

# HALLIBURTON

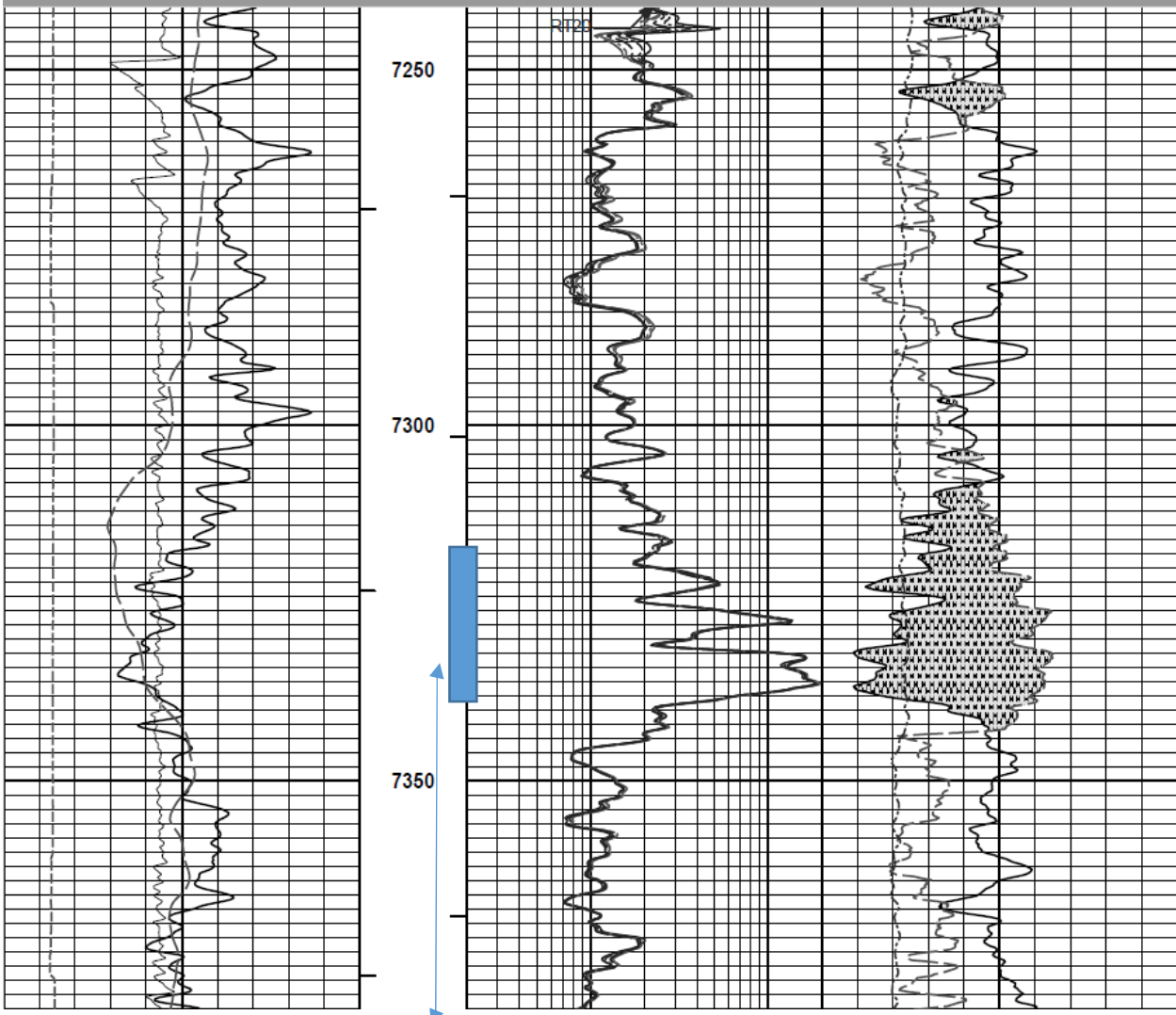
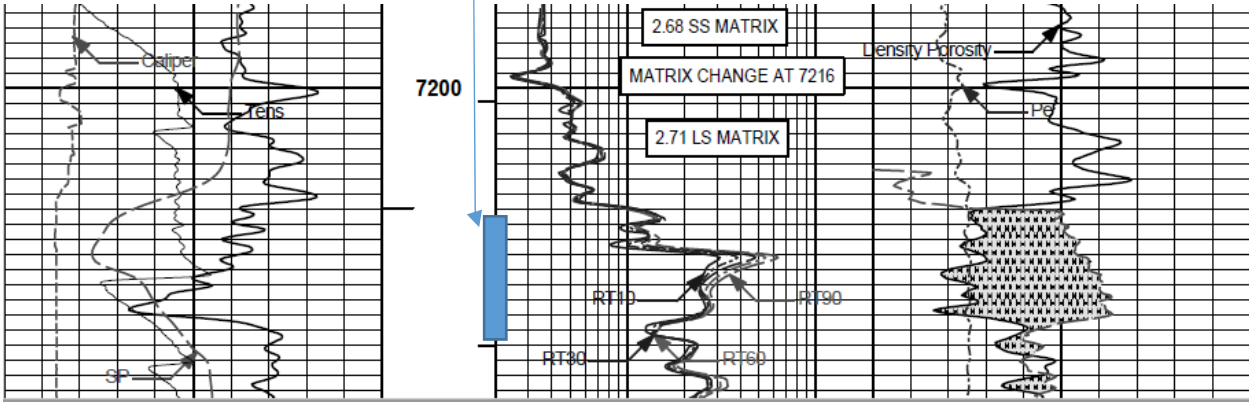
## SPECTRAL DENSITY DUAL SPACED NEUTRON ARRAY COMPENSATED TRUE RESISTIVITY

COMPANY		NOBLE ENERGY	
WELL		BOULTER PC G11-20D	
FIELD		WATTENBERG	
COUNTY		WELD	
STATE		CO	
API No.	05123339370000	Location	SHL: 471' FSL & 1154' FWL SWSW BHL: 1320' FWL & 2550' FNL SENW LAT: 40.321050 LONG: -104.635470
Other Services:	RWCH CSNG BSAT		
Permanent Datum	GL	Seal. 11	Twp. 4N
Log measured from	KB		Rge. 6SW
Drilling measured from	KB		Elev. 4683.0 ft
			14.0 ft above perm. Datum
Date	09-Jan-12		
Run No.	ONE		
Depth - Driller	7728.00 ft		
Depth - Logger	7707.0 ft		
Bottom - Logged Interval	7698 ft		
Top - Logged Interval	767 ft		
Casing - Driller	8.625 in @ 767.0 ft		
Casing - Logger	767.0 ft		
Bit Size	7.785 in		
Type Fluid in Hole	WATER		
Density	10.9 ppg	36.00	slqt
PH	8.00	10.0	qpm
Source of Sample	MUD CELL		
Rm @ Meas. Temperature	1.202 ohmm @ 95.80 degF		
Rmf @ Meas. Temperature	0.98 ohmm @ 75.00 degF		
Rmc @ Meas. Temperature	1.602 ohmm @ 75.00 degF		
Source Rmf	CHART	CHART	
Rm @ BHT	0.46 ohmm @ 235.0 degF		
Time Since Circulation	5.0 hr		
Time on Bottom	09-Jan-12 13:09		
Max. Rec. Temperature	235.0 degF @ 7707.0 ft		
Equipment	10800785	BRIGHTON	
Recorded By	C. BLUE		
Witnessed By	S. HEARD	A. ZWALI	

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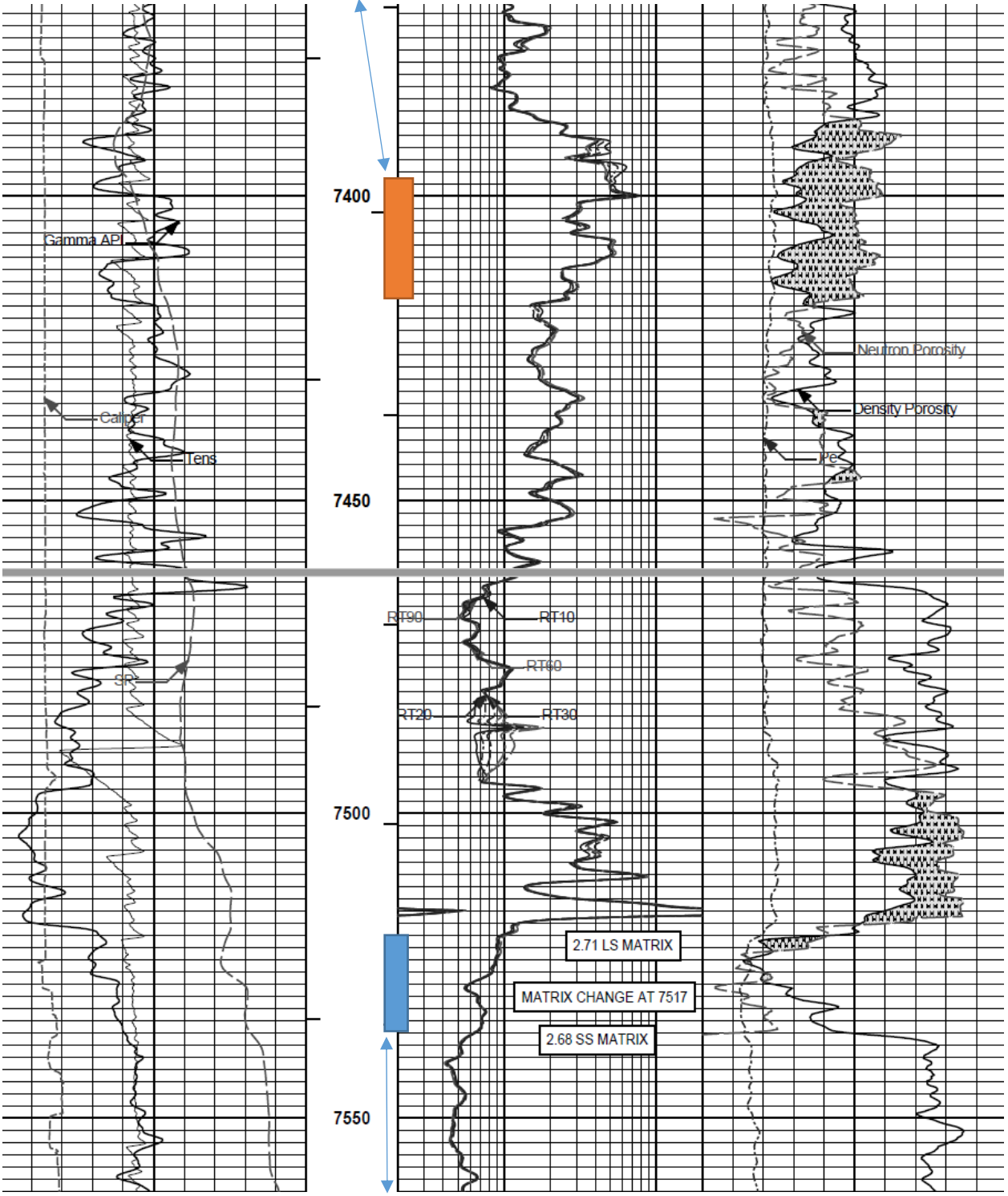
Service Ticket No.: N/A		API Serial No.: 05123339370000		PGM Version: WL INSITE R3.4.4 (Build 2)			
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE				RESISTIVITY SCALE CHANGES			
Date	Sample No.			Type Log	Depth	Scale Up Hole	Scale Down Hole
Depth-Driller							
Type Fluid in Hole							
Density	Viscosity						
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 584-585	N/A	1.5' S.O
Rmc @ Meas. Temp.	@	@					
Source Rmf	Rmc						
Rm @ BHT	@	@					
Rmf @ BHT	@	@					
Rmc @ BHT	@	@					
EQUIPMENT DATA							
GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	11215095	Serial No.	11105780	Serial No.	M319P593	Serial No.	11219332

Nio A Perfs  
7217' - 7229'



Nio B Perfs  
7327' - 7339'

PROPOSED  
Nio C Perfs  
7397'-7417'



Codell Perfs  
7520' - 7536'