Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1212412

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 # 34923
Name: Petroflow Energy Corporation
Address 1: 525 S. MAIN ST., STE 1120
Address 2:
City: TULSA State: OK Zip: 74103 + __ __ __ __
Contact Person: Kim Reece
Phone: (918) 592-1010
CONTRACTOR: License # 34293
Name: Project Drilling LLC
Wellsite Geologist: Claus Axelson
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 #:

8/23/2013	9/6/2013	10/8/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-113-21359-01-00
Spot Description:
NE - NE - NE - NE Sec. 4 Twp. 17 S. R. 4 ☐ East ☑ West
160 Feet from ☑ North / ☐ South Line of Section
255 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: McPherson
Lease Name: Neustrom Well #: 1-4H
Field Name:
Producing Formation: Maquoketa
Elevation: Ground: 1499 Kelly Bushing: 1503
Total Vertical Depth: 5800 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 278 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: 3000 ppm Fluid volume: 3500 bbls
Dewatering method used: Evaporated
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: 07/02/2014
☐ **Confidential Release Date:**
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Deanna Garrison **Date:** 07/14/2014

[redacted] 1212412

Operator Name: Petroflow Energy Corporation Lease Name: Neustrom Well #: 1-4H

Sec. 4 Twp. 17 S. R. 4 ☐ East ☑ West County: McPherson

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 ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Mud Log
Sonic Cement Bond Log

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Lansing	2484	KB
Cherokee	2981	KB
Mississippi	3157	KB
Kinderhook	3425	KB
Sylvan	3628	KB

CASING RECORD ☑ New ☐ 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
Surface	12.25	9.625	33.3	275	Class A	130	
Longstring	8.25	7	26	3986	Class A	350	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ 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 *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☑ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
3960 MD
7929 MD

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

PETROFLOW ENERGY

calmena ENERGY SERVICES

Final

WELLBORE: Lateral #1
PLAN: Design #4
GEODETIC SYSTEM: US State Plane 1927 (Exact solution) DATUM: NAD 1927 (NADCON CONUS) ELLIPSOID: Clarke 1866 ZONE: Kansas South 1502 SYSTEM DATUM: Mean Sea Level
SURFACE HOLE COORDINATES LATITUDE: 38° 36' 31.911 N LONGITUDE: 97° 45' 34.790 W NORTHING (Y): 708050.00 EASTING (X): 2211567.00 GROUND LEVEL: 1503.0 RIG FLOOR(KB): WELL @ 1523.0usft (Original Well Elev)
MAGNETIC FIELD: STRENGTH: 52581 DIP ANGLE: 66.48° MODEL: IGRF2010 DATE: 21-May-13 AZIMUTHS CORRECTED TO: Grid MWD - USE IF ABOVE IS GRID Magnetic North is 3.83° East of Grid North (Magnetic Convergence) MWD - USE IF ABOVE IS TRUE Magnetic North is 4.29° East of True North (Magnetic Declination)

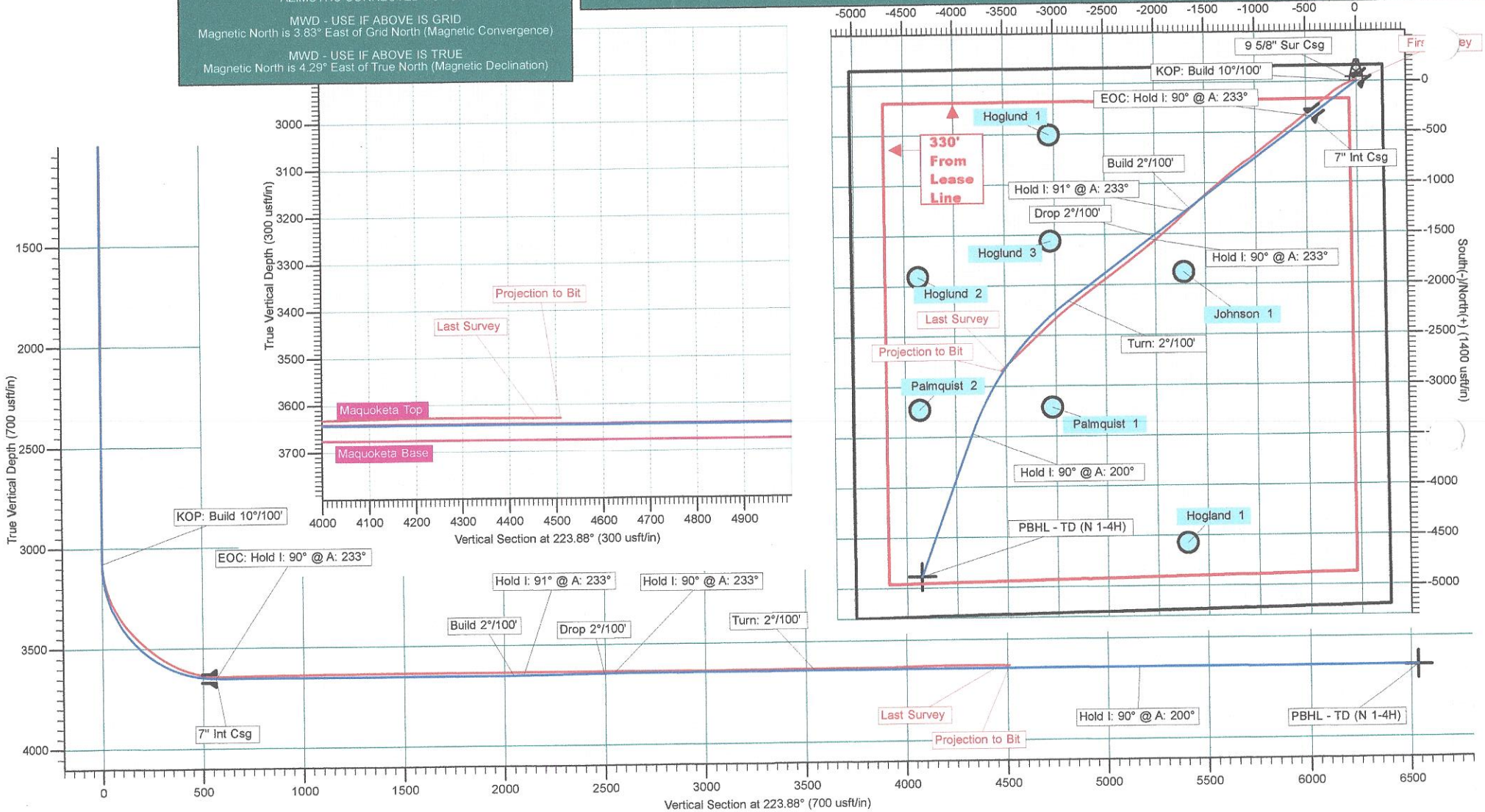
Operator: Petroflow Energy
Location: McPherson Co, Kansas (NAD-27)
Well Name: Neustrom 1-4H
Calmena Job# 13154

PLAN SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		KOP: Build 10°/100'
2	3078.0	0.00	0.00	3078.0	0.0	0.0	0.00	0.00	0.0		EOC: Hold I: 90° @ A: 233°
3	3978.0	90.00	233.00	3651.0	-344.8	-457.6	10.00	233.00	565.7		Build 2°/100'
4	5478.0	90.00	233.00	3651.0	-1247.5	-1655.5	0.00	0.00	2046.8		Hold I: 91° @ A: 233°
5	5528.0	91.00	233.00	3650.5	-1277.6	-1695.5	2.00	0.00	2096.1		Drop 2°/100'
6	5933.0	91.00	233.00	3643.5	-1521.3	-2018.9	0.00	0.00	2495.9		Hold I: 90° @ A: 233°
7	5983.0	90.00	233.00	3643.0	-1551.4	-2058.8	2.00	180.00	2545.3		Turn: 2°/100'
8	6993.5	90.00	233.00	3643.0	-2159.5	-2865.8	0.00	0.00	3543.0		Hold I: 90° @ A: 200°
9	8643.5	90.00	200.00	3643.0	-3467.7	-3833.8	2.00	-90.00	5156.8		
10	10152.2	90.00	200.00	3643.0	-4885.3	-4349.8	0.00	0.00	6536.4	PBHL - TD (N 1-4H)	

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - TD (N 1-4H)	3643.0	-4885.3	-4349.8	703164.66	2207217.25	38° 35' 43.960 N	97° 46' 30.063 W	Point



Calmena Energy Services

Survey Report

Company:	Petroflow Energy	**Local Co-ordinate Reference:**	Site Neustrom 1-4H
Project:	McPherson Co, Kansas (NAD-27)	**TVD Reference:**	WELL @ 1523.0usft (Original Well Elev)
Site:	Neustrom 1-4H	**MD Reference:**	WELL @ 1523.0usft (Original Well Elev)
Well:	Neustrom 1-4H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Lateral #1	**Database:**	EDM 5000.1 Single User Db

Project McPherson Co, Kansas (NAD-27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		

Site Neustrom 1-4H

Site Position:		**Northing:**	708,050.00 usft	**Latitude:**	38° 36' 31.911 N
From:	Map	**Easting:**	2,211,567.00 usft	**Longitude:**	97° 45' 34.790 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.45 °

Well Neustrom 1-4H

Well Position	**+N/-S**	0.0 usft	**Northing:**	708,050.00 usft	**Latitude:**	38° 36' 31.911 N
	+E/-W	0.0 usft	**Easting:**	2,211,567.00 usft	**Longitude:**	97° 45' 34.790 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	1,523.0 usft	**Ground Level:**	1,503.0 usft

Wellbore Lateral #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/21/2013	4.29	66.48	52,581

Design Lateral #1

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	223.88

Survey Program **Date** 9/7/2013

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
360.0	7,930.0	Survey #1 (Lateral #1)	MWD	MWD - Calmena

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.20	166.50	360.0	-0.6	0.1	0.3	0.06	0.06	0.00
First Survey									
868.0	0.10	263.40	868.0	-1.5	-0.1	1.2	0.05	-0.02	19.07
1,398.0	0.00	302.00	1,398.0	-1.6	-0.5	1.5	0.02	-0.02	0.00
1,812.0	0.20	342.10	1,812.0	-0.9	-0.8	1.2	0.05	0.05	0.00
2,318.0	0.40	313.50	2,318.0	1.2	-2.3	0.8	0.05	0.04	-5.65
2,876.0	1.00	333.60	2,875.9	6.9	-5.9	-0.9	0.11	0.11	3.60
2,982.0	0.80	342.70	2,981.9	8.4	-6.5	-1.5	0.23	-0.19	8.58
3,014.0	1.00	340.00	3,013.9	8.9	-6.7	-1.8	0.64	0.63	-8.44
3,046.0	1.50	300.00	3,045.9	9.4	-7.2	-1.8	3.05	1.56	-125.00

Company:	Petroflow Energy	**Local Co-ordinate Reference:**	Site Neustrom 1-4H
Project:	McPherson Co, Kansas (NAD-27)	**TVD Reference:**	WELL @ 1523.0usft (Original Well Elev)
Site:	Neustrom 1-4H	**MD Reference:**	WELL @ 1523.0usft (Original Well Elev)
Well:	Neustrom 1-4H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Lateral #1	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,078.0	3.50	264.80	3,077.9	9.5	-8.5	-0.9	7.60	6.25	-110.00
3,110.0	6.20	254.30	3,109.8	8.9	-11.1	1.3	8.85	8.44	-32.81
3,142.0	9.60	251.70	3,141.5	7.6	-15.3	5.1	10.68	10.63	-8.13
3,174.0	14.10	251.80	3,172.8	5.6	-21.6	10.9	14.06	14.06	0.31
3,205.0	18.50	250.00	3,202.5	2.7	-29.8	18.7	14.29	14.19	-5.81
3,236.0	21.60	248.60	3,231.6	-1.1	-39.7	28.3	10.12	10.00	-4.52
3,268.0	24.50	249.40	3,261.1	-5.6	-51.4	39.6	9.12	9.06	2.50
3,300.0	28.40	248.70	3,289.7	-10.7	-64.7	52.5	12.23	12.19	-2.19
3,331.0	31.20	247.10	3,316.6	-16.5	-79.0	66.6	9.39	9.03	-5.16
3,362.0	34.30	244.90	3,342.7	-23.3	-94.3	82.1	10.71	10.00	-7.10
3,393.0	36.60	243.60	3,367.9	-31.1	-110.5	99.0	7.81	7.42	-4.19
3,425.0	39.70	241.90	3,393.1	-40.2	-128.0	117.7	10.23	9.69	-5.31
3,457.0	42.80	240.40	3,417.2	-50.4	-146.5	137.9	10.17	9.69	-4.69
3,489.0	45.00	238.40	3,440.2	-61.7	-165.6	159.2	8.13	6.88	-6.25
3,520.0	47.40	237.50	3,461.7	-73.5	-184.6	180.9	8.02	7.74	-2.90
3,552.0	49.40	235.60	3,482.9	-86.7	-204.5	204.3	7.67	6.25	-5.94
3,584.0	51.30	234.30	3,503.3	-100.9	-224.7	228.5	6.71	5.94	-4.06
3,616.0	52.80	232.50	3,523.0	-115.9	-245.0	253.3	6.45	4.69	-5.63
3,648.0	55.50	232.10	3,541.8	-131.8	-265.5	279.0	8.50	8.44	-1.25
3,679.0	59.20	232.10	3,558.5	-147.8	-286.1	304.8	11.94	11.94	0.00
3,711.0	61.70	231.00	3,574.3	-165.1	-307.9	332.4	8.37	7.81	-3.44
3,743.0	64.00	230.90	3,588.9	-183.1	-330.0	360.7	7.19	7.19	-0.31
3,775.0	67.50	231.30	3,602.0	-201.4	-352.7	389.6	11.00	10.94	1.25
3,807.0	70.30	231.30	3,613.5	-220.0	-376.0	419.2	8.75	8.75	0.00
3,839.0	73.90	231.60	3,623.4	-239.0	-399.8	449.4	11.29	11.25	0.94
3,871.0	77.10	230.60	3,631.4	-258.5	-423.9	480.1	10.45	10.00	-3.13
3,902.0	81.60	230.80	3,637.1	-277.8	-447.5	510.4	14.53	14.52	0.65
3,979.0	90.40	231.00	3,642.5	-326.2	-507.0	586.5	11.43	11.43	0.26
4,011.0	90.50	231.30	3,642.2	-346.2	-531.9	618.3	0.99	0.31	0.94
4,074.0	91.10	232.10	3,641.3	-385.3	-581.4	680.7	1.59	0.95	1.27
4,138.0	90.70	232.00	3,640.3	-424.6	-631.8	744.0	0.64	-0.63	-0.16
4,202.0	90.80	231.70	3,639.5	-464.2	-682.2	807.4	0.49	0.16	-0.47
4,265.0	89.80	230.50	3,639.2	-503.7	-731.2	869.9	2.48	-1.59	-1.90
4,329.0	90.50	231.90	3,639.0	-543.8	-781.1	933.4	2.45	1.09	2.19
4,392.0	90.80	232.10	3,638.3	-582.6	-830.7	995.7	0.57	0.48	0.32
4,455.0	90.50	230.70	3,637.6	-621.9	-879.9	1,058.2	2.27	-0.48	-2.22
4,519.0	90.70	231.20	3,636.9	-662.2	-929.6	1,121.7	0.84	0.31	0.78
4,582.0	90.70	231.80	3,636.1	-701.4	-978.9	1,184.1	0.95	0.00	0.95
4,645.0	90.80	233.00	3,635.3	-739.9	-1,028.8	1,246.4	1.91	0.16	1.90
4,708.0	89.70	234.50	3,635.0	-777.1	-1,079.6	1,308.5	2.95	-1.75	2.38
4,771.0	90.30	233.40	3,635.0	-814.2	-1,130.6	1,370.5	1.99	0.95	-1.75
4,834.0	89.70	231.90	3,635.0	-852.4	-1,180.7	1,432.8	2.56	-0.95	-2.38
4,897.0	90.30	230.30	3,635.0	-892.0	-1,229.7	1,495.3	2.71	0.95	-2.54

Company:	Petroflow Energy	**Local Co-ordinate Reference:**	Site Neustrom 1-4H
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Well:	Neustrom 1-4H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Lateral #1	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,961.0	90.00	230.50	3,634.9	-932.8	-1,279.0	1,558.9	0.56	-0.47	0.31
5,024.0	89.30	230.80	3,635.2	-972.7	-1,327.7	1,621.4	1.21	-1.11	0.48
5,088.0	90.40	229.40	3,635.4	-1,013.8	-1,376.8	1,685.1	2.78	1.72	-2.19
5,151.0	89.70	229.70	3,635.4	-1,054.6	-1,424.7	1,747.7	1.21	-1.11	0.48
5,215.0	90.40	228.90	3,635.3	-1,096.4	-1,473.3	1,811.5	1.66	1.09	-1.25
5,279.0	89.60	229.40	3,635.3	-1,138.2	-1,521.7	1,875.2	1.47	-1.25	0.78
5,343.0	90.30	228.60	3,635.4	-1,180.2	-1,570.0	1,938.9	1.66	1.09	-1.25
5,406.0	90.00	227.50	3,635.2	-1,222.3	-1,616.8	2,001.8	1.81	-0.48	-1.75
5,470.0	90.40	226.70	3,635.0	-1,265.9	-1,663.7	2,065.7	1.40	0.63	-1.25
5,534.0	90.50	226.60	3,634.5	-1,309.8	-1,710.3	2,129.6	0.22	0.16	-0.16
5,597.0	90.20	227.20	3,634.1	-1,352.9	-1,756.3	2,192.5	1.06	-0.48	0.95
5,661.0	90.10	228.20	3,633.9	-1,395.9	-1,803.6	2,256.3	1.57	-0.16	1.56
5,724.0	90.10	229.10	3,633.8	-1,437.6	-1,850.9	2,319.1	1.43	0.00	1.43
5,787.0	90.10	230.40	3,633.7	-1,478.3	-1,899.0	2,381.8	2.06	0.00	2.06
5,851.0	89.50	229.20	3,633.9	-1,519.6	-1,947.8	2,445.5	2.10	-0.94	-1.88
5,915.0	89.50	230.50	3,634.5	-1,560.8	-1,996.8	2,509.1	2.03	0.00	2.03
5,979.0	91.00	232.30	3,634.2	-1,600.8	-2,046.8	2,572.5	3.66	2.34	2.81
6,042.0	89.80	231.20	3,633.8	-1,639.8	-2,096.2	2,635.0	2.58	-1.90	-1.75
6,106.0	89.70	231.90	3,634.0	-1,679.6	-2,146.4	2,698.4	1.10	-0.16	1.09
6,170.0	89.20	232.80	3,634.6	-1,718.7	-2,197.0	2,761.7	1.61	-0.78	1.41
6,233.0	89.10	232.80	3,635.6	-1,756.7	-2,247.2	2,823.9	0.16	-0.16	0.00
6,296.0	90.00	233.10	3,636.1	-1,794.7	-2,297.5	2,886.1	1.51	1.43	0.48
6,360.0	89.30	233.00	3,636.5	-1,833.2	-2,348.6	2,949.3	1.10	-1.09	-0.16
6,423.0	90.10	233.60	3,636.8	-1,870.8	-2,399.1	3,011.4	1.59	1.27	0.95
6,485.0	90.70	233.60	3,636.4	-1,907.6	-2,449.0	3,072.6	0.97	0.97	0.00
6,549.0	89.60	232.80	3,636.2	-1,945.9	-2,500.3	3,135.7	2.13	-1.72	-1.25
6,613.0	90.40	233.80	3,636.2	-1,984.2	-2,551.6	3,198.8	2.00	1.25	1.56
6,676.0	90.40	233.80	3,635.8	-2,021.4	-2,602.4	3,260.9	0.00	0.00	0.00
6,740.0	90.40	232.30	3,635.3	-2,059.9	-2,653.6	3,324.1	2.34	0.00	-2.34
6,803.0	90.70	232.10	3,634.7	-2,098.5	-2,703.4	3,386.4	0.57	0.48	-0.32
6,867.0	90.00	232.50	3,634.3	-2,137.6	-2,754.0	3,449.7	1.26	-1.09	0.63
6,930.0	90.60	233.00	3,634.0	-2,175.8	-2,804.2	3,512.0	1.24	0.95	0.79
6,993.0	89.50	231.20	3,633.9	-2,214.5	-2,853.9	3,574.3	3.35	-1.75	-2.86
7,057.0	90.20	230.50	3,634.1	-2,254.9	-2,903.5	3,637.8	1.55	1.09	-1.09
7,120.0	90.00	231.20	3,634.0	-2,294.6	-2,952.3	3,700.4	1.16	-0.32	1.11
7,184.0	89.80	227.80	3,634.1	-2,336.2	-3,001.0	3,764.1	5.32	-0.31	-5.31
7,247.0	89.30	227.20	3,634.6	-2,378.8	-3,047.5	3,826.9	1.24	-0.79	-0.95
7,311.0	90.50	227.60	3,634.7	-2,422.1	-3,094.6	3,890.8	1.98	1.88	0.63
7,374.0	91.50	226.60	3,633.6	-2,464.9	-3,140.7	3,953.7	2.24	1.59	-1.59
7,406.0	91.60	226.00	3,632.7	-2,487.0	-3,163.8	3,985.7	1.90	0.31	-1.88
7,437.0	91.80	226.20	3,631.8	-2,508.5	-3,186.2	4,016.6	0.91	0.65	0.65
7,501.0	91.90	227.00	3,629.8	-2,552.5	-3,232.6	4,080.5	1.26	0.16	1.25
7,565.0	90.30	227.30	3,628.5	-2,596.0	-3,279.5	4,144.4	2.54	-2.50	0.47

Company:	Petroflow Energy	**Local Co-ordinate Reference:**	Site Neustrom 1-4H
Project:	McPherson Co, Kansas (NAD-27)	**TVD Reference:**	WELL @ 1523.0usft (Original Well Elev)
Site:	Neustrom 1-4H	**MD Reference:**	WELL @ 1523.0usft (Original Well Elev)
Well:	Neustrom 1-4H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Lateral #1	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,628.0	90.60	227.40	3,628.0	-2,638.7	-3,325.9	4,207.3	0.50	0.48	0.16
7,691.0	89.60	226.00	3,627.9	-2,681.9	-3,371.7	4,270.2	2.73	-1.59	-2.22
7,754.0	89.40	225.70	3,628.5	-2,725.8	-3,416.9	4,333.2	0.57	-0.32	-0.48
7,818.0	90.10	226.10	3,628.8	-2,770.3	-3,462.9	4,397.1	1.26	1.09	0.63
7,881.0	89.50	224.30	3,629.0	-2,814.7	-3,507.6	4,460.1	3.01	-0.95	-2.86
Last Survey									
7,930.0	89.50	224.30	3,629.4	-2,849.8	-3,541.8	4,509.1	0.00	0.00	0.00
Projection to Bit									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
360.0	360.0	-0.6	0.1	First Survey
7,881.0	3,629.0	-2,814.7	-3,507.6	Last Survey
7,930.0	3,629.4	-2,849.8	-3,541.8	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

CONSOLIDATED
Oil Well Services, LLC

ENTERED

TICKET NUMBER 42866
LOCATION 180
FOREMAN Jeff Sheh

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

API 15-113-21359-01-00

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8/23/13	P85	Neustrom 1-4H	4	17	4	McPherson

CUSTOMER		
Petroflow Energy Corp		
MAILING ADDRESS		
525 S. Main St, Ste 1120		
CITY	STATE	ZIP CODE
Tulsa	OK	74103

TRUCK #	DRIVER	TRUCK #	DRIVER
446	Josh G		
502	Zevi A		
471	Jeff S.		

JOB TYPE Surface 8 HOLE SIZE 12 1/4 HOLE DEPTH 282 CASING SIZE & WEIGHT 9 5/8 32.3 lb
CASING DEPTH 275 DRILL PIPE ______ TUBING ______ OTHER ______
SLURRY WEIGHT ______ SLURRY VOL 31.49 WATER gal/sk ______ CEMENT LEFT in CASING ______
DISPLACEMENT 18.4 DISPLACEMENT PSI ______ MIX PSI ______ RATE ______

REMARKS: Safety Meeting, Broke circ. pumped 130sks class A cement 3% calcium 2% gel 1/2 lb Polyflake displaced with 18.4 bbls freshwater

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401S	1	PUMP CHARGE	870.00	870.00
5406	85	MILEAGE	4.20	357.00
5407A	85 mi	Ton mileage delivery	1.41	719.10
1104S	130 sks	class A cement	15.70	2041.00
1102	312 lbs	calcium Chloride	.78	243.36
1107	75 lbs	Polyflake	2.47	185.25
1118B	260 lbs	Gel	.22	57.20
4167	1	9 5/8 Float Shoe	758.00	758.00
4310	25 lbs	Sugar	22.50	22.50
4415	1	9 5/8 rubber Plug	159.75	159.75
4133	3	9 5/8 centralizers	82.00	246.00
			Subtotal	5659.16
			SALES TAX	265.48
			ESTIMATED TOTAL	5924.64

Ravin 3737

261746

AUTHORIZTION ______ TITLE ______ DATE ______

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

ENTERED

TICKET NUMBER 43884
LOCATION 180 ElDorado
FOREMAN Jacob Storm

CONSOLIDATED Oil Well Services, LLC

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

Api 15-113-21359-01-00

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-31-13	P85	Newstorm 1-4 H	4	17	4	McPherson

CUSTOMER: PetroFlow Energy
MAILING ADDRESS: 525 S main st ste 1120
CITY: Tulsa STATE: OK ZIP CODE: 74103

TRUCK #	DRIVER	TRUCK #	DRIVER
467	Jerild	202	Jacob
603	Jeramy A		
491	Jeramy M		
681	mark		

JOB TYPE longstring B HOLE SIZE 8 3/4 HOLE DEPTH 3986 CASING SIZE & WEIGHT 7" 26lb
CASING DEPTH 3986 DRILL PIPE ______ TUBING ______ OTHER 43ft shoe Joint
SLURRY WEIGHT 15.5 lb SLURRY VOL ______ WATER gal/sk ______ CEMENT LEFT in CASING 43 ft
DISPLACEMENT 151.65 DISPLACEMENT PSI 1200 MIX PSI 300 RATE 11.5 bpm

REMARKS: safty meating, Break curculation pump 10bbl water flsh mix 200 sks 60/40 poz 6% gel 2% cc 5% kol-seal 1/4 lb poly-Flake at 13 lb per gal, tail with 150 sks classA, 3% gel, 2% cc, 3% kolseal, 1/4 lb poly displaced at 11.5 bpm for 133 bbl, Slow Rate to 2.13 bpm to land plug at 1500 psi check float float held Job complete.

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	2	PUMP CHARGE	1085.00	2170.00
5406	85	MILEAGE	4.20	357.00
5407 A	85	15 ton mileage	1.41	1797.75
5402	1500	footage	.23	345.00
1104 S	150	class A	15.70	2355.00
1131	200	60/40	13.18	2636.00
1107	75	poly-Flake	2.47	185.25
1118 B	1650	gel	.22	363.00
1102	560	calcium chloride	.78	436.80
1110 A	1700	Kol-Seal	.46	782.00
1137	50	cdi 26	8.48	424.00
1146	50	caf 38	8.51	425.50
4131	11	7" centrzer	61.00	671.00
4164	1	7" AFU Shoe	577.50	577.50
4455	1	7" Latch down plug	325.50	325.50
4306	1	thread lock kit	65.00	65.00
			~~Subtotal~~	~~[illegible]~~
		tax 7.3%	Subtotal	13916.30
			SALES TAX	601.12
		261951	ESTIMATED TOTAL	14517.42

Ravin 3737

AUTHORIZTION [signature] TITLE ______ DATE 8-31-13

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

MID CONTINENT WELL LOGGING SERVICE, INC.

CONTINUOUS WELL LOGGING / COMPLETE HYDROCARBON ANALYSIS

2222 WESTPARK DR. STE. A
NORMAN, OK 73069
OFFICE (405) 360-7333
OPERATIONS (405) 590-3655
SALES (405) 203-9989

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name:	**Neurstrom 1-4H**	**PETROFLOW ENERGY**	
Location:	**SEC 4-17S-4W**	**McPHERSON Co, KS**	
License Number:	**API #15-113-21359-0100**	**Region:**	**HOGLUND**
Spud Date:	**8-24-2013**	**Drilling Completed:**	**09/06/2013**
Surface Coordinates:	**150' FNL & 255' FEL**		
	REPORT FOR: MR. CLAUS AXELSEN		
Bottom Hole	**400' FSL & 660' FWL**		
Coordinates:	**LOGGER: BLAKE JOHNSON**		
Ground Elevation (ft):	**1,504.3'**	**K.B. Elevation (ft):**	**1,515.8'**
Logged Interval (ft):	**2,000'** **To: 7,929'**	**Total Depth (ft):**	**7,929'**
Formation:	**SLYVAN DOLOMITE**		
Type of Drilling Fluid:	**NATIVE GEL**		

OPERATOR

Company: **PETROFLOW ENERGY**
Address:

GEOLOGIST

Name: **CLAUS AXELSEN**
Company:
Address: **427 SOUTH BOSTON**
SUITE 604
TULSA, OK 74103

Cores

DSTs

Comments

DRLG CONTRACTOR: PROJECT #2
DIRECTIONAL: CALMENA
MUD ENGINEER: NAFATA

ROCK TYPES

- Sndylm
- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Ss
- Till
- Hotsh
- Sltst

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Ssstrg
- Sltstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy
- New symbol
- New symbol
- Sndylm
- New symbol

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW

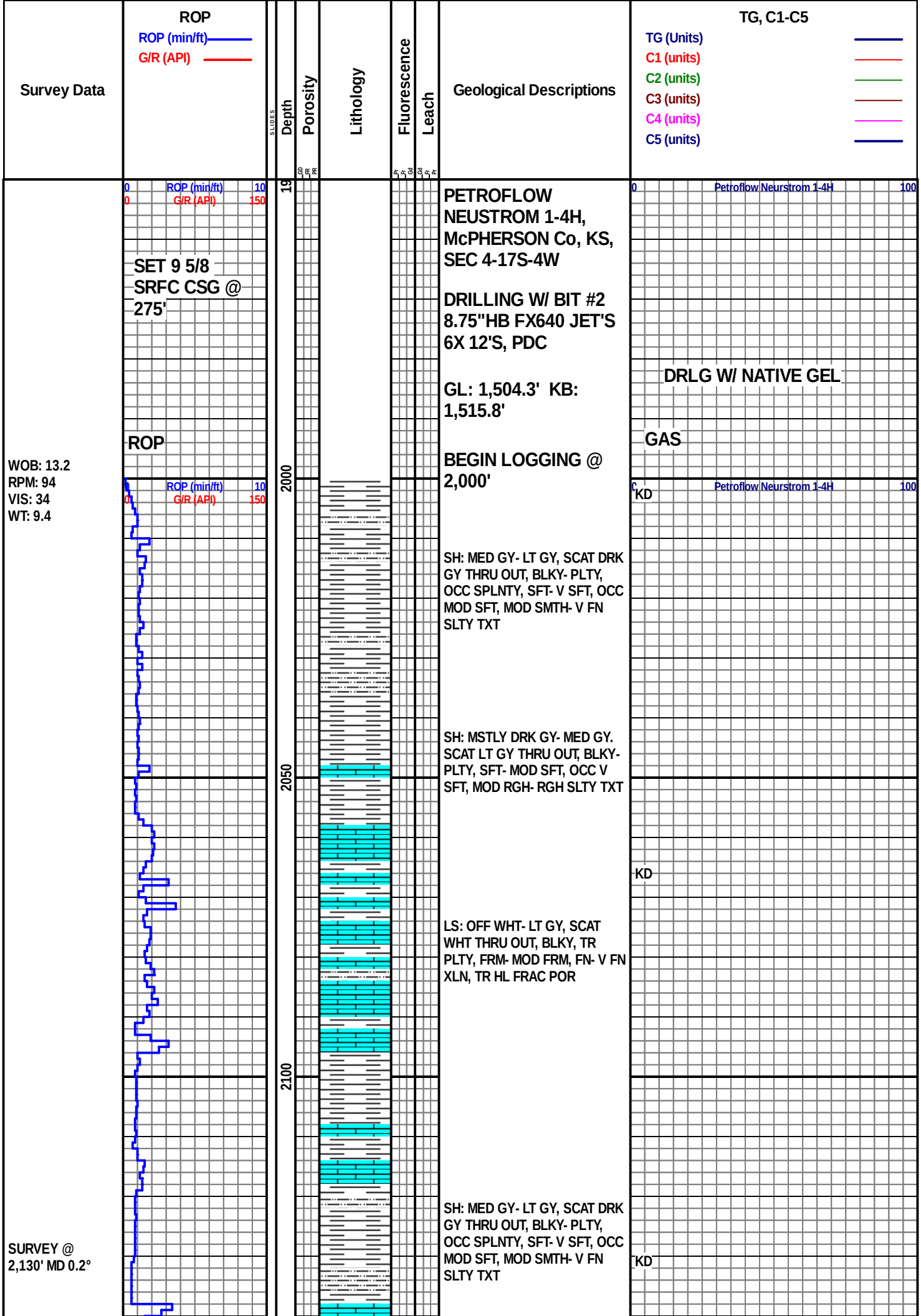
- Even
- Spotted
- Ques
- Dead

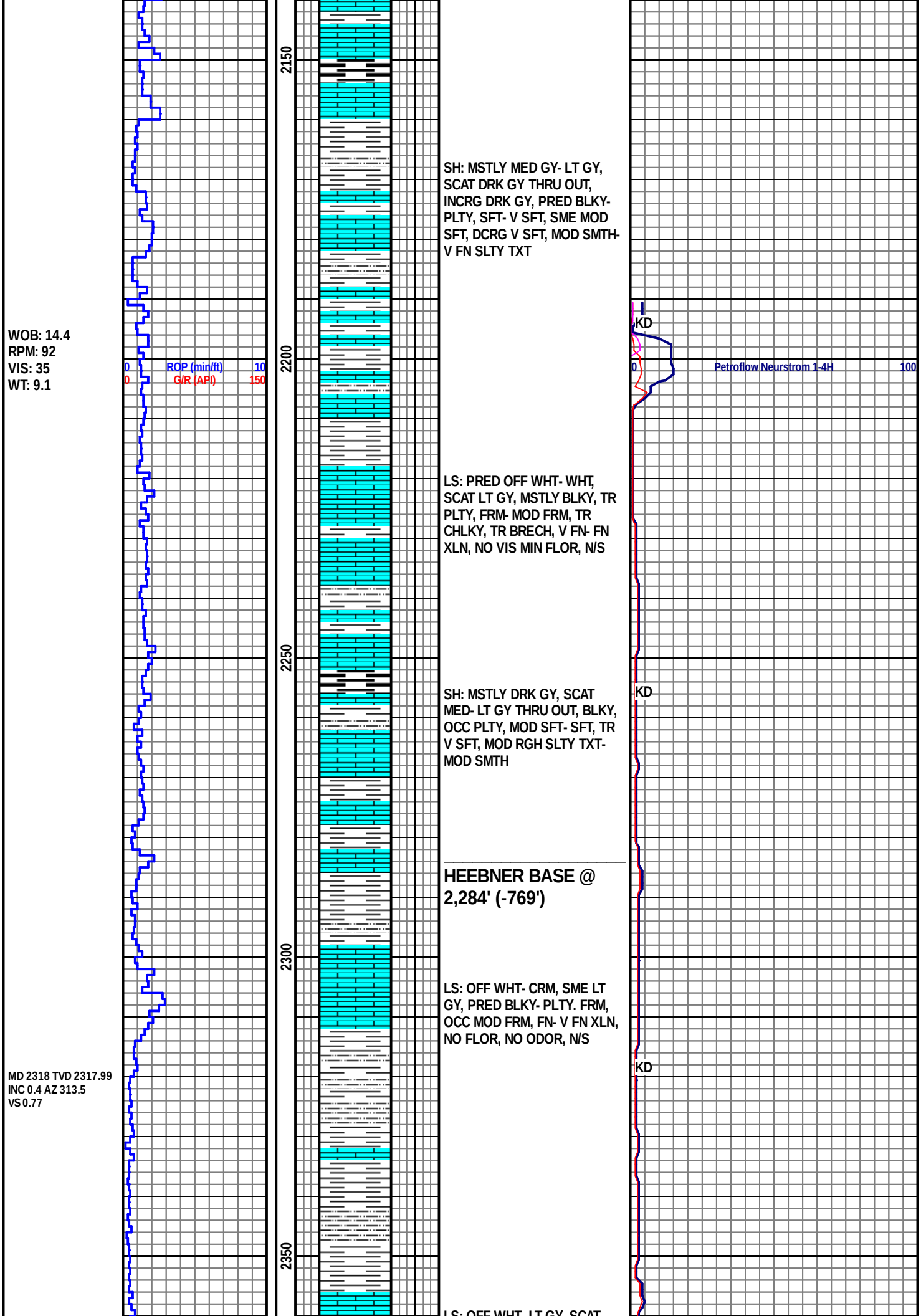
INTERVAL

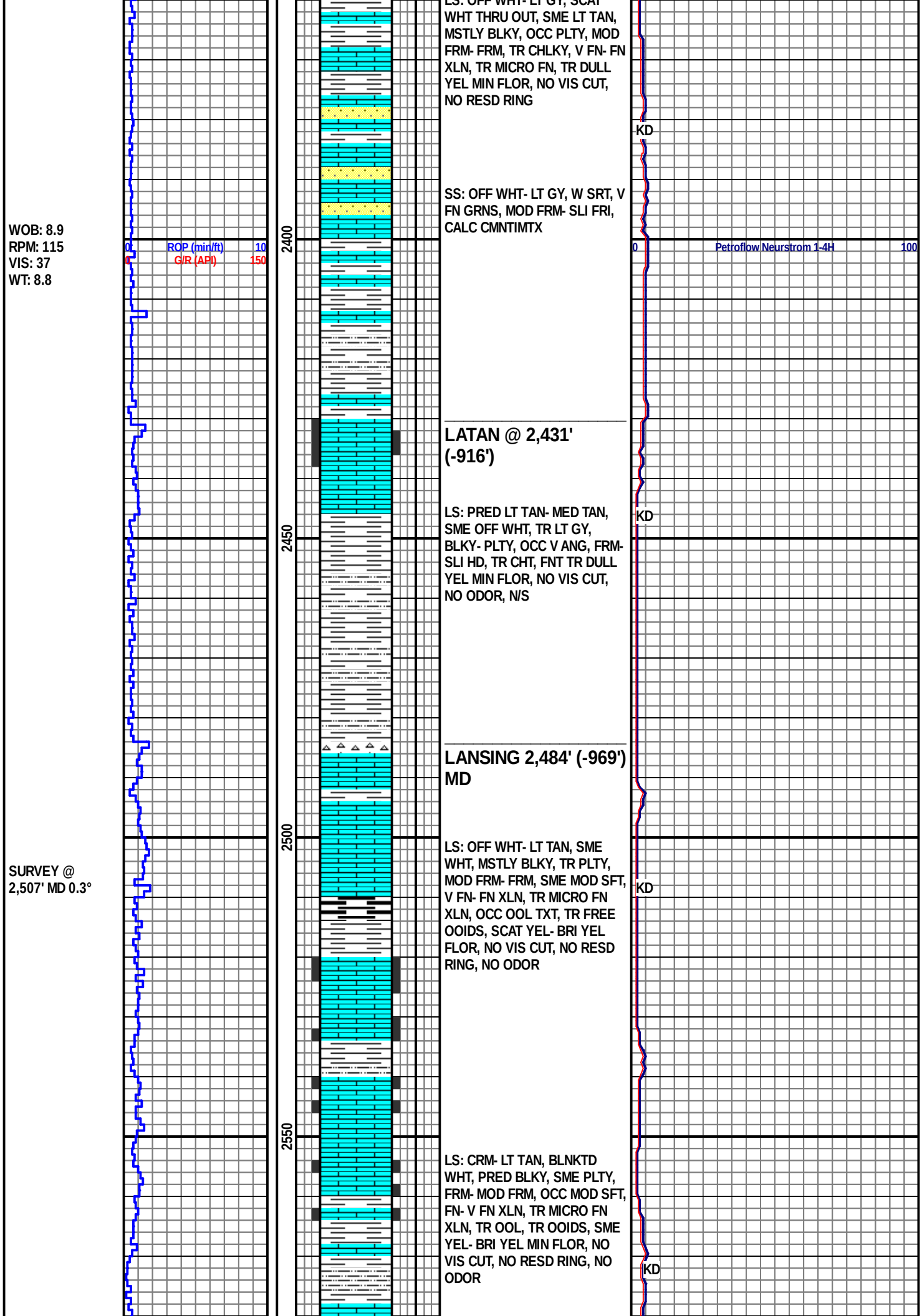
- Core
- Dst

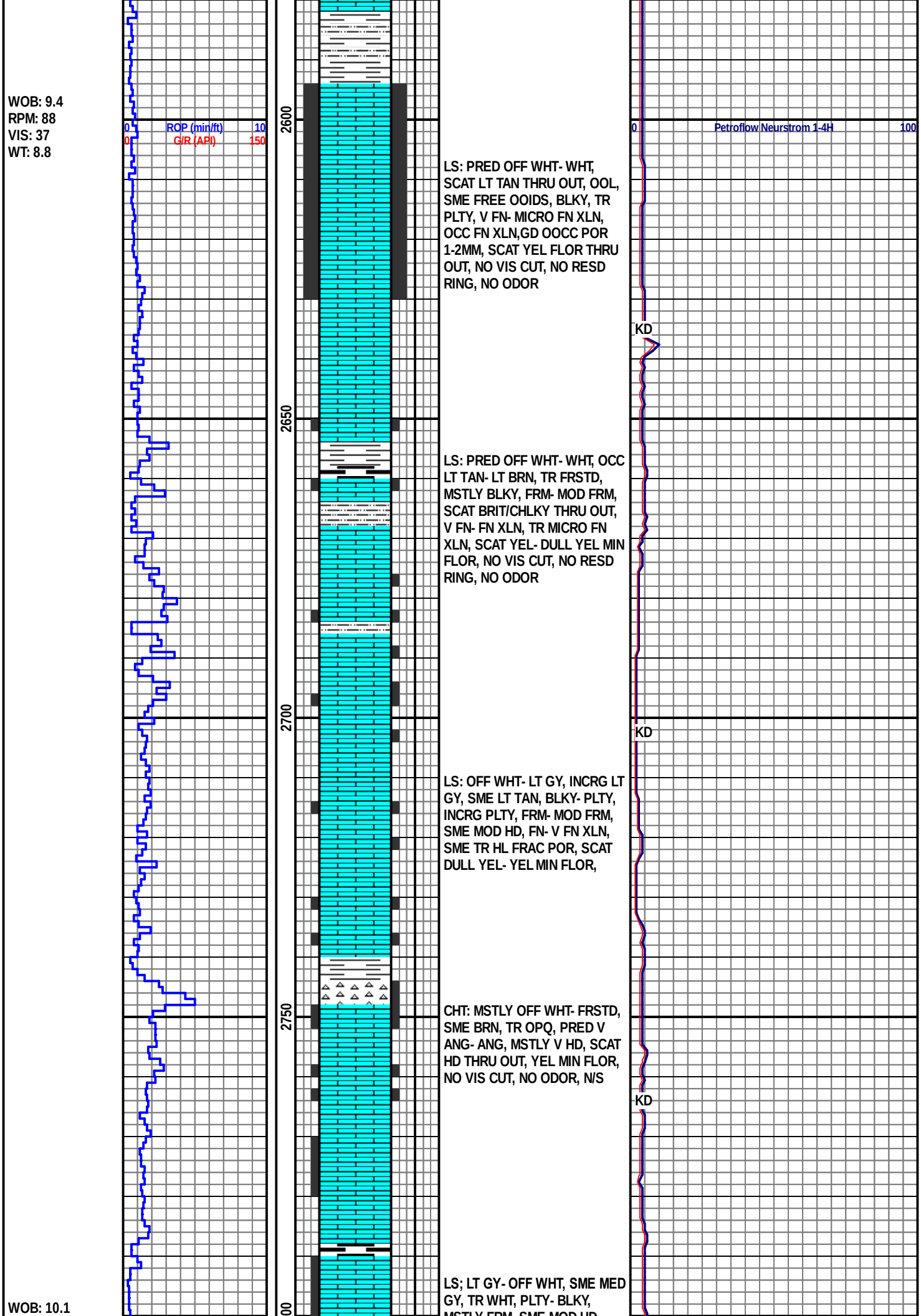
EVENT

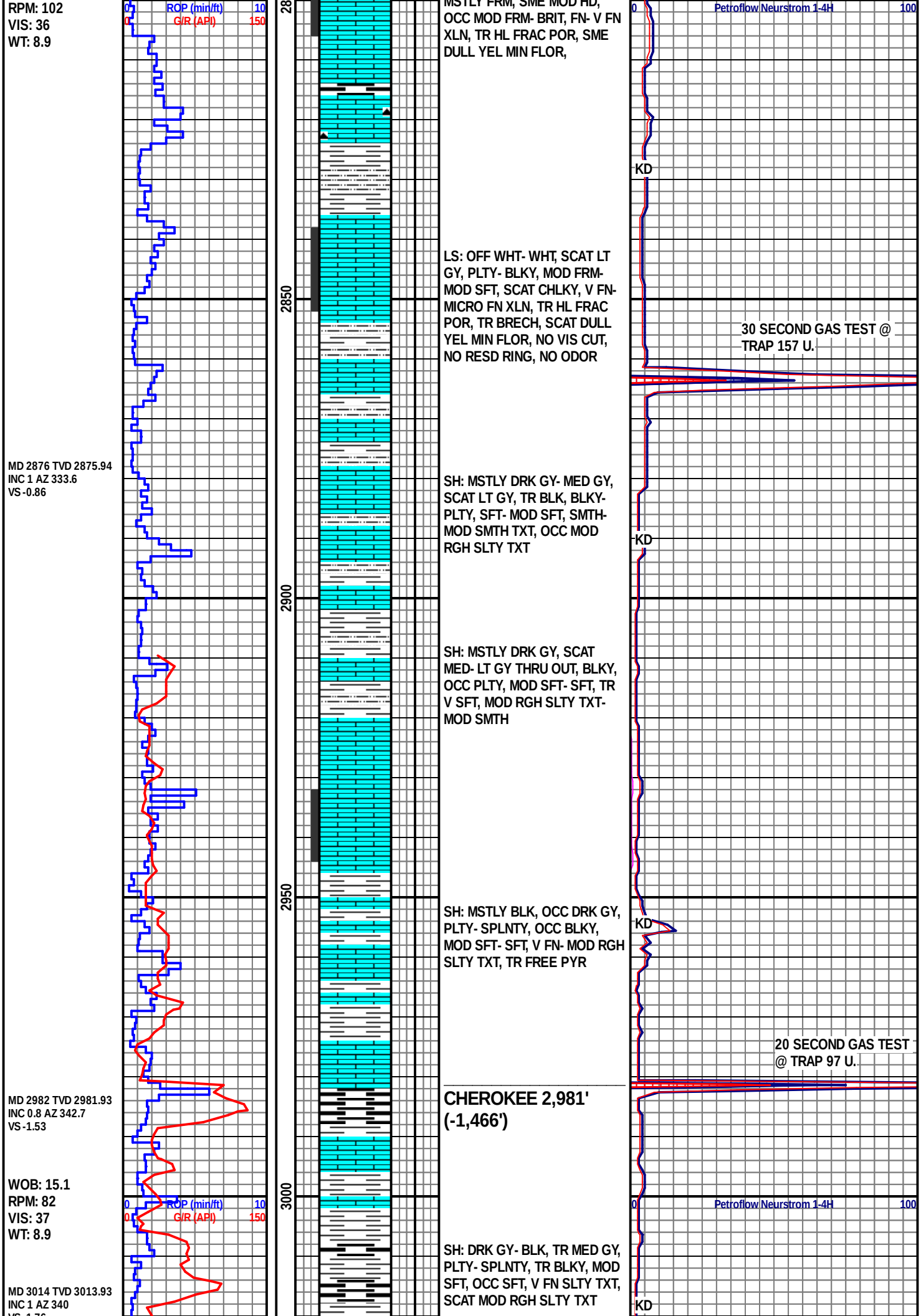
- Rft
- Sidewall

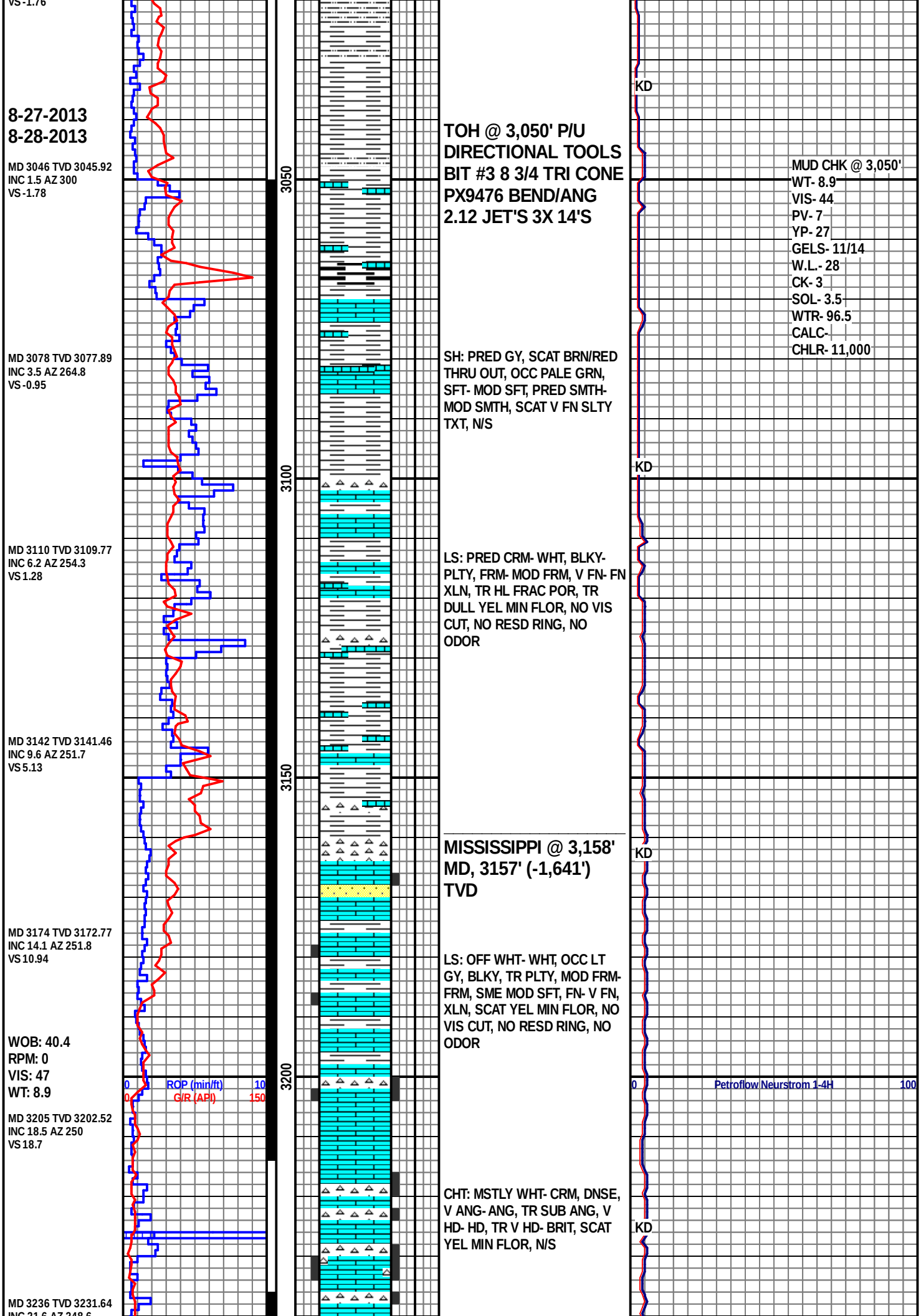

Survey Data
ROP
ROP (min/ft)
G/R (API)
SLIDES
Depth
Porosity
Lithology
Fluorescence
Leach
Geological Descriptions
TG, C1-C5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
C5 (units)
0
ROP (min/ft)
10
0
G/R (API)
150
SET 9 5/8 SRFC CSG @ 275'
ROP
WOB: 13.2
RPM: 94
VIS: 34
WT: 9.4
SURVEY @ 2,130' MD 0.2°
19
2000
2050
2100
PETROFLOW NEUSTROM 1-4H, McPHERSON Co, KS, SEC 4-17S-4W
DRILLING W/ BIT #2 8.75"HB FX640 JET'S 6X 12'S, PDC
GL: 1,504.3' KB: 1,515.8'
BEGIN LOGGING @ 2,000'
SH: MED GY- LT GY, SCAT DRK GY THRU OUT, BLKY- PLTY, OCC SPLNTY, SFT- V SFT, OCC MOD SFT, MOD SMTH- V FN SLTY TXT
SH: MSTLY DRK GY- MED GY. SCAT LT GY THRU OUT, BLKY- PLTY, SFT- MOD SFT, OCC V SFT, MOD RGH- RGH SLTY TXT
LS: OFF WHT- LT GY, SCAT WHT THRU OUT, BLKY, TR PLTY, FRM- MOD FRM, FN- V FN XLN, TR HL FRAC POR
SH: MED GY- LT GY, SCAT DRK GY THRU OUT, BLKY- PLTY, OCC SPLNTY, SFT- V SFT, OCC MOD SFT, MOD SMTH- V FN SLTY TXT
0
Petroflow Neurstrom 1-4H
100
DRLG W/ NATIVE GEL
GAS
KD
KD
KD

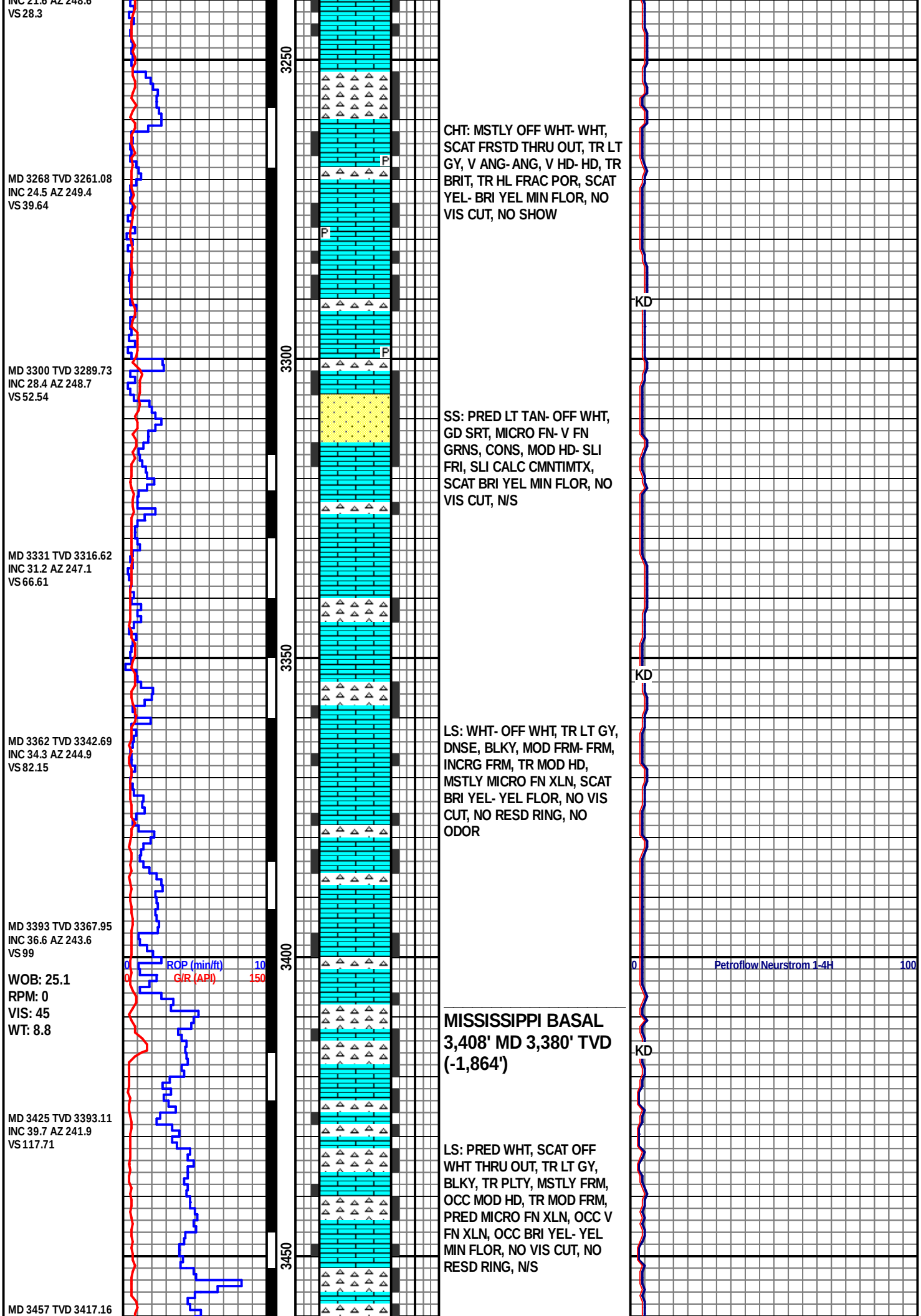

WOB: 14.4
RPM: 92
VIS: 35
WT: 9.1
0
ROP (min/ft)
10
0
G/R (API)
150
2150
2200
2250
2300
2350
SH: MSTLY MED GY- LT GY, SCAT DRK GY THRU OUT, INCRG DRK GY, PRED BLKY-PLTY, SFT- V SFT, SME MOD SFT, DCRG V SFT, MOD SMTH-V FN SLTY TXT
KD
0
Petroflow Neurstrom 1-4H
100
LS: PRED OFF WHT- WHT, SCAT LT GY, MSTLY BLKY, TR PLTY, FRM- MOD FRM, TR CHLKY, TR BRECH, V FN- FN XLN, NO VIS MIN FLOR, N/S
SH: MSTLY DRK GY, SCAT MED- LT GY THRU OUT, BLKY, OCC PLTY, MOD SFT- SFT, TR V SFT, MOD RGH SLTY TXT-MOD SMTH
KD
HEEBNER BASE @ 2,284' (-769')
LS: OFF WHT- CRM, SME LT GY, PRED BLKY- PLTY. FRM, OCC MOD FRM, FN- V FN XLN, NO FLOR, NO ODOR, N/S
KD
MD 2318 TVD 2317.99
INC 0.4 AZ 313.5
VS 0.77

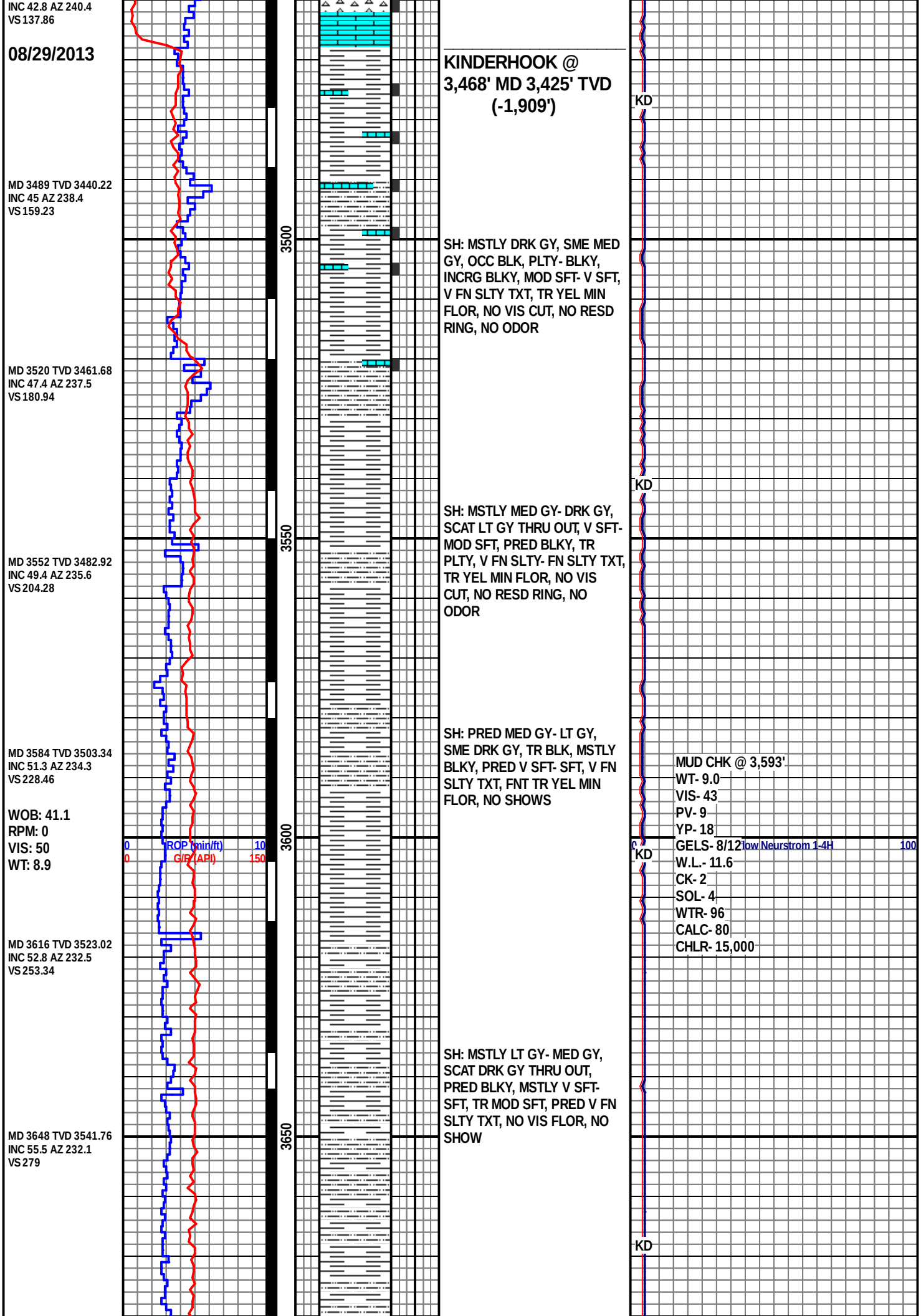

LS: OFF WHT- LT GY, SCAT WHT THRU OUT, SME LT TAN, MSTLY BLKY, OCC PLTY, MOD FRM- FRM, TR CHLKY, V FN- FN XLN, TR MICRO FN, TR DULL YEL MIN FLOR, NO VIS CUT, NO RESD RING
KD
SS: OFF WHT- LT GY, W SRT, V FN GRNS, MOD FRM- SLI FRI, CALC CMNTIMTX
WOB: 8.9
RPM: 115
VIS: 37
WT: 8.8
0
ROP (min/ft)
10
0
G/R (API)
150
2400
0
Petroflow Neurstrom 1-4H
100
LATAN @ 2,431' (-916')
KD
LS: PRED LT TAN- MED TAN, SME OFF WHT, TR LT GY, BLKY- PLTY, OCC V ANG, FRM- SLI HD, TR CHT, FNT TR DULL YEL MIN FLOR, NO VIS CUT, NO ODOR, N/S
2450
LANSING 2,484' (-969') MD
SURVEY @ 2,507' MD 0.3°
LS: OFF WHT- LT TAN, SME WHT, MSTLY BLKY, TR PLTY, MOD FRM- FRM, SME MOD SFT, V FN- FN XLN, TR MICRO FN XLN, OCC OOL TXT, TR FREE OOIDS, SCAT YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
2500
LS: CRM- LT TAN, BLNKTD WHT, PRED BLKY, SME PLTY, FRM- MOD FRM, OCC MOD SFT, FN- V FN XLN, TR MICRO FN XLN, TR OOL, TR OOIDS, SME YEL- BRI YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
2550

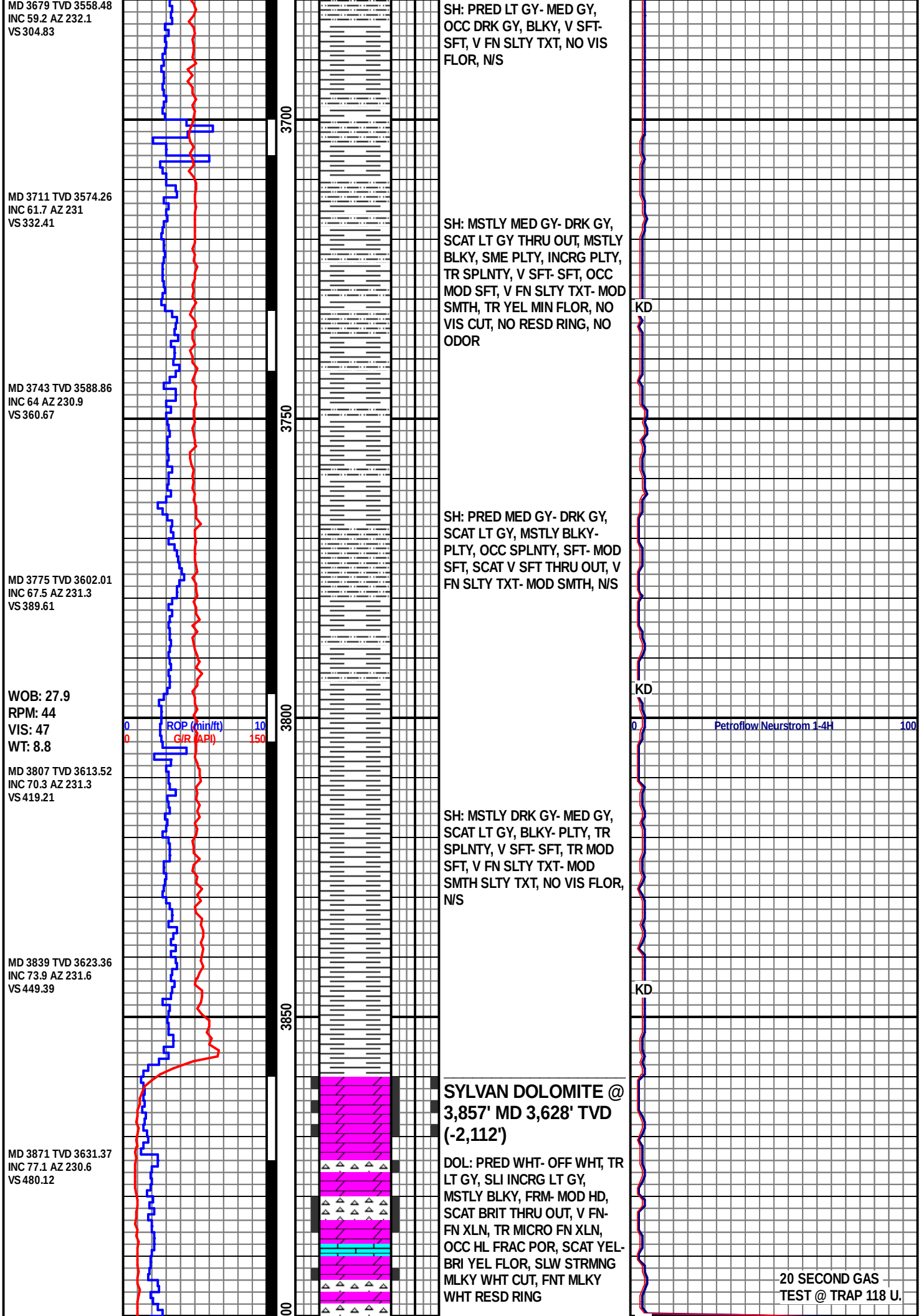

WOB: 9.4
RPM: 88
VIS: 37
WT: 8.8
0
ROP (min/ft)
10
0
G/R (API)
150
2600
2650
2700
2750
0
Petroflow Neurstrom 1-4H
100
LS: PRED OFF WHT- WHT, SCAT LT TAN THRU OUT, OOL, SME FREE OOIDS, BLKY, TR PLTY, V FN- MICRO FN XLN, OCC FN XLN,GD OOCC POR 1-2MM, SCAT YEL FLOR THRU OUT, NO VIS CUT, NO RESD RING, NO ODOR
KD
LS: PRED OFF WHT- WHT, OCC LT TAN- LT BRN, TR FRSTD, MSTLY BLKY, FRM- MOD FRM, SCAT BRIT/CHLKY THRU OUT, V FN- FN XLN, TR MICRO FN XLN, SCAT YEL- DULL YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
LS: OFF WHT- LT GY, INCRG LT GY, SME LT TAN, BLKY- PLTY, INCRG PLTY, FRM- MOD FRM, SME MOD HD, FN- V FN XLN, SME TR HL FRAC POR, SCAT DULL YEL- YEL MIN FLOR,
CHT: MSTLY OFF WHT- FRSTD, SME BRN, TR OPQ, PRED V ANG- ANG, MSTLY V HD, SCAT HD THRU OUT, YEL MIN FLOR, NO VIS CUT, NO ODOR, N/S
KD
LS; LT GY- OFF WHT, SME MED GY, TR WHT, PLTY- BLKY,
WOB: 10.1

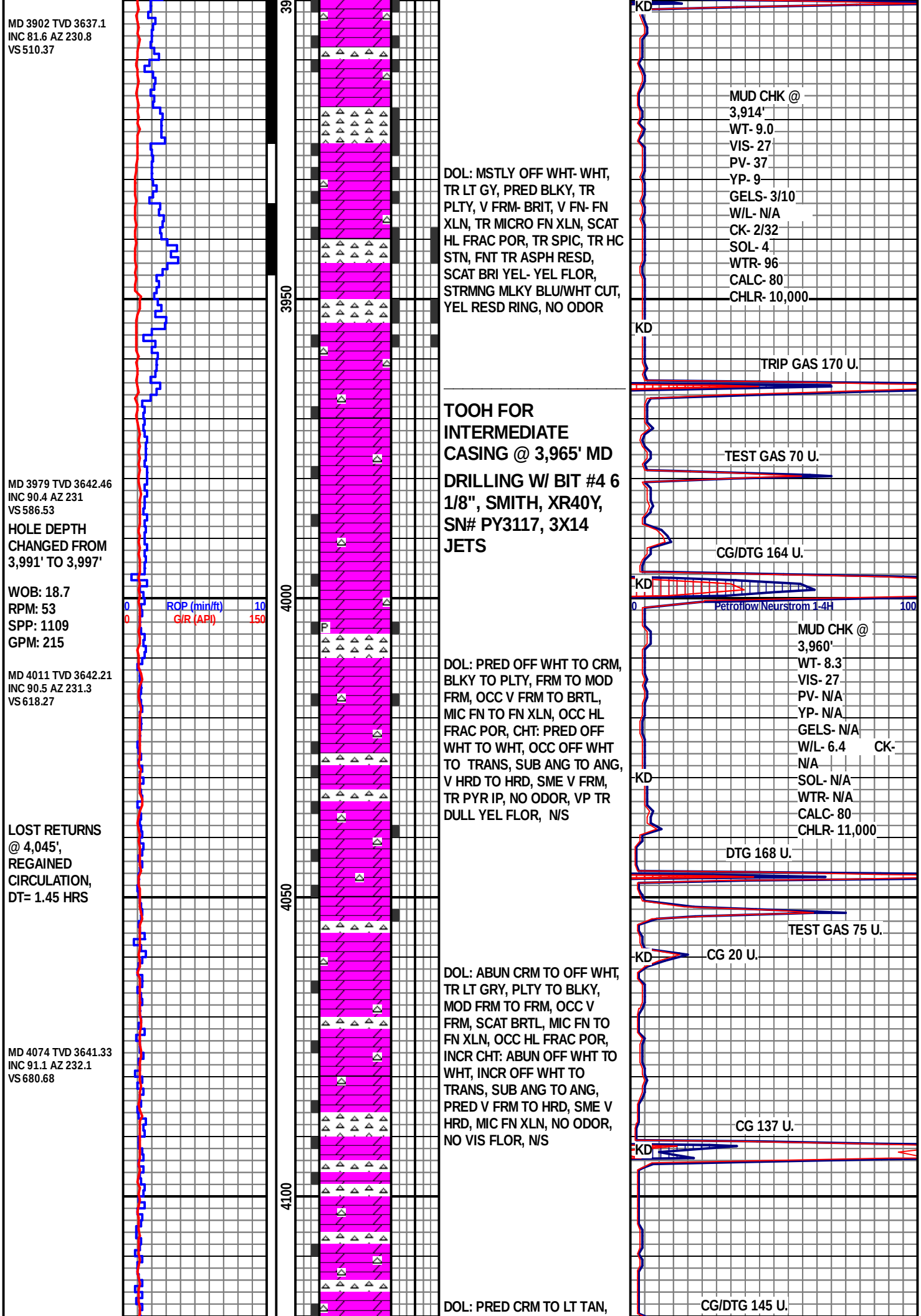

RPM: 102
VIS: 36
WT: 8.9
0
ROP (min/ft)
10
0
G/R (API)
150
2800
2850
2900
2950
3000
MSTLY FRM, SME MOD HD, OCC MOD FRM- BRIT, FN- V FN XLN, TR HL FRAC POR, SME DULL YEL MIN FLOR,
LS: OFF WHT- WHT, SCAT LT GY, PLTY- BLKY, MOD FRM- MOD SFT, SCAT CHLKY, V FN- MICRO FN XLN, TR HL FRAC POR, TR BRECH, SCAT DULL YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
MD 2876 TVD 2875.94
INC 1 AZ 333.6
VS -0.86
SH: MSTLY DRK GY- MED GY, SCAT LT GY, TR BLK, BLKY- PLTY, SFT- MOD SFT, SMTH- MOD SMTH TXT, OCC MOD RGH SLTY TXT
SH: MSTLY DRK GY, SCAT MED- LT GY THRU OUT, BLKY, OCC PLTY, MOD SFT- SFT, TR V SFT, MOD RGH SLTY TXT- MOD SMTH
SH: MSTLY BLK, OCC DRK GY, PLTY- SPLNTY, OCC BLKY, MOD SFT- SFT, V FN- MOD RGH SLTY TXT, TR FREE PYR
MD 2982 TVD 2981.93
INC 0.8 AZ 342.7
VS -1.53
CHEROKEE 2,981'
(-1,466')
WOB: 15.1
RPM: 82
VIS: 37
WT: 8.9
0
ROP (min/ft)
10
0
G/R (API)
150
SH: DRK GY- BLK, TR MED GY, PLTY- SPLNTY, TR BLKY, MOD SFT, OCC SFT, V FN SLTY TXT, SCAT MOD RGH SLTY TXT
MD 3014 TVD 3013.93
INC 1 AZ 340
0
Petroflow Neurstrom 1-4H
100
KD
30 SECOND GAS TEST @ TRAP 157 U.
KD
KD
20 SECOND GAS TEST @ TRAP 97 U.
0
Petroflow Neurstrom 1-4H
100
KD

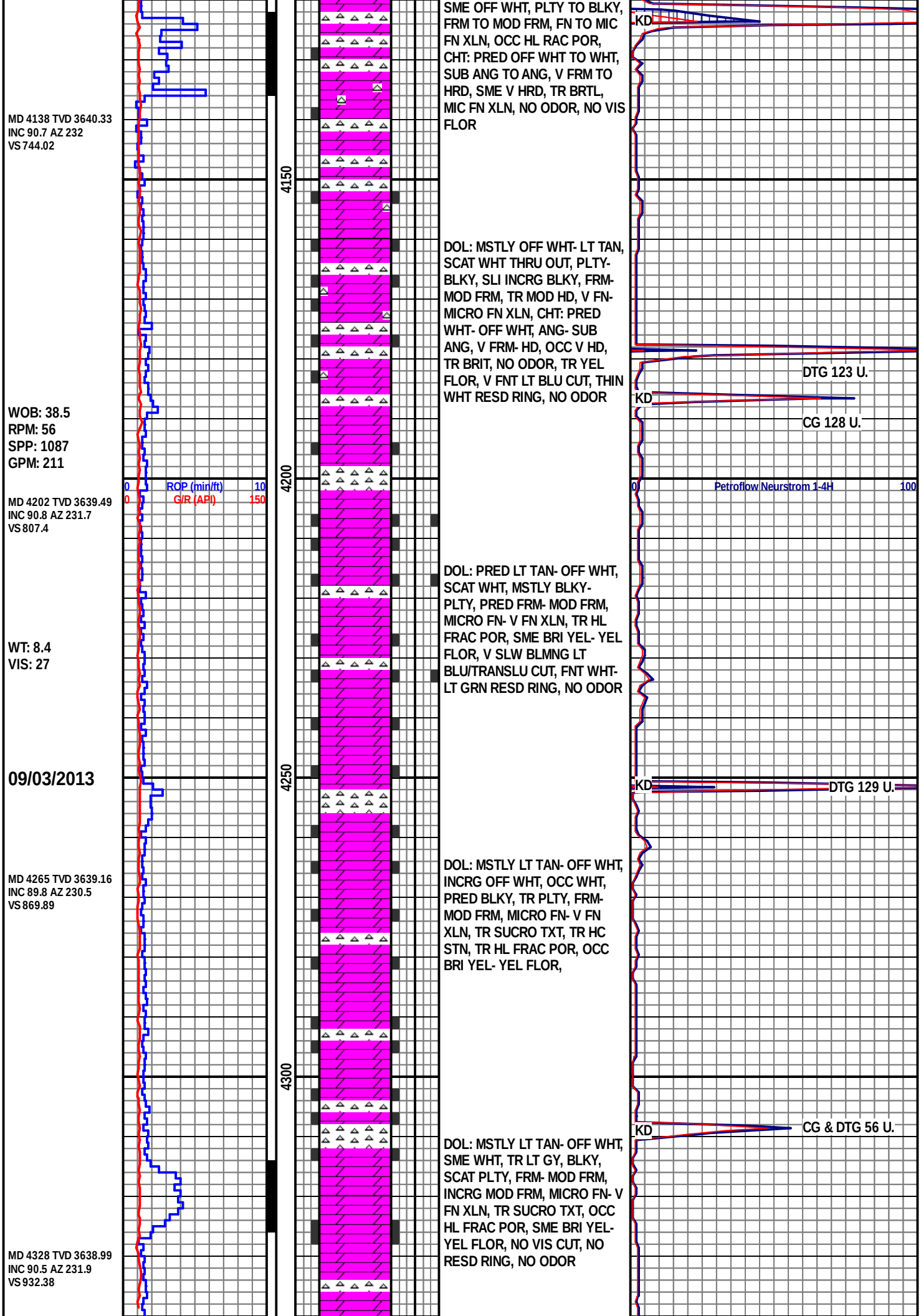

VS -1.76
8-27-2013
8-28-2013
MD 3046 TVD 3045.92
INC 1.5 AZ 300
VS -1.78
MD 3078 TVD 3077.89
INC 3.5 AZ 264.8
VS -0.95
MD 3110 TVD 3109.77
INC 6.2 AZ 254.3
VS 1.28
MD 3142 TVD 3141.46
INC 9.6 AZ 251.7
VS 5.13
MD 3174 TVD 3172.77
INC 14.1 AZ 251.8
VS 10.94
WOB: 40.4
RPM: 0
VIS: 47
WT: 8.9
MD 3205 TVD 3202.52
INC 18.5 AZ 250
VS 18.7
MD 3236 TVD 3231.64
3050
3100
3150
3200
0
ROP (min/ft)
10
0
G/R (API)
150
TOH @ 3,050' P/U DIRECTIONAL TOOLS BIT #3 8 3/4 TRI CONE PX9476 BEND/ANG 2.12 JET'S 3X 14'S
SH: PRED GY, SCAT BRN/RED THRU OUT, OCC PALE GRN, SFT- MOD SFT, PRED SMTH- MOD SMTH, SCAT V FN SLTY TXT, N/S
LS: PRED CRM- WHT, BLKY- PLTY, FRM- MOD FRM, V FN- FN XLN, TR HL FRAC POR, TR DULL YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
MISSISSIPPI @ 3,158' MD, 3157' (-1,641') TVD
LS: OFF WHT- WHT, OCC LT GY, BLKY, TR PLTY, MOD FRM- FRM, SME MOD SFT, FN- V FN, XLN, SCAT YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
CHT: MSTLY WHT- CRM, DNSE, V ANG- ANG, TR SUB ANG, V HD- HD, TR V HD- BRIT, SCAT YEL MIN FLOR, N/S
KD
KD
KD
KD
MUD CHK @ 3,050'
WT- 8.9
VIS- 44
PV- 7
YP- 27
GELS- 11/14
W.L.- 28
CK- 3
SOL- 3.5
WTR- 96.5
CALC-
CHLR- 11,000
0
Petroflow Neurstrom 1-4H
100

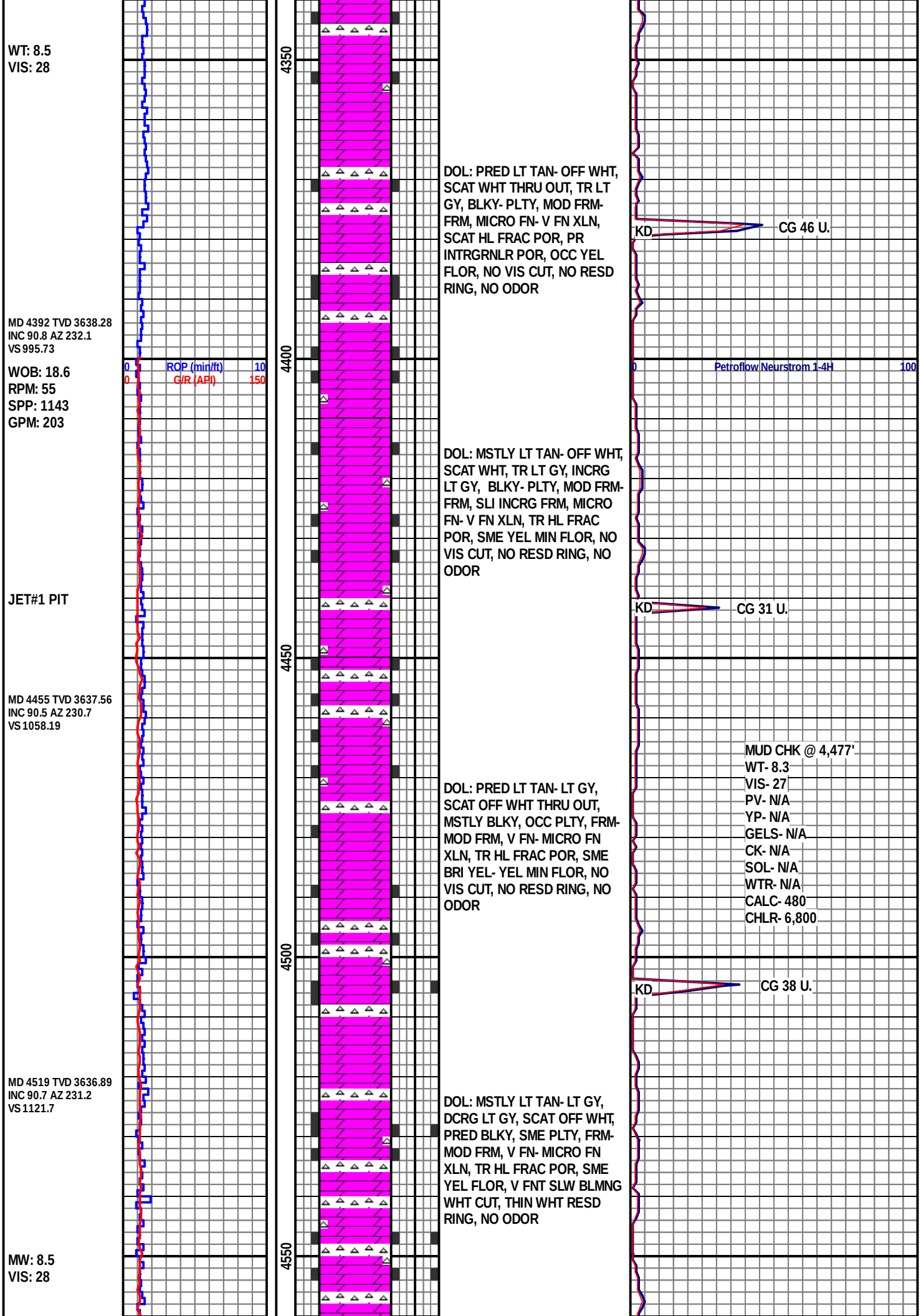

INC 21.6 AZ 248.6
VS 28.3
MD 3268 TVD 3261.08
INC 24.5 AZ 249.4
VS 39.64
MD 3300 TVD 3289.73
INC 28.4 AZ 248.7
VS 52.54
MD 3331 TVD 3316.62
INC 31.2 AZ 247.1
VS 66.61
MD 3362 TVD 3342.69
INC 34.3 AZ 244.9
VS 82.15
MD 3393 TVD 3367.95
INC 36.6 AZ 243.6
VS 99
WOB: 25.1
RPM: 0
VIS: 45
WT: 8.8
MD 3425 TVD 3393.11
INC 39.7 AZ 241.9
VS 117.71
MD 3457 TVD 3417.16
3250
3300
3350
3400
3450
P
P
P
CHT: MSTLY OFF WHT- WHT, SCAT FRSTD THRU OUT, TR LT GY, V ANG- ANG, V HD- HD, TR BRIT, TR HL FRAC POR, SCAT YEL- BRI YEL MIN FLOR, NO VIS CUT, NO SHOW
SS: PRED LT TAN- OFF WHT, GD SRT, MICRO FN- V FN GRNS, CONS, MOD HD- SLI FRI, SLI CALC CMNTIMTX, SCAT BRI YEL MIN FLOR, NO VIS CUT, N/S
LS: WHT- OFF WHT, TR LT GY, DNSE, BLKY, MOD FRM- FRM, INCRG FRM, TR MOD HD, MSTLY MICRO FN XLN, SCAT BRI YEL- YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
MISSISSIPPI BASAL
3,408' MD 3,380' TVD
(-1,864')
LS: PRED WHT, SCAT OFF WHT THRU OUT, TR LT GY, BLKY, TR PLTY, MSTLY FRM, OCC MOD HD, TR MOD FRM, PRED MICRO FN XLN, OCC V FN XLN, OCC BRI YEL- YEL MIN FLOR, NO VIS CUT, NO RESD RING, N/S
KD
KD
KD
0
ROP (min/ft)
10
0
G/R (API)
150
0
Petroflow Neurstrom 1-4H
100

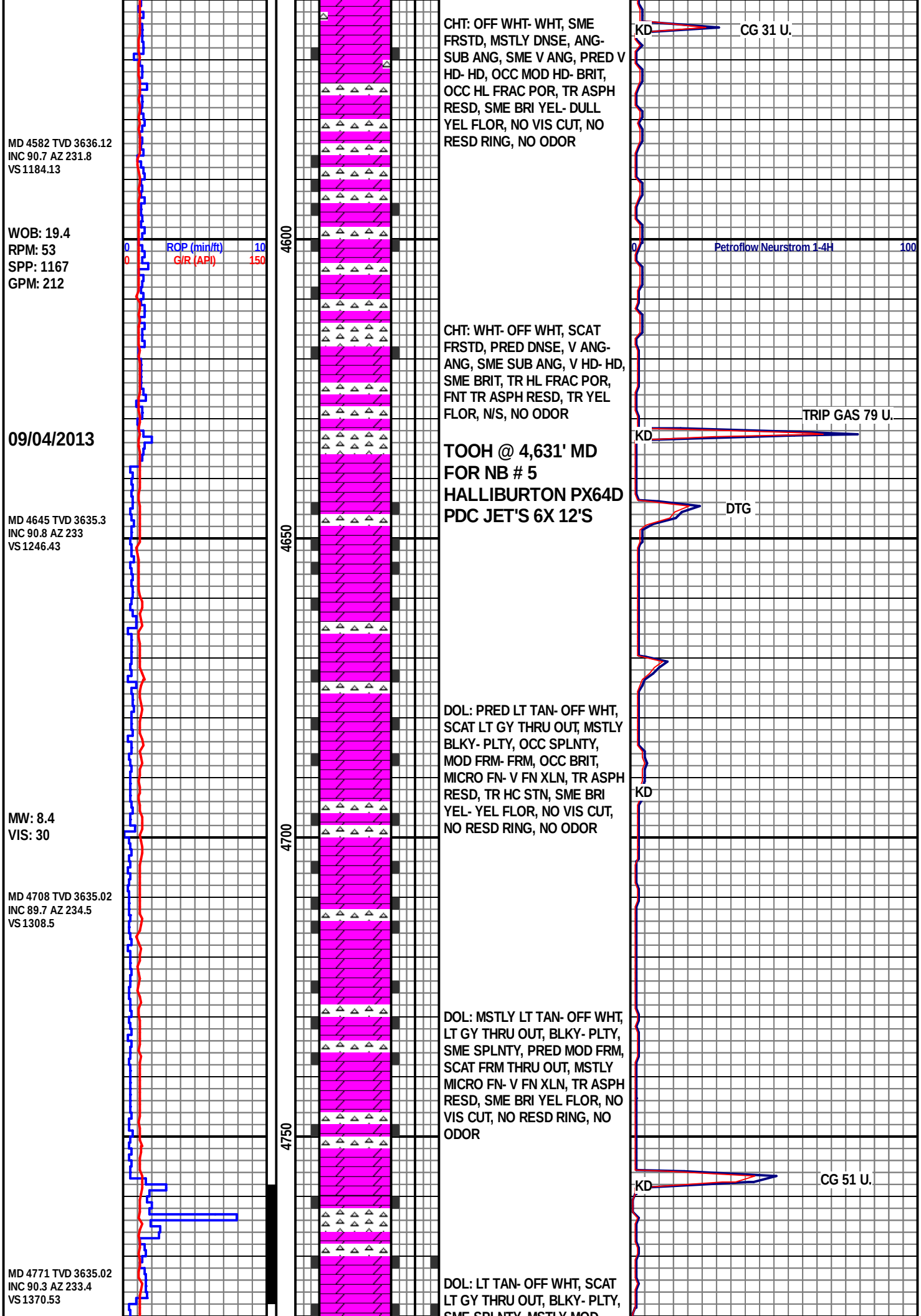

INC 42.8 AZ 240.4
VS 137.86
08/29/2013
MD 3489 TVD 3440.22
INC 45 AZ 238.4
VS 159.23
MD 3520 TVD 3461.68
INC 47.4 AZ 237.5
VS 180.94
MD 3552 TVD 3482.92
INC 49.4 AZ 235.6
VS 204.28
MD 3584 TVD 3503.34
INC 51.3 AZ 234.3
VS 228.46
WOB: 41.1
RPM: 0
VIS: 50
WT: 8.9
MD 3616 TVD 3523.02
INC 52.8 AZ 232.5
VS 253.34
MD 3648 TVD 3541.76
INC 55.5 AZ 232.1
VS 279
3500
3550
3600
3650
0
ROP (min/ft)
10
0
G/R (API)
150
KINDERHOOK @
3,468' MD 3,425' TVD
(-1,909')
KD
SH: MSTLY DRK GY, SME MED GY, OCC BLK, PLTY- BLKY, INCRG BLKY, MOD SFT- V SFT, V FN SLTY TXT, TR YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
SH: MSTLY MED GY- DRK GY, SCAT LT GY THRU OUT, V SFT- MOD SFT, PRED BLKY, TR PLTY, V FN SLTY- FN SLTY TXT, TR YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
SH: PRED MED GY- LT GY, SME DRK GY, TR BLK, MSTLY BLKY, PRED V SFT- SFT, V FN SLTY TXT, FNT TR YEL MIN FLOR, NO SHOWS
MUD CHK @ 3,593'
WT- 9.0
VIS- 43
PV- 9
YP- 18
GELS- 8/12
low Neurstrom 1-4H
100
W.L.- 11.6
CK- 2
SOL- 4
WTR- 96
CALC- 80
CHLR- 15,000
SH: MSTLY LT GY- MED GY, SCAT DRK GY THRU OUT, PRED BLKY, MSTLY V SFT- SFT, TR MOD SFT, PRED V FN SLTY TXT, NO VIS FLOR, NO SHOW

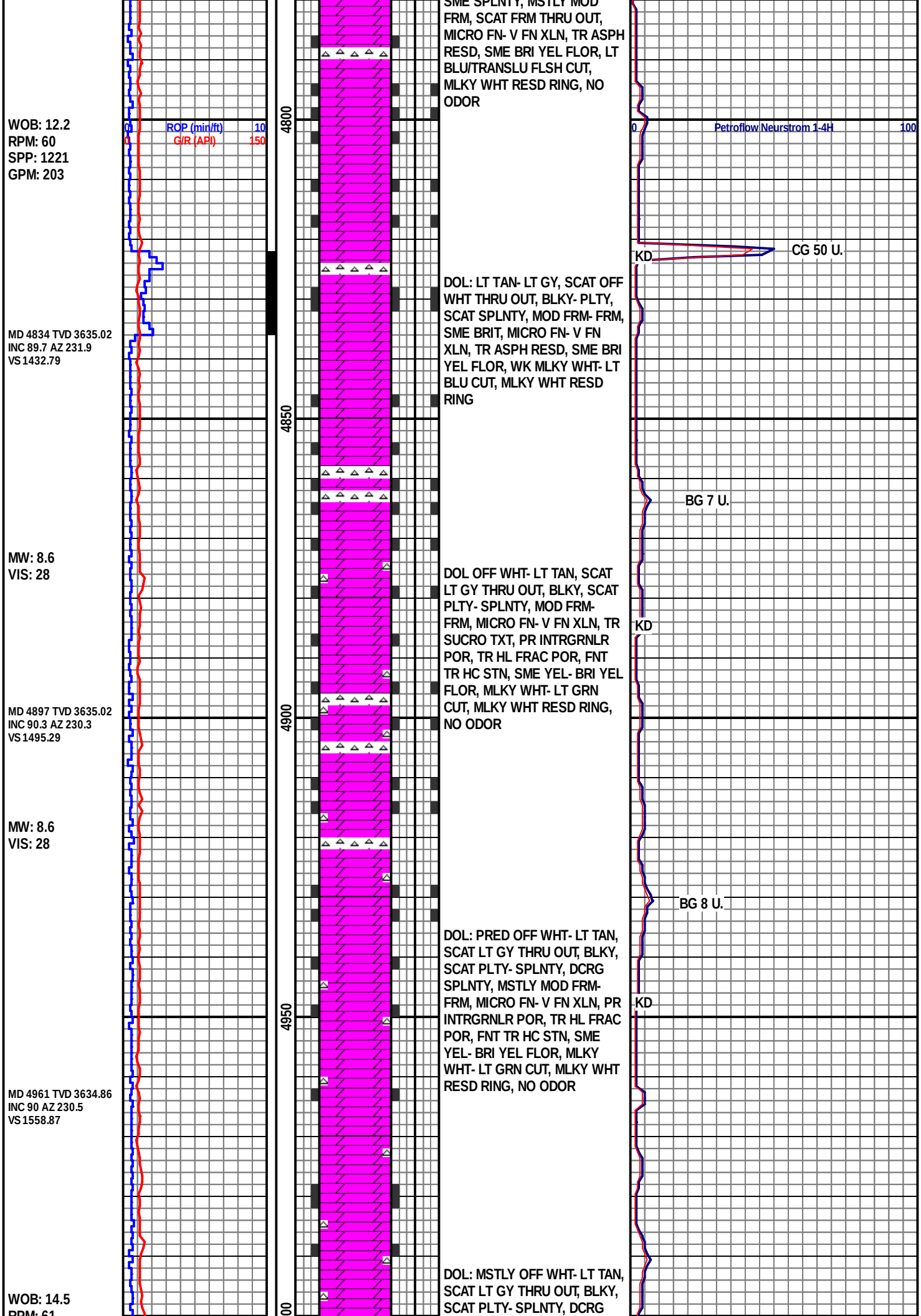

MD 3679 TVD 3558.48
INC 59.2 AZ 232.1
VS 304.83
MD 3711 TVD 3574.26
INC 61.7 AZ 231
VS 332.41
MD 3743 TVD 3588.86
INC 64 AZ 230.9
VS 360.67
MD 3775 TVD 3602.01
INC 67.5 AZ 231.3
VS 389.61
WOB: 27.9
RPM: 44
VIS: 47
WT: 8.8
MD 3807 TVD 3613.52
INC 70.3 AZ 231.3
VS 419.21
MD 3839 TVD 3623.36
INC 73.9 AZ 231.6
VS 449.39
MD 3871 TVD 3631.37
INC 77.1 AZ 230.6
VS 480.12
3700
3750
3800
3850
0
ROP (min/ft)
10
0
G/R (API)
150
SH: PRED LT GY- MED GY, OCC DRK GY, BLKY, V SFT- SFT, V FN SLTY TXT, NO VIS FLOR, N/S
SH: MSTLY MED GY- DRK GY, SCAT LT GY THRU OUT, MSTLY BLKY, SME PLTY, INCRG PLTY, TR SPLNTY, V SFT- SFT, OCC MOD SFT, V FN SLTY TXT- MOD SMTH, TR YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
SH: PRED MED GY- DRK GY, SCAT LT GY, MSTLY BLKY- PLTY, OCC SPLNTY, SFT- MOD SFT, SCAT V SFT THRU OUT, V FN SLTY TXT- MOD SMTH, N/S
KD
0
Petroflow Neurstrom 1-4H
100
SH: MSTLY DRK GY- MED GY, SCAT LT GY, BLKY- PLTY, TR SPLNTY, V SFT- SFT, TR MOD SFT, V FN SLTY TXT- MOD SMTH SLTY TXT, NO VIS FLOR, N/S
KD
SYLVAN DOLOMITE @ 3,857' MD 3,628' TVD (-2,112')
DOL: PRED WHT- OFF WHT, TR LT GY, SLI INCRG LT GY, MSTLY BLKY, FRM- MOD HD, SCAT BRIT THRU OUT, V FN- FN XLN, TR MICRO FN XLN, OCC HL FRAC POR, SCAT YEL- BRI YEL FLOR, SLW STRMNG MLKY WHT CUT, FNT MLKY WHT RESD RING
20 SECOND GAS TEST @ TRAP 118 U.

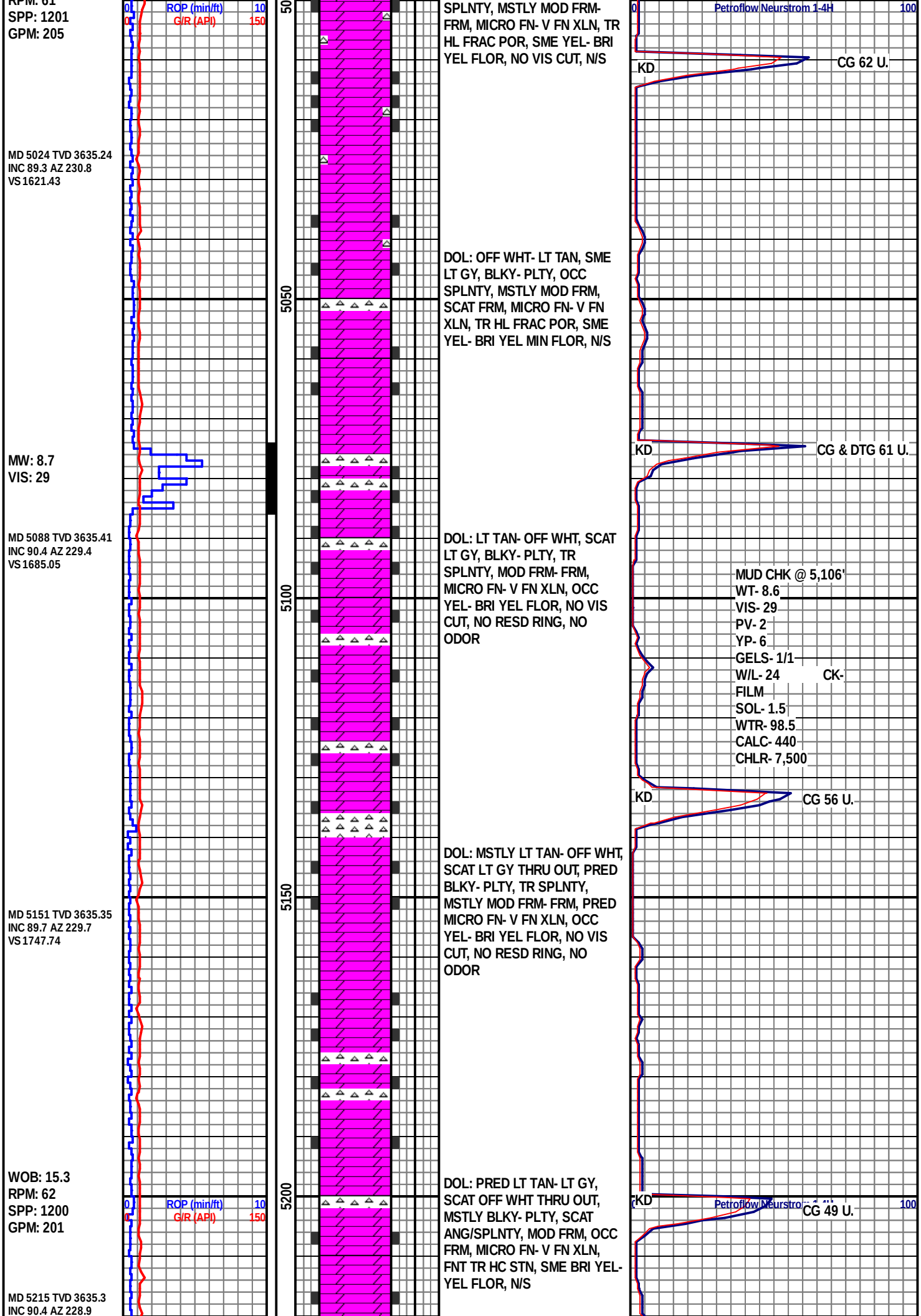

MD 3902 TVD 3637.1
INC 81.6 AZ 230.8
VS 510.37
3950
DOL: MSTLY OFF WHT- WHT, TR LT GY, PRED BLKY, TR PLTY, V FRM- BRIT, V FN- FN XLN, TR MICRO FN XLN, SCAT HL FRAC POR, TR SPIC, TR HC STN, FNT TR ASPH RESD, SCAT BRI YEL- YEL FLOR, STRMNG MLKY BLU/WHT CUT, YEL RESD RING, NO ODOR
KD
MUD CHK @ 3,914'
WT- 9.0
VIS- 27
PV- 37
YP- 9
GELS- 3/10
W/L- N/A
CK- 2/32
SOL- 4
WTR- 96
CALC- 80
CHLR- 10,000
KD
TRIP GAS 170 U.
TOOH FOR INTERMEDIATE CASING @ 3,965' MD
DRILLING W/ BIT #4 6 1/8", SMITH, XR40Y, SN# PY3117, 3X14 JETS
TEST GAS 70 U.
MD 3979 TVD 3642.46
INC 90.4 AZ 231
VS 586.53
HOLE DEPTH CHANGED FROM 3,991' TO 3,997'
WOB: 18.7
RPM: 53
SPP: 1109
GPM: 215
CG/DTG 164 U.
KD
0
ROP (min/ft)
10
0
G/R (API)
150
4000
P
0
Petroflow Neurstrom 1-4H
100
MUD CHK @ 3,960'
WT- 8.3
VIS- 27
PV- N/A
YP- N/A
GELS- N/A
W/L- 6.4
CK- N/A
SOL- N/A
WTR- N/A
CALC- 80
CHLR- 11,000
DOL: PRED OFF WHT TO CRM, BLKY TO PLTY, FRM TO MOD FRM, OCC V FRM TO BRTL, MIC FN TO FN XLN, OCC HL FRAC POR, CHT: PRED OFF WHT TO WHT, OCC OFF WHT TO TRANS, SUB ANG TO ANG, V HRD TO HRD, SME V FRM, TR PYR IP, NO ODOR, VP TR DULL YEL FLOR, N/S
KD
DTG 168 U.
LOST RETURNS @ 4,045', REGAINED CIRCULATION, DT= 1.45 HRS
4050
TEST GAS 75 U.
KD
CG 20 U.
DOL: ABUN CRM TO OFF WHT, TR LT GRY, PLTY TO BLKY, MOD FRM TO FRM, OCC V FRM, SCAT BRTL, MIC FN TO FN XLN, OCC HL FRAC POR, INCR CHT: ABUN OFF WHT TO WHT, INCR OFF WHT TO TRANS, SUB ANG TO ANG, PRED V FRM TO HRD, SME V HRD, MIC FN XLN, NO ODOR, NO VIS FLOR, N/S
MD 4074 TVD 3641.33
INC 91.1 AZ 232.1
VS 680.68
CG 137 U.
KD
4100
DOL: PRED CRM TO LT TAN,
CG/DTG 145 U.

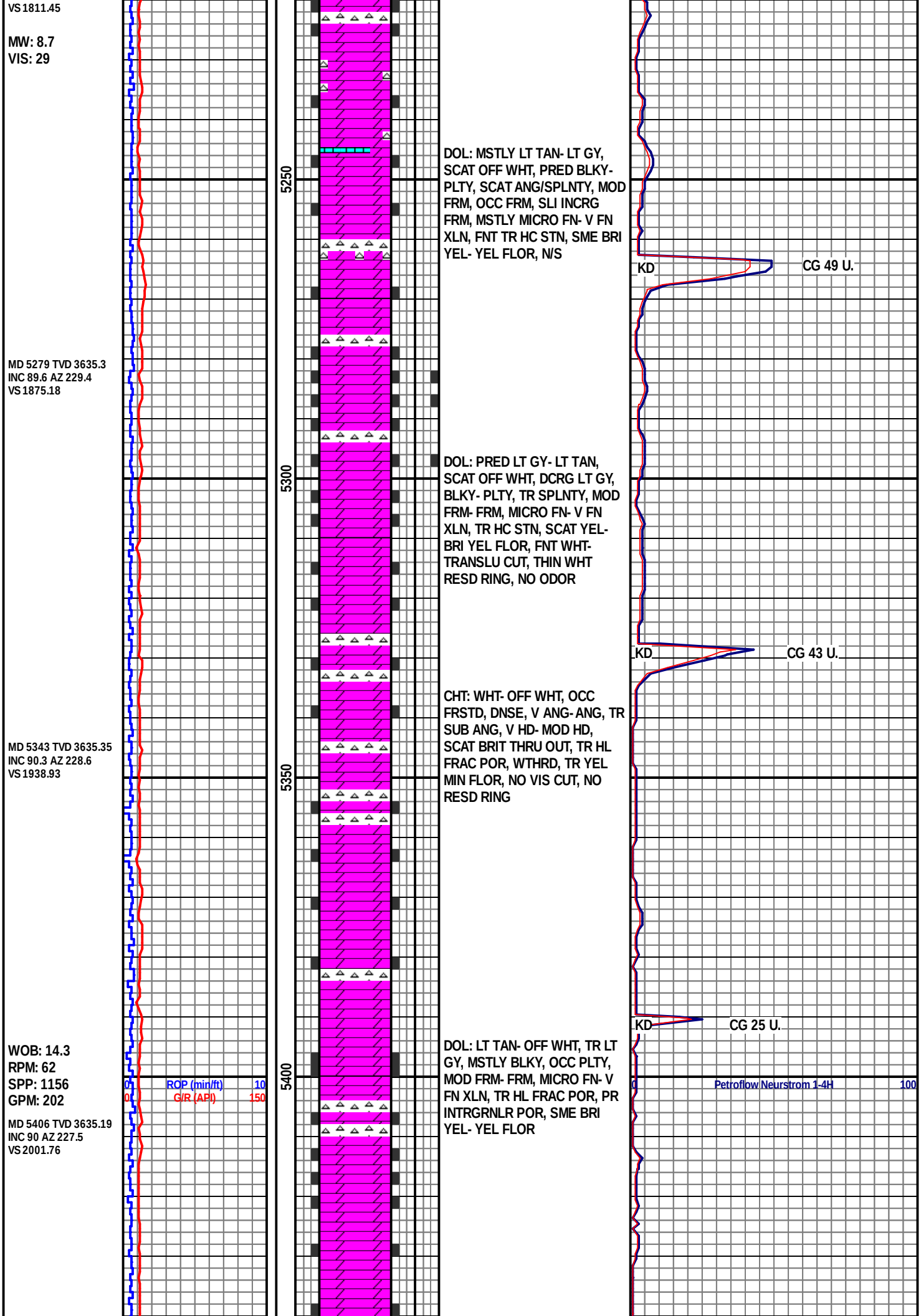

MD 4138 TVD 3640.33
INC 90.7 AZ 232
VS 744.02
SME OFF WHT, PLTY TO BLKY, FRM TO MOD FRM, FN TO MIC FN XLN, OCC HL RAC POR, CHT: PRED OFF WHT TO WHT, SUB ANG TO ANG, V FRM TO HRD, SME V HRD, TR BRTL, MIC FN XLN, NO ODOR, NO VIS FLOR
KD
4150
DOL: MSTLY OFF WHT- LT TAN, SCAT WHT THRU OUT, PLTY-BLKY, SLI INCRG BLKY, FRM-MOD FRM, TR MOD HD, V FN-MICRO FN XLN, CHT: PRED WHT- OFF WHT, ANG- SUB ANG, V FRM- HD, OCC V HD, TR BRIT, NO ODOR, TR YEL FLOR, V FNT LT BLU CUT, THIN WHT RESD RING, NO ODOR
DTG 123 U.
KD
CG 128 U.
WOB: 38.5
RPM: 56
SPP: 1087
GPM: 211
0
ROP (min/ft)
10
0
G/R (API)
150
4200
0
Petroflow Neurstrom 1-4H
100
MD 4202 TVD 3639.49
INC 90.8 AZ 231.7
VS 807.4
DOL: PRED LT TAN- OFF WHT, SCAT WHT, MSTLY BLKY-PLTY, PRED FRM- MOD FRM, MICRO FN- V FN XLN, TR HL FRAC POR, SME BRI YEL- YEL FLOR, V SLW BLMNG LT BLU/TRANSLU CUT, FNT WHT-LT GRN RESD RING, NO ODOR
WT: 8.4
VIS: 27
09/03/2013
KD
DTG 129 U.
4250
MD 4265 TVD 3639.16
INC 89.8 AZ 230.5
VS 869.89
DOL: MSTLY LT TAN- OFF WHT, INCRG OFF WHT, OCC WHT, PRED BLKY, TR PLTY, FRM-MOD FRM, MICRO FN- V FN XLN, TR SUCRO TXT, TR HC STN, TR HL FRAC POR, OCC BRI YEL- YEL FLOR,
4300
KD
CG & DTG 56 U.
MD 4328 TVD 3638.99
INC 90.5 AZ 231.9
VS 932.38
DOL: MSTLY LT TAN- OFF WHT, SME WHT, TR LT GY, BLKY, SCAT PLTY, FRM- MOD FRM, INCRG MOD FRM, MICRO FN- V FN XLN, TR SUCRO TXT, OCC HL FRAC POR, SME BRI YEL-YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR

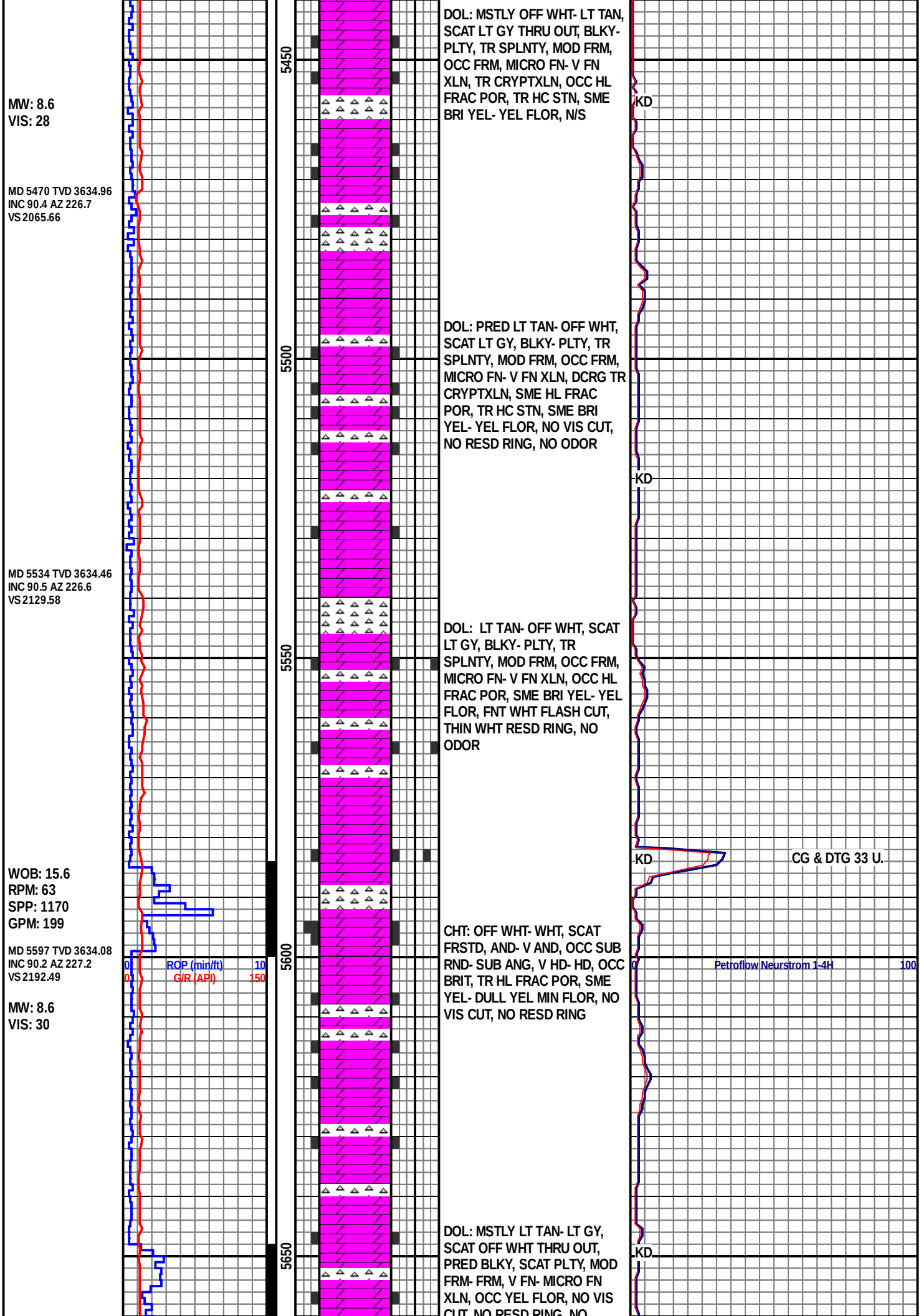

WT: 8.5
VIS: 28
MD 4392 TVD 3638.28
INC 90.8 AZ 232.1
VS 995.73
WOB: 18.6
RPM: 55
SPP: 1143
GPM: 203
JET#1 PIT
MD 4455 TVD 3637.56
INC 90.5 AZ 230.7
VS 1058.19
MD 4519 TVD 3636.89
INC 90.7 AZ 231.2
VS 1121.7
MW: 8.5
VIS: 28
0
ROP (min/ft)
10
0
G/R (API)
150
4350
4400
4450
4500
4550
DOL: PRED LT TAN- OFF WHT, SCAT WHT THRU OUT, TR LT GY, BLKY- PLTY, MOD FRM-FRM, MICRO FN- V FN XLN, SCAT HL FRAC POR, PR INTRGRNLR POR, OCC YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
CG 46 U.
0
Petroflow Neurstrom 1-4H
100
DOL: MSTLY LT TAN- OFF WHT, SCAT WHT, TR LT GY, INCRG LT GY, BLKY- PLTY, MOD FRM-FRM, SLI INCRG FRM, MICRO FN- V FN XLN, TR HL FRAC POR, SME YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
CG 31 U.
DOL: PRED LT TAN- LT GY, SCAT OFF WHT THRU OUT, MSTLY BLKY, OCC PLTY, FRM-MOD FRM, V FN- MICRO FN XLN, TR HL FRAC POR, SME BRI YEL- YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
MUD CHK @ 4,477'
WT- 8.3
VIS- 27
PV- N/A
YP- N/A
GELS- N/A
CK- N/A
SOL- N/A
WTR- N/A
CALC- 480
CHLR- 6,800
KD
CG 38 U.
DOL: MSTLY LT TAN- LT GY, DCRG LT GY, SCAT OFF WHT, PRED BLKY, SME PLTY, FRM-MOD FRM, V FN- MICRO FN XLN, TR HL FRAC POR, SME YEL FLOR, V FNT SLW BLMNG WHT CUT, THIN WHT RESD RING, NO ODOR

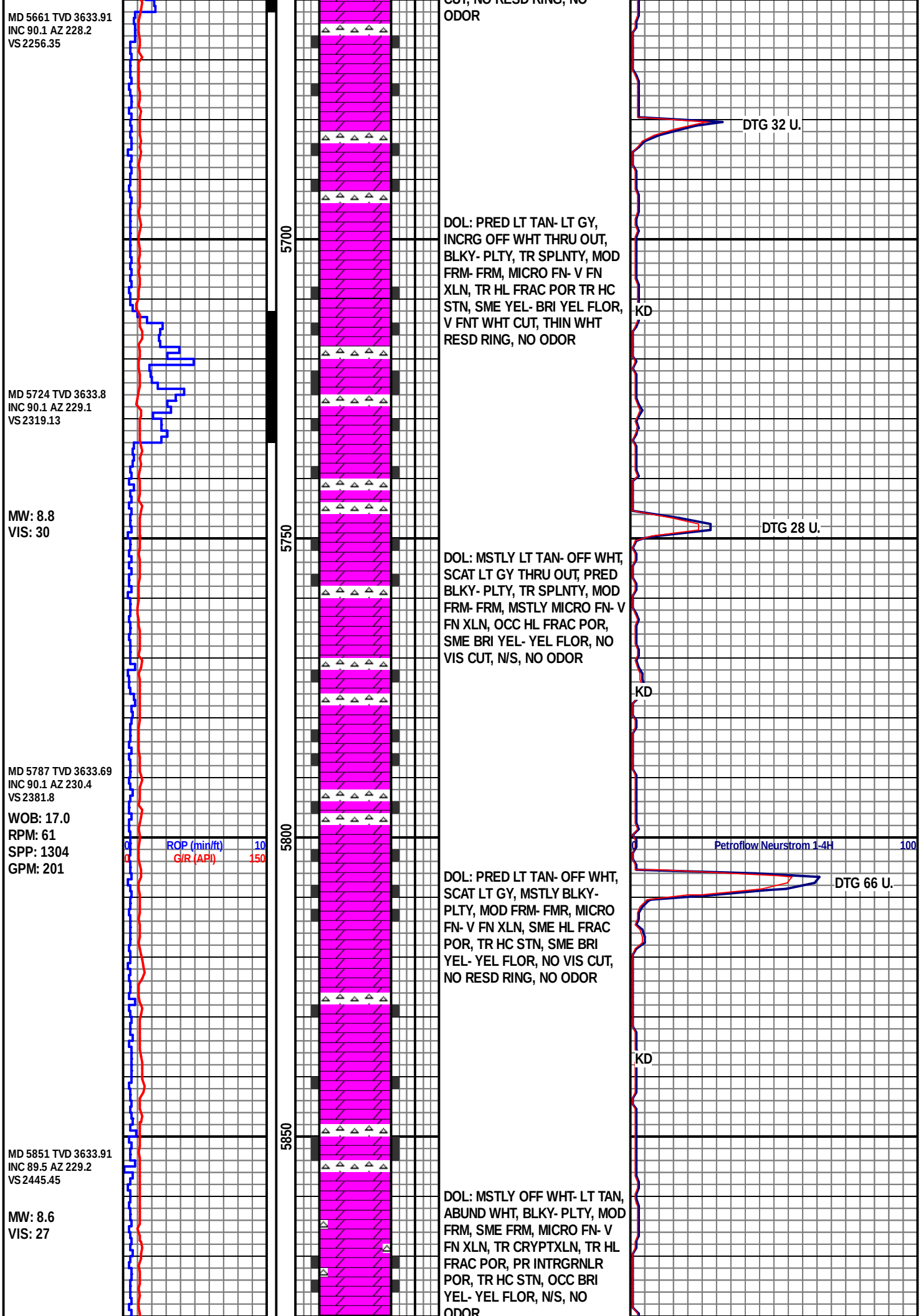

MD 4582 TVD 3636.12
INC 90.7 AZ 231.8
VS 1184.13
WOB: 19.4
RPM: 53
SPP: 1167
GPM: 212
0
ROP (min/ft)
10
0
G/R (API)
150
4600
CHT: OFF WHT- WHT, SME FRSTD, MSTLY DNSE, ANG-SUB ANG, SME V ANG, PRED V HD- HD, OCC MOD HD- BRIT, OCC HL FRAC POR, TR ASPH RESD, SME BRI YEL- DULL YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
CG 31 U.
0
Petroflow Neurstrom 1-4H
100
CHT: WHT- OFF WHT, SCAT FRSTD, PRED DNSE, V ANG-ANG, SME SUB ANG, V HD- HD, SME BRIT, TR HL FRAC POR, FNT TR ASPH RESD, TR YEL FLOR, N/S, NO ODOR
TRIP GAS 79 U.
09/04/2013
KD
TOOH @ 4,631' MD
FOR NB # 5
HALLIBURTON PX64D
PDC JET'S 6X 12'S
DTG
MD 4645 TVD 3635.3
INC 90.8 AZ 233
VS 1246.43
4650
DOL: PRED LT TAN- OFF WHT, SCAT LT GY THRU OUT, MSTLY BLKY- PLTY, OCC SPLNTY, MOD FRM- FRM, OCC BRIT, MICRO FN- V FN XLN, TR ASPH RESD, TR HC STN, SME BRI YEL- YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
MW: 8.4
VIS: 30
MD 4708 TVD 3635.02
INC 89.7 AZ 234.5
VS 1308.5
4700
DOL: MSTLY LT TAN- OFF WHT, LT GY THRU OUT, BLKY- PLTY, SME SPLNTY, PRED MOD FRM, SCAT FRM THRU OUT, MSTLY MICRO FN- V FN XLN, TR ASPH RESD, SME BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
CG 51 U.
4750
MD 4771 TVD 3635.02
INC 90.3 AZ 233.4
VS 1370.53
DOL: LT TAN- OFF WHT, SCAT LT GY THRU OUT, BLKY- PLTY,

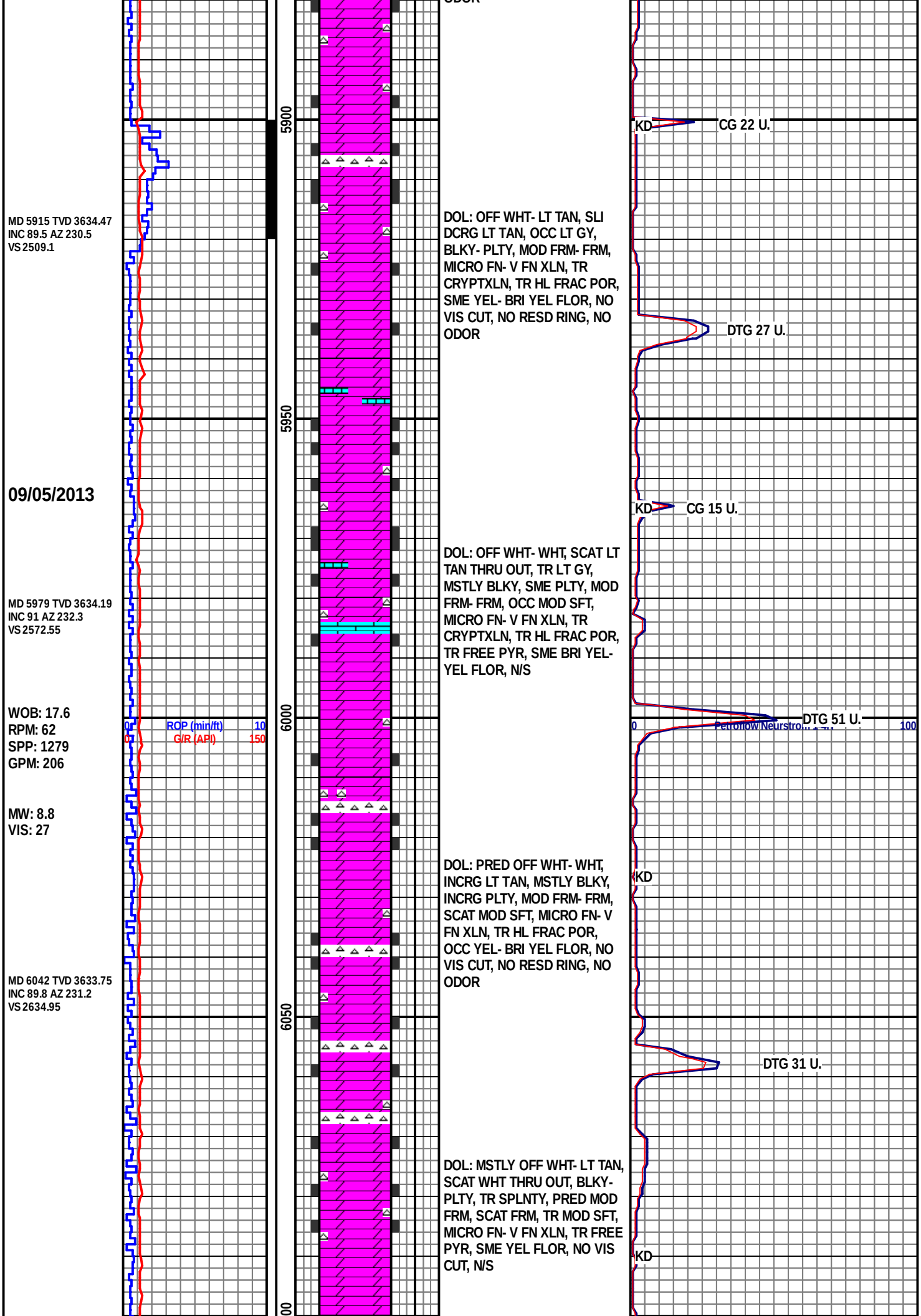

WOB: 12.2
RPM: 60
SPP: 1221
GPM: 203
0
ROP (min/ft)
10
0
G/R (API)
150
4800
4850
4900
4950
5000
SME SPLNTY, MSTLY MOD FRM, SCAT FRM THRU OUT, MICRO FN- V FN XLN, TR ASPH RESD, SME BRI YEL FLOR, LT BLU/TRANSLU FLSH CUT, MLKY WHT RESD RING, NO ODOR
0
Petroflow Neurstrom 1-4H
100
KD
CG 50 U.
MD 4834 TVD 3635.02
INC 89.7 AZ 231.9
VS 1432.79
DOL: LT TAN- LT GY, SCAT OFF WHT THRU OUT, BLKY- PLTY, SCAT SPLNTY, MOD FRM- FRM, SME BRIT, MICRO FN- V FN XLN, TR ASPH RESD, SME BRI YEL FLOR, WK MLKY WHT- LT BLU CUT, MLKY WHT RESD RING
BG 7 U.
MW: 8.6
VIS: 28
DOL OFF WHT- LT TAN, SCAT LT GY THRU OUT, BLKY, SCAT PLTY- SPLNTY, MOD FRM- FRM, MICRO FN- V FN XLN, TR SUCRO TXT, PR INTRGRNLR POR, TR HL FRAC POR, FNT TR HC STN, SME YEL- BRI YEL FLOR, MLKY WHT- LT GRN CUT, MLKY WHT RESD RING, NO ODOR
KD
MD 4897 TVD 3635.02
INC 90.3 AZ 230.3
VS 1495.29
MW: 8.6
VIS: 28
BG 8 U.
DOL: PRED OFF WHT- LT TAN, SCAT LT GY THRU OUT, BLKY, SCAT PLTY- SPLNTY, DCRG SPLNTY, MSTLY MOD FRM- FRM, MICRO FN- V FN XLN, PR INTRGRNLR POR, TR HL FRAC POR, FNT TR HC STN, SME YEL- BRI YEL FLOR, MLKY WHT- LT GRN CUT, MLKY WHT RESD RING, NO ODOR
KD
MD 4961 TVD 3634.86
INC 90 AZ 230.5
VS 1558.87
DOL: MSTLY OFF WHT- LT TAN, SCAT LT GY THRU OUT, BLKY, SCAT PLTY- SPLNTY, DCRG
WOB: 14.5
RPM: 61

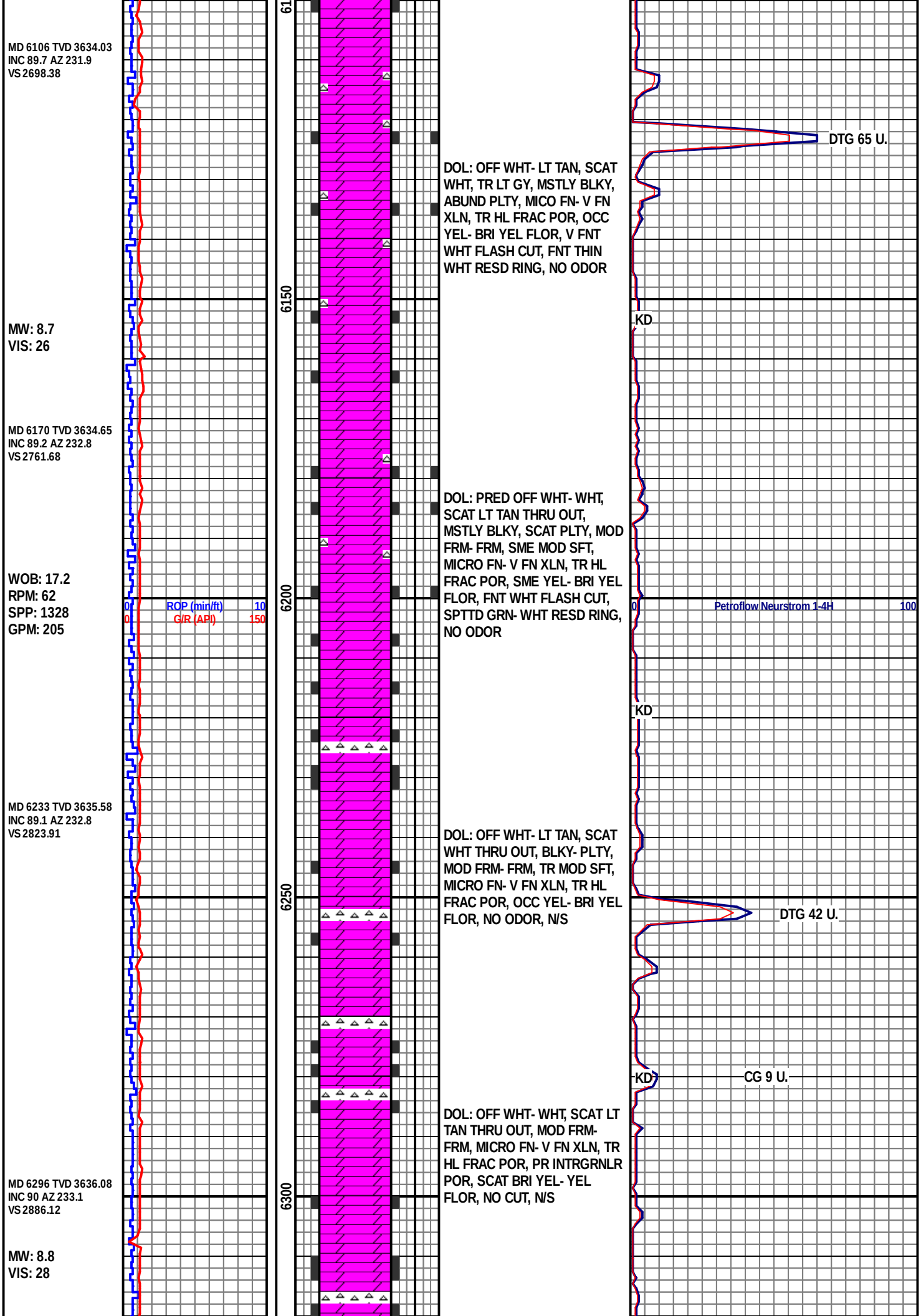

RPM: 61
SPP: 1201
GPM: 205
0
ROP (min/ft)
10
0
G/R (API)
150
MD 5024 TVD 3635.24
INC 89.3 AZ 230.8
VS 1621.43
MW: 8.7
VIS: 29
MD 5088 TVD 3635.41
INC 90.4 AZ 229.4
VS 1685.05
MD 5151 TVD 3635.35
INC 89.7 AZ 229.7
VS 1747.74
WOB: 15.3
RPM: 62
SPP: 1200
GPM: 201
0
ROP (min/ft)
10
0
G/R (API)
150
MD 5215 TVD 3635.3
INC 90.4 AZ 228.9
5050
5100
5150
5200
SPLNTY, MSTLY MOD FRM- FRM, MICRO FN- V FN XLN, TR HL FRAC POR, SME YEL- BRI YEL FLOR, NO VIS CUT, N/S
DOL: OFF WHT- LT TAN, SME LT GY, BLKY- PLTY, OCC SPLNTY, MSTLY MOD FRM, SCAT FRM, MICRO FN- V FN XLN, TR HL FRAC POR, SME YEL- BRI YEL MIN FLOR, N/S
DOL: LT TAN- OFF WHT, SCAT LT GY, BLKY- PLTY, TR SPLNTY, MOD FRM- FRM, MICRO FN- V FN XLN, OCC YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: MSTLY LT TAN- OFF WHT, SCAT LT GY THRU OUT, PRED BLKY- PLTY, TR SPLNTY, MSTLY MOD FRM- FRM, PRED MICRO FN- V FN XLN, OCC YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: PRED LT TAN- LT GY, SCAT OFF WHT THRU OUT, MSTLY BLKY- PLTY, SCAT ANG/SPLNTY, MOD FRM, OCC FRM, MICRO FN- V FN XLN, FNT TR HC STN, SME BRI YEL- YEL FLOR, N/S
0
Petroflow Neurstrom 1-4H
100
KD
CG 62 U.
KD
CG & DTG 61 U.
MUD CHK @ 5,106'
WT- 8.6
VIS- 29
PV- 2
YP- 6
GELS- 1/1
W/L- 24
CK-
FILM
SOL- 1.5
WTR- 98.5
CALC- 440
CHLR- 7,500
KD
CG 56 U.
KD
Petroflow Neurstrom 1-4H
CG 49 U.
100

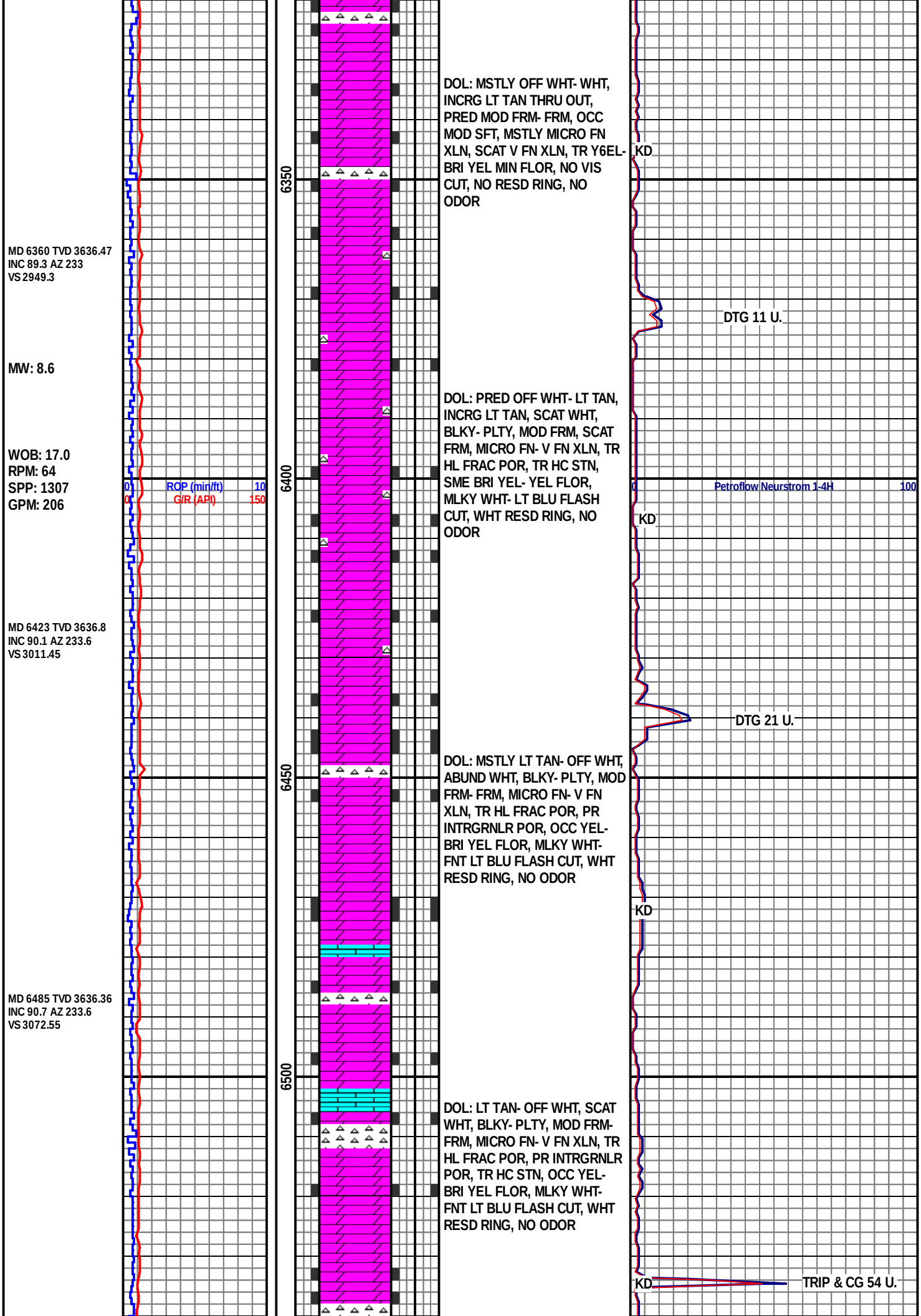

VS 1811.45
MW: 8.7
VIS: 29
5250
DOL: MSTLY LT TAN- LT GY, SCAT OFF WHT, PRED BLKY- PLTY, SCAT ANG/SPLNTY, MOD FRM, OCC FRM, SLI INCRG FRM, MSTLY MICRO FN- V FN XLN, FNT TR HC STN, SME BRI YEL- YEL FLOR, N/S
KD
CG 49 U.
MD 5279 TVD 3635.3
INC 89.6 AZ 229.4
VS 1875.18
5300
DOL: PRED LT GY- LT TAN, SCAT OFF WHT, DCRG LT GY, BLKY- PLTY, TR SPLNTY, MOD FRM- FRM, MICRO FN- V FN XLN, TR HC STN, SCAT YEL- BRI YEL FLOR, FNT WHT- TRANSLU CUT, THIN WHT RESD RING, NO ODOR
KD
CG 43 U.
5350
CHT: WHT- OFF WHT, OCC FRSTD, DNSE, V ANG- ANG, TR SUB ANG, V HD- MOD HD, SCAT BRIT THRU OUT, TR HL FRAC POR, WTHRD, TR YEL MIN FLOR, NO VIS CUT, NO RESD RING
MD 5343 TVD 3635.35
INC 90.3 AZ 228.6
VS 1938.93
KD
CG 25 U.
WOB: 14.3
RPM: 62
SPP: 1156
GPM: 202
5400
DOL: LT TAN- OFF WHT, TR LT GY, MSTLY BLKY, OCC PLTY, MOD FRM- FRM, MICRO FN- V FN XLN, TR HL FRAC POR, PR INTRGRNLR POR, SME BRI YEL- YEL FLOR
MD 5406 TVD 3635.19
INC 90 AZ 227.5
VS 2001.76
0
ROP (min/ft)
10
0
G/R (API)
150
0
Petroflow Neurstrom 1-4H
100

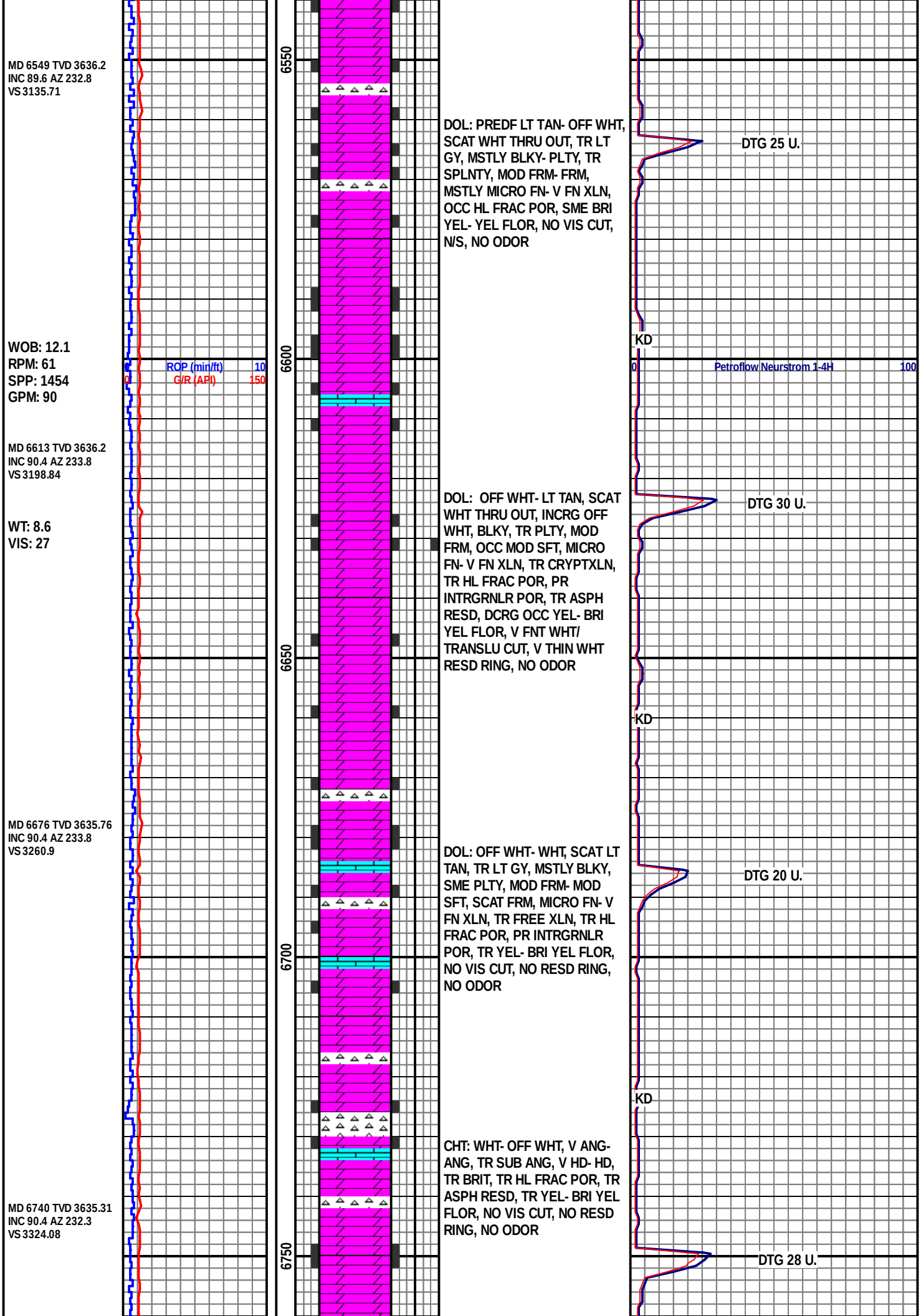

MW: 8.6
VIS: 28
MD 5470 TVD 3634.96
INC 90.4 AZ 226.7
VS 2065.66
MD 5534 TVD 3634.46
INC 90.5 AZ 226.6
VS 2129.58
WOB: 15.6
RPM: 63
SPP: 1170
GPM: 199
MD 5597 TVD 3634.08
INC 90.2 AZ 227.2
VS 2192.49
MW: 8.6
VIS: 30
0
ROP (min/ft)
10
0
G/R (API)
150
5450
5500
5550
5600
5650
DOL: MSTLY OFF WHT- LT TAN, SCAT LT GY THRU OUT, BLKY- PLTY, TR SPLNTY, MOD FRM, OCC FRM, MICRO FN- V FN XLN, TR CRYPTXLN, OCC HL FRAC POR, TR HC STN, SME BRI YEL- YEL FLOR, N/S
DOL: PRED LT TAN- OFF WHT, SCAT LT GY, BLKY- PLTY, TR SPLNTY, MOD FRM, OCC FRM, MICRO FN- V FN XLN, DCRG TR CRYPTXLN, SME HL FRAC POR, TR HC STN, SME BRI YEL- YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: LT TAN- OFF WHT, SCAT LT GY, BLKY- PLTY, TR SPLNTY, MOD FRM, OCC FRM, MICRO FN- V FN XLN, OCC HL FRAC POR, SME BRI YEL- YEL FLOR, FNT WHT FLASH CUT, THIN WHT RESD RING, NO ODOR
CHT: OFF WHT- WHT, SCAT FRSTD, AND- V AND, OCC SUB RND- SUB ANG, V HD- HD, OCC BRIT, TR HL FRAC POR, SME YEL- DULL YEL MIN FLOR, NO VIS CUT, NO RESD RING
DOL: MSTLY LT TAN- LT GY, SCAT OFF WHT THRU OUT, PRED BLKY, SCAT PLTY, MOD FRM- FRM, V FN- MICRO FN XLN, OCC YEL FLOR, NO VIS
KD
KD
KD
KD
CG & DTG 33 U.
0
Petroflow Neurstrom 1-4H
100

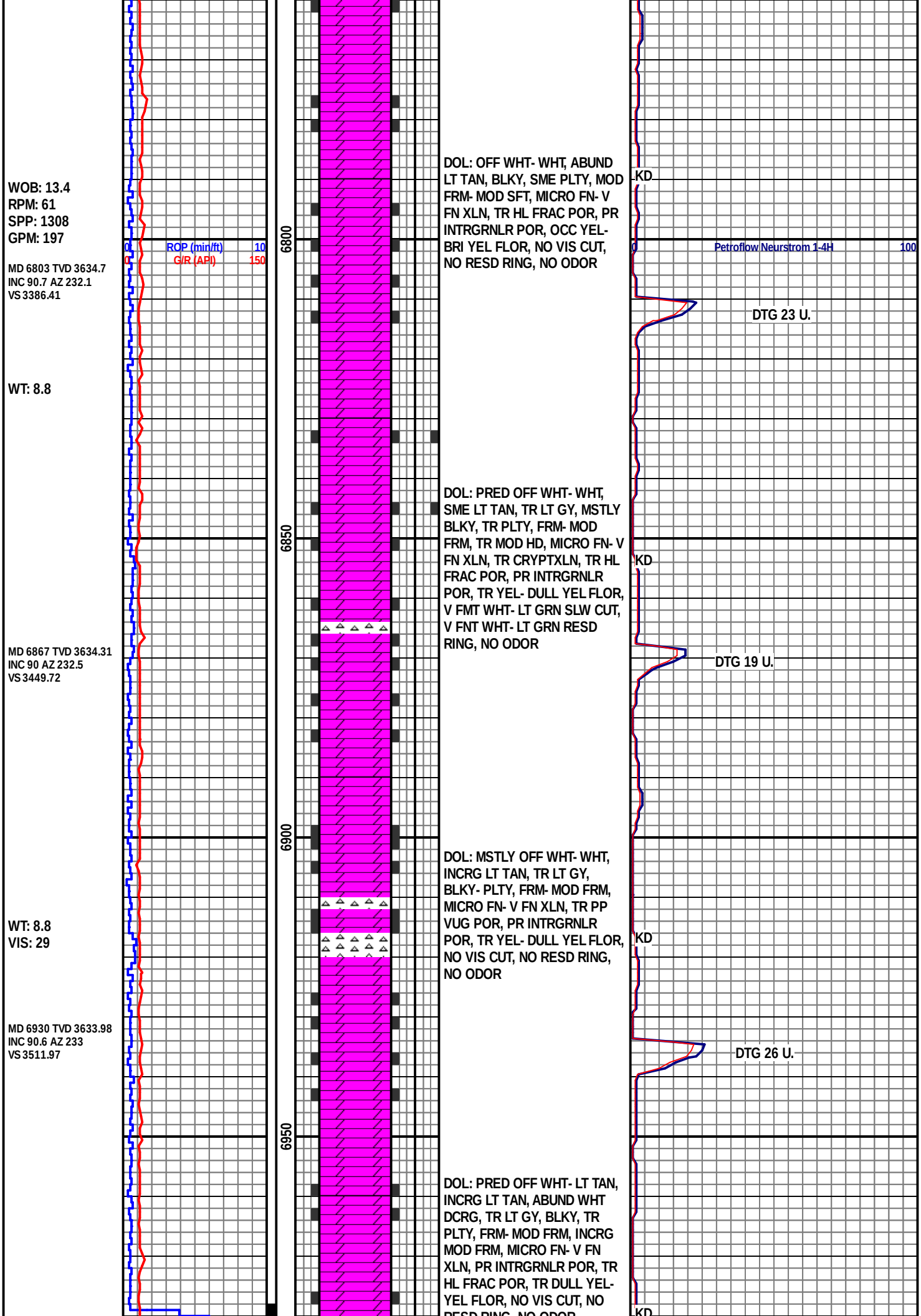

MD 5661 TVD 3633.91
INC 90.1 AZ 228.2
VS 2256.35
MD 5724 TVD 3633.8
INC 90.1 AZ 229.1
VS 2319.13
MW: 8.8
VIS: 30
MD 5787 TVD 3633.69
INC 90.1 AZ 230.4
VS 2381.8
WOB: 17.0
RPM: 61
SPP: 1304
GPM: 201
MD 5851 TVD 3633.91
INC 89.5 AZ 229.2
VS 2445.45
MW: 8.6
VIS: 27
0
ROP (min/ft)
10
0
G/R (API)
150
5700
5750
5800
5850
ODOR
DOL: PRED LT TAN- LT GY, INCRG OFF WHT THRU OUT, BLKY- PLTY, TR SPLNTY, MOD FRM- FRM, MICRO FN- V FN XLN, TR HL FRAC POR TR HC STN, SME YEL- BRI YEL FLOR, V FNT WHT CUT, THIN WHT RESD RING, NO ODOR
DOL: MSTLY LT TAN- OFF WHT, SCAT LT GY THRU OUT, PRED BLKY- PLTY, TR SPLNTY, MOD FRM- FRM, MSTLY MICRO FN- V FN XLN, OCC HL FRAC POR, SME BRI YEL- YEL FLOR, NO VIS CUT, N/S, NO ODOR
DOL: PRED LT TAN- OFF WHT, SCAT LT GY, MSTLY BLKY- PLTY, MOD FRM- FMR, MICRO FN- V FN XLN, SME HL FRAC POR, TR HC STN, SME BRI YEL- YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: MSTLY OFF WHT- LT TAN, ABUND WHT, BLKY- PLTY, MOD FRM, SME FRM, MICRO FN- V FN XLN, TR CRYPTXLN, TR HL FRAC POR, PR INTRGRNLR POR, TR HC STN, OCC BRI YEL- YEL FLOR, N/S, NO
DTG 32 U.
KD
DTG 28 U.
KD
0
Petroflow Neurstrom 1-4H
100
DTG 66 U.
KD

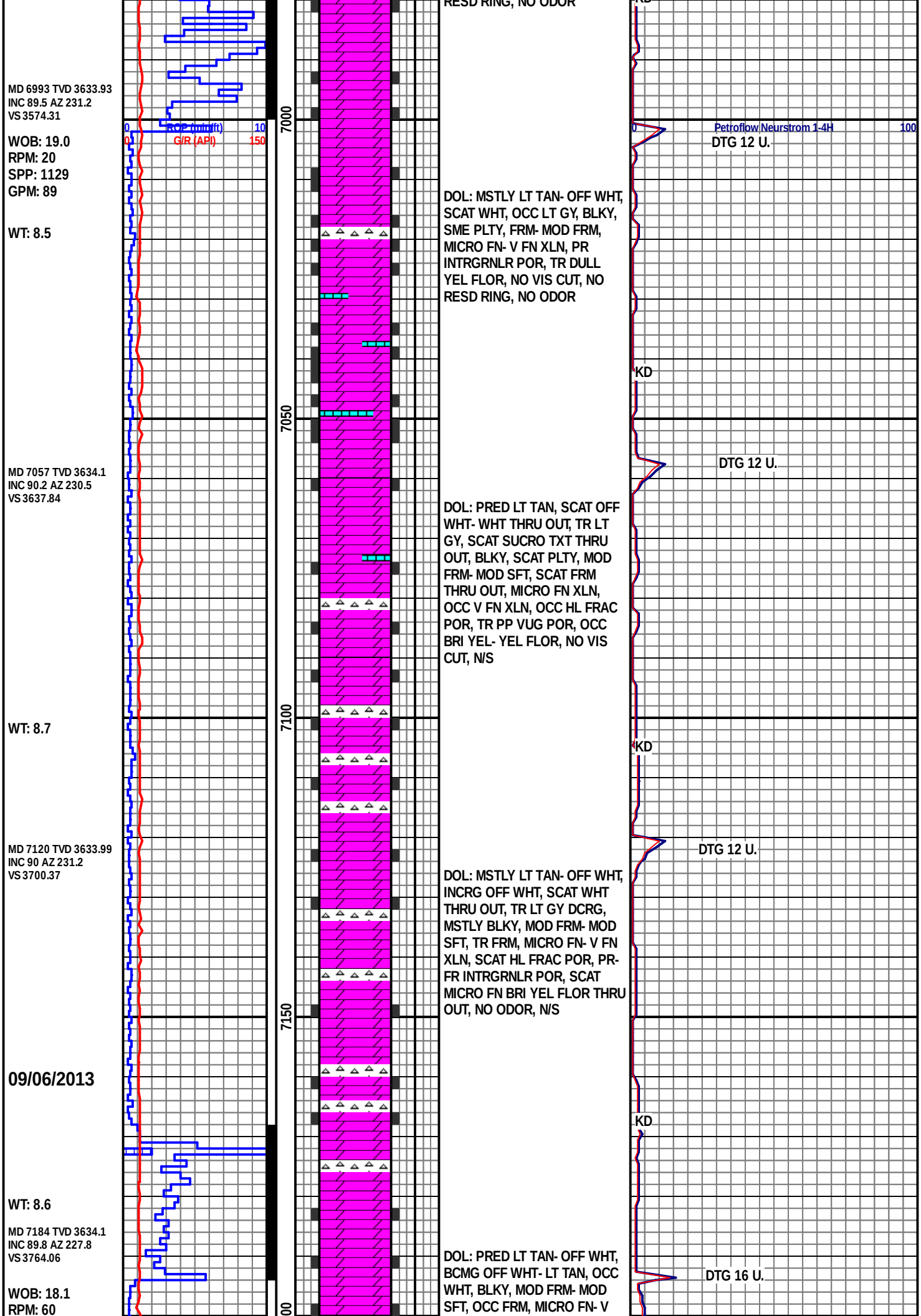

5900
5950
6000
6050
ROP (min/ft)
G/R (API)
0
10
0
150
KD
CG 22 U.
DTG 27 U.
KD
CG 15 U.
DTG 51 U.
0
100
KD
DTG 31 U.
KD
MD 5915 TVD 3634.47
INC 89.5 AZ 230.5
VS 2509.1
09/05/2013
MD 5979 TVD 3634.19
INC 91 AZ 232.3
VS 2572.55
WOB: 17.6
RPM: 62
SPP: 1279
GPM: 206
MW: 8.8
VIS: 27
MD 6042 TVD 3633.75
INC 89.8 AZ 231.2
VS 2634.95
DOL: OFF WHT- LT TAN, SLI DCRG LT TAN, OCC LT GY, BLKY- PLTY, MOD FRM- FRM, MICRO FN- V FN XLN, TR CRYPTXLN, TR HL FRAC POR, SME YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: OFF WHT- WHT, SCAT LT TAN THRU OUT, TR LT GY, MSTLY BLKY, SME PLTY, MOD FRM- FRM, OCC MOD SFT, MICRO FN- V FN XLN, TR CRYPTXLN, TR HL FRAC POR, TR FREE PYR, SME BRI YEL- YEL FLOR, N/S
DOL: PRED OFF WHT- WHT, INCRG LT TAN, MSTLY BLKY, INCRG PLTY, MOD FRM- FRM, SCAT MOD SFT, MICRO FN- V FN XLN, TR HL FRAC POR, OCC YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: MSTLY OFF WHT- LT TAN, SCAT WHT THRU OUT, BLKY- PLTY, TR SPLNTY, PRED MOD FRM, SCAT FRM, TR MOD SFT, MICRO FN- V FN XLN, TR FREE PYR, SME YEL FLOR, NO VIS CUT, N/S

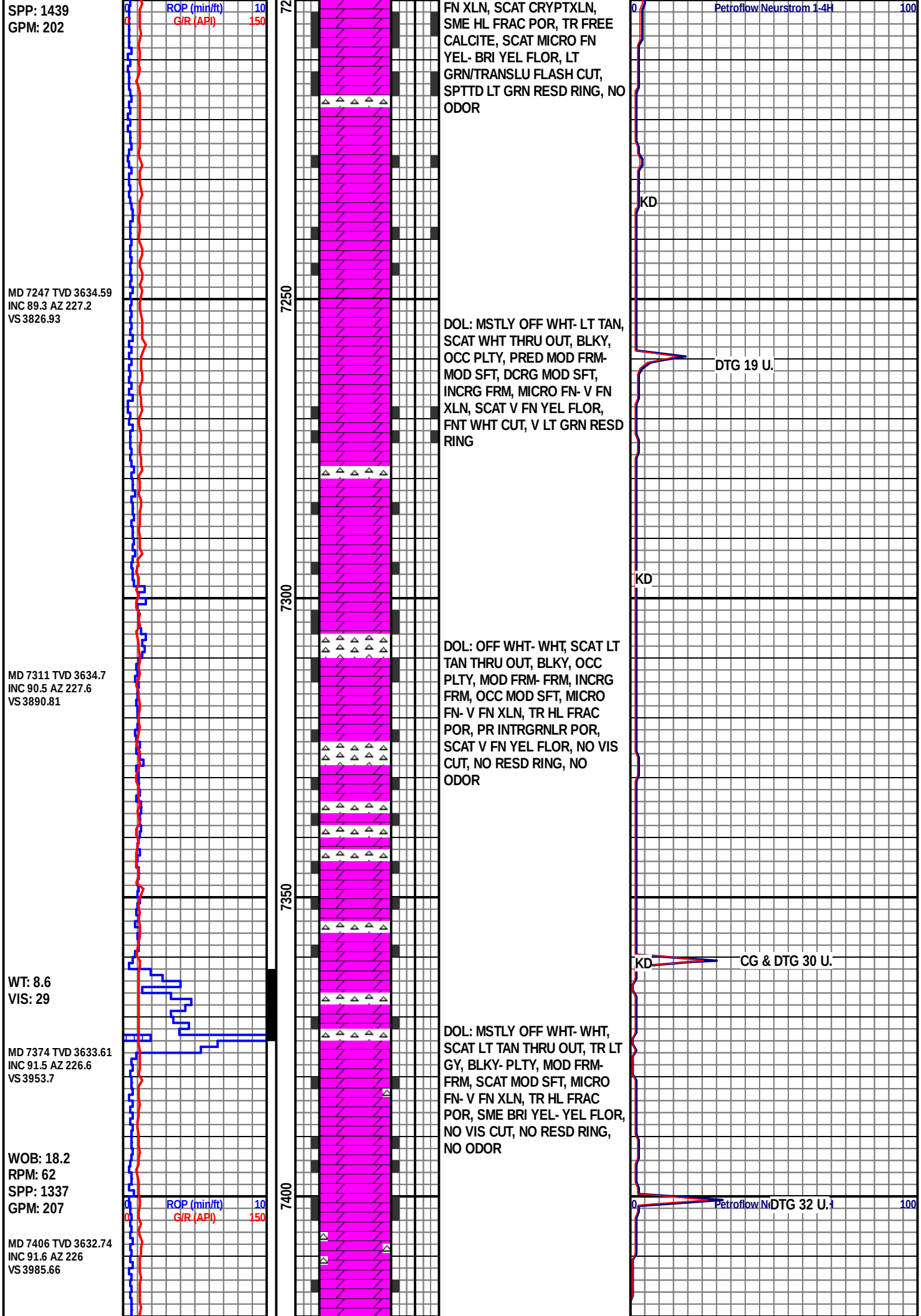

MD 6106 TVD 3634.03
INC 89.7 AZ 231.9
VS 2698.38
MW: 8.7
VIS: 26
MD 6170 TVD 3634.65
INC 89.2 AZ 232.8
VS 2761.68
WOB: 17.2
RPM: 62
SPP: 1328
GPM: 205
MD 6233 TVD 3635.58
INC 89.1 AZ 232.8
VS 2823.91
MD 6296 TVD 3636.08
INC 90 AZ 233.1
VS 2886.12
MW: 8.8
VIS: 28
0
ROP (min/ft)
10
0
G/R (API)
150
6150
6200
6250
6300
DOL: OFF WHT- LT TAN, SCAT WHT, TR LT GY, MSTLY BLKY, ABUND PLTY, MICO FN- V FN XLN, TR HL FRAC POR, OCC YEL- BRI YEL FLOR, V FNT WHT FLASH CUT, FNT THIN WHT RESD RING, NO ODOR
DOL: PRED OFF WHT- WHT, SCAT LT TAN THRU OUT, MSTLY BLKY, SCAT PLTY, MOD FRM- FRM, SME MOD SFT, MICRO FN- V FN XLN, TR HL FRAC POR, SME YEL- BRI YEL FLOR, FNT WHT FLASH CUT, SPTTD GRN- WHT RESD RING, NO ODOR
DOL: OFF WHT- LT TAN, SCAT WHT THRU OUT, BLKY- PLTY, MOD FRM- FRM, TR MOD SFT, MICRO FN- V FN XLN, TR HL FRAC POR, OCC YEL- BRI YEL FLOR, NO ODOR, N/S
DOL: OFF WHT- WHT, SCAT LT TAN THRU OUT, MOD FRM- FRM, MICRO FN- V FN XLN, TR HL FRAC POR, PR INTRGRNLR POR, SCAT BRI YEL- YEL FLOR, NO CUT, N/S
DTG 65 U.
KD
KD
DTG 42 U.
KD
CG 9 U.
0
Petroflow Neurstrom 1-4H
100

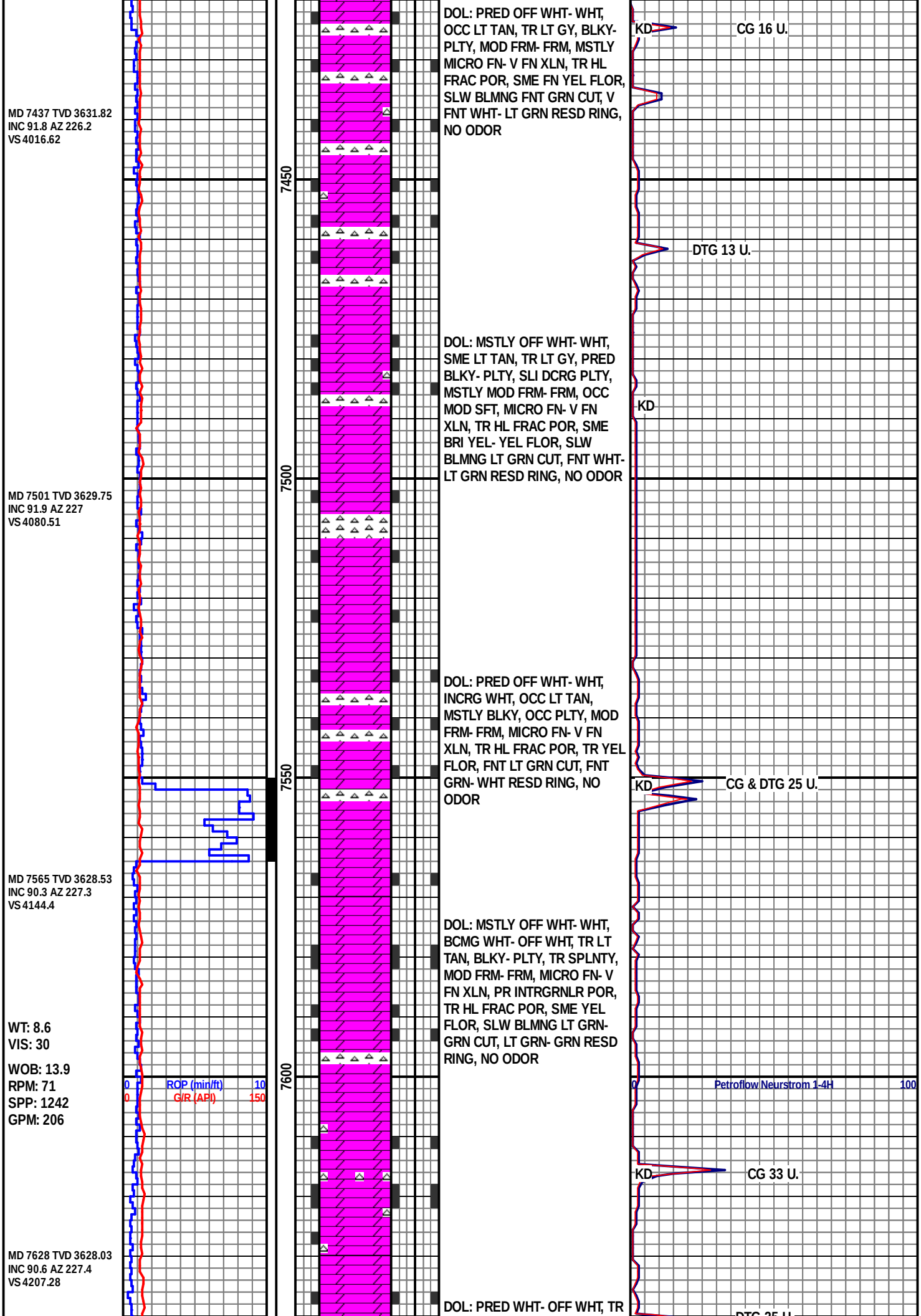

MD 6360 TVD 3636.47
INC 89.3 AZ 233
VS 2949.3
MW: 8.6
WOB: 17.0
RPM: 64
SPP: 1307
GPM: 206
MD 6423 TVD 3636.8
INC 90.1 AZ 233.6
VS 3011.45
MD 6485 TVD 3636.36
INC 90.7 AZ 233.6
VS 3072.55
0
ROP (min/ft)
10
0
G/R (API)
150
6350
6400
6450
6500
DOL: MSTLY OFF WHT- WHT, INCRG LT TAN THRU OUT, PRED MOD FRM- FRM, OCC MOD SFT, MSTLY MICRO FN XLN, SCAT V FN XLN, TR Y6EL-BRI YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: PRED OFF WHT- LT TAN, INCRG LT TAN, SCAT WHT, BLKY- PLTY, MOD FRM, SCAT FRM, MICRO FN- V FN XLN, TR HL FRAC POR, TR HC STN, SME BRI YEL- YEL FLOR, MLKY WHT- LT BLU FLASH CUT, WHT RESD RING, NO ODOR
DOL: MSTLY LT TAN- OFF WHT, ABUND WHT, BLKY- PLTY, MOD FRM- FRM, MICRO FN- V FN XLN, TR HL FRAC POR, PR INTRGRNLR POR, OCC YEL-BRI YEL FLOR, MLKY WHT-FNT LT BLU FLASH CUT, WHT RESD RING, NO ODOR
DOL: LT TAN- OFF WHT, SCAT WHT, BLKY- PLTY, MOD FRM-FRM, MICRO FN- V FN XLN, TR HL FRAC POR, PR INTRGRNLR POR, TR HC STN, OCC YEL-BRI YEL FLOR, MLKY WHT-FNT LT BLU FLASH CUT, WHT RESD RING, NO ODOR
KD
DTG 11 U.
0
Petroflow Neurstrom 1-4H
100
KD
DTG 21 U.
KD
KD
TRIP & CG 54 U.

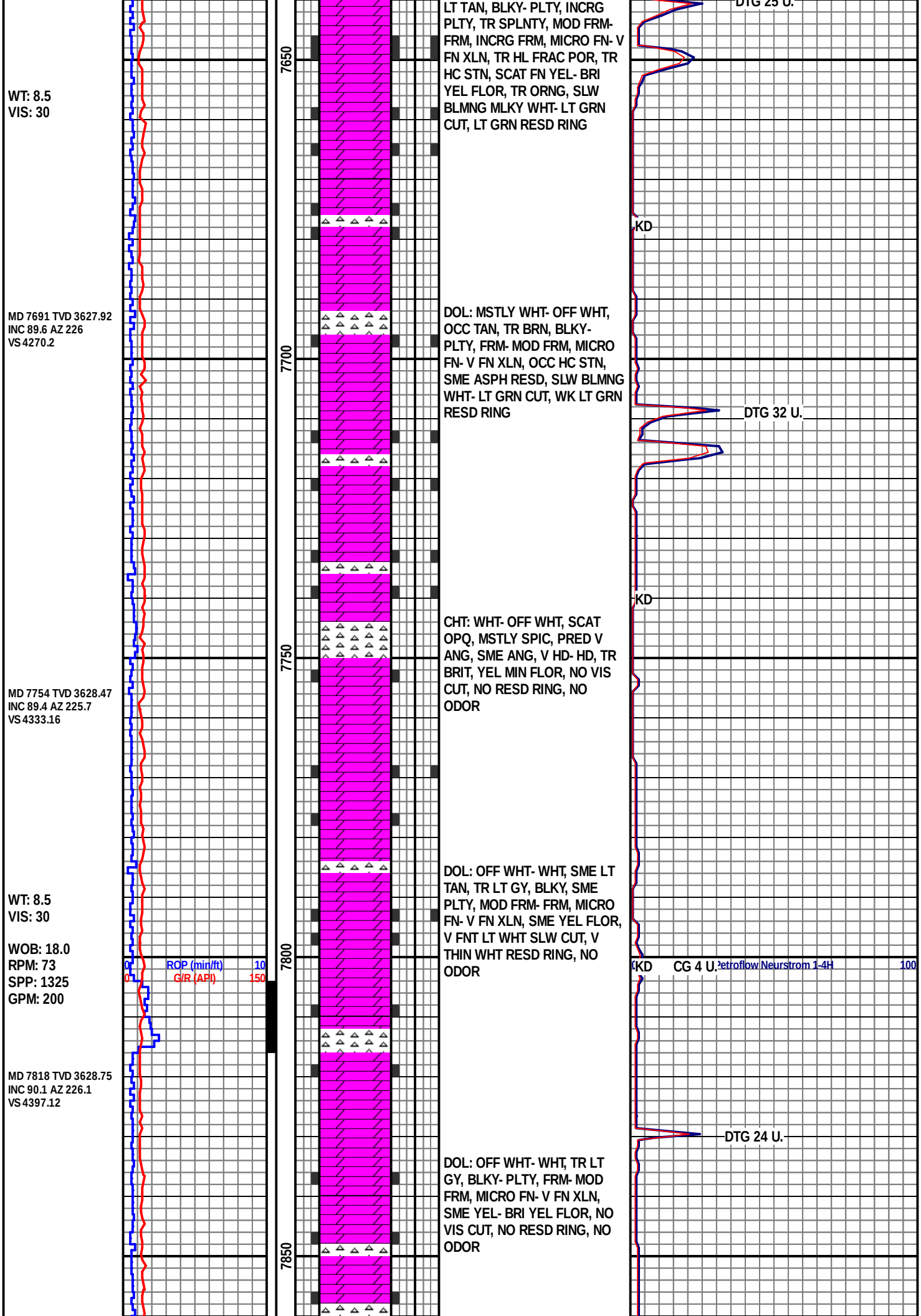

MD 6549 TVD 3636.2
INC 89.6 AZ 232.8
VS 3135.71
WOB: 12.1
RPM: 61
SPP: 1454
GPM: 90
ROP (min/ft)
G/R (API)
0
10
150
6550
6600
6650
6700
6750
DOL: PREDF LT TAN- OFF WHT, SCAT WHT THRU OUT, TR LT GY, MSTLY BLKY- PLTY, TR SPLNTY, MOD FRM- FRM, MSTLY MICRO FN- V FN XLN, OCC HL FRAC POR, SME BRI YEL- YEL FLOR, NO VIS CUT, N/S, NO ODOR
DTG 25 U.
KD
0
Petroflow Neurstrom 1-4H
100
MD 6613 TVD 3636.2
INC 90.4 AZ 233.8
VS 3198.84
WT: 8.6
VIS: 27
DOL: OFF WHT- LT TAN, SCAT WHT THRU OUT, INCRG OFF WHT, BLKY, TR PLTY, MOD FRM, OCC MOD SFT, MICRO FN- V FN XLN, TR CRYPTXLN, TR HL FRAC POR, PR INTRGRNLR POR, TR ASPH RESD, DCRG OCC YEL- BRI YEL FLOR, V FNT WHT/ TRANSLU CUT, V THIN WHT RESD RING, NO ODOR
DTG 30 U.
KD
MD 6676 TVD 3635.76
INC 90.4 AZ 233.8
VS 3260.9
DOL: OFF WHT- WHT, SCAT LT TAN, TR LT GY, MSTLY BLKY, SME PLTY, MOD FRM- MOD SFT, SCAT FRM, MICRO FN- V FN XLN, TR FREE XLN, TR HL FRAC POR, PR INTRGRNLR POR, TR YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DTG 20 U.
KD
CHT: WHT- OFF WHT, V ANG- ANG, TR SUB ANG, V HD- HD, TR BRIT, TR HL FRAC POR, TR ASPH RESD, TR YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
MD 6740 TVD 3635.31
INC 90.4 AZ 232.3
VS 3324.08
DTG 28 U.

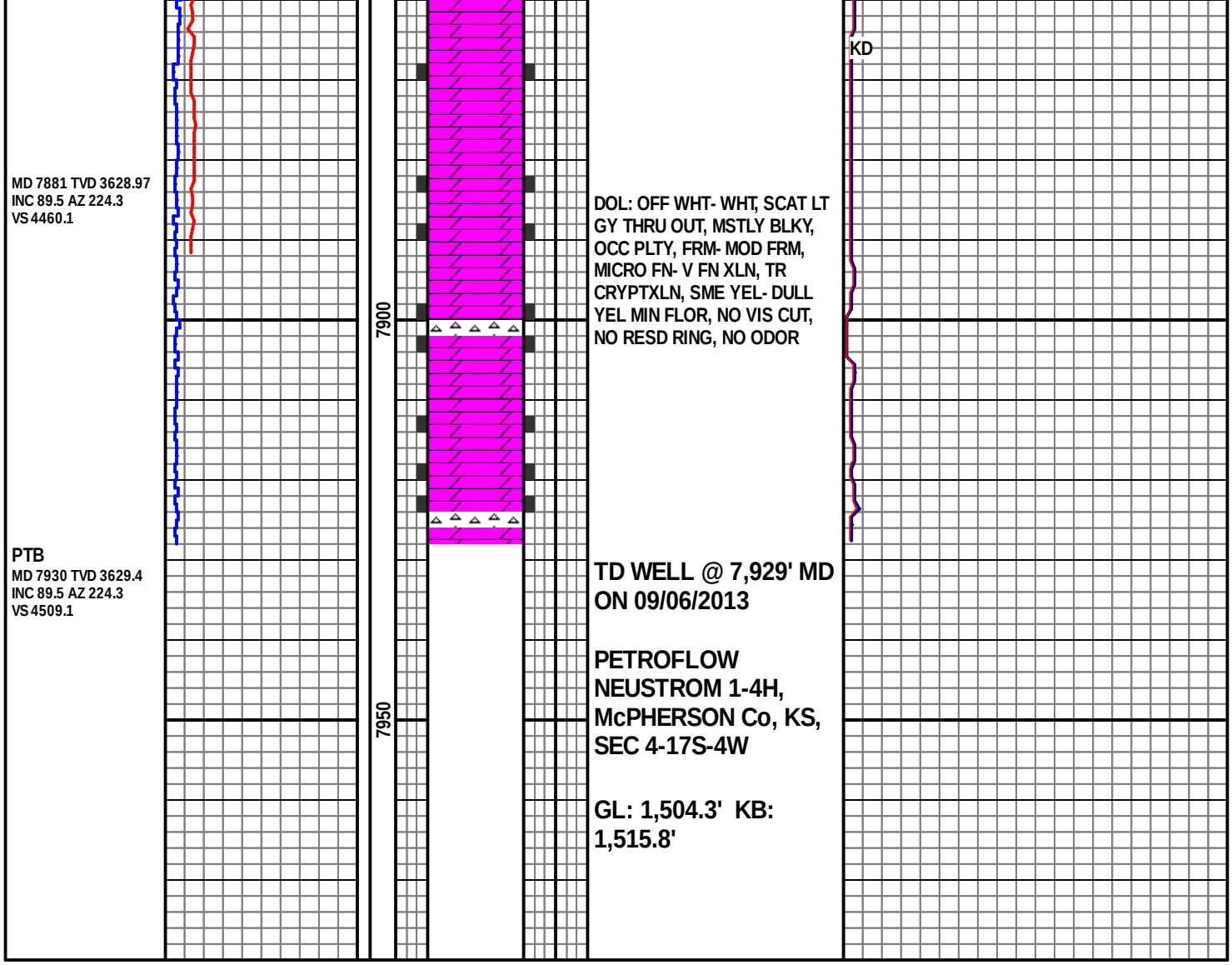

WOB: 13.4
RPM: 61
SPP: 1308
GPM: 197
MD 6803 TVD 3634.7
INC 90.7 AZ 232.1
VS 3386.41
WT: 8.8
MD 6867 TVD 3634.31
INC 90 AZ 232.5
VS 3449.72
WT: 8.8
VIS: 29
MD 6930 TVD 3633.98
INC 90.6 AZ 233
VS 3511.97
0
ROP (min/ft)
10
0
G/R (API)
150
6800
6850
6900
6950
DOL: OFF WHT- WHT, ABUND LT TAN, BLKY, SME PLTY, MOD FRM- MOD SFT, MICRO FN- V FN XLN, TR HL FRAC POR, PR INTRGRNLR POR, OCC YEL-BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: PRED OFF WHT- WHT, SME LT TAN, TR LT GY, MSTLY BLKY, TR PLTY, FRM- MOD FRM, TR MOD HD, MICRO FN- V FN XLN, TR CRYPTXLN, TR HL FRAC POR, PR INTRGRNLR POR, TR YEL- DULL YEL FLOR, V FMT WHT- LT GRN SLW CUT, V FNT WHT- LT GRN RESD RING, NO ODOR
DOL: MSTLY OFF WHT- WHT, INCRG LT TAN, TR LT GY, BLKY- PLTY, FRM- MOD FRM, MICRO FN- V FN XLN, TR PP VUG POR, PR INTRGRNLR POR, TR YEL- DULL YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: PRED OFF WHT- LT TAN, INCRG LT TAN, ABUND WHT DCRG, TR LT GY, BLKY, TR PLTY, FRM- MOD FRM, INCRG MOD FRM, MICRO FN- V FN XLN, PR INTRGRNLR POR, TR HL FRAC POR, TR DULL YEL-YEL FLOR, NO VIS CUT, NO
KD
KD
KD
KD
0
Petroflow Neurstrom 1-4H
100
DTG 23 U.
DTG 19 U.
DTG 26 U.


RESD RING, NO ODOR
MD 6993 TVD 3633.93
INC 89.5 AZ 231.2
VS 3574.31
0 ROP (min/ft) 10
0 G/R (API) 150
7000
Petroflow Neurstrom 1-4H
0
100
WOB: 19.0
RPM: 20
SPP: 1129
GPM: 89
DTG 12 U.
WT: 8.5
DOL: MSTLY LT TAN- OFF WHT, SCAT WHT, OCC LT GY, BLKY, SME PLTY, FRM- MOD FRM, MICRO FN- V FN XLN, PR INTRGRNLR POR, TR DULL YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
KD
7050
MD 7057 TVD 3634.1
INC 90.2 AZ 230.5
VS 3637.84
DTG 12 U.
DOL: PRED LT TAN, SCAT OFF WHT- WHT THRU OUT, TR LT GY, SCAT SUCRO TXT THRU OUT, BLKY, SCAT PLTY, MOD FRM- MOD SFT, SCAT FRM THRU OUT, MICRO FN XLN, OCC V FN XLN, OCC HL FRAC POR, TR PP VUG POR, OCC BRI YEL- YEL FLOR, NO VIS CUT, N/S
WT: 8.7
7100
KD
MD 7120 TVD 3633.99
INC 90 AZ 231.2
VS 3700.37
DTG 12 U.
DOL: MSTLY LT TAN- OFF WHT, INCRG OFF WHT, SCAT WHT THRU OUT, TR LT GY DCRG, MSTLY BLKY, MOD FRM- MOD SFT, TR FRM, MICRO FN- V FN XLN, SCAT HL FRAC POR, PR-FR INTRGRNLR POR, SCAT MICRO FN BRI YEL FLOR THRU OUT, NO ODOR, N/S
7150
09/06/2013
KD
WT: 8.6
MD 7184 TVD 3634.1
INC 89.8 AZ 227.8
VS 3764.06
WOB: 18.1
RPM: 60
DTG 16 U.
DOL: PRED LT TAN- OFF WHT, BCMG OFF WHT- LT TAN, OCC WHT, BLKY, MOD FRM- MOD SFT, OCC FRM, MICRO FN- V
00


SPP: 1439
GPM: 202
ROP (min/ft)
G/R (API)
0
10
150
FN XLN, SCAT CRYPTXLN, SME HL FRAC POR, TR FREE CALCITE, SCAT MICRO FN YEL- BRI YEL FLOR, LT GRN/TRANSLU FLASH CUT, SPTTD LT GRN RESD RING, NO ODOR
Petroflow Neurstrom 1-4H
100
KD
MD 7247 TVD 3634.59
INC 89.3 AZ 227.2
VS 3826.93
7250
DOL: MSTLY OFF WHT- LT TAN, SCAT WHT THRU OUT, BLKY, OCC PLTY, PRED MOD FRM- MOD SFT, DCRG MOD SFT, INCRG FRM, MICRO FN- V FN XLN, SCAT V FN YEL FLOR, FNT WHT CUT, V LT GRN RESD RING
DTG 19 U.
KD
7300
MD 7311 TVD 3634.7
INC 90.5 AZ 227.6
VS 3890.81
DOL: OFF WHT- WHT, SCAT LT TAN THRU OUT, BLKY, OCC PLTY, MOD FRM- FRM, INCRG FRM, OCC MOD SFT, MICRO FN- V FN XLN, TR HL FRAC POR, PR INTRGRNLR POR, SCAT V FN YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
7350
KD
CG & DTG 30 U.
WT: 8.6
VIS: 29
MD 7374 TVD 3633.61
INC 91.5 AZ 226.6
VS 3953.7
DOL: MSTLY OFF WHT- WHT, SCAT LT TAN THRU OUT, TR LT GY, BLKY- PLTY, MOD FRM- FRM, SCAT MOD SFT, MICRO FN- V FN XLN, TR HL FRAC POR, SME BRI YEL- YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
WOB: 18.2
RPM: 62
SPP: 1337
GPM: 207
7400
ROP (min/ft)
G/R (API)
0
10
150
Petroflow Ne
DTG 32 U.
100
MD 7406 TVD 3632.74
INC 91.6 AZ 226
VS 3985.66


MD 7437 TVD 3631.82
INC 91.8 AZ 226.2
VS 4016.62
MD 7501 TVD 3629.75
INC 91.9 AZ 227
VS 4080.51
MD 7565 TVD 3628.53
INC 90.3 AZ 227.3
VS 4144.4
MD 7628 TVD 3628.03
INC 90.6 AZ 227.4
VS 4207.28
WT: 8.6
VIS: 30
WOB: 13.9
RPM: 71
SPP: 1242
GPM: 206
0
ROP (min/ft)
10
0
G/R (API)
150
7450
7500
7550
7600
DOL: PRED OFF WHT- WHT, OCC LT TAN, TR LT GY, BLKY- PLTY, MOD FRM- FRM, MSTLY MICRO FN- V FN XLN, TR HL FRAC POR, SME FN YEL FLOR, SLW BLMNG FNT GRN CUT, V FNT WHT- LT GRN RESD RING, NO ODOR
DOL: MSTLY OFF WHT- WHT, SME LT TAN, TR LT GY, PRED BLKY- PLTY, SLI DCRG PLTY, MSTLY MOD FRM- FRM, OCC MOD SFT, MICRO FN- V FN XLN, TR HL FRAC POR, SME BRI YEL- YEL FLOR, SLW BLMNG LT GRN CUT, FNT WHT- LT GRN RESD RING, NO ODOR
DOL: PRED OFF WHT- WHT, INCRG WHT, OCC LT TAN, MSTLY BLKY, OCC PLTY, MOD FRM- FRM, MICRO FN- V FN XLN, TR HL FRAC POR, TR YEL FLOR, FNT LT GRN CUT, FNT GRN- WHT RESD RING, NO ODOR
DOL: MSTLY OFF WHT- WHT, BCMG WHT- OFF WHT, TR LT TAN, BLKY- PLTY, TR SPLNTY, MOD FRM- FRM, MICRO FN- V FN XLN, PR INTRGRNLR POR, TR HL FRAC POR, SME YEL FLOR, SLW BLMNG LT GRN- GRN CUT, LT GRN- GRN RESD RING, NO ODOR
DOL: PRED WHT- OFF WHT, TR
KD
CG 16 U.
DTG 13 U.
KD
KD
CG & DTG 25 U.
0
Petroflow Neurstrom 1-4H
100
KD
CG 33 U.


WT: 8.5
VIS: 30
MD 7691 TVD 3627.92
INC 89.6 AZ 226
VS 4270.2
MD 7754 TVD 3628.47
INC 89.4 AZ 225.7
VS 4333.16
WT: 8.5
VIS: 30
WOB: 18.0
RPM: 73
SPP: 1325
GPM: 200
MD 7818 TVD 3628.75
INC 90.1 AZ 226.1
VS 4397.12
7650
7700
7750
7800
7850
ROP (min/ft)
G/R (API)
0
10
0
150
LT TAN, BLKY- PLTY, INCRG PLTY, TR SPLNTY, MOD FRM- FRM, INCRG FRM, MICRO FN- V FN XLN, TR HL FRAC POR, TR HC STN, SCAT FN YEL- BRI YEL FLOR, TR ORNG, SLW BLMNG MLKY WHT- LT GRN CUT, LT GRN RESD RING
DOL: MSTLY WHT- OFF WHT, OCC TAN, TR BRN, BLKY- PLTY, FRM- MOD FRM, MICRO FN- V FN XLN, OCC HC STN, SME ASPH RESD, SLW BLMNG WHT- LT GRN CUT, WK LT GRN RESD RING
CHT: WHT- OFF WHT, SCAT OPQ, MSTLY SPIC, PRED V ANG, SME ANG, V HD- HD, TR BRIT, YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DOL: OFF WHT- WHT, SME LT TAN, TR LT GY, BLKY, SME PLTY, MOD FRM- FRM, MICRO FN- V FN XLN, SME YEL FLOR, V FNT LT WHT SLW CUT, V THIN WHT RESD RING, NO ODOR
DOL: OFF WHT- WHT, TR LT GY, BLKY- PLTY, FRM- MOD FRM, MICRO FN- V FN XLN, SME YEL- BRI YEL FLOR, NO VIS CUT, NO RESD RING, NO ODOR
DTG 25 U.
KD
DTG 32 U.
KD
KD
CG 4 U.
Petroflow Neurstrom 1-4H
100
DTG 24 U.


MD 7881 TVD 3628.97
INC 89.5 AZ 224.3
VS 4460.1
PTB
MD 7930 TVD 3629.4
INC 89.5 AZ 224.3
VS 4509.1
7900
7950
KD
DOL: OFF WHT- WHT, SCAT LT GY THRU OUT, MSTLY BLKY, OCC PLTY, FRM- MOD FRM, MICRO FN- V FN XLN, TR CRYPTXLN, SME YEL- DULL YEL MIN FLOR, NO VIS CUT, NO RESD RING, NO ODOR
TD WELL @ 7,929' MD ON 09/06/2013
PETROFLOW NEUSTROM 1-4H, McPHERSON Co, KS, SEC 4-17S-4W
GL: 1,504.3' KB: 1,515.8'

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

July 02, 2014

Kim Reece
Petroflow Energy Corporation
525 S. MAIN ST., STE 1120
TULSA, OK 74103

Re: ACO-1
API 15-113-21359-01-00
Neustrom 1-4H
NE/4 Sec.04-17S-04W
McPherson County, Kansas

Dear Kim Reece:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 8/23/2013 and the ACO-1 was received on July 02, 2014 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department