



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1191523  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1191523

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Elsie 1-17
Doc ID	1191523

Tops

Name	Top	Datum
Heebner (base)	3911	-984
Lansing/KS City A	3955	-1028
LKC B	4000	-1073
LKC C	4040	-1113
LKC D	4098	-1171
LKC E	4136	-1209
LKC G	4214	-1287
LKC H	4246	-1319
LKC I	4286	-1359
Marmaton	4544	-1617
Pawnee	4632	-1705
Ft. Scott	4666	-1739
Cherokee	4680	-1753
Atoka	4788	-1861
Morrow	4930	-2003
Chester	5060	-2133
St. Genevieve	5096	-2169
St. Louis	5146	-2219
RTD	5370	
LTD	5377	



# ALLIED OIL & GAS SERVICES, LLC 052133

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

Liberal 21

DATE <u>12-23-13</u>	SEC. <u>17</u>	TWP. <u>26S</u>	RANGE <u>33W</u>	CALLED OUT	ON LOCATION	JOB START <u>1930</u>	JOB FINISH <u>2200</u>
LEASE <u>Elsie</u>	WELL # <u>1-17</u>	LOCATION <u>Sublette KS N to TV Rd</u>			COUNTY <u>Finney</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one):			<u>SW; N into</u>				

CONTRACTOR Beredo 1  
 TYPE OF JOB Surface  
 HOLE SIZE 12 1/4 T.D. 1765  
 CASING SIZE 8 7/8 24 DEPTH 1780  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG.  
 PERFS.  
 DISPLACEMENT

OWNER

CEMENT

AMOUNT ORDERED 625sk - 65/35 3900.  
1/4" FloSeal  
150 SK Class # 3900, 1/4" FloSeal

COMMON	<u>150sk @ 17.90</u>	<u>2685.00</u>
POZMIX	@	
GEL	@	
CHLORIDE	<u>27sk @ 64.00</u>	<u>1728.00</u>
ASC	<u>625.5K @ 16.00</u>	<u>10,012.50</u>
<u>FloSeal</u>	<u>157 LB @ 2.95</u>	<u>466.25</u>
	@	
	@	
	@	
	@	
	@	
HANDLING	<u>840.47 ft<sup>3</sup> @ 2.75</u>	<u>2,283.57</u>
MILEAGE	<u>1848.70 TM @ 2.60</u>	<u>4806.62</u>
		TOTAL <u>22,181.94</u>

EQUIPMENT

PUMP TRUCK CEMENTER Kisby  
 #530-484 HELPER: Acoberto  
 BULK TRUCK  
 #868-842 DRIVER: Ricardo E  
 BULK TRUCK  
 #472-554 DRIVER: Alex Ayala

REMARKS:

SERVICE

DEPTH OF JOB		
PUMP TRUCK CHARGE		<u>2273.75</u>
EXTRA FOOTAGE	@	
MILEAGE <u>Heavy</u>	<u>50MI @ 7.70</u>	<u>385.00</u>
MANIFOLD	<u>1 Day @ 275.00</u>	<u>N/A</u>
<u>Additional hrs</u>	<u>3 HR @ 140.00</u>	<u>420.00</u>
	@	
		TOTAL <u>3918.75</u>

CHARGE TO: Berexco  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

<u>Guideshoe</u>	<u>1EA @ 432.00</u>	<u>432.00</u>
<u>DFW Insert</u>	<u>1EA @ 254.00</u>	<u>254.00</u>
<u>Top Plug</u>	<u>1EA @ 122.00</u>	<u>122.00</u>
<u>Centralizer</u>	<u>3EA @ 74.00</u>	<u>222.00</u>
	@	
		TOTAL <u>1030.00</u>

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any)	
TOTAL CHARGES	<u>27,130.73</u>
DISCOUNT	<u>Net - 19,534.13</u>
	IF PAID IN 30 DAYS

PRINTED NAME CRAIG WEEKS  
 SIGNATURE Craig Weeks



# ALLIED OIL & GAS SERVICES, LLC 061436

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:  
Oakley KS  
5:00 p.m. 1:00 a.m.  
JOB START 6:00 a.m. JOB FINISH 11:00 p.m.  
COUNTY STATE  
Finney KS

DATE <u>1-8-14</u>	SEC. <u>17</u>	TWP. <u>26</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION <u>10:00 a.m.</u>
LEASE <u>Elsie</u>	WELL# <u>1-17</u>	LOCATION <u>Garden City S to TV Rd</u>			
OLD OR NEW (Circle one)		<u>Sw, 1/8 N, E into</u>			

CONTRACTOR Beredco I OWNER Same

TYPE OF JOB Production (2 stage)

HOLE SIZE 7 7/8 I.D. 5377'

CASING SIZE 5 1/2 DEPTH 5374'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DV TOOL DEPTH 3206'

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 42.30'

CEMENT LEFT IN CSG. 42.30'

PERFS.

DISPLACEMENT Bot 50 bl water Top 76.30 bl water  
76.87 mud EQUIPMENT

CEMENT

AMOUNT ORDERED 410 sks Class A Lite

1/4" Flo-seal, 300 sks ASC, 10%

Salt, 6" Gilsomite, 2% gel, 1/4" Flo-seal, 500# 1%

FL-160, .200# 1% of Deaermer

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC 300 sks @ 20.90 6270.00

Lite 410 sks @ 16.50 6765.00

Gilsomite 1800# @ .98 1764.00

Flo-seal 177.5# @ 2.97 527.18

FL-160 117 # @ 18.90 2211.30

Deaermer 60 # @ 9.80 588.00

HANDLING 816.47 ft<sup>3</sup> @ 2.48 2024.85

MILEAGE 34.67 hrs x 50 mi x 2.60 4567.10

TOTAL 24,657.43

PUMP TRUCK CEMENTER Paul Bauer

# 120 HELPER Tyler Flipse

BULK TRUCK

# 566 DRIVER Adam Flipse

BULK TRUCK

# 386 DRIVER Chris Helpingstone

REMARKS:

Bottom stage

Break cir. Drop Ball, Ball went through shoe @ 4002'

Mix 100 sks lite, 250 sks ASC, wash-up in pit,

Displace w/ water + mud, plug did land @ 1700'

114 pressure, 800' Drop Dart opened tool @ 1400'

Mix 20 sks in R.U. mix 15 sks in M.H. mix 275

skts lite, mix 50 sks ASC, wash-up in pit. Displace

w/ water, plug did land @ 1100' w/ 800'

114 pressure, cement did circ.

Thank You!

CHARGE TO: Beredco LLC

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To: Allied Oil & Gas Services, LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Gym Plus

SIGNATURE \_\_\_\_\_

SERVICE

DEPTH OF JOB 5377'

PUMP TRUCK CHARGE Bot 3097.25 top 2406.25

EXTRA FOOTAGE @

MILEAGE MILV 50 @ 7.70 385.00

MANIFOLD Head @ 275.00 N/C

MILV 50 @ 4.40 N/C

TOTAL 5,890.50

PLUG & FLOAT EQUIPMENT

Industrial Rubber (5 1/2)

AFU Float shoe @ 210.00

DV TOOL @ 2597.50

Baskets 3 @ 161.25 483.75

Centralizers 17 @ 33.75 573.75

TOTAL 3,865.00

SALES TAX (if Any) \_\_\_\_\_

TOTAL CHARGES 34,412.93

DISCOUNT 8,553.42 IF PAID IN 30 DAYS

25,859.51 Net.

Date 1-8-14 District Oakley KS Ticket No. 061436  
 Company Berexco Rig Berexco 1  
 Lease Elsie Well No. 1-17  
 County Finney State KS  
 Location 17-26-33 Field \_\_\_\_\_

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 5 1/2 Type New Weight 18.5# Collar \_\_\_\_\_

Casing Depths: Top KB Bottom 3206'

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 7 7/8 T.D. 5377 ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. .0238 Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

CEMENT DATA:  
 Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG \_\_\_\_\_

LEAD: Pump Time \_\_\_\_\_ hrs. Type Lite 6.5/35  
6% gel 1/4" Flo-seal Excess \_\_\_\_\_  
 Amt. 275 Sks Yield 1.97 ft<sup>3</sup>/sk Density 12.4 PPG \_\_\_\_\_

TAIL: Pump Time \_\_\_\_\_ hrs. Type ASC 10% salt  
200# 14% Selenmer Excess \_\_\_\_\_  
 Amt. 50 Sks Yield 1.56 ft<sup>3</sup>/sk Density 14.66 PPG \_\_\_\_\_

WATER: Lead \_\_\_\_\_ gals/sk Tail \_\_\_\_\_ gals/sk Total \_\_\_\_\_ Bbls.

Pump Trucks Used 120 Tyler  
 Bulk Equip. 566-Adam  
386 - Chris

Float Equip: Manufacturer Industrial Rubber  
 Shoe: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Float: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars DV Tool  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type water Amt. 7630 Bbls. Weight \_\_\_\_\_ PPG \_\_\_\_\_  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG \_\_\_\_\_

COMPANY REPRESENTATIVE \_\_\_\_\_ CEMENTER Paul Beaver

TIME AM/PM	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
10:00			5.19 bbl	5.19 bbl		Mix 20 sks in R.H. mix 15 sks in m.t. mix 275 sks lite @ 12.4# mix 50 sks ASC @ 14.66# stop cement/wash-up pump+lines release plug Displace w/ water  Plug did land @ 1600# lift pressure @ 800# Cement did circulate
			3.89 bbl	9.08 bbl		
			71.37 bbl	80.45 bbl		
			8.30 bbl	88.75 bbl		
			6.0 bbl	94.75 bbl		
			76.30 bbl	171.05 bbl		
11:00						Hold Safety meeting  Thank You!

FINAL DISP. PRESS: 800 PSI BUMP PLUG TO 1600 PSI BLEEDBACK 1/2 BBLs. THANK YOU



# DIAMOND TESTING

## General Information Report

### General Information

<b>Company Name</b>	BEREXCO LLC	<b>Representative</b>	TIM VENTERS
<b>Contact</b>	EVAN MAYHEW	<b>Well Operator</b>	BEREXCO LLC
<b>Well Name</b>	ELSIE #1-17	<b>Report Date</b>	2014/01/03
<b>Unique Well ID</b>	DST #1, MARMATON "B", 4550-4580	<b>Prepared By</b>	TIM VENTERS
<b>Surface Location</b>	SEC 17-26S-33W, FINNEY CO. KS.	<b>Qualified By</b>	IAN BOSMYER
<b>Field</b>	IVANHOE		
<b>Well Type</b>	Vertical		
<b>Test Type</b>	CONVENTIONAL		
<b>Formation</b>	DST #1, MARMATON "B", 4550-4580		
<b>Well Fluid Type</b>	01 Oil		
<b>Start Test Date</b>	2014/01/02	<b>Start Test Time</b>	14:52:00
<b>Final Test Date</b>	2014/01/03	<b>Final Test Time</b>	04:59:00

### Test Recovery:

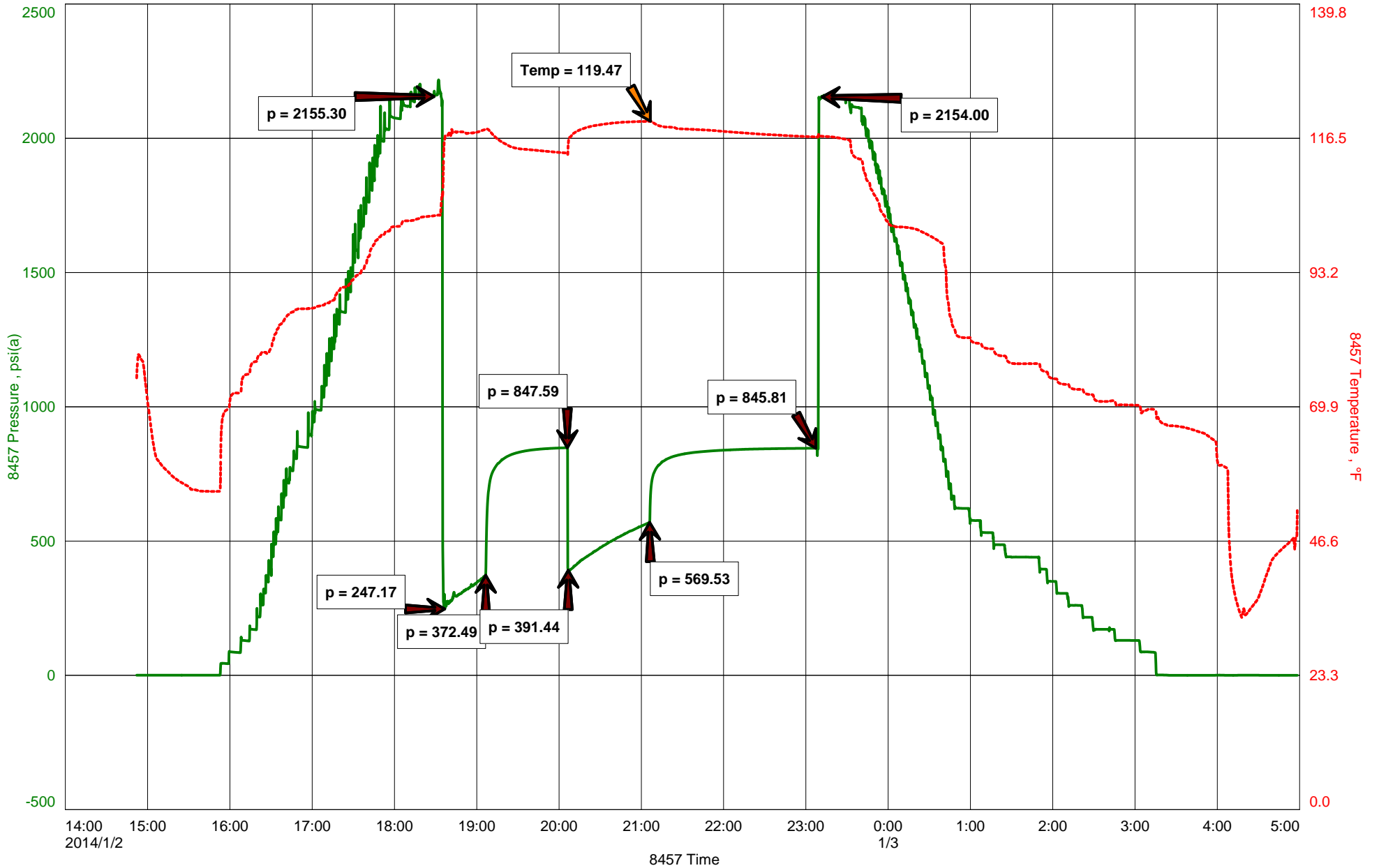
#### RECOVERED: 2520' GAS IN PIPE

100' G,SOCM, 11% GAS, 2% OIL, 87% MUD  
470' G,O&WCM, 8% GAS, 28% OIL, 21% WATER, 43% MUD  
730' G,SO&MCW, 2% GAS, 13% OIL, 76% WATER, 9% MUD  
1300' TOTAL FLUID

TOOL SAMPLE: TRACE OIL, 99% WATER, 1% MUD

CHLORIDES: 51,000 ppm  
PH: 7.0  
RW: .15 @ 88 deg.

# ELSIE #1-17





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: ELSIE1-17DST1

TIME ON: 14:52 1-2-14  
TIME OFF: 04:50 1-3-14

Company BEREXCO LLC Lease & Well No. ELSIE #1-17  
Contractor BEREDCO LLC RIG #1 Charge to BEREXCO LLC  
Elevation 2927 KB Formation MARMATON "B" Effective Pay \_\_\_\_\_ Ft. Ticket No. T300  
Date 1-2-14 Sec. 17 Twp. 26 S Range 33 W County FINNEY State KANSAS  
Test Approved By IAN BOSMYER Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 1 Interval Tested from 4550 ft. to 4580 ft. Total Depth 4580 ft.  
Packer Depth 4545 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4550 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 4531 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4577 ft. Recorder Number 11029 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 46 Drill Collar Length 354 ft. I.D. 2 1/4 in.  
Weight 9.35 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 1,900 P.P.M. Drill Pipe Length 4163 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 2 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 30 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: **STRONG 6 INCH BLOW, BUILDING, REACHING BOB 45 SEC. (NO BB)**  
2nd Open: **WEAK SURFACE BLOW, BUILDING, REACHING BOB 7 MIN. (WS BB)**

Recovered 2520 ft. of GAS IN PIPE  
Recovered 100 ft. of G,SOCM, 11% GAS, 2% OIL, 87% MUD  
Recovered 470 ft. of G,O&WCM, 8% GAS, 28% OIL, 21% WATER, 43% MUD  
Recovered 730 ft. of G,SO&MCW, 2% GAS, 13% OIL, 76% WATER, 9% MUD

Recovered <u>1300</u> ft. of <u>TOTAL FLUID</u>	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
_____	Total

TOOL SAMPLE: TRACE OIL, 99% WATER, 1% MUD  
Time Set Packer(s) 6:35 PM A.M. P.M. Time Started Off Bottom 11:05 PM A.M. P.M. Maximum Temperature 119 deg.

Initial Hydrostatic Pressure..... (A) 2155 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 247 P.S.I. to (C) 372 P.S.I.  
Initial Closed In Period..... Minutes 60 (D) 848 P.S.I.  
Final Flow Period..... Minutes 60 (E) 391 P.S.I. to (F) 570 P.S.I.  
Final Closed In Period..... Minutes 120 (G) 846 P.S.I.  
Final Hydrostatic Pressure..... (H) 2154 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# EARTH TECH OGL, INC

PO BOX 683

HOOKERT, OK 73945

(888)543-8378

TIM AND PARISH HEDRICK OWNER OPERATORS

COMPANY: BEREXCO LLC

WELL: Elsie 1-17

FIELD: Ivanhoe EXT COUNTY: Finney STATE: Kansas

LOCATION: Sec. 17 Twp. 26 R. 33 W

660 FSL 560 FWL

Interval Logged: 3650 To: 5377 G.L.: 2915 K.B.: 2927

Date Logged: 12-27-13 To: 1-7-13 Spud Date: 12-18-13

Rig: Beredco Drlg #1 Unit No.:     

Loggers: Ian Bosmeijer

Api No.: 15-055-22266-00-00

Filename: elsie - 1\_17.mlw

Geologist: Pete Wilson

### Abbreviations:

NB...New Bit  
CO...Circ Out  
NR...No Returns  
TG...Trip Gas  
WOB...Wt on Bit  
RPM...Rev/Min  
SG...Survey Gas  
DST...Drill Stem Test  
DS...Directional Survey  
CG...Connection gas  
LAT...Logged After Trip  
PP...Pump Pressure  
SPM...Strokes/Min  
DTG...Down Time Gas

### Mud Data

WT..Weight  
PH..Acidity  
CHL..Chlorides  
V..Viscosity  
F..Filtrate  
SC..Solids Content

### Lithology Symbols:

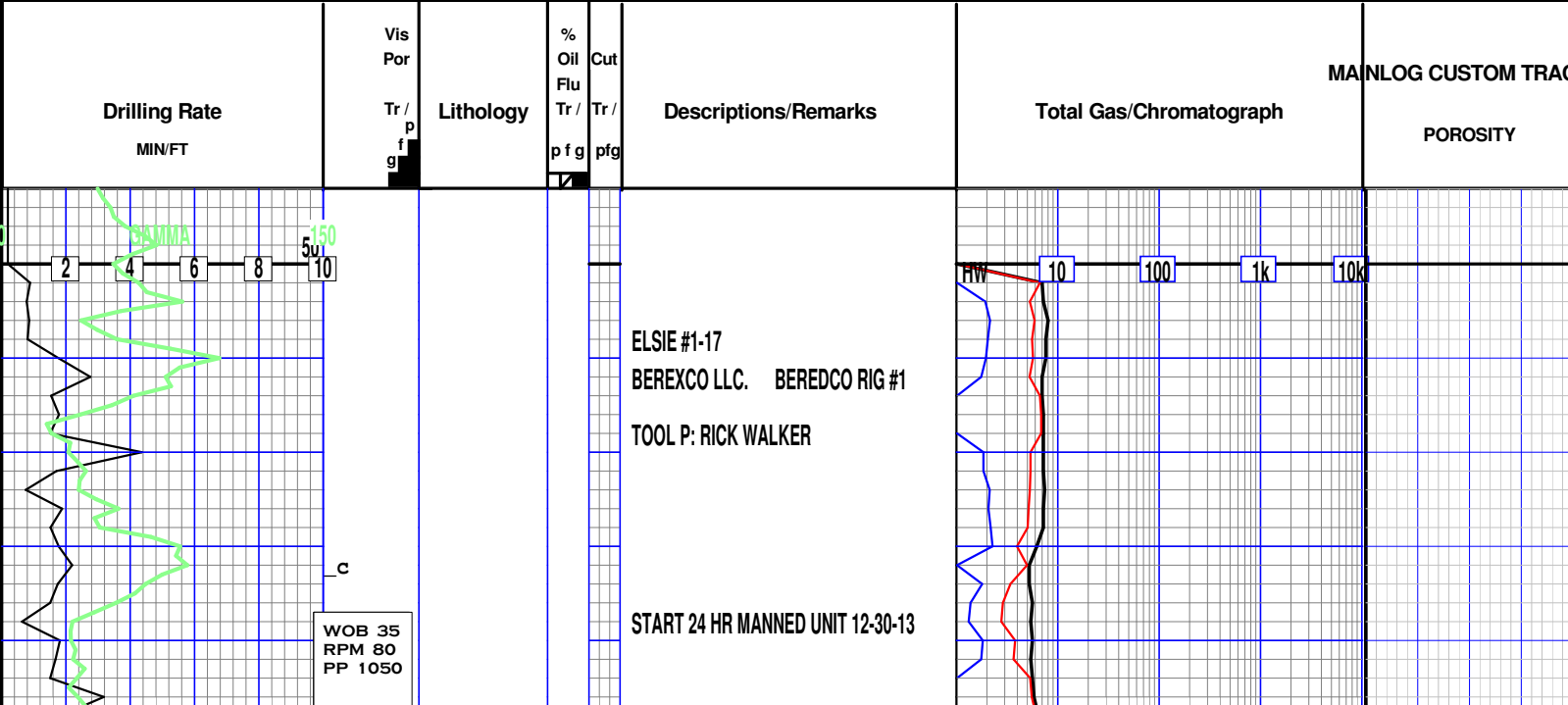
	Anhydrite		Salt		Granite
	Siltstone		Chert		Sandstone
	Dolomite		Conglomerate		Limestone
	Coal		Shale		Bentonite
	Carb Shale		Granite Wash		Quartz Wash
	Red Sh		Org Sh		Green Sh
	Cust Sh1		Cust Sh2		Cust Sh3
	Cust Sh4		Cust Sh5		Cust Sh6

### Gas Chromatograph Analysis:

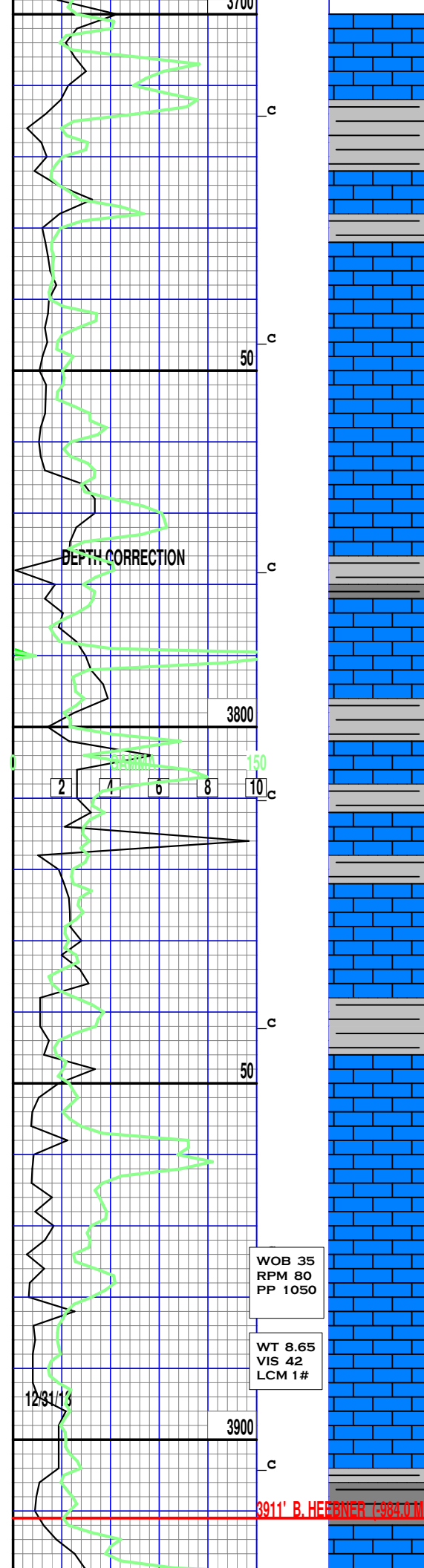
HW  
C1  
C2  
C3  
IC4  
NC4  
IC5

### Accessories

Glauconite Pyrite Fossils Oolites  
 Fractures Cement



WOB 35  
RPM 80  
PP 1050



LS- OFF WHT TO LT TN, HD TO BRITT, F-XLN TO TT-SUCRO IP, TR FOSS FRAG IP, TR SFT WHT CHLK, TR IMBD F-GRN ORTZ, DUL YEL MIN FLO IN 30%, NO VIS POR, NO VIS SHOW

SH- LT GY TO RD, FRM TO SFT GMMY IP, SMTH TXT

LS-OFF WHT TO WHT, HD DNS TO BRIT IP, SUCRO RE-XLN, SCAT FOSS FRAG, TR SFT WHT CHLK, DUL YEL MIN IN 60%, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO WHT, HD DNS TO BRIT IP, SUCRO RE-XLN, TR WHT CHRT IP, TR SFT WHT CHLK, DUL YEL MIN IN 60%, NO VIS POR, NO VIS SHOW

SH-LT GY TO BLK, FRM BLKY, CARB IP, SMTH TXT

LS-OFF WHT TO LT GY, HD DNS, F-XLN TO RE-XLN, TR IMBD GY SH, TR PYR CLSTR, DUL YEL MIN FLO IN 60%, NO VIS POR, NO VIS SHOW

SH- LT GY TO LT BRN, FRM BLKY TO SFT IP, DISS PYR IP, SMTH TXT

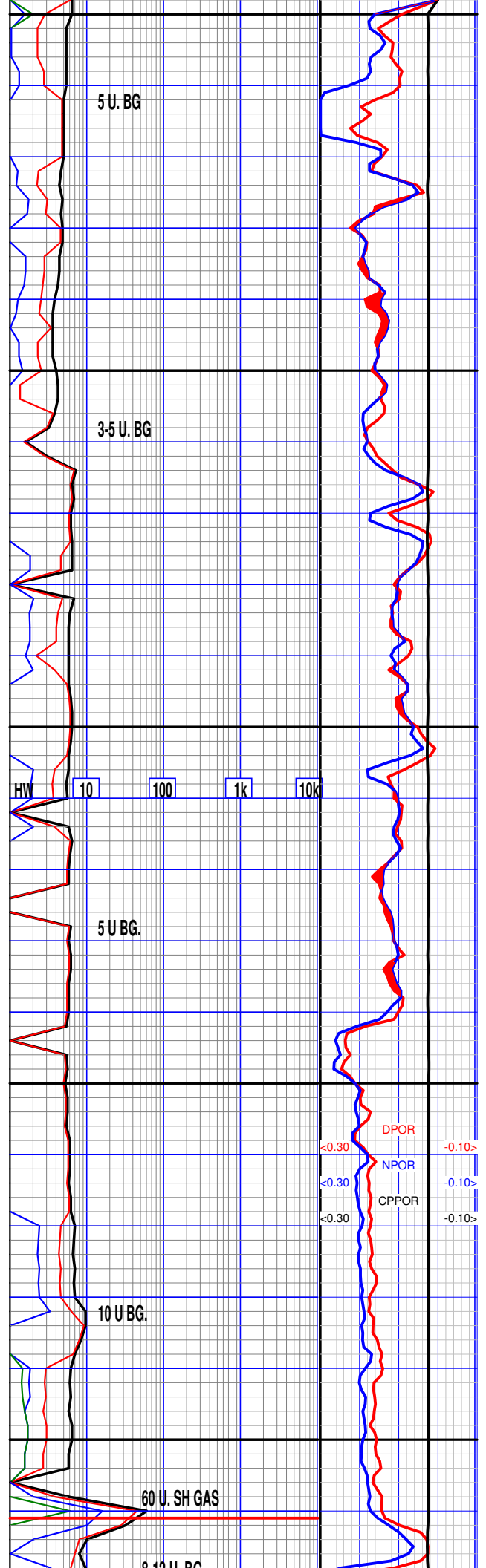
LS-OFF WHT TO GY, HD TO BRITT IP, F-XLN TO RE-XLN, TR WHT TO LT BRN CHRT IP, TR FOSS FRAG IP, DUL YEL MIN FLO IN 40%, NO VIS POR, NO VIS SHOW

SH- LT TO MD GY, FRM BLKY, SLI CALC IP, SMTH TXT

LS- WHT TO OFF WHT, BRIT TO SFT, F-XLN TO S-CHLKY, SFT WHT CHLK IP, IMBD BRN SH IP, MIN FLO IN 40%, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM LT TN, HD DNS TO BRITT, TT SUCRO TO S-CHLKY IP, IMBD SH IP, DUL YEL MIN FLO IN 30%, NO VIS POR, NO VIS SHOW

SH- DK GY TO BLK, FRM BLKY TO SPLNTY, CARB IP, TR PYR CLSTR IP, SMTH TXT

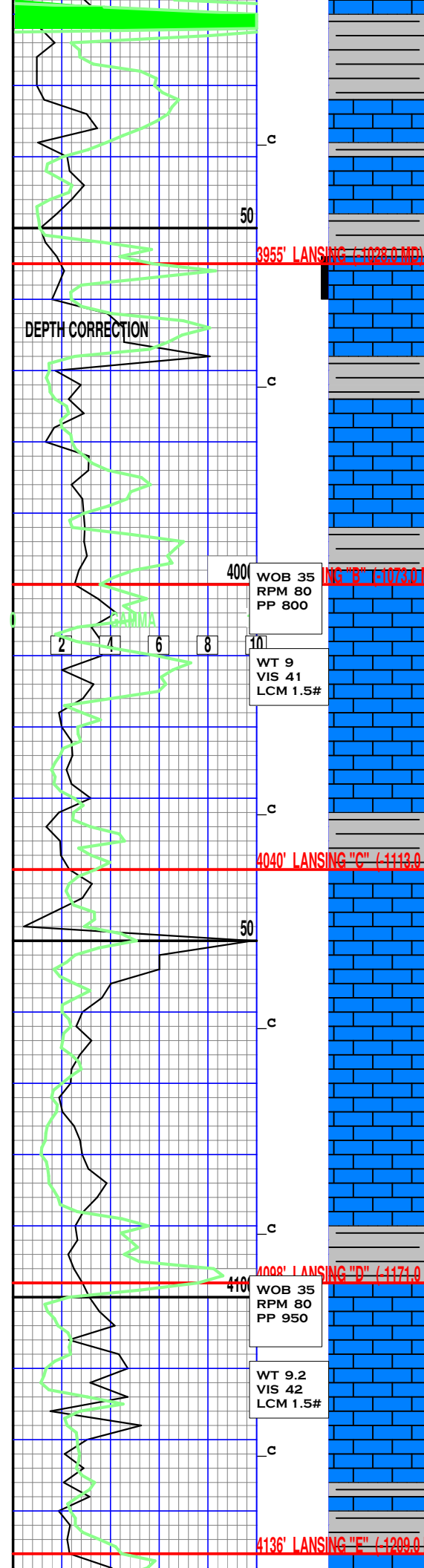


WOB 35  
RPM 80  
PP 1050

WT 8.65  
VIS 42  
LCM 1#

12/31/13

3911' B. HEEBNER (384.0 MD)



SH- LT TO MD GY BRN IP,  
FRM TO BLKY, SMTH TO  
SLI GRNY TXT

LS- OFF WHT TO LT GY,  
HD DNS, CRYPTO-XLN TO  
RE-XLN IP, TR FOSS FRAG  
TR DISS PYR IP, IMBD  
BRN SH IP, DUL YEL MIN  
FLO IN 50%, NO VIS POR,  
NO VIS SHOW

3955'-3960' LS- WHT TO  
LT TN (DUE TO OIL STN  
IN 2%), BRITT, SUCRO,  
IMBD FOSS FRAG, DLL YEL  
MIN FLO IN 60%, GLD FLO  
IN 2%, PR TO TR FR,  
INTER-XLN POR IN 5%, PR  
INTER FOSS POR IN 2%,  
NO CUT OR SHOW

LS- OFF WHT TO LT GY,  
HD DNS TO BRITT, F-XLN  
TO RE-XLN IP, SFT WHT  
CHLK IP, TR WHT CHRT IP  
DLL YEL MIN FLO IN 40%,  
NO VIS POR, NO VIS SHOW

SH- LT GY TO LT GRN,  
FRM BLKY TO GMMY IP,  
SMTH TXT

LS- OFF WHT TO WHT CRM  
IP, F-XLN TO TT SUCRO  
IP, ABDT WHT CHRT, TR  
SFT WHT CHLK, TR FOSS,  
DLL YEL FLO IN 40%, NO

LS- OFF WHT TO WHT, HD  
DNS BRITT, F-XLN TO  
RE-XLN, IMBD F-GRN QRTZ  
IP, SFT WHT CHLK IP, TR  
DISS PYR, DUL YEL MIN  
FLO IN 30%, NO VIS POR,  
NO VIS SHOW

SH- LT GY TO LT BRN,  
FRM TO SFT, IMBD PYR  
IP, SMTH TXT

LS- OFF WHT TO LT CRM,  
HD DNS TO BRITT IP,  
RE-XLN TO TT SUCRO,  
IMBD WHT SHRT IP, IMBD  
GY SH IP, TR SFT WHT  
CHLK IP, DUL YEL MIN  
FLO IN 25%, NO VIS POR,  
NO VIS SHOW

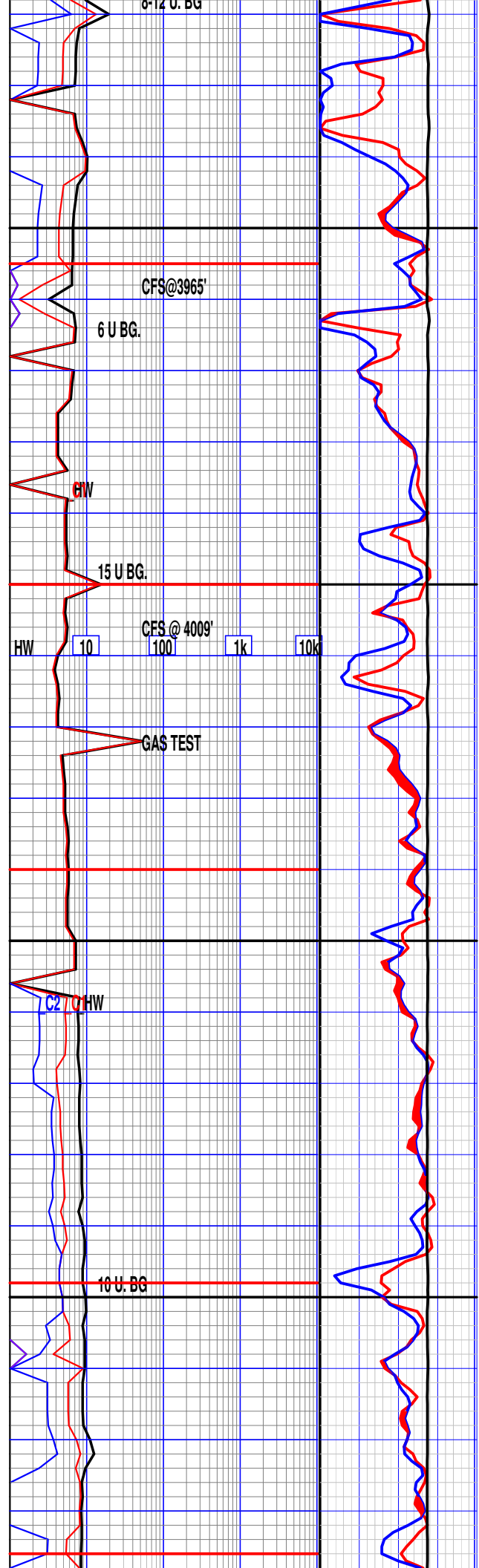
LS- CRM TO LT GY, HD TO  
BRITT, CRYPTO-XLN TO  
TR SUCRO, TR IMBD WHT  
CHRT, TR GALUC, SPOTTED  
YEL MIN IN 30%, NO VIS  
POR, NO VIS SHOW

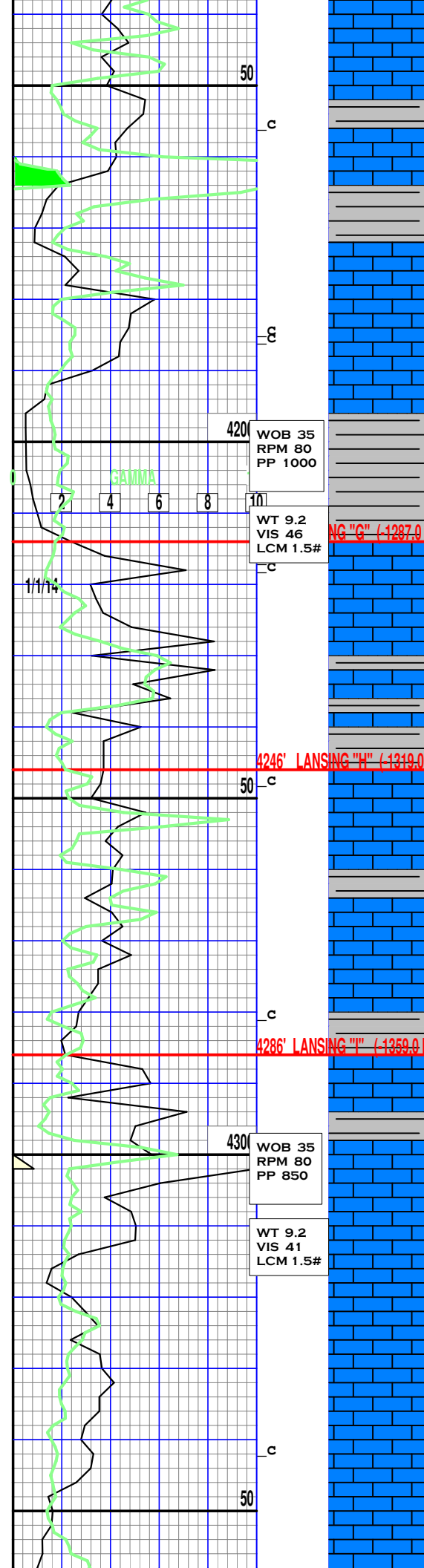
SH- LT GRN TO LT GY,  
FRM BLKY SFT IP, SMTH  
TO SLI GRNY TXT

LS- WHT TO OFF WHT, HD  
TO SFT BRITT, F-XLN TO  
RE-XLN, TR SUCRO, SFT  
WHT CHLK IP, TR SCATT  
FOSS FRAG, DUL YEL MIN  
FLO IN 65%, NO VIS POR,  
NO VIS SHOW

LS- OFF WHT, HD DNS TO  
BRITT, F-XLN TO RE-XLN,  
TR IMBD PYR, TR SFT WHT  
CHLK, DUL YEL MIN FLO  
IN 70%, NO VIS POR, NO  
VIS SHOW

SH-LT TO MD GYM TR RD  
IP, MOTT, FRM BLKY TO  
SFT, SLI CALC IP





LS- WHT TO GY, HD DNS,  
V/RE-XLN MTRX, IMBD  
FOSS, IMBD GY SH IP,  
TR DISS PYR IP, DUL YEL  
MIN FLO IN 40%, NO VIS  
POR, NO VIS SHOW

SH- LT GY TO DRK GY,  
FRM TO BLKY, SLI CALC,  
SMTH TXT

LS- OFF WHT CRM, HD DNS  
V/F-XLN TO CRYPTO-XLN,  
ABDT WHT BRN CHRT IP,  
TR SFT WHT CHKL, TR  
IMBD SH, DUL YEL MIN IN  
40%, NO VIS POR, NO VIS  
SHOW

SH- LT TO DRK GY BRN  
IP, FRM TO BLKY TO  
BRITT, SLI CALC IP,  
SMTH TXT

LS- OFF WHT TO CRM L  
TN, HD DNS, MD-XLN TO  
F-XLN, RE-XLN IP, IMBD  
GY SH IP, TR WHT CHRT  
IP, DLL YEL FLO IN 40%,  
NO VIS POR, NO VIS SHOW

LS- OFF WHT TO LT GY, HD  
DNS TO BRITT IP, F-XLN  
TO TT SUCRO, IMBD GY SH  
IP, IMBD GLAUC IP, TR  
IMBD PYR, DLL YEL MIN  
FLO IN 40%, NO VIS POR,  
NO VIS SHOW

LS- CRM TO WHT, HD DNS  
TR BRITT, F-XLN TO  
CRYPTO-XLN, IMBD  
CALC-XLS IP, DLL YEL FLO  
IN 25%, NO VIS POR, NO  
VIS SHOW

LS- OFF WHT TO WHT, HD  
DNS, F-XLN TO SUCRO IP,  
TR SFT WHT CHLK, TR IMBD  
F-GRN ORTZ, DLL YEL FLO  
IN 30%, NO VIS POR, NO  
VIS SHOW

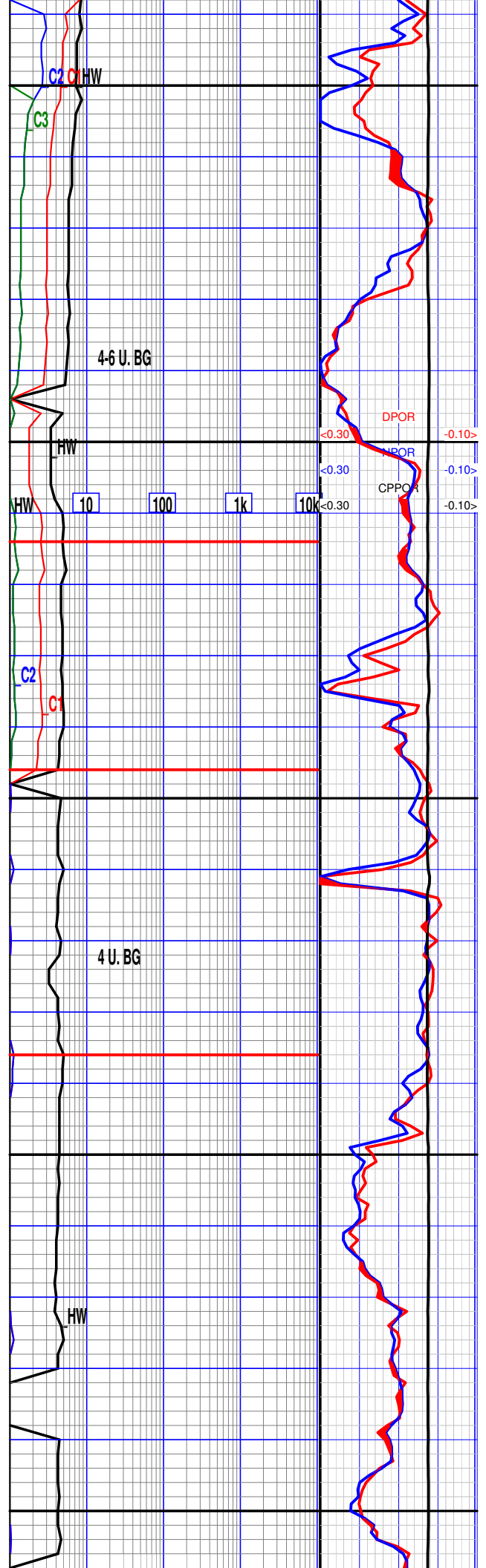
SH- LT GY TO LT RD, FRM  
BLKY TO SFT GMMY IP,  
SMTH TXT

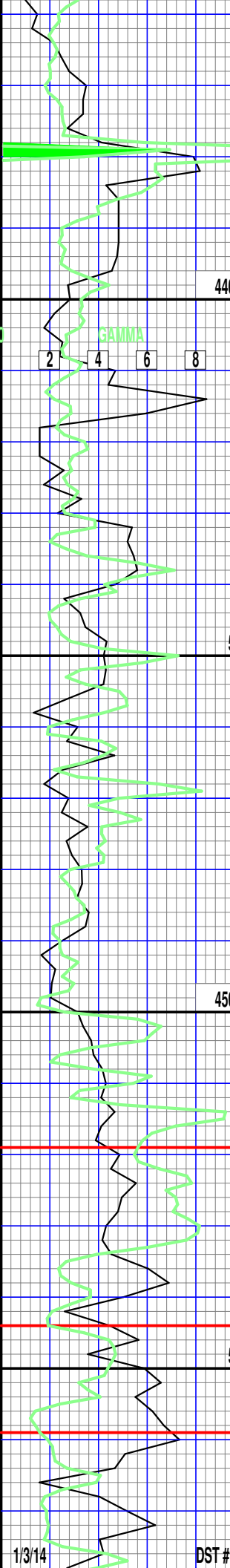
LS- LT GY, HD DNS, F-XLN  
SLI RE-XLN IP, NO FLO,  
NO VIS POR, NO SHOW

LS- OFF WHT CRM, HD DNS  
V/F-XLN TO CRYPTO-XLN,  
WHT HRT IP,  
TR SFT WHT CHKL, TR  
IMBD PYR, DUL YEL MIN IN  
40%, NO VIS POR, NO VIS  
SHOW

LS- WHT TO OFF WHT,  
BRITT TO SFT TR HD,  
S-CHLKY TO TT SUCRO IP,  
ABDT SFT WHT CHLK,  
SCAT IMBD FOSS, TR WHT  
CHRT, DUL YEL MIN FLO  
IN 20%, NO VIS POR, NO  
VIS SHOW

LS- OFF WHT TO WHT,  
BRITT TO SFT TR HD,  
F-XLN TO S-CHLKY IP,  
SFT WHT CHLK IP, TR  
IMBD GY SH, DUL YEL MIN





440  
 WOB 35  
 RPM 80  
 PP 1000  
 SPM 56  
 WT 9.25  
 VIS 45  
 FIL 9.6  
 LCM 3.5#

450  
 WOB 38  
 RPM 76  
 PP 1100  
 SPM 56  
 WT 9.3  
 VIS 48  
 FIL 6  
 LCM 3#

4544' MARMATON (-1617.0 MD)

4559' MARMATON "B" (-1632.0 MD)

DST #1 4550'-4580'

IN 60%, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO LT TN, HD DNS TO TR SFT, F/VF-XLN, TR WHT CHRT, DUL YEL MIN FLO IN 70%, NO VIS POR, NO VIS SHOW

SH- MD GY TO BLK TR GRN, FRM BLKY CARB IP, IMBD PYR IP, SMTH TXT

LS- OFF WHT TO LT GY, HD DNS TO SFT IP, V SUCRO TO RE-XLN, SFT WHT CHLK IP, IMBD DRK GY SH IP, DOS IN 1%, DUL YEL MIN FLO IN 40%, PR INTER-XLN POR IN 2%, NO VIS CUT OR SHOW

LS- OFF WHT TO LT TN IP, HD DNS, VF-XLN, TR IMBD BRN SH, TR FOSS FRAG, TR WHT TO CLR CHRT IN TRAY, DUL YEL MIN IN 60%, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO LT GY, HD DNS, F-XLN TO TR S-CHLKY, IMBD SH IP, IMBD SM CALC-XLS IP, DUL YEL MIN FLO IN 30%, NO VIS POR, NO VIS SHOW

LS- WHT, HD DNS TO BRITT, F-XLN TO VF-XLN, TR IMBD PYR IP, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS SHOW

SH- MD TO DK GY, FRM BLKY, SLI CALC IP, DISS PYR IP

LS- BUFF TO LT GY, HD DNS, MD-XLN TO OOLITIC IP, TR FOSS FRAG, TR IMBD SH IP, TR WHT TO CLR CHRT IP, DUL YEL MIN FLO IN 20%, NO VIS POR, NO SHOW

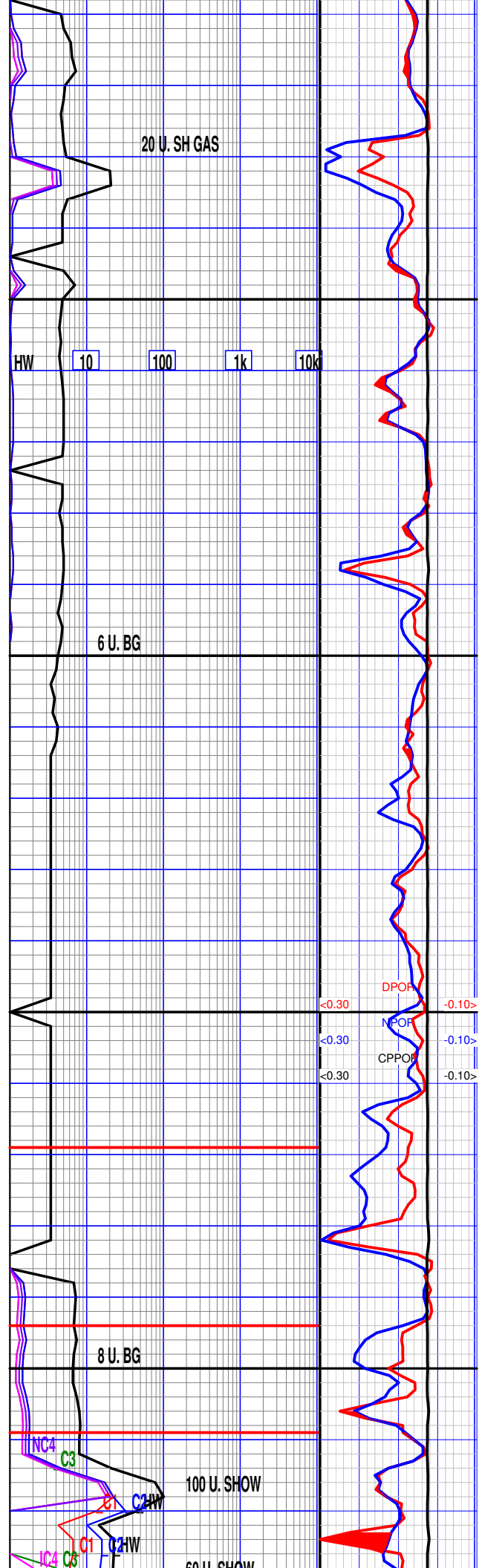
LS- WHT TO CRM, HD DNS, F-XLN TO RE-XLN, ABDT IMBD FOSS, TR IMBD SH IP, TR SFT WHT CHLK IP, TR PYR CLSTR IP, DUL YEL MIN FLO IN 20%, PR INTER FOSS POR IN 2%, NO VIS CUT OR SHOW  
 SH- LT GRN TO GY, FRM BLKY TO SFT, SMTH TXT

LS- LT GY TO TN, HD DNS, VF-XLN TO CRYPTO-XLN, TR WHT CHLK DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS SHOW

4544'-4559' LS- WHT TO LT GY, HD DNS, F-XLN TO CRYPTO-XLN, IMBD OOLIDS, IMBD FOSS, IMBD WHT TO BRN CHRT IP, DUL YEL MIN FLO IN 30%, NO VIS POR, NO SHOW

4564'-4569' LS- WHT TO OFF WHT LT TN (DUE TO OIL STN ON 15%), HD DNS, OOLICASTIC TO OOLITIC MTRX, IMBD PYR IP, YEL GOLD FLO IN 40%, FR TO TR GD OOLICAST POR IN 8%, FR INTER XLN POR IN 5%, FR TO GD FLSH CUT, GD SLW STRM IN 25%, GD OIL ODOR, LT TN LCH ON DISH

4574'-4580' LS- WHT TO CRM (LT TN DUE TO OIL



20 U. SH GAS

HW 10 100 1k 10k

6 U. BG

8 U. BG

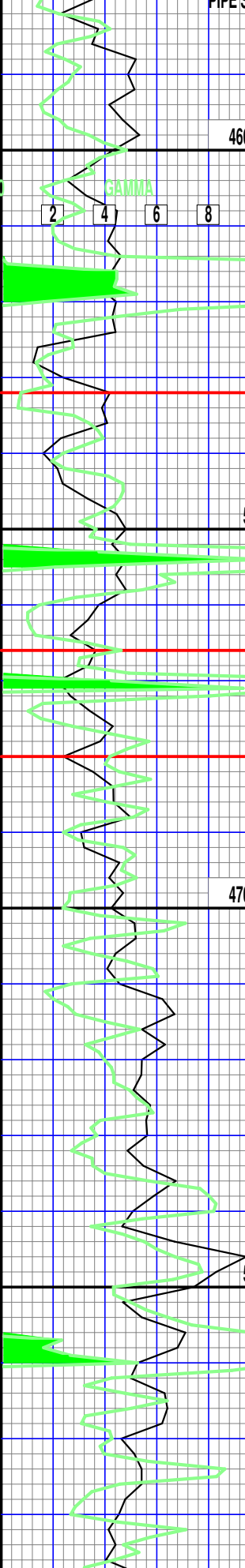
100 U. SHOW

DPOP <-0.30 -0.10>  
 NPOP <-0.30 -0.10>  
 CPPOR <-0.30 -0.10>

INC4 C3  
 C1 C2HW  
 C3 C1 C2HW



PIPE STRAP 5' SHORT @ DST 1



460  
WOB 38  
RPM 78  
PP 1000  
SPM 58

WT 9.2  
VIS 42  
FIL 7.6  
LCM 2#

4632' PAWNEE (-1705.0 MD)

50

4666' FT SCOTT (-1739.0 MD)

4680' CHEROKEE (-1750.0 MD)

470  
WOB 38  
RPM 78  
PP 1000  
SPM 58

WT 9.3  
VIS 47  
FIL 7.6  
LCM 2#

50

4788' ATOKA (-1861.0 MD)

STNS IN 10%) F-XLN TO OOLITIC TR SFT WHT CHLK, TR FOSS, YEL GLD FLO IN 25%, PR TO TR FR OOLICAST POR IN 5%, PR INTER-XLN POR IN 3%, FR FL SH CUT GD SLW STRM IN 20% LS-WHT TO CRM, HD TO BRITT, F-XLN TO OOLITIC, S-CHLKY, IMBD FOSS, TR IMBD GMMY SH, TR PYR, DUL YEL MIN FLO IN 30%, TR PR INTER FOSS POR, NO CUT OR SHOW

LS- WHT TO OFF WHT, HD DNS F/-MD-XLN OOLITIC IP, TR FOSS FRAG, SFT WHT CHLK IP, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS SHOW SH- LT GY TO BLK, FRM BLKY, CARB IP, SMTH TXT,

LS-WHT TO OFF WHT, HD DNS, F-XLN TO V/RE-XLN IP, TR SFT WHT CHLK, TR IMBD BRN CHRT, TR FOSS FRAG, DUL YEL FLO IN 30%, NO VIS POR, NO VIS SHOW LS- OFF WHT TO LT GY, HD DNS, F-XLN TO RE-XLN, ARG TO SHLY IP, IMBD FOSS IP, DUL YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

SH- MD GY TO BLK, FRM BLKY, SFT BLK CARB IP LS-LT GY TO OFF WHT, HD DNS, F-XLN TO TR S-CHLKY, FOSS IP, SHLY IP, SFT WHT CHL IP, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS SHOW

SH- DK GY TO BLK, FRM BLKY TO SFT BLK CARB LS-WHT TO LT CRM, HD DNS, F-XLN TO SUCRO IP, TR FOSS FRAG, DUL YEL MIN FLO IN 60%, NO VIS POR, NO VIS SHOW

SH- LT GY TO LT GRN, FRM BLKY, IMBD PYR IP, SMTH TXT

LS- OFF WHT TO LT GY, HD DNS, F- XLN TO RE-XLN, IMBD SH IP, TR IMBD PYR, TR FOSS FRAG, DUL YEL MIN FLO IN 30%, NO VIS POR, NO VIS SHOW

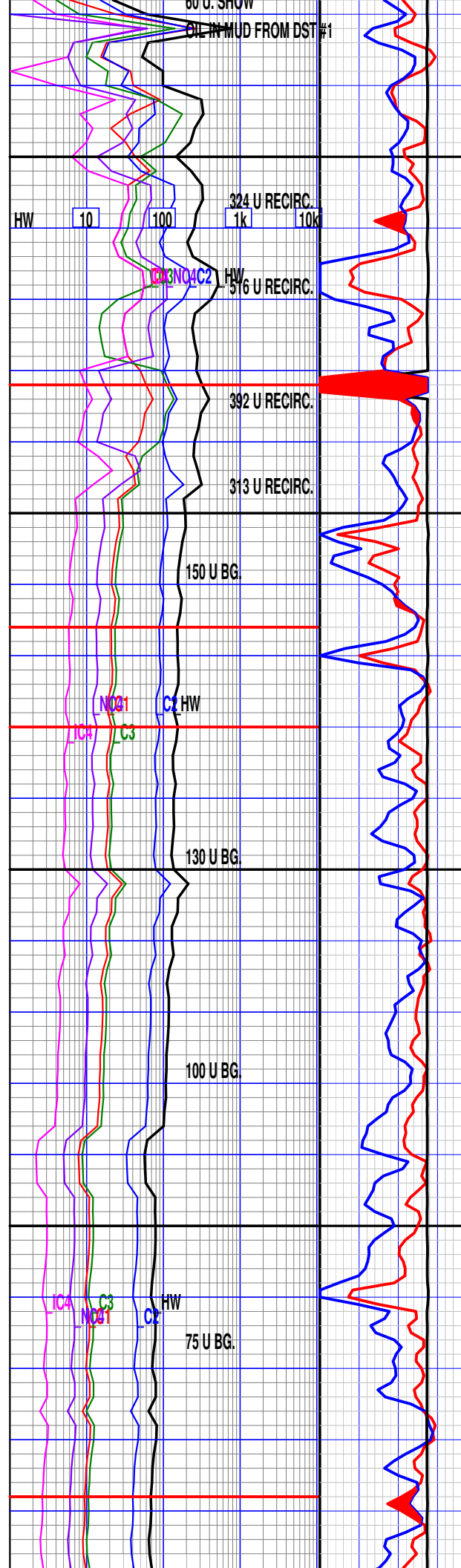
LS-OFF WHT TO LT CRM, HD DNS, F-XLN TO RE-XLN, TR TT SUCRO, TR IMBD FOSS FRAG, TR IMBD SH, TR SFT WHT CHLK, DUL YEL MIN FLO IN 25%, NO VIS POR, NO VIS SHOW

LS-OFF WHT TO LT GY, HD DNS TO BRITT, RE-XLN TO TT SUCRO, IMBD SH IP, IMBD WHT TO CLR CHRT, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS SHOW, PR SAMPLE QUALITY

SH- MD GY TO BLK, FRM BLKY, CARB IP, TR IMBD F GRN QRTZ, SMTH TXT

SH- LT GY TO LT GRN, FRM BLKY, SMTH TXT

LS- CRM TO LT GY, HD DNS, F-XLN TO CRYPTO-XLN, TR IMBD SH, V DUL YEL MIN FLO IN



60 U. SHOW  
DUL IN MUD FROM DST #1

HW 10 100 324 U RECIRC. 1k 10k

HW 576 U RECIRC.

392 U RECIRC.

313 U RECIRC.

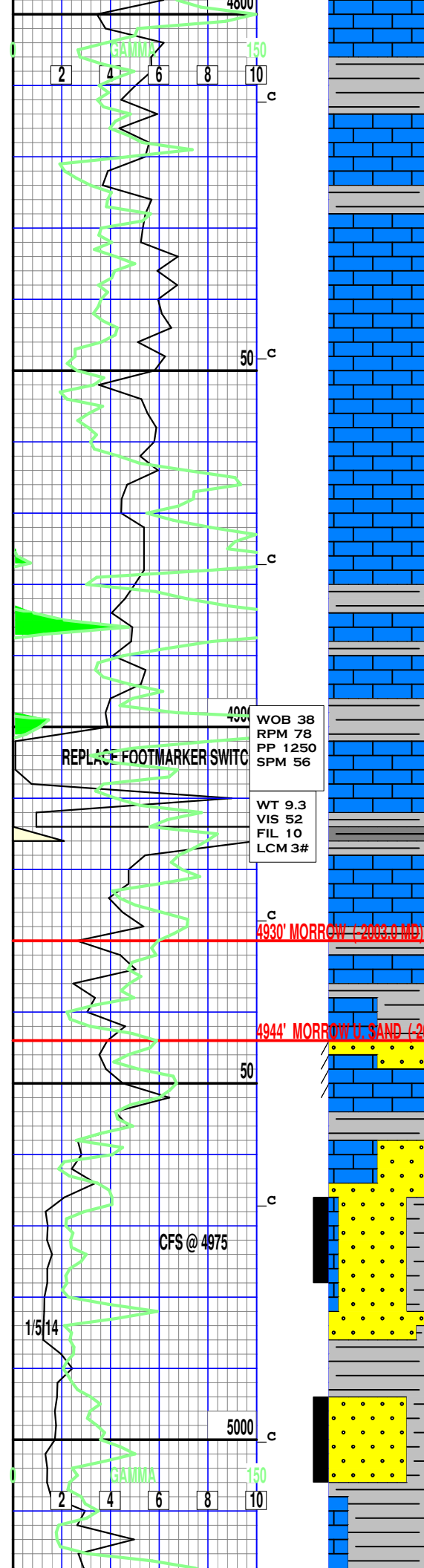
150 U BG.

N021  
C1 HW  
C2  
C3

130 U BG.

100 U BG.

75 U BG.



20%, NO VIS POR, NO VIS SHOW

SH- LT TO MD GY, FRM BLKY, SMTH TO SLI GRNY TXT

LS- OFF WHT TO CRM, HD DNS, F-XLN TO TT SUCRO, TR WHT TO BRN CHRT, TR IMBD SH, DUL YEL FLO IN 10%, NO VIS POR, NO SHOW

LS- WHT TO GY, HD DNS, F-XLN TO RE-XLN, TR IMBD FOSS IP, TR IMBD SH, DUL YEL MIN FLO IN 25%, NO VIS POR, NO SHOW

LS-LT GY, HD TO BRITT, F-XLN TO CRYPTO-XLN IP, IMBD SH IP, TR IMBD SH, DUL YEL MIN FLO IN 10%, NO VIS POR, NO SHOW

LS- CRM, HD DNS, F-XLN TO RE-XLN, IMBD FOSS IP, TR IMBD PYR IP, TR IMBD WHT TO GY CHRT, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- LY GY, FRM BLKY TO SFT, CALC IP, SMTH TXT

LS- WHT TO GY, HD DNS, V/F-XLN, CALC-XLS IP, TR CHRT, TR SFT WHT CHLK, NO VIS FLO, NO POR, NO SHOW

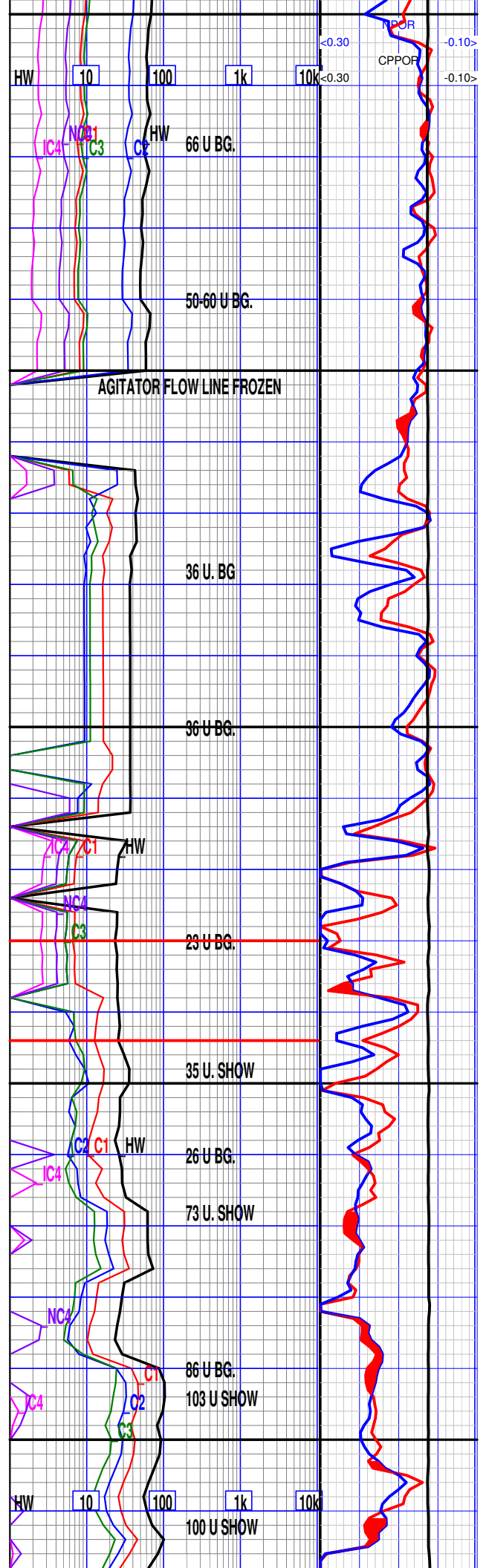
SH- LT GY TO BLK, SFT TO FRM IP, CARB IP, SMTH TXT

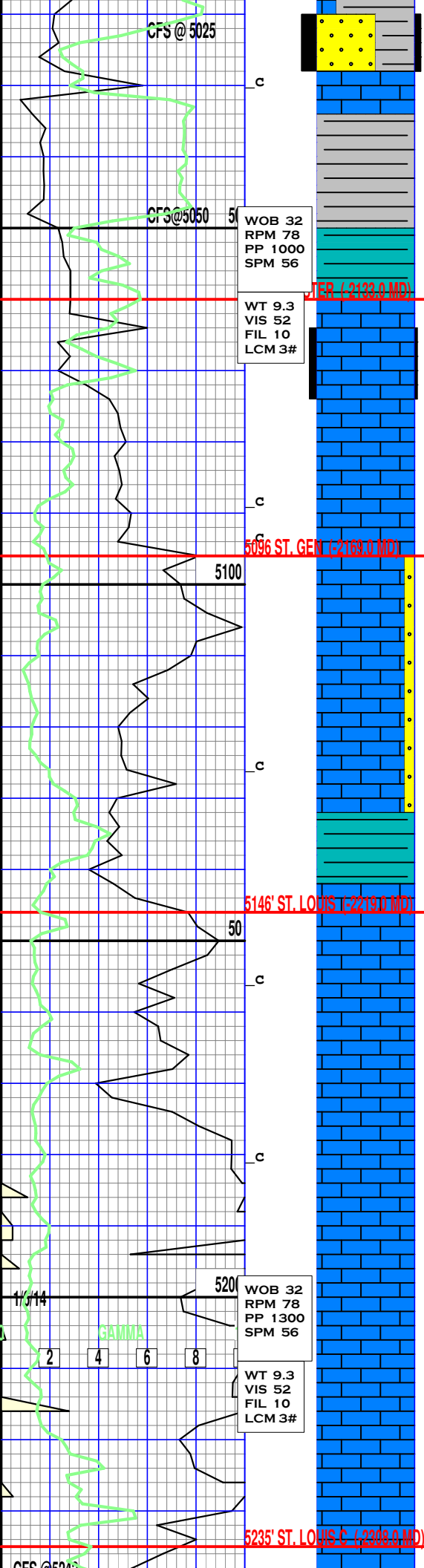
LS-LT TN TO GY, HD DNS, F-XLN FOSS IP, IMBD GLAC IP, IMBD SH IP, V ARG TO SHLY, NO VIS FLO, NO VIS POR, NO VIS SHOW

4944'-4952' LS- WHT TO LT GY (DOS IN 5%), HD DNS TO BRITT, F-XLN TO RE-XLN, ABDT IMBD F-GRN ORTZ, ABDT FOSS, IMBD GLAUC, DUL YEL MIN FLO IN 20%, GLD FLO IN 5%, V PR INTER GRN POR IN 5%, TR PR MICRO PP, PR FLSH CUT, FR SLW STRM IN 10%

SS- FRSTY TO LT TN (DUE TO OIL STN IN 70%) ORTZ GRNS, HD, TT, F-V/F XLN, S-ANG GRNS, WLL SRT, SIL CMNT IP, TR GLAUC, TR WHT CHLK, TR IMBD SH, GOLD FLO IN 50%, FR INTER-GRN POR, EXCEL FLN CUT, EXCEL SLO STRM IN 70%, TN LCH ON DISH, GD OIL ODOR, LIVE OIL ON SAMPLE

SS- FRSTY TO LT TN (DUE TO OIL STN IN 80%) ORTZ GRNS, HD, TT, FN TO V/F XLN, S-ANG GRNS, WLL SRT, SIL CMNT IP, TR GLAUC, TR IMBD SH, GOLD FLO IN 50%, FR INTER-GRN POR, EXCEL FLN CUT, EXCEL SLO STRM IN 80%, TN LCH ON DISH, GD OIL ODOR, LIVE OIL ON SAMPLE





SS- FRSTY TO GY LT TN IP (DUE TO OIL STAIN IN 30%), QRTZ GRNS, HD, F-V/GRN, S-ANG, WLL SRT, SIL TO CALC CMNT, ABDT IMBD SH IP, GLD FLO IN 25%, FR INTER GRN POR IP, EXCEL FLSH CUT, EXCEL SLW STRM IN 40%, LT TN LCH ON DISH GD OIL ODOR, TR LIVE OIL

SH- LT GRN TO DK GY, FRM BLKY TO SPLNTY, IMBD QRTZ GRNS IP, SMTH TXT

SH- GRN, FRM BLKY TO HD, CALC, TR FOSS FRAG, WXY TXT

LS- OFF WHT TO LT GY, HD DNS, F-XLN TO TT SUCRO IP, S-CHLK IP, IMBD F GRN QRTZ, GLD FLO IN 5%, PR MICRO PP POR IP, PR FLSH CUT, FR SLW STRM IN 10%

LS- OFF WHT TO LT GY, HD DNS F-XLN TO RE-XLN, IMBD FOSS, TR IMBD SH, TR F-GRN QRTZ, TR PYR, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO WHT, HD DNS, SUCRO IMBD F-GRN QRTZ IP, SM OODS IP, TR SFT WHT CHLK, DUL YEL MIN FLO IN 7%, TR MICRO PP POR, NO CUT OR SHOW

LS- WHT, HD DNS, MD-XLN TO TT SUCRO, SUCRO IP, IMBD F-GRN QRTZ IP, TR SFT WHT CHLK, DUL YEL MIN FLO IN 50%, NO VIS POR, NO VIS SHOW

SH- LT GRN TO LT GY, FRM BLKY, HD, WXY TXT

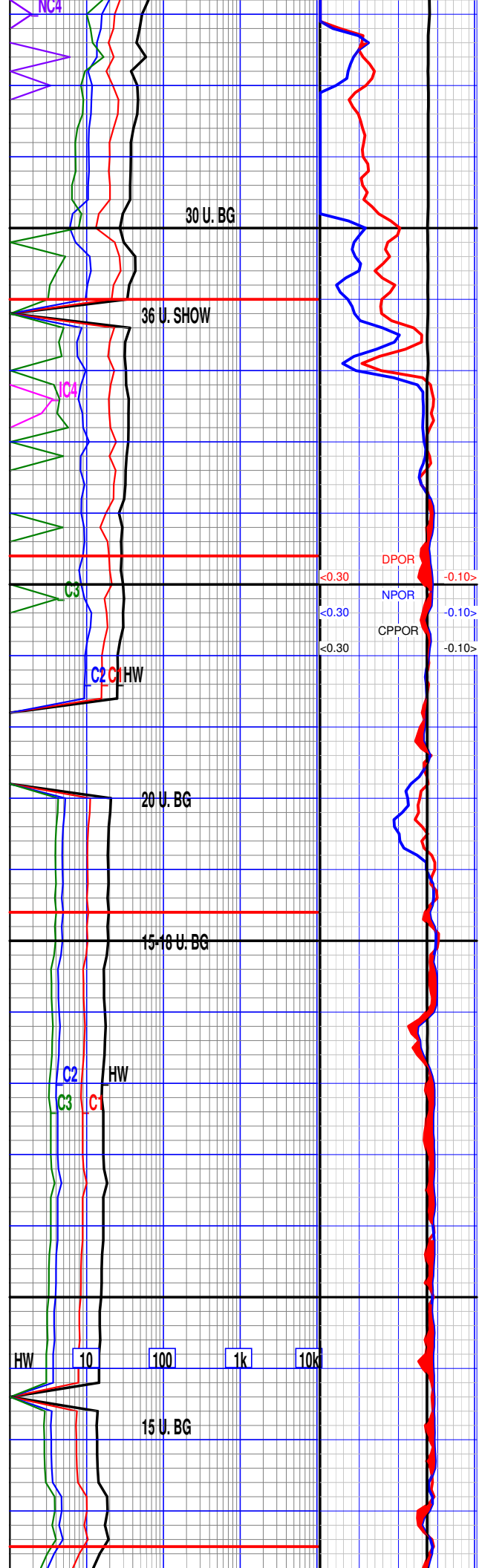
LS- LT GRN TO LT GY, HD DNS, F-XLN, SLTY SH GRADING TO LS, IMBD WHT TO LT GY CHRT, NO FLO, NO VIS POR, NO SHOW

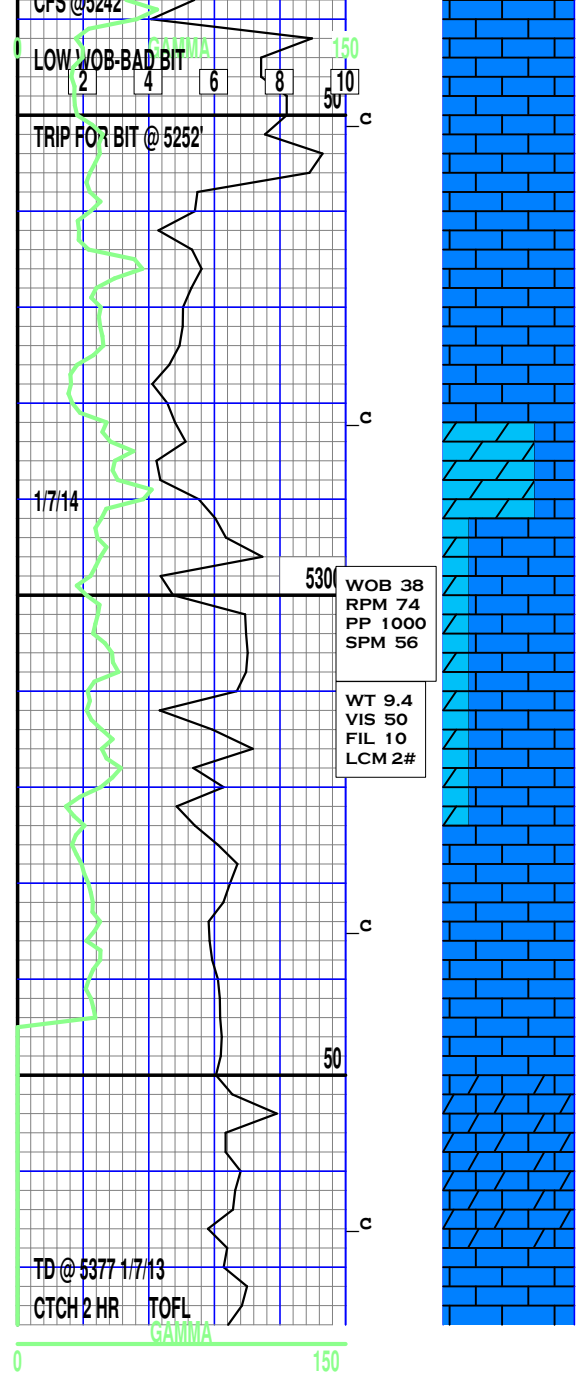
LS- WHT TO OFF WHT, HD DNS, OOLITIC W/RE-XLN MTRX, TR TT SUCRO IMBD WHT TO BRN CHRT, TR GLAUC, TR FOSS, TR IMBD SH, DUL YEL MIN FLO IN 70%, NO VIS POR, NO VIS SHOW

LS- WHT TO LT CRM (DOS IN 2%), HD DNS, V OOLITIC W/RE-XLN TO F-XLN MTRX, SFT WHT CHLK IP, TR WHT TO BRN CHRT IN TRAY, TR PYR, DUL YEL MIN FLO IN 50% TR GLD FLO, TR PR OOLIMOLD POR IN 2%, GD FLSH CUT, FR SLW STRM IN 10%

LS- WHT OFF WHT TO LT TN, F-XLN TO OOLITIC W/RE-XLN TO F-XLN MTRX, SFT WHT CHLK IP, WHT TO GY CLR CHRT IP, DLL YEL FLO IN 25%, NO VIS POR, NO VIS SHOW

5238' LS- OFF WHT TO LT TN, HD DNS TO BRITT IP, OOLITIC W/F-XLN MTRX,





ABDT SFT WHT CHLK IP,  
SCAT WHT TO BRN CHTR IN  
TRAY, V DUL YEL MIN FLO  
IN 20%, NO VIS POR, NO  
VIS SHOW

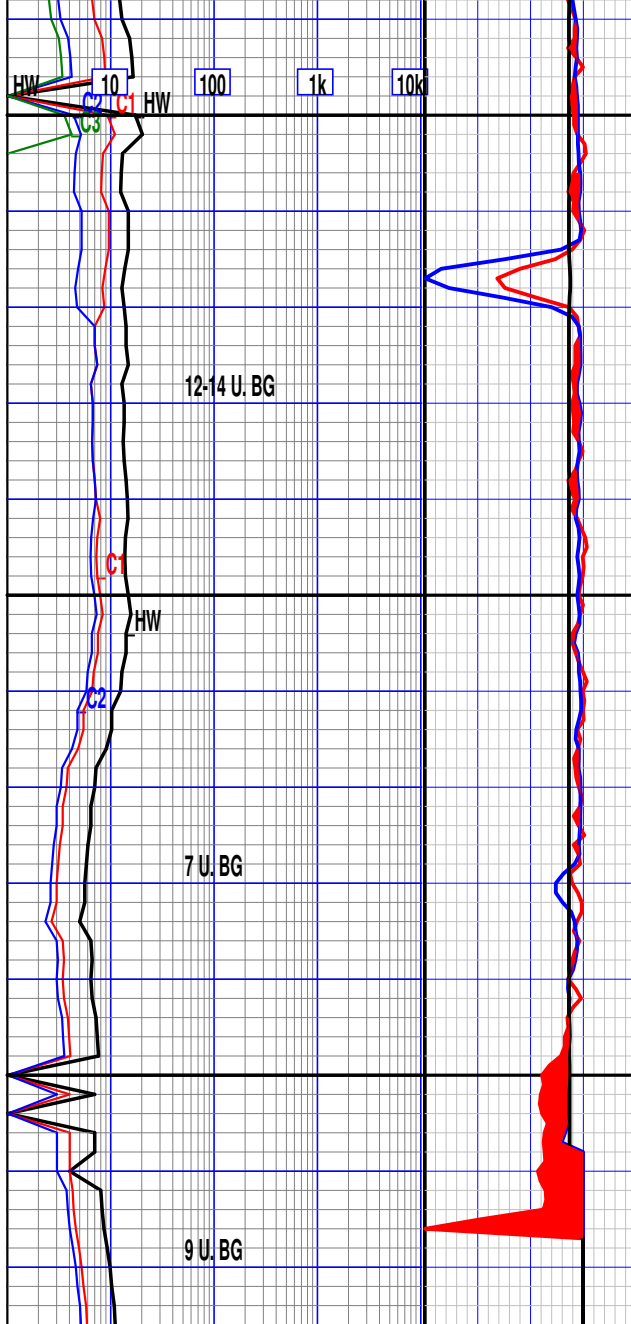
LS-WHT TO CRM, HD DNS,  
F-XL TO RE-XLN TO TR  
SUCRO, SFT WHT CHLK IP,  
DUL YEL MIN FLO IN 20%,  
NO VIS POR, NO VIS SHOW

DOLO- OFF WHT TO LT GY,  
HD DNS TO BRIT, F-XLN,  
SFT WHT CHLK IP, V CALC  
TR IMBD GY SH IP, DUL  
YEL MIN FLO IN 30%, TR  
MICRO PP POR IP, NO VIS  
CUT OR SHOW

LS- WHT TO OFF WHT, HD  
DNS, F-XLN TO RE-XLN TO  
TT SUCRO, SCATT FOSS IP,  
IMBD OOLITES IP, IMBD  
SM-MD DOLO GRNS IP, DUL  
YEL TO TR BRI YEL FLO IN  
25%, NO VIS POR, NO VIS  
SHOW

LS- LT TN TO OFF WHT, HD  
DNS, F-XLN TO CRYPTO-XLN  
TR RE-XLN, TR WHT CHRT  
IP, TR SFT WHT CHLK, DLL  
YEL FLO IN 25%, NO VIS  
POR, NO VIS SHOW

LS- LT TN TO OFF WHT,  
HD DNS, F-XLN TO CRYPTO  
-XLN, WHT TO BRN CHRT  
IP, TR SFT WHT CHLK,  
SLI DOLO IP, DLL YEL  
FLO IN 25%, NO VIS POR  
NO VIS SHOW



FORMATION: MARMATON "B"

	PRESSURE (psi)	TIME (min)
IAL HYD:	2155	
AL FLOW:	247-372	30
L SHUT IN:	848	60
AL FLOW:	391-570	60
L SHUT IN:	846	120
AL HYD:	2154	

PE RECOVERY:

87% MUD), 470' G O&WCM(8% GAS 28% OIL,  
2%GAS 13%OIL 76% WATER 9%MUD), 1300 TF

R RECOVERY:

ATER, 1% MUD

MMENTS:

6" BBR BOB IN 45 SEC (NO BB)

SBRRBOB 7 MIN (BOB BB)

PPM, PH 7.0, RW .15@88 DEG