



**Tucker**  
ENERGY SERVICES

**COMPOSITE LOG**

<b>Company</b> SONOMA RESOURCES LLC		<b>File No</b> : TUL-58486	
<b>Well</b> CoFANK RANCH #3		<b>Company</b> : SONOMA RESOURCES LLC	
<b>Field</b> STANHOPE		<b>Well</b> : COFANK RANCH #3	
<b>Country</b> GREENWOOD		<b>Field</b> : STANHOPE	
<b>State</b> KANSAS		<b>Country</b> : GREENWOOD	
<b>Country</b> USA		<b>State</b> : KANSAS	
<b>API No.</b> 15-073-24217-00-00		<b>Country</b> : USA	
<b>API No.</b> 15-073-24217-00-00		<b>API No.</b> : 15-073-24217-00-00	
<b>Location</b> : 850' FSL & 1660' FWL SE NW SE SW		<b>Sect</b> : 22 <b>Twp</b> : 26S <b>Rge</b> : 8E	
<b>Permanent Datum:</b> GL		<b>Elevations:</b>	
<b>Drilling Measured From:</b> KB		KB 1383.00      Ft	
<b>Log Measured From:</b> KB		DF 1382.00      Ft	
<b>Above Permanent Datum:</b> 6.00 Ft		GL 1377.00      Ft	
<b>Date</b> 11-12-2014		<b>Services:</b>	
<b>Run Number</b> 1		CNT      PIT	
<b>Depth--Driller</b> 3100.0 Ft			
<b>Depth--Logger</b> 3100.0 Ft			
<b>First Reading</b> 3100.0 Ft			
<b>Last Reading</b> 208.0 Ft			
<b>Casing--Driller</b> 208.0 Ft			
<b>Casing--Logger</b> 208.0 Ft			
<b>Bit Size</b> 7.875 In			
<b>Casing Size</b> 8.625 In			
<b>Hole Fluid Type</b> WBM			
<b>Density</b> 9.5 ppg			
<b>Fluid Loss</b> 7.4 ml/30min			
<b>pH/Viscosity</b> 10.0      36.0 sec/qt			
<b>Sample Source</b> MEASURED			
<b>RMF@Measured Temp.</b> 1.000 @ 70 F			
<b>RMF@Measured Temp</b> 0.800 @ 70 F			
<b>RMF@Measured Temp.</b> 1.200 @ 70 F			
<b>Source RMF/RMC</b> CALCULATED/CALCULATED			
<b>RM@BHT</b> 0.680 @ 106 F			
<b>Time Circulation Stopped</b> 11-12-2014 12:30 pm			
<b>Max Recorded Temp.</b> 109 F			
<b>Equipment Base</b> TRK-126      TULSA			
<b>Recorded By</b> SEAN DAVIS / AMOUR DJAHO			
<b>Witnessed By</b> BILL STOUT / DAN FLOWER			

The customer is hereby warned that by providing the log data herein, T. E. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. E. S. does not guarantee or warrant either expressly or impliedly, the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by T. E. S. personnel. Any interpretation, conversion or recommendation is not part of the consideration for the agreement between the parties and is not part of any part of the charge by T. E. S. for its services. Any user of the log data is warned that said user is not entitled to rely on interpretations, conversions or recommendations as aforesaid.

Bitsize Intervals		Casing Strings			
Size (In)	Bottom (Ft)	Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
7.875	3100.00	8.625	32.00	208.00	0.00

<b>Run Number</b>	1
<b>Date</b>	11-12-2014
<b>Date/Time On Bottom</b>	11-12-2014 2:30 pm
<b>Depth to Fluid</b>	2727.0 Ft
<b>Salinity</b>	600.000 ppm
<b>RMF@BHT</b>	0.540 @ 106 F
<b>RMC@BHT</b>	0.810 @ 106 F

Run Number 1

Comments

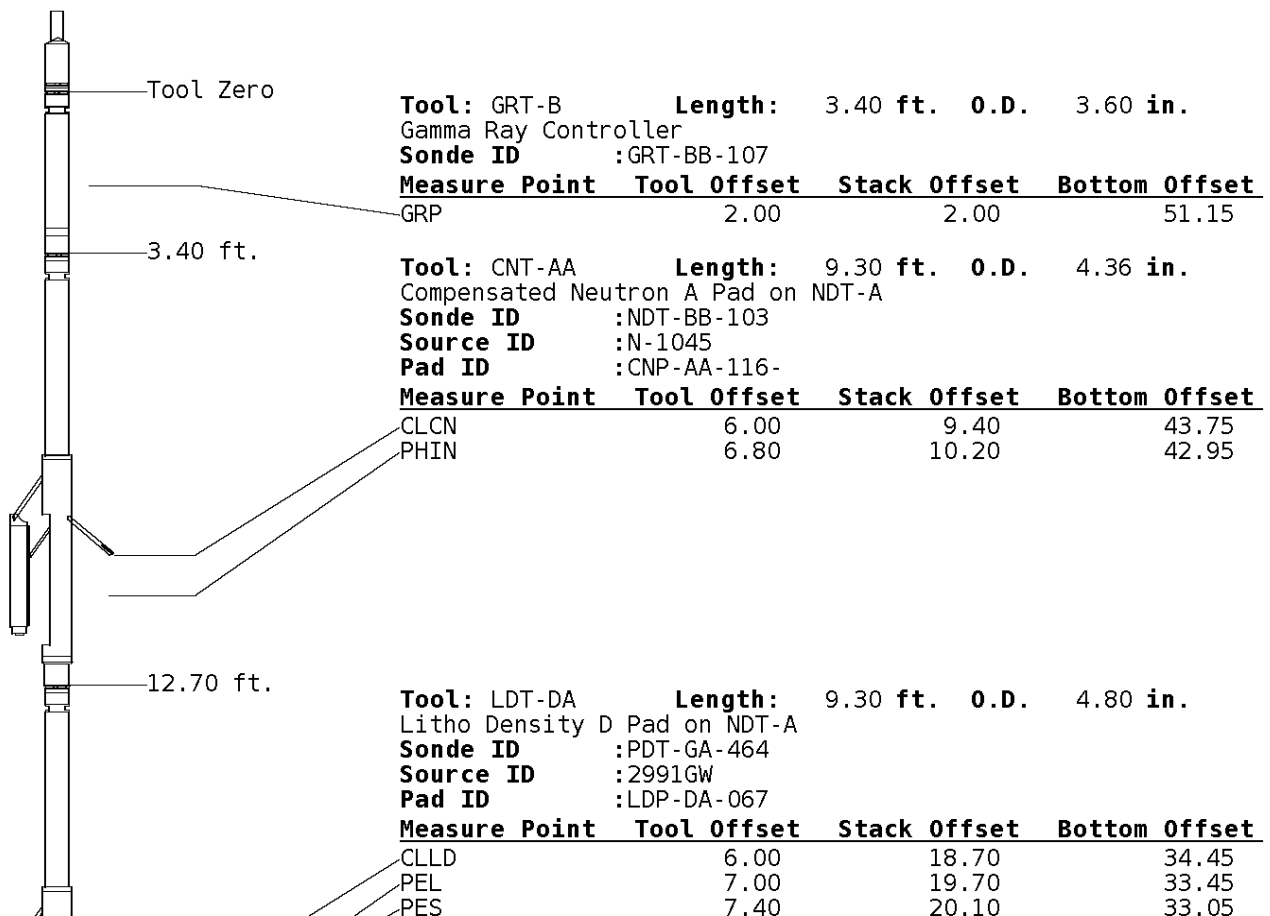
ALL PRESENTATION PER CUSTOMER REQUEST  
 GRT,CNT,LDT,PIT RUN IN COMBINATION  
 CALIPERS ORIENTED ON X-Y AXIS  
 2.71 G/CC USED TO CALCULATE POROSITY  
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 5.5 PRODUCTION CASING  
 PHIN IS CALIPER CORRECTED  
 DETAIL IS PRESENTED FROM TD TO 1700'

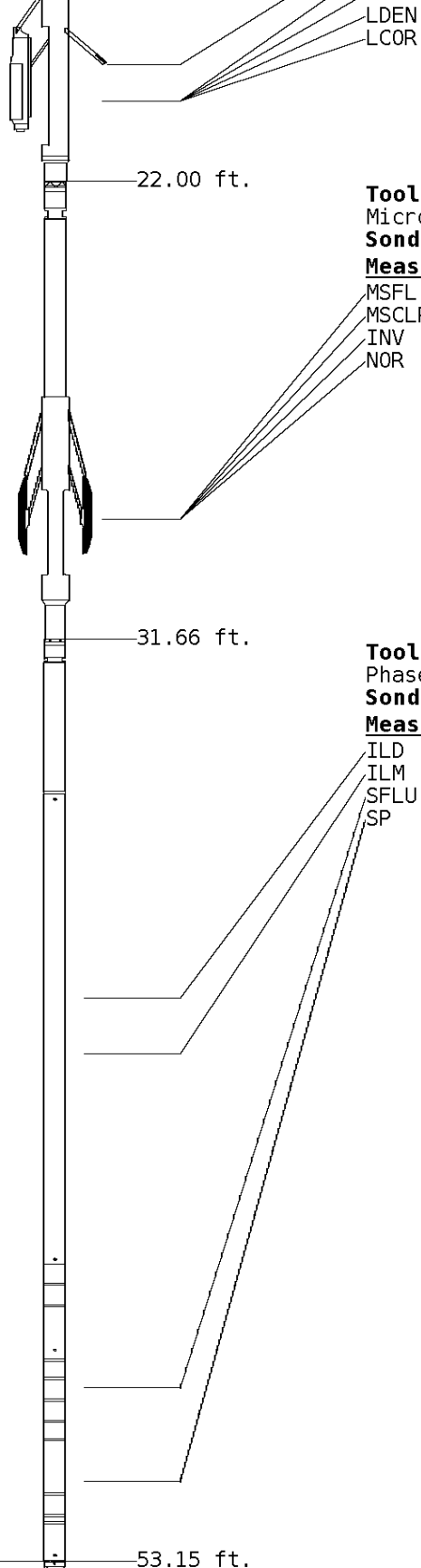
GRT; GRP,  
 CNT; PHIN, CLCNIN  
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN  
 MLT; NOR.RF, INV.RF, MSCLPIN.  
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

OPERATORS;  
 C. GONZALES  
 J. KLINE

### Tool String Schematic

**Total Tool Length** - 53.15 ft.  
**Maximum Outside diameter** - 6.00 in.  
**Net Weight in Air** - 943.00 lbs.





**Tool:** MST-DA      **Length:** 9.66 ft.    **O.D.** 6.00 in.  
 Micro Spherically Focused (IC)  
**Sonde ID** :MST-DA-26

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	23.55
MSCLP	7.60	29.60	23.55
INV	7.60	29.60	23.55
NOR	7.60	29.60	23.55

**Tool:** PIT-CA      **Length:** 21.49 ft.    **O.D.** 3.62 in.  
 Phased Dual Induction w/ RM & D  
**Sonde ID** :PIT-CA-075

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	40.58	12.56
ILM	10.10	41.76	11.39
SFLU	17.49	49.15	4.00
SP	20.60	52.26	0.88

**Well File:** SONOMA-COFANK-3-NOV-12

**Scale:** 1:240      **Format:** COMSAT

**Segment:** V1.D1.S5 MAIN

**Acquired:** 2014-11/12 15:34 3.4.0-13284

**Reference:** 0

**Processed:** 2014-11/12 16:30 3.4.0-13284

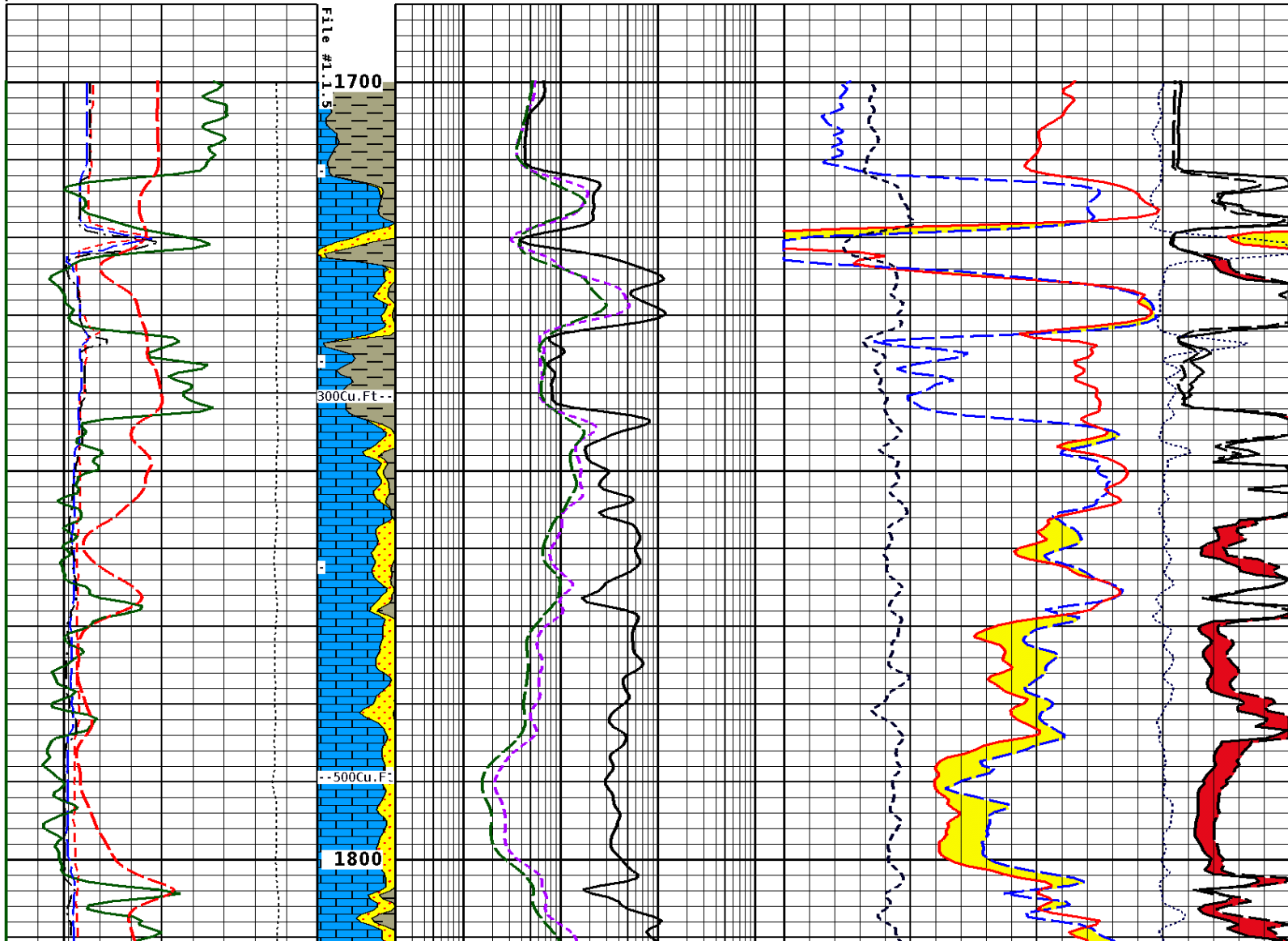
CALIPER MICRO INCHES (IN)	
16	26
6	16

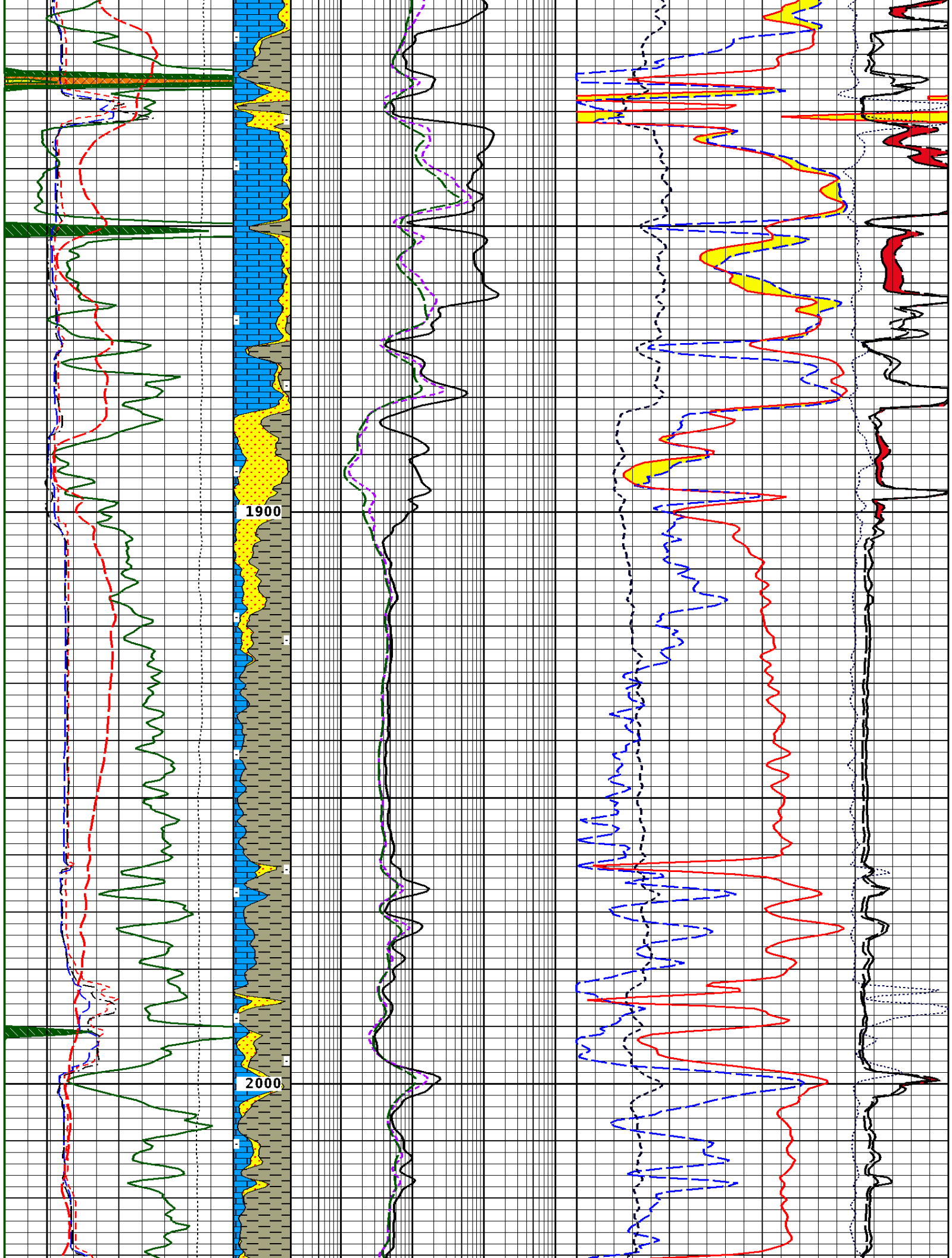
BIT SIZE INCHES (IN)

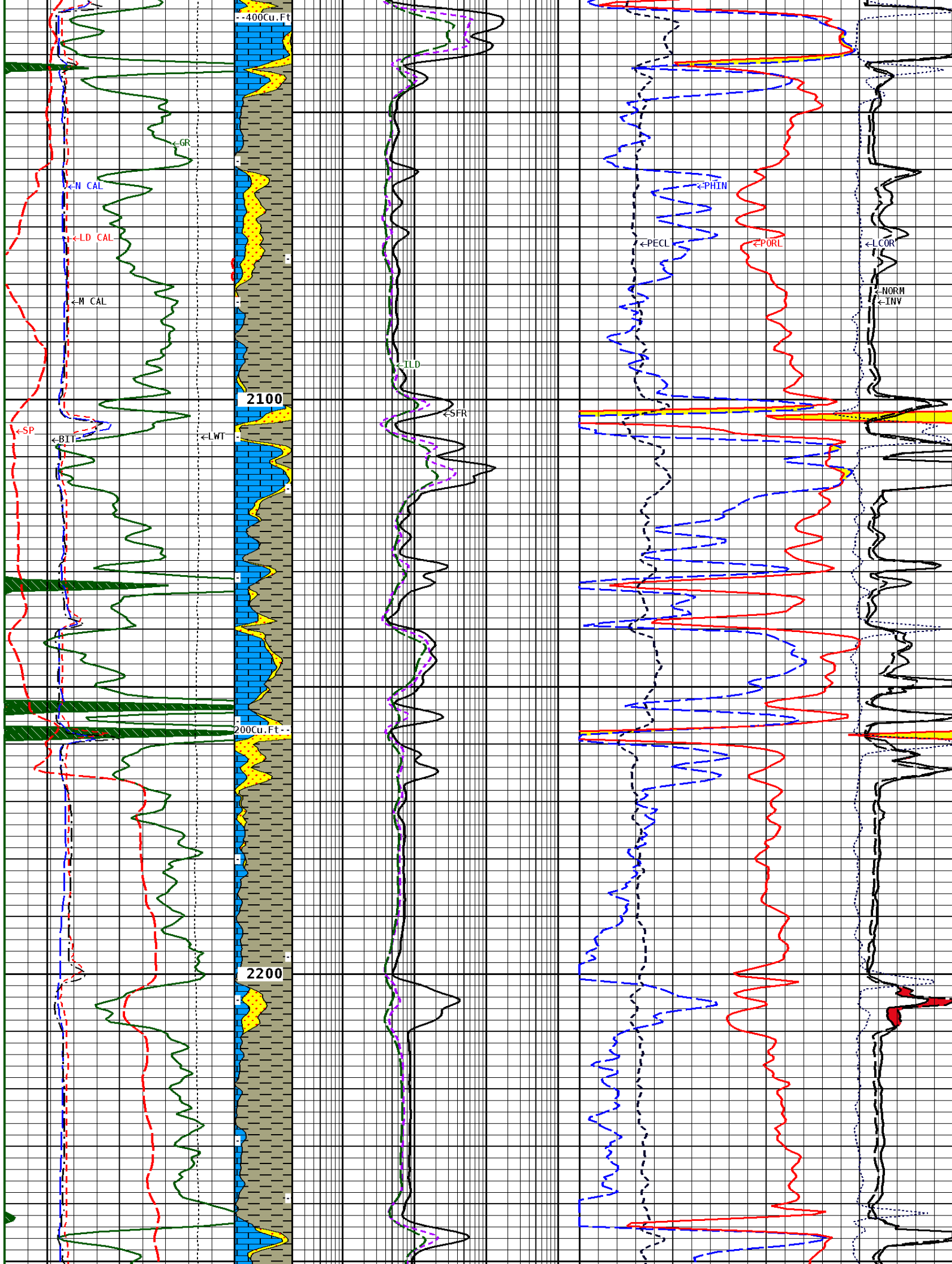
NORMAL  
OHNN

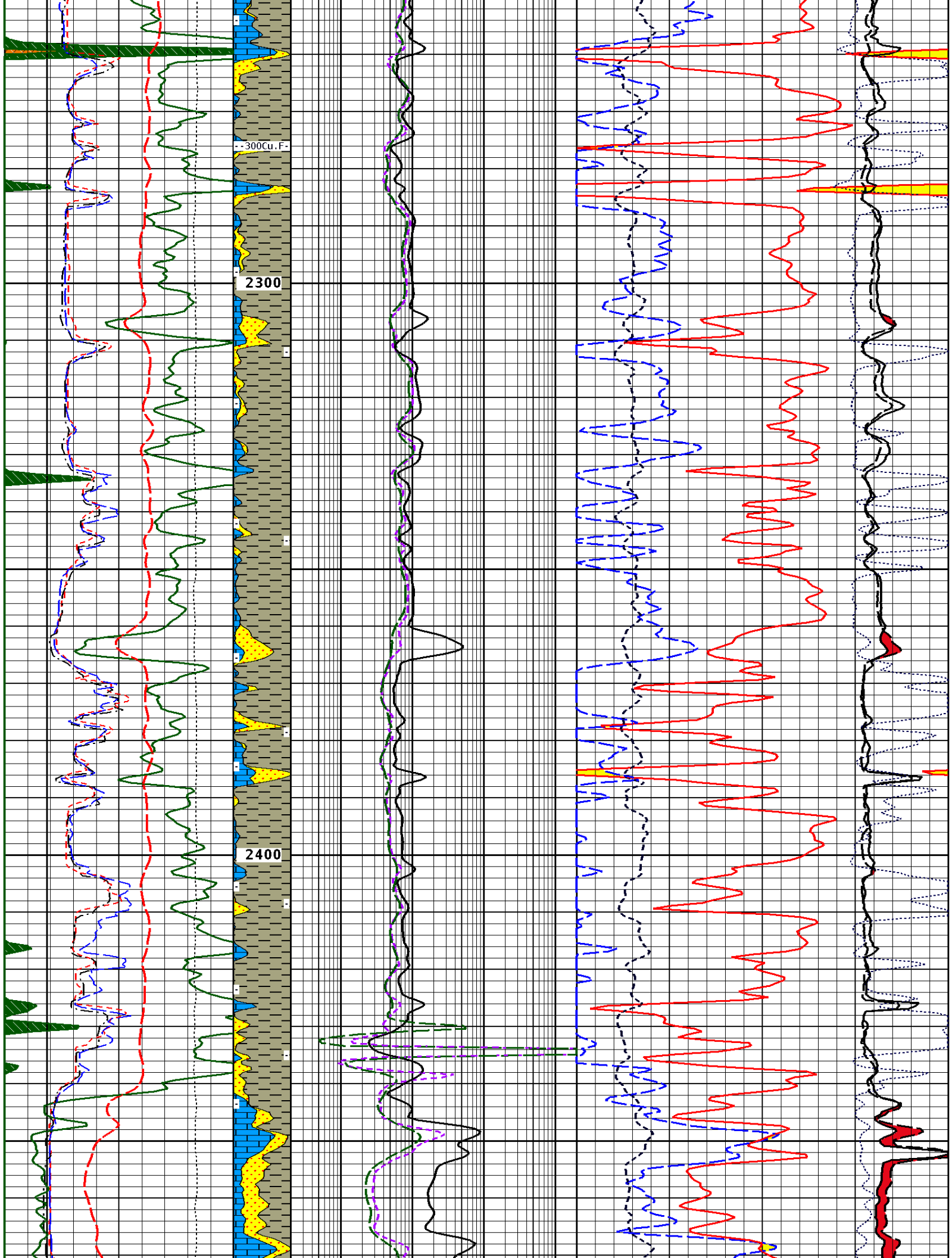
6	16				0	40
NEUTRON (Y) CALIPER INCHES (IN)					INVERSE OHMM	
16	26				0	40
6	16					
DENSITY (X) CALIPER INCHES (IN)		Volume Quartz		DENSITY CORRECTION G/CC		
16	26			-0.75		0.25
6	16					
TENSION LBS		Volume Calcite	SHALLOW FOCUSED RESISTIVITY OHMM	PE CROSS-SECTION BARNS/ELECTRON		
10000	0		0.2	2000.0	0	20
SPONTANEOUS POTENTIAL mV		Volume DoLo/Shale	DEEP INDUCTION OHMM	DENSITY POROSITY (2.71g/cc) PERCENT		
	→   ← 40		0.2	2000.0	70	30
					30	-10
					-10	-50
GAMMA RAY API UNITS		BHV AHV CU.FT	MEDIUM INDUCTION OHMM	NEUTRON POROSITY (LIMESTONE) PERCENT		
150	300		0.2	2000.0	30	-10
0	150					

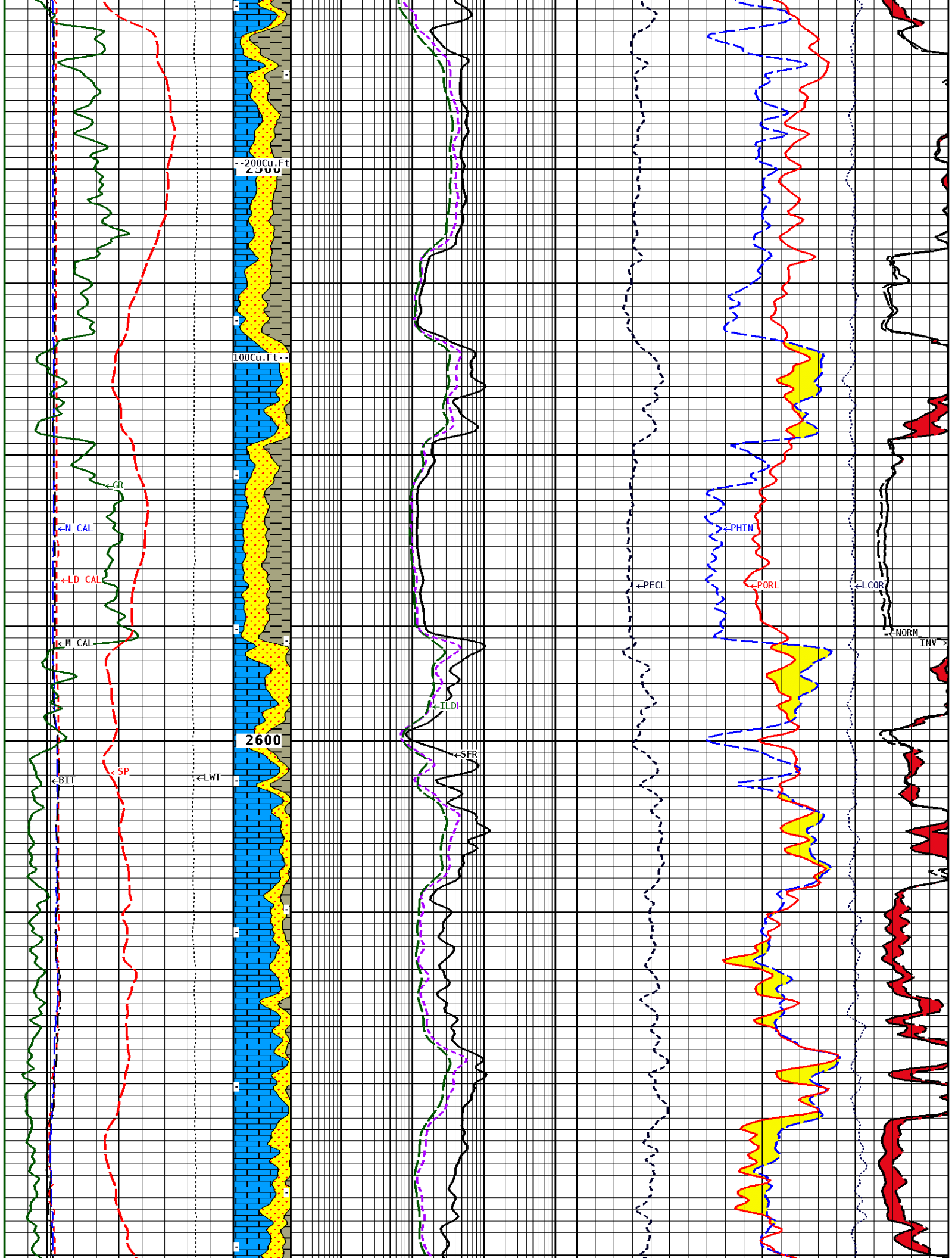
**1:240 MAIN SECTION**



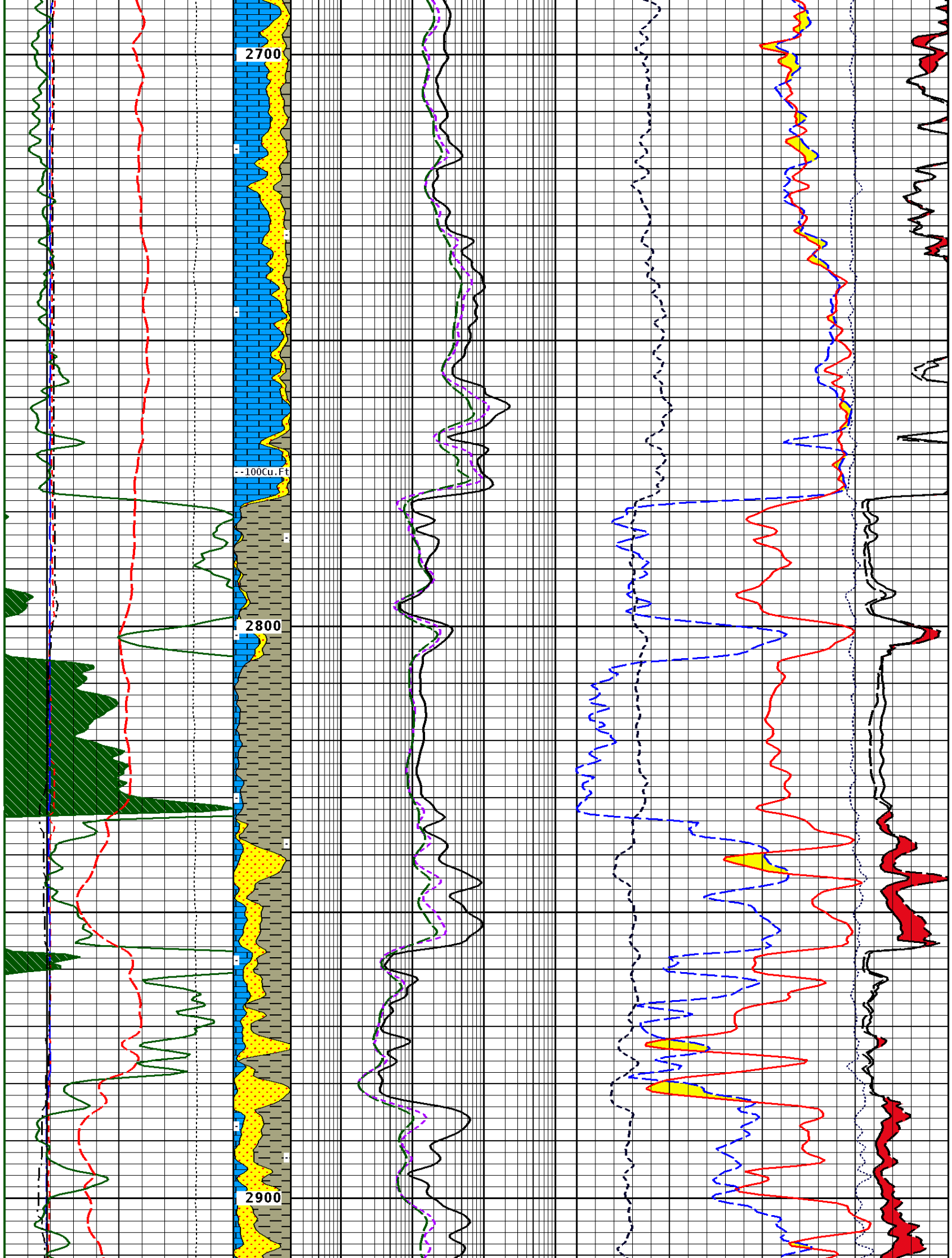


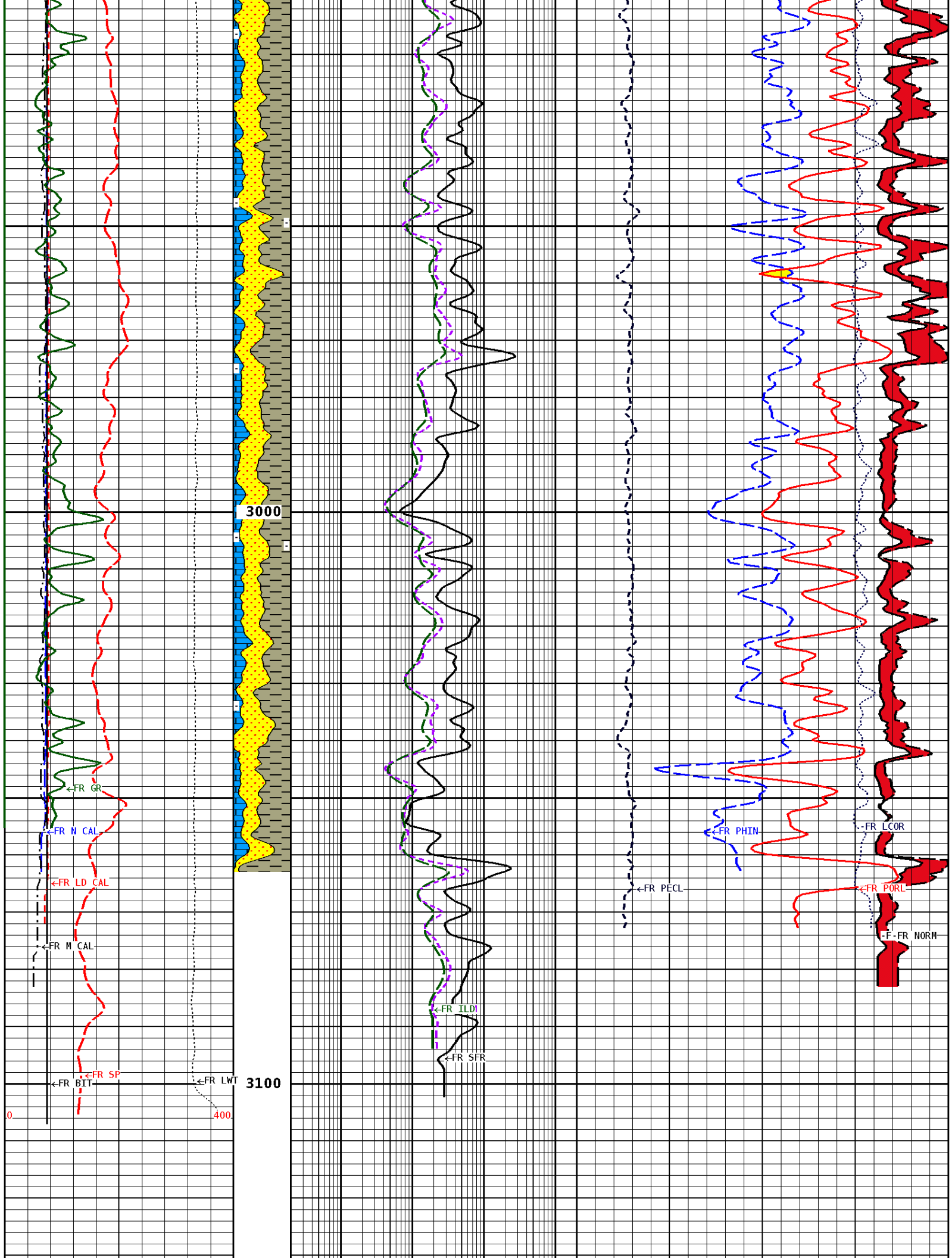












# 1:240 MAIN SECTION

<p><b>GAMMA RAY API UNITS</b></p> <p>150  300 0 150</p>	<p>BHY AHV - CU. FT</p>	<p><b>MEDIUM INDUCTION OHMM</b></p> <p>0.2 2000.0 30</p>	<p><b>NEUTRON POROSITY (LIMESTONE) PERCENT</b></p> <p>30 -10</p>
<p><b>SPONTANEOUS POTENTIAL mV</b></p> <p>→   ← 40</p>	<p>Volume Dolo/Shale</p>	<p><b>DEEP INDUCTION OHMM</b></p> <p>0.2 2000.0</p>	<p><b>DENSITY POROSITY (2.71g/cc) PERCENT</b></p> <p>70 30 -10 -50</p>
<p><b>TENSION LBS</b></p> <p>10000 0</p>	<p>Volume Calcite</p>	<p><b>SHALLOW FOCUSED RESISTIVITY OHMM</b></p> <p>0.2 2000.0 0</p>	<p><b>PE CROSS-SECTION BARNS/ELECTRON</b></p> <p>20</p>
<p><b>DENSITY (X) CALIPER INCHES (IN)</b></p> <p>16 26 6 16</p>	<p>Volume Quartz</p>		<p><b>DENSITY CORRECTION G/CC</b></p> <p>-0.75 0.25</p>
<p><b>NEUTRON (Y) CALIPER INCHES (IN)</b></p> <p>16 26 6 16</p>			<p><b>INVERSE OHMM</b></p> <p>0 40</p>
<p><b>BIT SIZE INCHES (IN)</b></p> <p>6 16</p>			<p><b>NORMAL OHMM</b></p> <p>0 40</p>
<p><b>CALIPER MICRO INCHES (IN)</b></p> <p>16 26 6 16</p>			

**\* Borehole Zone Factors \***

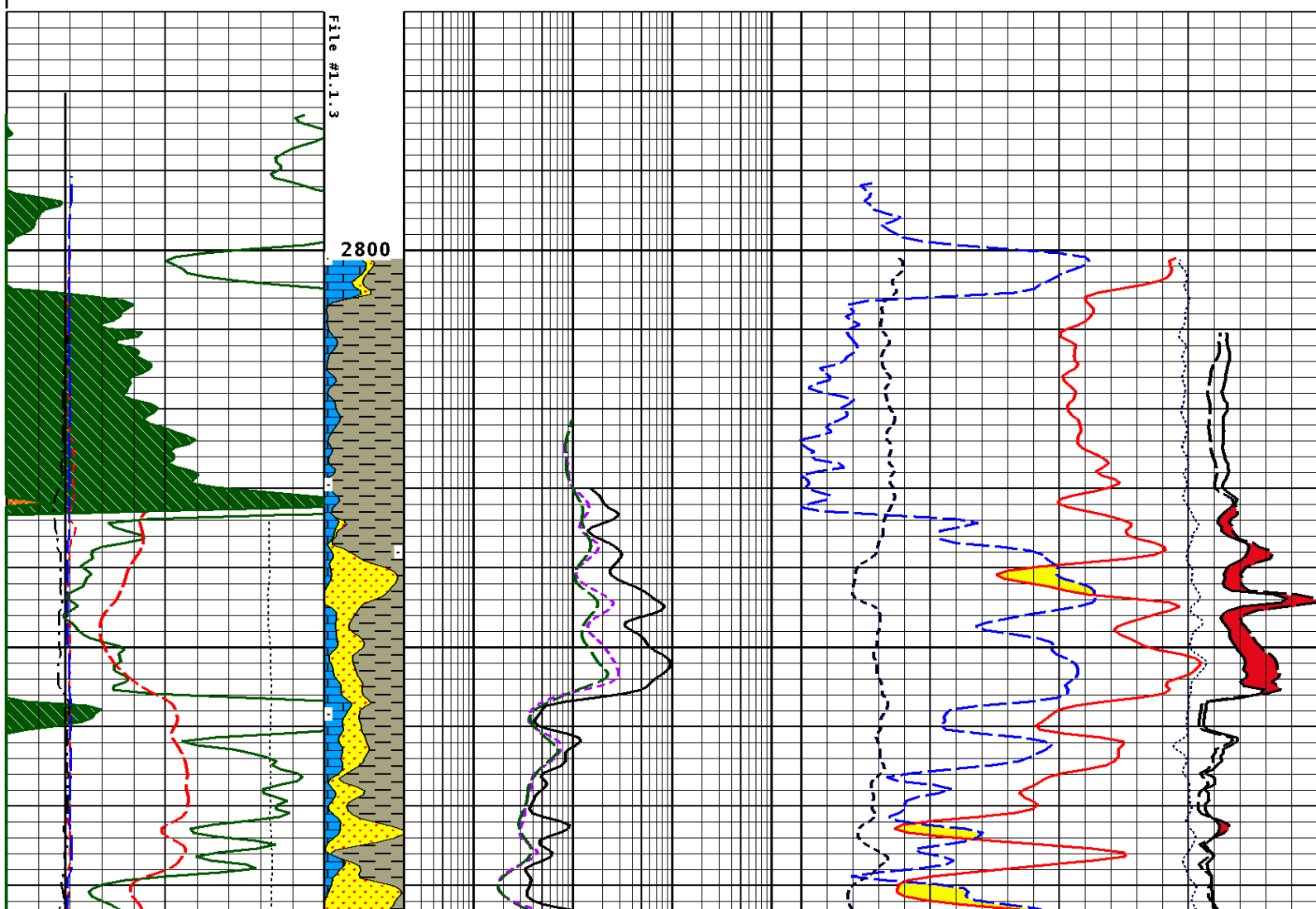
Zone 1 99999.0 to 0.0 Feet		
Matrix Density	2.71	g/cc
Fluid Density	1.00	g/cc
Formation Matrix	Limestone	
Drill Bit Size	7.875	in
Casing Diameter	5.500	in
Casing Thickness	0.250	in
Casing Correction (PHI N)	Disable	
Hole Substance	Fluid	
BHT Depth	3100.000	ft
Borehole Temperature	106.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	1.000	ohm/m
MSTNG Normal Correction	0.00	ohm/m
MSTNG Inverse Correction	1.25	ohm/m

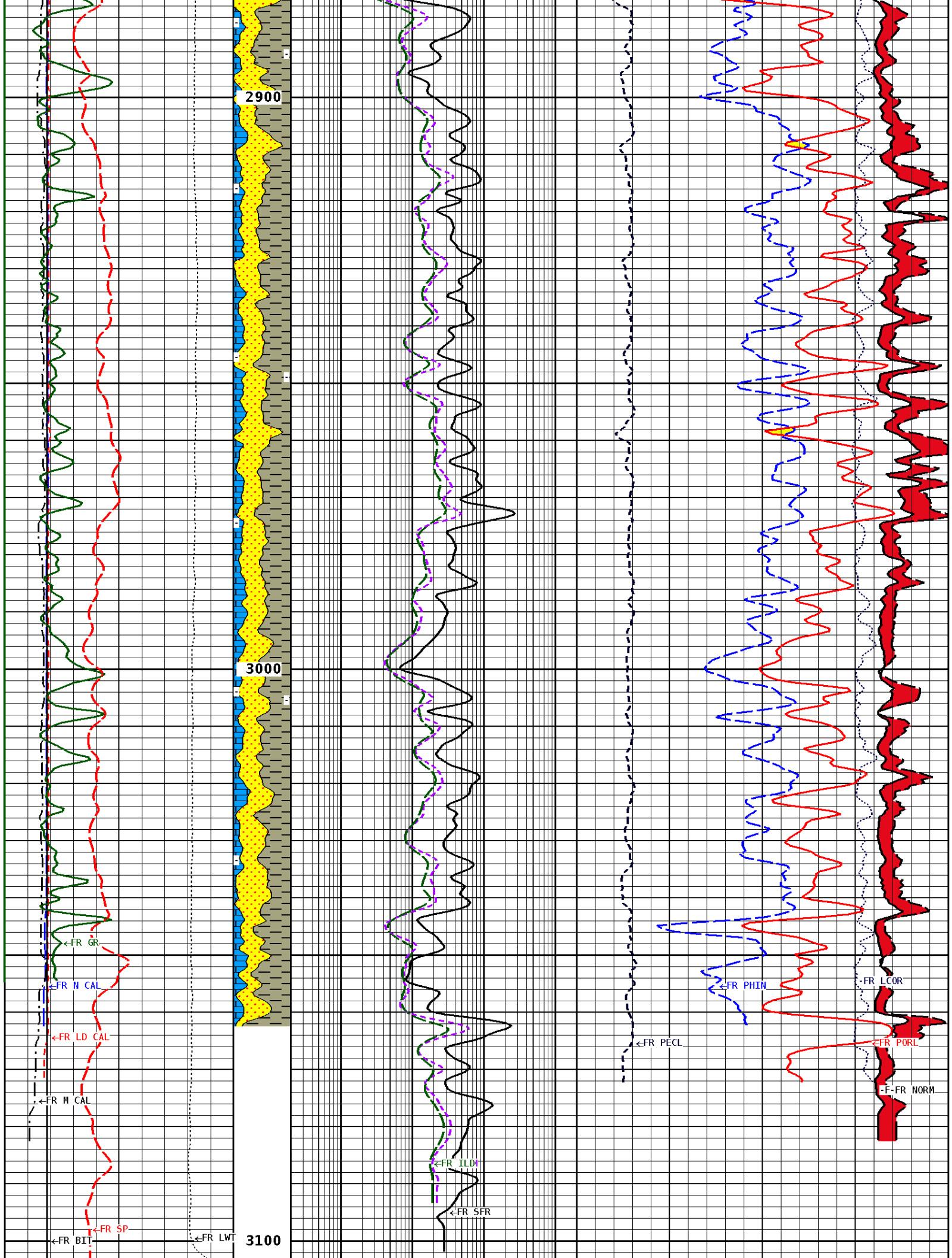
<b>Well File:</b> SONOMA-COFANK-3-NOV-12	<b>Scale:</b> 1:240	<b>Format:</b> COMSAT
<b>Segment:</b> V1.D1.S3 REPEAT	<b>Acquired:</b> 2014-11/12 15:19 3.4.0-13284	
<b>Reference:</b> 0	<b>Processed:</b> 2014-11/12 16:36 3.4.0-13284	

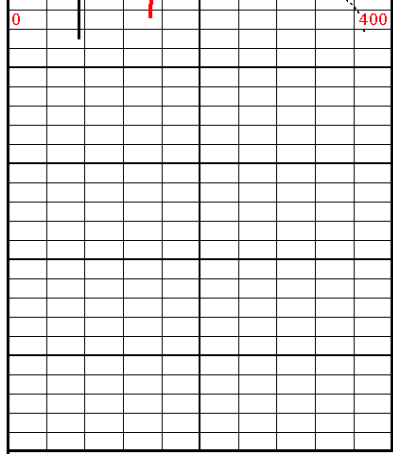
<b>CALIPER MICRO INCHES (IN)</b>
16 26 6 16

<b>BIT SIZE INCHES (IN)</b>			<b>NORMAL OHMM</b>	
6	16		0	40
<b>NEUTRON (Y) CALIPER INCHES (IN)</b>			<b>INVERSE OHMM</b>	
16	26		0	40
6	16			
<b>DENSITY (X) CALIPER INCHES (IN)</b>		<b>Volume Quartz</b>	<b>DENSITY CORRECTION G/CC</b>	
16	26		-0.75	0.25
6	16			
<b>TENSION LBS</b>		<b>Volume Calcite</b>	<b>SHALLOW FOCUSED RESISTIVITY OHMM</b>	
10000	0		0.2	2000.0
<b>SPONTANEOUS POTENTIAL mV</b>		<b>Volume Dolo/Shale</b>	<b>PE CROSS-SECTION BARNs/ELECTRON</b>	
→   ← 40			0.2	2000.0
<b>GAMMA RAY API UNITS</b>		<b>BHV AHV CU. FT</b>	<b>DENSITY POROSITY (2.71g/cc) PERCENT</b>	
150	300		70	30
0	150		30	-10
			-10	-50
			<b>NEUTRON POROSITY (LIMESTONE) PERCENT</b>	
			0.2	2000.0
			30	-10

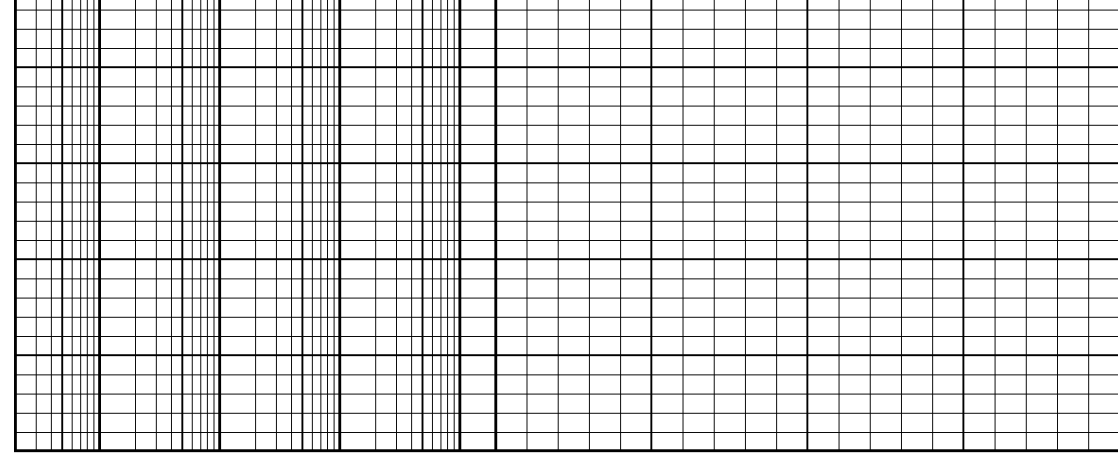
**1:240 REPEAT SECTION**







File #1.1.3



### 1:240 REPEAT SECTION

<b>GAMMA RAY</b> <b>API UNITS</b> 150 300 0 150	BHV AHV CU. FT	<b>MEDIUM INDUCTION</b> <b>OHMM</b> 0.2 2000.0	<b>NEUTRON POROSITY (LIMESTONE)</b> <b>PERCENT</b> 30 -10
<b>SPONTANEOUS POTENTIAL</b> <b>mV</b> →   ← 40	Volume Dolo/Shale	<b>DEEP INDUCTION</b> <b>OHMM</b> 0.2 2000.0	<b>DENSITY POROSITY (2.71g/cc)</b> <b>PERCENT</b> 70 30 -10 -50
<b>TENSION</b> <b>LBS</b> 10000 0	Volume Calcite	<b>SHALLOW FOCUSED RESISTIVITY</b> <b>OHMM</b> 0.2 2000.0	<b>PE CROSS-SECTION</b> <b>BARNS/ELECTRON</b> 0 20
<b>DENSITY (X) CALIPER</b> <b>INCHES (IN)</b> 16 26 6 16	Volume Quartz		<b>DENSITY CORRECTION</b> <b>G/CC</b> -0.75 0.25
<b>NEUTRON (Y) CALIPER</b> <b>INCHES (IN)</b> 16 26 6 16			<b>INVERSE</b> <b>OHMM</b> 0 40
<b>BIT SIZE</b> <b>INCHES (IN)</b> 6 16			<b>NORMAL</b> <b>OHMM</b> 0 40
<b>CALIPER MICRO</b> <b>INCHES (IN)</b> 16 26 6 16			

**\* Borehole Zone Factors \***

Zone 1	99999.0	to	0.0	Feet
Matrix Density				2.71 g/cc
Fluid Density				1.00 g/cc
Formation Matrix				Limestone
Drill Bit Size				7.875 in
Casing Diameter				5.500 in
Casing Thickness				0.250 in
Casing Correction (PHI N)				Disable
Hole Substance				Fluid
BHT Depth				3100.000 ft
Borehole Temperature				106.0 degF
Temperature Gradient				1.00 DFHF
Resistivity Of Mud				1.000 ohm/m
MSTNG Normal Correction				0.00 ohm/m
MSTNG Inverse Correction				1.25 ohm/m

**\* Calibration Summary \***

<b>Shop Calibration</b>					
<b>GRT-B</b>					
Performed : 23-OCT-2014			Time : 09:31		
Sensor Suite : GR-GR5			ID : GRT-BB-107		
	Measured	Units	Calibrated	Units	
GR	Background	Jig	Jig		
	75	381	175		GRAPI

<b>Shop Calibration</b>					
<b>CNT-AA</b>					
Performed : 05-NOV-2014			Time : 11:41		
Sensor Suite : CALI-BCN			ID : NDT-BB-103		
	Jig - Measured		Jig - Calibrated	Units	
CL # 1	Ring#1	Ring#2	Ring#1	Ring#2	
	9.1	14.0	6.0	12.0	IN.

Performed : 05-Nov-2014			Time : 09:41		
Sensor Suite : BHC NEUT			ID : CNP-AA-116-		
Source ID : N-1045					
	Tank	Verification	Units		
N/F	Measured	Calibrated	Jig		
Porosity	3.8180	3.6893	3.6933		
	22.5	20.5	20.6		%

<b>Shop Calibration</b>					
<b>LDT-DA</b>					
Performed : 05-NOV-2014			Time : 10:50		
Sensor Suite : CALI-LTH			ID : PDT-GA-464		
	Jig - Measured		Jig - Calibrated	Units	
CL # 1	Ring#1	Ring#2	Ring#1	Ring#2	
	7.9	11.4	6.0	12.0	IN.

Performed : 05-Nov-2014			Time : 10:35		
Sensor Suite : BHCPELNG			ID : LDP-DA-067		
Source ID : 2991GW					
Short Space					
	BKGD	Al	Mg	Al+Fe	Units
LSW1	61	1065	1728	697	CPS
LSW2	65	1220	1942	894	CPS
LSW3	240	2804	4527	2386	CPS
LSW4	296	2541	3712	2248	CPS
LSW5	39	66	73	64	CPS
LSW6	66	72	71	71	CPS
LSW7	48	51	52	51	CPS
LSW8	10	12	13	11	CPS
QS	0.152	0.166	0.158	0.168	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC
Long Space					
	BKGD	Al	Mg	Al+Fe	Units
LLW1	89	1206	4966	736	CPS
LLW2	98	2065	8163	1523	CPS
LLW3	371	3784	14505	3275	CPS
LLW4	478	1798	5791	1636	CPS
LLW5	52	62	113	61	CPS
LLW6	158	155	147	154	CPS
LLW7	101	97	95	98	CPS
LLW8	3	5	16	5	CPS
QL	0.223	0.228	0.215	0.223	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC

<b>Shop Calibration</b>					
<b>MST-DA</b>					
Performed : 23-OCT-2014			Time : 09:31		
Sensor Suite : CALI-MSN			ID : MST-DA-26		
	Jig - Measured		Jig - Calibrated	Units	
CL # 1	Ring#1	Ring#2	Ring#1	Ring#2	
	7.1	11.2	6.0	12.0	IN.

Performed : 23-Oct-2014			Time : 09:28		
Sensor Suite : MSTDA-NI			ID : MST-DA-26		

	Measured		Units	Calibrated		Units
	Zero	Reference		Zero	Reference	
INV-V	87.0	29241.9		0.00	1546.00	MV
NOR-V	160.8	30370.9		0.00	1546.00	MV
IN-C	154.0	57456.8		0.00	15.46	UA
INV-R					32.34	OHMM
NOR-R					55.11	OHMM

**Shop Calibration  
PIT-CA**

Performed : 10-Sep-2014      Time : 11:40  
 Sensor Suite : P-IND-T      ID : PIT-CA-075

Medium

	Measured		Calibrated		Units
	R	X	R	X	
Air	131419	129931	1.4	0.2	MMHOS
Zero	131070	131067	-10.2	45.4	MMHOS
Reference	250682	249654	4989.8	5045.4	MMHOS
Loop	129961	216623	3595.7	3716.3	MMHOS
Sonde Error			0.5	-7.1	MMHOS
Cond			4989.8	5045.4	MMHOS

Deep

	Measured		Calibrated		Units
	R	X	R	X	
Air	128119	131856	0.3	-1.2	MMHOS
Zero	131062	131059	52.1	-18.8	MMHOS
Reference	238518	237019	2052.1	1981.2	MMHOS
Loop	126986	223844	1715.5	1756.2	MMHOS
Sonde Error			-6.7	0.1	MMHOS
Cond			2052.1	1981.2	MMHOS

Temperature

	Measured		Calibrated		Units
	Low	High	Low	High	
	16980.0	56920.0	70.0	350.0	DEGF

Performed : 10-Sep-2014      Time : 11:51  
 Sensor Suite : SFL      ID : PIT-CA-075

Internal

	Measured		Calibrated		Units
	Zero	Reference	Zero	Reference	
Im	32770.2	49049.9	0.0	7028.0	uA
Ib	32767.1	49093.1	0.0	1750.0	mA
MOM1	32794.6	56675.8	0.0	175.0	mV
Equivalent SFL				43.97	OHMM

Performed : 10-SEP-2014      Time : 11:47  
 Sensor Suite : P-SP      ID : PIT-CA-075

Internal

	Measured		Calibrated		Units
	Zero	Reference	Zero	Reference	
	32768.0	58944.2	0.0	1000.0	mV



Company: SONOMA RESOURCES LLC  
 Well: CoFANK RANCH #3  
 Location: 850' FSL & 1660' FWL  
 Logged: 11-12-2014  
 K.B. Elev: 1383.0 Ft