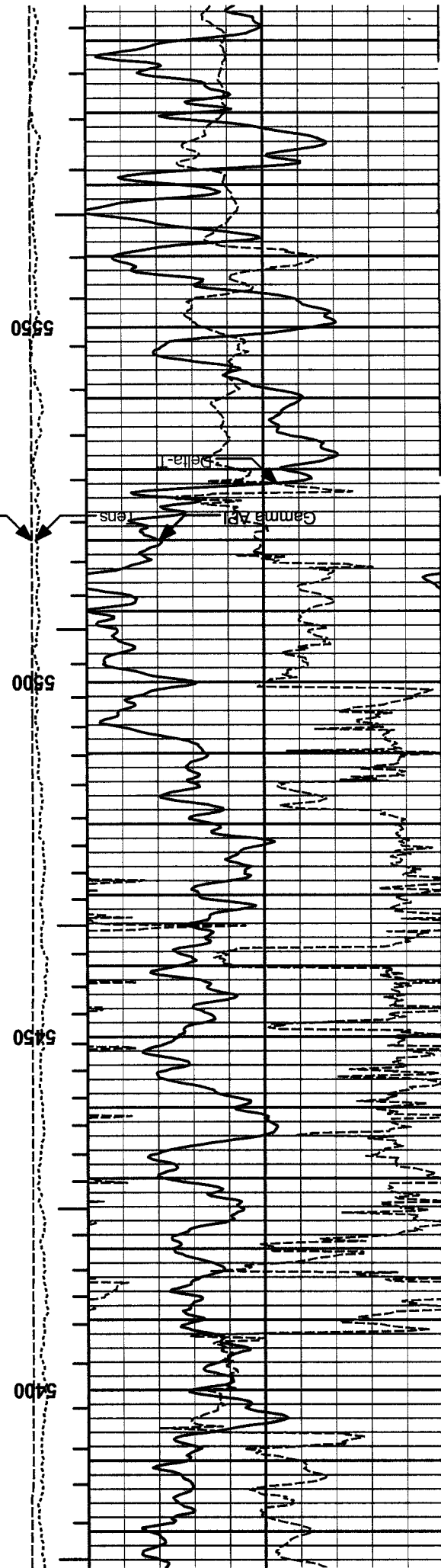
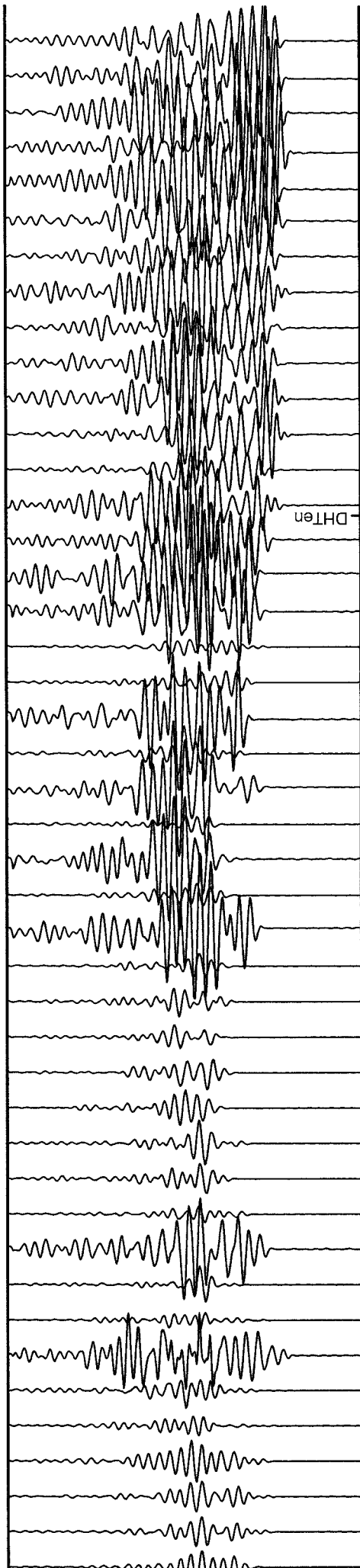
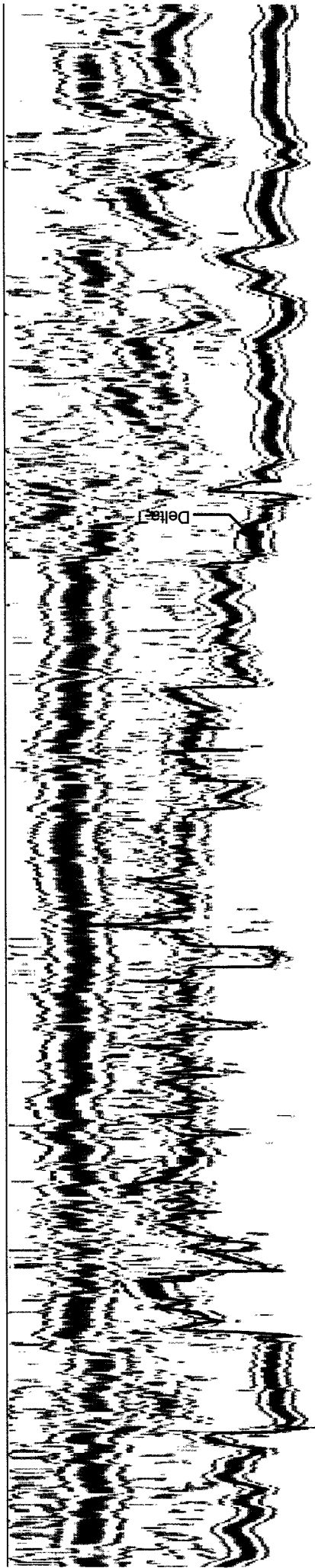
5350

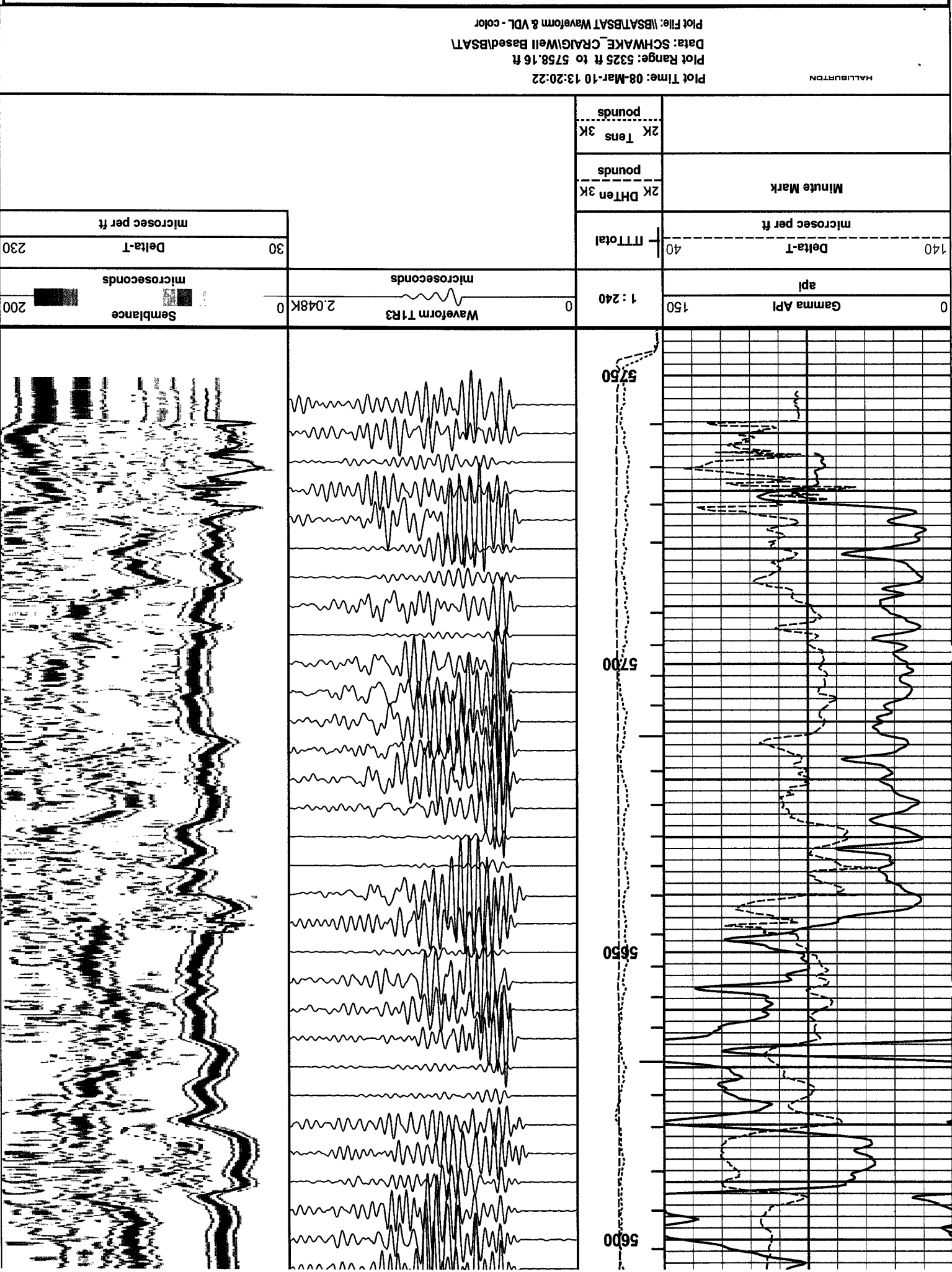
0	Waveform T1R3	2.048K
	microseconds	




30	Delta-T	230
	microsec per ft	
0	Semblance	200
	microseconds	







TOOL STRING DIAGRAM REPORT

Description		O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-B097 135.00 lbs		Ø 3.625 in →		← Load Cell @ 29.86 ft ← BH Temperature @ 29.30 ft	6.25 ft	33.55 ft
GTET-11294346 165.00 lbs		Ø 3.625 in →		← GammaRay @ 21.23 ft	8.52 ft	27.30 ft
BSAT-1105781 300.00 lbs		Ø 3.625 in →		← Sonic Receivers @ 10.26 ft	15.77 ft	18.77 ft
MULE SHOE-KW-MS 50.00 lbs		Ø 3.625 in →			3.00 ft	3.00 ft
					3.00 ft	0.00 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	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		

Data: SCHWAKE\0002 BSAT\001 22-Feb-10 16:38 Dn @0.0f

Date: 22-Feb-10 16:38:23

COMPANY

MERCHANT ENERGY PARTNERS, LLC

WELL

SCHWAKE A-1

FIELD	WEST PEETZ		
COUNTY	LOGAN	STATE	CO
HALLIBURTON		BOREHOLE COMPENSATED SONIC	