Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

OCD Hobbs
HOBBS OCD
FEB 08 2019
RECEIVED

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. NMNM136226
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA/Agreement, Name and/or No.
	8. Well Name and No. LESLIE FED COM 217H
2. Name of Operator MATADOR PRODUCTION COMPANY Contact: TAMMY R LINK E-Mail: tlink@matadorresources.com	9. API Well No. 30-025-44547-00-X1
3a. Address 5400 LBJ FREEWAY SUITE 1500 DALLAS, TX 75240 3b. Phone No. (include area code) Ph: 575-627-2465	10. Field and Pool or Exploratory Area DOGIE DRAW-DELAWARE
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Sec 17 T25S R35E SWSE 300FSL 2085FEL 32.123959 N Lat, 103.387756 W Lon	11. County or Parish, State LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Drilling Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

BLM Bond No:NMB001079
Surety Bond No:RLB0015172

See attached Direction Survey and Logs

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #451370 verified by the BLM Well Information System
For MATADOR PRODUCTION COMPANY, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 01/29/2019 (19PP0853SE)

Name *(Printed/Typed)* TAMMY R LINK — Title PRODUCTION ANALYST

Signature (Electronic Submission) — Date 01/22/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

ACCEPTED FOR RECORD

Approved By — Title — Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office — JAN 29 2019 /s/ Jonathon Shepard

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Company: Matador Resources
Site: Leslie Fed Com
Well: Leslie Fed Com #217H
Project: Lea County, New Mexico (NAD 27)
Rig: Patterson 282

MS Directional

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
12655.00	75.00	1.80	12421.52	210.26	-10.83	210.35	0.00	Last Survey
12708.00	82.00	1.80	12432.08	262.14	-9.20	262.21	51.90	Projection to Bit - 12708.00' MD
12765.00	82.00	1.80	12440.01	318.55	-7.43	318.61	108.35	Begin 6.00°/100' Build & Turn
12947.92	91.00	355.50	12451.18	500.80	-11.77	500.89	290.74	Begin 91.00° Lateral; Begin 2.00°/100' Turn
13147.34	91.00	359.49	12447.70	699.96	-20.48	700.12	490.13	Hold 359.49° Azm
17186.58	91.00	359.49	12377.28	4738.43	-56.50	4738.75	4528.76	PBHL

Azimuths to Grid North
True North: -0.50°
Magnetic North: 6.31°

Magnetic Field
Strength: 47811.8nT
Dip Angle: 59.95°
Date: 8/15/2018
Model: BGGM2018

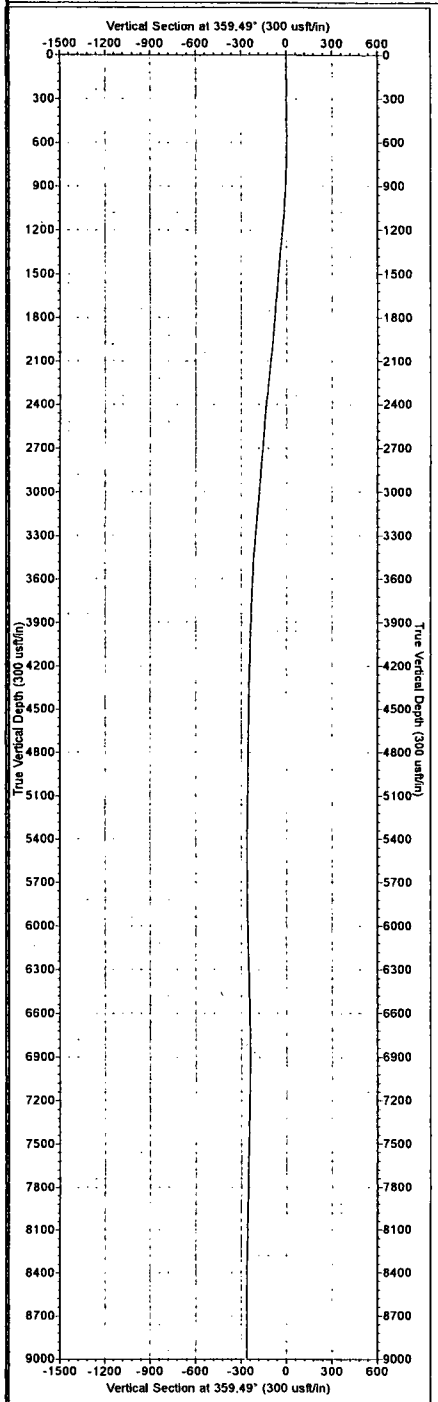
WELL DETAILS: Leslie Fed Com #217H

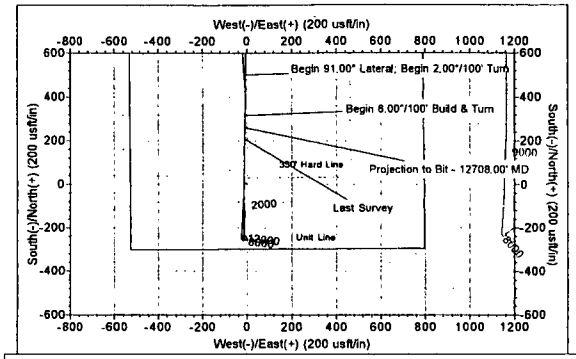
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	410056.43	792848.60	32° 7' 25.799 N	103° 23' 14.602 W

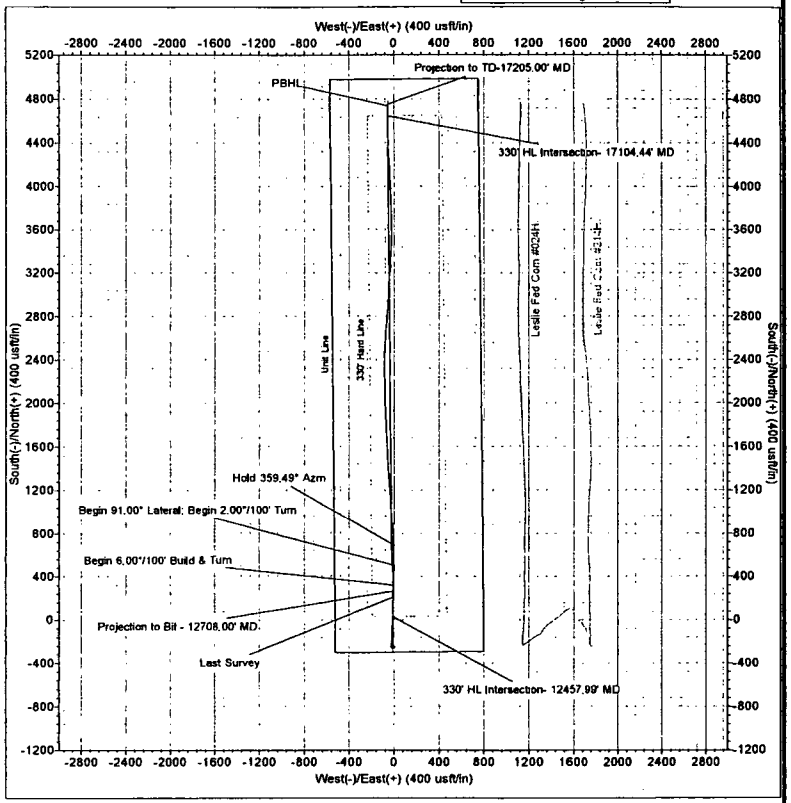
3279.00

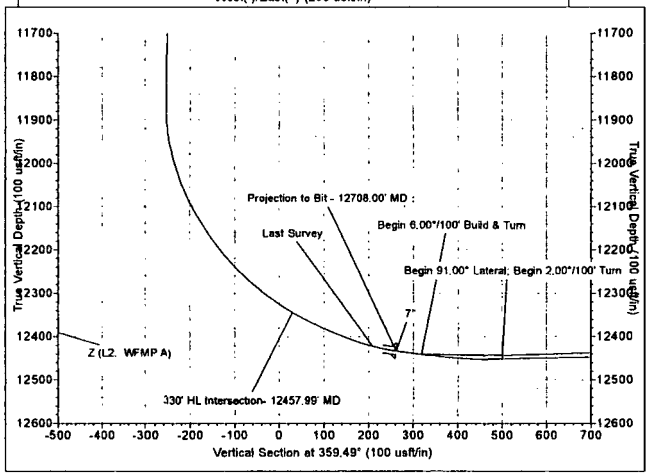
US State Plane 1927 (Exact solution)
New Mexico East 3001

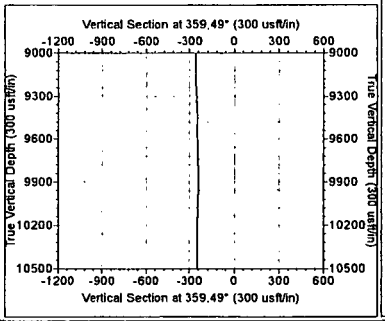
Created By: SRA
Date: 10:00, August 27 2018
Plan: Design #3

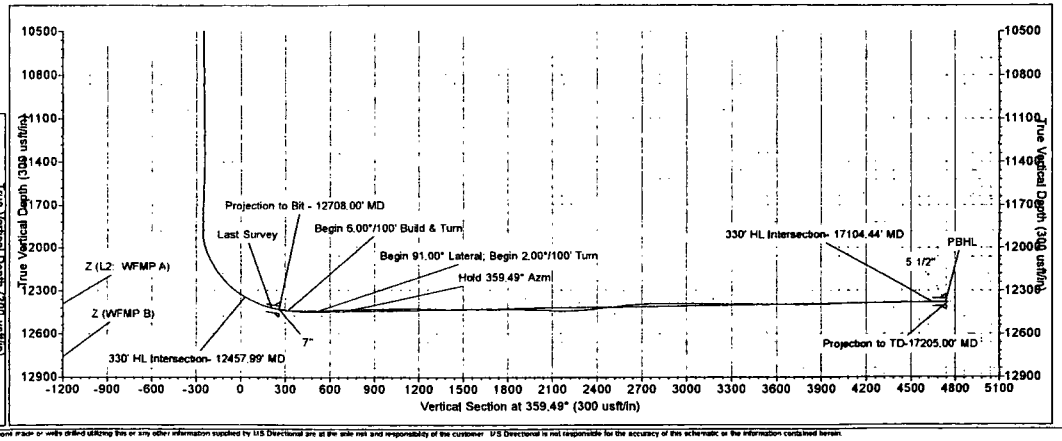












This customer should only rely on this document after independently verifying all outline, targets, coordinates, lease and hard lines represented. Any directional drilling or wells drilled utilizing this or any other information supplied by MS Directional are at the sole risk and responsibility of the customer. MS Directional is not responsible for the accuracy of this schematic or the information contained herein.

Matador Resources

Lea County, New Mexico (NAD 27)
Leslie Fed Com
Leslie Fed Com #217H

Wellbore #1

Design: Surveys

Standard Survey Report

27 August, 2018

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Leslie Fed Com #217H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3307.50usft (Patterson 282)
Site:	Leslie Fed Com	**MD Reference:**	WELL @ 3307.50usft (Patterson 282)
Well:	Leslie Fed Com #217H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys	**Database:**	EDM 5000.1 Conroe DB

Project Lea County, New Mexico (NAD 27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Leslie Fed Com

Site Position:		**Northing:**	0.00 usft	**Latitude:**	30° 59' 24.512 N
From:	Map	**Easting:**	0.00 usft	**Longitude:**	105° 55' 44.137 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Leslie Fed Com #217H

Well Position	**+N/-S**	0.00 usft	**Northing:**	410,058.43 usft	**Latitude:**	32° 7' 25.799 N
	+E/-W	0.00 usft	**Easting:**	792,848.60 usft	**Longitude:**	103° 23' 14.602 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,279.00 usft
Grid Convergence:		0.503 °				

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2018	8/15/2018	6.817	59.947	47,811.83

Design Surveys

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.49

Survey Program **Date** 8/27/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
141.00	17,205.00	MS MWD (Wellbore #1)	MWD	OWSG MWD - Standard

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141.00	0.60	10.50	141.00	0.73	0.13	0.72	0.43	0.43	0.00
322.00	1.20	299.80	321.98	2.60	-1.34	2.61	0.64	0.33	-39.06
474.00	1.20	302.10	473.95	4.24	-4.07	4.27	0.03	0.00	1.51
566.00	2.00	268.30	565.91	4.70	-6.49	4.76	1.31	0.87	-36.74
658.00	1.90	235.60	657.86	3.79	-9.35	3.87	1.20	-0.11	-35.54
748.00	2.10	221.70	747.81	1.72	-11.68	1.82	0.58	0.22	-15.44
839.00	2.50	198.90	838.73	-1.41	-13.43	-1.29	1.09	0.44	-25.05
931.00	3.30	183.50	930.62	-5.95	-14.24	-5.82	1.21	0.87	-16.74
1,031.00	3.40	180.80	1,030.45	-11.78	-14.46	-11.66	0.19	0.10	-2.70

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Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys	**Database:**	EDM 5000.1 Conroe 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)
1,219.00	5.30	181.30	1,217.90	-26.04	-14.73	-25.91	1.01	1.01	0.27
1,408.00	4.60	178.50	1,406.19	-42.34	-14.73	-42.21	0.39	-0.37	-1.48
1,596.00	4.70	177.30	1,593.57	-57.57	-14.17	-57.45	0.07	0.05	-0.64
1,784.00	4.20	178.70	1,781.00	-72.15	-13.66	-72.03	0.27	-0.27	0.74
1,973.00	5.70	175.40	1,969.29	-88.43	-12.75	-88.31	0.81	0.79	-1.75
2,161.00	5.60	175.00	2,156.38	-106.87	-11.20	-106.77	0.06	-0.05	-0.21
2,350.00	5.20	180.20	2,344.54	-124.62	-10.42	-124.52	0.33	-0.21	2.75
2,538.00	4.90	180.20	2,531.81	-141.17	-10.48	-141.07	0.16	-0.16	0.00
2,726.00	4.50	183.10	2,719.18	-156.56	-10.91	-156.46	0.25	-0.21	1.54
2,914.00	4.10	181.60	2,906.65	-170.65	-11.49	-170.54	0.22	-0.21	-0.80
3,105.00	4.70	177.40	3,097.09	-185.29	-11.33	-185.18	0.36	0.31	-2.20
3,293.00	4.70	183.20	3,284.46	-200.67	-11.41	-200.56	0.25	0.00	3.09
3,482.00	3.90	183.40	3,472.92	-214.82	-12.22	-214.70	0.42	-0.42	0.11
3,671.00	3.10	188.10	3,661.57	-226.30	-13.33	-226.17	0.45	-0.42	2.49
3,860.00	2.30	212.90	3,850.36	-234.54	-16.11	-234.39	0.74	-0.42	13.12
4,050.00	1.70	190.20	4,040.25	-240.52	-18.68	-240.34	0.52	-0.32	-11.95
4,238.00	1.30	178.20	4,228.19	-245.39	-19.10	-245.21	0.27	-0.21	-6.38
4,425.00	1.00	154.20	4,415.15	-248.98	-18.33	-248.81	0.30	-0.16	-12.83
4,614.00	1.10	125.70	4,604.12	-251.52	-16.13	-251.37	0.28	0.05	-15.08
4,802.00	1.30	111.40	4,792.08	-253.36	-12.68	-253.23	0.19	0.11	-7.61
4,991.00	1.80	121.30	4,981.01	-255.68	-8.15	-255.60	0.30	0.26	5.24
5,181.00	1.10	112.20	5,170.95	-257.92	-3.91	-257.87	0.39	-0.37	-4.79
5,370.00	0.90	112.40	5,359.92	-259.17	-0.86	-259.15	0.11	-0.11	0.11
5,478.00	0.80	114.70	5,467.91	-259.81	0.61	-259.80	0.10	-0.09	2.13
5,656.00	0.70	110.50	5,645.89	-260.71	2.76	-260.72	0.06	-0.06	-2.36
5,843.00	1.40	333.80	5,832.87	-259.06	2.82	-259.07	1.05	0.37	-73.10
6,031.00	1.40	339.50	6,020.82	-254.85	1.00	-254.85	0.07	0.00	3.03
6,220.00	1.40	335.10	6,209.76	-250.59	-0.78	-250.57	0.06	0.00	-2.33
6,410.00	1.50	334.00	6,399.70	-246.25	-2.85	-246.21	0.05	0.05	-0.58
6,600.00	1.50	345.80	6,589.64	-241.60	-4.55	-241.55	0.16	0.00	6.21
6,789.00	1.40	289.10	6,778.59	-238.45	-7.34	-238.38	0.73	-0.05	-30.00
6,978.00	1.40	241.70	6,967.54	-238.79	-11.55	-238.68	0.60	0.00	-25.08
7,167.00	1.10	236.60	7,156.49	-240.88	-15.10	-240.74	0.17	-0.16	-2.70
7,356.00	1.20	208.60	7,345.45	-243.62	-17.56	-243.45	0.30	0.05	-14.81
7,544.00	1.00	197.50	7,533.42	-246.91	-19.00	-246.73	0.15	-0.11	-5.90
7,733.00	1.20	202.20	7,722.38	-250.32	-20.24	-250.13	0.12	0.11	2.49
7,921.00	0.60	189.10	7,910.36	-253.11	-21.14	-252.91	0.34	-0.32	-6.97
8,110.00	0.90	185.00	8,099.34	-255.57	-21.43	-255.37	0.16	0.16	-2.17
8,298.00	0.80	174.00	8,287.32	-258.34	-21.42	-258.14	0.10	-0.05	-5.85
8,486.00	0.70	139.10	8,475.31	-260.52	-20.53	-260.32	0.24	-0.05	-18.56
8,675.00	0.90	75.80	8,664.29	-261.03	-18.33	-260.85	0.45	0.11	-33.49
8,864.00	0.90	79.10	8,853.27	-260.38	-15.44	-260.23	0.03	0.00	1.75
9,052.00	0.90	44.60	9,041.25	-259.05	-12.95	-258.92	0.28	0.00	-18.35

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Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys	**Database:**	EDM 5000.1 Conroe 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)
9,242.00	1.50	3.50	9,231.21	-255.51	-11.75	-255.39	0.53	0.32	-21.63
9,430.00	2.20	350.20	9,419.11	-249.49	-12.22	-249.37	0.43	0.37	-7.07
9,618.00	1.10	335.50	9,607.03	-244.30	-13.58	-244.16	0.62	-0.59	-7.82
9,807.00	1.40	314.50	9,795.99	-241.03	-15.98	-240.87	0.29	0.16	-11.11
9,995.00	1.40	191.90	9,983.96	-241.66	-18.09	-241.49	1.31	0.00	-65.21
10,184.00	1.70	229.10	10,172.89	-245.76	-20.68	-245.56	0.54	0.16	19.68
10,373.00	0.80	131.90	10,361.86	-248.48	-21.82	-248.27	1.04	-0.48	-51.43
10,562.00	0.80	88.80	10,550.84	-249.33	-19.52	-249.15	0.31	0.00	-22.80
10,752.00	0.80	20.70	10,740.83	-248.06	-17.73	-247.89	0.47	0.00	-35.84
10,940.00	0.60	357.40	10,928.82	-245.85	-17.31	-245.69	0.18	-0.11	-12.39
11,128.00	1.10	310.90	11,116.80	-243.68	-18.71	-243.51	0.43	0.27	-24.73
11,316.00	1.50	274.60	11,304.75	-242.31	-22.53	-242.10	0.48	0.21	-19.31
11,504.00	2.00	204.30	11,492.68	-245.10	-26.33	-244.85	1.09	0.27	-37.39
11,599.00	1.50	174.80	11,587.64	-247.85	-26.90	-247.60	1.07	-0.53	-31.05
11,694.00	1.70	173.70	11,682.60	-250.49	-26.64	-250.24	0.21	0.21	-1.16
11,782.00	1.80	175.60	11,770.56	-253.16	-26.39	-252.92	0.13	0.11	2.16
11,823.00	1.90	177.60	11,811.54	-254.48	-26.31	-254.24	0.29	0.24	4.88
11,917.00	3.90	0.20	11,905.49	-252.84	-26.23	-252.60	6.17	2.13	-188.72
11,964.00	11.00	2.40	11,952.06	-246.76	-26.04	-246.51	15.12	15.11	4.68
12,011.00	16.00	7.30	11,997.75	-235.84	-25.03	-235.61	10.90	10.64	10.43
12,058.00	20.30	7.50	12,042.40	-221.33	-23.14	-221.11	9.15	9.15	0.43
12,105.00	25.70	4.20	12,085.65	-203.07	-21.33	-202.87	11.81	11.49	-7.02
12,152.00	30.00	359.80	12,127.20	-181.14	-20.62	-180.95	10.13	9.15	-9.36
12,199.00	33.70	1.40	12,167.12	-156.35	-20.34	-156.16	8.07	7.87	3.40
12,246.00	37.60	3.90	12,205.30	-129.00	-19.05	-128.82	8.86	8.30	5.32
12,293.00	43.40	3.30	12,241.03	-98.54	-17.14	-98.39	12.37	12.34	-1.28
12,340.00	48.20	1.80	12,273.78	-64.89	-15.66	-64.75	10.47	10.21	-3.19
12,387.00	52.60	1.40	12,303.74	-28.70	-14.66	-28.57	9.38	9.36	-0.85
12,434.00	56.60	1.20	12,330.96	9.59	-13.79	9.71	8.52	8.51	-0.43
12,457.99	59.00	0.78	12,343.74	29.89	-13.44	30.00	10.11	10.00	-1.74
330' HL Intersection- 12457.99' MD									
12,481.00	61.30	0.40	12,355.19	49.84	-13.23	49.96	10.11	10.00	-1.66
12,528.00	64.40	0.20	12,376.64	91.66	-13.02	91.77	6.61	6.60	-0.43
12,575.00	67.90	0.90	12,395.64	134.63	-12.60	134.74	7.57	7.45	1.49
12,622.00	71.40	1.40	12,411.98	178.68	-11.71	178.78	7.51	7.45	1.06
12,655.00	75.00	1.80	12,421.52	210.26	-10.83	210.35	10.97	10.91	1.21
12,716.00	80.90	1.20	12,434.25	269.87	-9.27	269.94	9.72	9.67	-0.98
12,763.00	86.20	2.40	12,439.52	316.53	-7.80	316.59	11.56	11.28	2.55
12,857.00	89.40	359.60	12,443.13	410.42	-6.17	410.46	4.52	3.40	-2.98
12,952.00	89.20	359.60	12,444.29	505.41	-6.83	505.46	0.21	-0.21	0.00
13,046.00	93.10	359.40	12,442.41	599.37	-7.65	599.42	4.15	4.15	-0.21
13,140.00	91.30	359.00	12,438.80	693.29	-8.96	693.34	1.96	-1.91	-0.43
13,235.00	90.40	358.20	12,437.39	788.25	-11.28	788.32	1.27	-0.95	-0.84

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Leslie Fed Com #217H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3307.50usft (Patterson 282)
Site:	Leslie Fed Com	**MD Reference:**	WELL @ 3307.50usft (Patterson 282)
Well:	Leslie Fed Com #217H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys	**Database:**	EDM 5000.1 Conroe 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)
13,329.00	91.60	355.90	12,435.75	882.10	-16.12	882.21	2.76	1.28	-2.45
13,423.00	89.80	354.60	12,434.60	975.77	-23.90	975.94	2.36	-1.91	-1.38
13,517.00	93.90	356.80	12,431.57	1,069.43	-30.95	1,069.66	4.95	4.36	2.34
13,612.00	88.60	355.80	12,429.49	1,164.17	-37.07	1,164.46	5.68	-5.58	-1.05
13,706.00	89.60	355.50	12,430.97	1,257.89	-44.20	1,258.23	1.11	1.06	-0.32
13,800.00	86.70	355.10	12,434.00	1,351.51	-51.90	1,351.92	3.11	-3.09	-0.43
13,894.00	89.30	357.40	12,437.29	1,445.24	-58.04	1,445.70	3.69	2.77	2.45
13,989.00	91.30	358.70	12,436.79	1,540.18	-61.27	1,540.66	2.51	2.11	1.37
14,084.00	89.10	356.70	12,436.46	1,635.09	-65.09	1,635.61	3.13	-2.32	-2.11
14,178.00	90.60	357.10	12,436.70	1,728.95	-70.17	1,729.51	1.65	1.60	0.43
14,273.00	90.80	358.80	12,435.54	1,823.88	-73.57	1,824.46	1.80	0.21	1.79
14,367.00	87.90	357.60	12,436.61	1,917.81	-76.52	1,918.42	3.34	-3.09	-1.28
14,461.00	88.90	357.50	12,439.23	2,011.69	-80.54	2,012.33	1.07	1.06	-0.11
14,555.00	84.30	358.80	12,444.81	2,105.45	-83.57	2,106.11	5.08	-4.89	1.38
14,649.00	93.00	359.80	12,447.02	2,199.33	-84.71	2,199.99	9.32	9.26	1.06
14,743.00	92.70	357.50	12,442.34	2,293.18	-86.92	2,293.86	2.46	-0.32	-2.45
14,838.00	98.50	2.70	12,433.07	2,387.65	-86.78	2,388.33	8.18	6.11	5.47
14,932.00	97.00	1.90	12,420.40	2,480.71	-83.04	2,481.35	1.80	-1.60	-0.85
15,027.00	96.60	2.70	12,409.15	2,574.97	-79.26	2,575.57	0.94	-0.42	0.84
15,121.00	95.40	4.90	12,399.32	2,668.24	-73.06	2,668.78	2.65	-1.28	2.34
15,215.00	91.00	6.00	12,394.07	2,761.64	-64.15	2,762.11	4.82	-4.68	1.17
15,310.00	89.10	1.70	12,393.99	2,856.40	-57.77	2,856.80	4.95	-2.00	-4.53
15,404.00	91.60	3.10	12,393.42	2,950.31	-53.84	2,950.67	3.05	2.66	1.49
15,499.00	88.50	2.50	12,393.33	3,045.18	-49.19	3,045.50	3.32	-3.26	-0.63
15,593.00	89.70	4.30	12,394.81	3,139.00	-43.62	3,139.26	2.30	1.28	1.91
15,687.00	90.10	4.30	12,394.97	3,232.74	-36.57	3,232.93	0.43	0.43	0.00
15,804.00	89.80	2.60	12,395.08	3,349.52	-29.53	3,349.65	1.48	-0.26	-1.45
15,898.00	89.80	3.80	12,395.41	3,443.37	-24.29	3,443.45	1.28	0.00	1.28
15,992.00	90.10	0.20	12,395.49	3,537.30	-21.01	3,537.34	3.84	0.32	-3.83
16,087.00	88.80	358.90	12,396.40	3,632.29	-21.75	3,632.34	1.94	-1.37	-1.37
16,181.00	86.90	358.30	12,399.93	3,726.19	-24.05	3,726.25	2.12	-2.02	-0.64
16,275.00	90.80	357.50	12,401.81	3,820.09	-27.49	3,820.18	4.24	4.15	-0.85
16,370.00	92.70	358.10	12,398.91	3,914.97	-31.13	3,915.09	2.10	2.00	0.63
16,464.00	93.40	357.80	12,393.91	4,008.77	-34.49	4,008.92	0.81	0.74	-0.32
16,559.00	92.20	357.40	12,389.27	4,103.57	-38.47	4,103.75	1.33	-1.26	-0.42
16,653.00	91.30	356.30	12,386.40	4,197.39	-43.63	4,197.61	1.51	-0.96	-1.17
16,748.00	90.70	356.50	12,384.74	4,292.18	-49.59	4,292.46	0.67	-0.63	0.21
16,842.00	92.00	359.50	12,382.52	4,386.09	-52.87	4,386.38	3.48	1.38	3.19
16,936.00	89.60	358.30	12,381.21	4,480.05	-54.68	4,480.36	2.85	-2.55	-1.28
17,031.00	90.10	359.80	12,381.46	4,575.04	-56.25	4,575.36	1.66	0.53	1.58
17,104.44	89.71	357.69	12,381.58	4,648.45	-57.86	4,648.79	2.92	-0.53	-2.87
330' HL Intersection- 17104.44' MD									
17,125.00	89.60	357.10	12,381.71	4,668.99	-58.79	4,669.33	2.92	-0.53	-2.87
17,148.00	89.50	356.90	12,381.89	4,691.96	-60.00	4,692.31	0.97	-0.43	-0.87

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Leslie Fed Com #217H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3307.50usft (Patterson 282)
Site:	Leslie Fed Com	**MD Reference:**	WELL @ 3307.50usft (Patterson 282)
Well:	Leslie Fed Com #217H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys	**Database:**	EDM 5000.1 Conroe 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)
17,205.00	89.50	356.90	12,382.39	4,748.87	-63.08	4,749.25	0.00	0.00	0.00
Projection to TD-17205.00' MD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
12,457.99	12,343.74	29.89	-13.44	330' HL Intersection- 12457.99' MD
17,104.44	12,381.58	4,648.45	-57.86	330' HL Intersection- 17104.44' MD
17,205.00	12,382.39	4,748.87	-63.08	Projection to TD-17205.00' MD

RESERVOIR GROUP

6360 West Sam Houston Pkwy N
Houston, Texas, 77041
Office: 713-466-7400 Fax: 281-653-0808
www.reservoirgroup.com

COUNTY Lea STATE NM
FIELD Wolfcamp A (Upper)
LOCATION JALL NM.
WELL Leslie Fed Com 217H
LOG TYPE 5"=100' MD
COMPANY Matador Resources
JOB NO. 1482PB1808

COMPANY **Matador Resources**
WELL **Leslie Fed Com 217H**
FIELD Wolfcamp A (Upper)
COUNTY/PARISH Lea STATE NM JOB NO. 1482PB1808
UNIT MANAGER Ruben Acevedo ENGINEER Francisco Muñiz
Alexander Caraway
GEOLOGIST Clark Collier CO. ENGINEER Blake Hermes

LOCATION
Lat: 32.1238331 N, Long: 103.3873895 W
300' FSL & 2115' FEL
Sec. 17, TWP 25-S, RGE 35-E

API SERIAL NO	SEC	TWP	RANGE
30-025-44547	17	25-S	35-E

ELEVATIONS

KB	Top Drive
DRILL FLOOR	3,307.5'
ELEVATION	3,279'
WATER DEPTH	
AIR GAP	

SPUD DATE 08/02/2018 TOTAL DEPTH 17,205MD, 12,382'TVD
LOGGING DATE: FROM 08/08/2018 TO 08/25/2018
LOGGING DEPTH: FROM 6,200' TO 17,205MD, 12,382'TVD

BORE HOLE RECORD			CASING RECORD				
SIZE	FROM	TO	SIZE	WGT.	FROM	TO	TEST
17.5"	Surface	1,000'	13.375'	54.5#	Surface	1,000'	N/A
12.25"	1,000'	5,535'	9.625"	40#	Surface	5,522'	N/A
8.75"	5,535'	12,708'	7.625"	29.7#	Surface	12,698'	15.0 EMW
6.125"	12,708'	17,205'					

REMARKS: THANK YOU FOR USING Reservoir Group
ALL DEPTHS CORRESPOND TO DRILLERS TALLY
Start Date: 8/8/2018 End Date: TBD Release Date: TBD

SERVICES PROVIDED: 2-Man Logging, Calcimetry, Digital Sample Pictures
WISE COMPUTER LOGGING SYSTEM, Dual Channel FID Chromatograph

TOTAL Gas Analyzer
1% C1 = 100 units
20% C1 = 2,000 units

DRILLING FLUID COMPANY Stellar Drilling Fluids
DRILLING FLUID TYPE WATER BASE-BRINE CUT
DRILLING CONTRACTOR Patterson RIG NAME Patterson 282
LOG SCALE 5"=100' MD LOGGING UNIT NUMBER 071L

RESERVOIR GROUP GUARANTEES THE CUSTOMER BENEFIT OF ITS BEST JUDGEMENT, BUT DOES NOT WARRANT THE ACCURACY OF THE SURFACE DATA COLLECTED NOR SUBSEQUENT INTERPRETATIONS OR RECOMMENDATIONS

SHOW VALUES
2 ZONE OF INTEREST
5 POOR SHOW, PROB. NON-PRODUCTIVE
10 FAIR SHOW, POSSIBLY PRODUCTIVE
15 GOOD SHOW, PROBABLY PRODUCTIVE

CG - CONNECTION GAS
CO - CIRCULATE OUT
CHL- CHLORIDE
DS - DIRECTIONAL SURVEY
DC - DEPTH CORRECTION
TG - TRIP GAS
G&OCM - GAS & OIL CUT MUD
GCM - GAS CUT MUD
LAT - LOGGED AFTER TRIP
LAST- LOGGED AFTER SHORT TRIP
NB - NEW BIT
ST - SHORT TRIP
NR - NO RETURNS

SYMBOLS
Fluorescence Bright
Fluorescence Dull
Fluorescence Mineral
Casing Shoe

Lithology
Sand
Shale Green
Shale Grey
Ash
Anhydrite
Limestone (Sandy)
Marl
Dolomite
Siltstone
Cement
Coal
Limestone

Modifiers
Anhydritic
Argillaceous
Calcareous
Carbonaceous
Stylolitic
Glauconite
Dolomitic
Fossiliferous
Cherty
Sandy
Marly
Micaceous
Pyritic
Conglomeratic
Dolomite Stringer

Remarks
Descriptions

Interpretive Lithology

Total Gas
GAS units 0 1000
C1u 0 1000
C2u 0 1000
C3u 0 1000

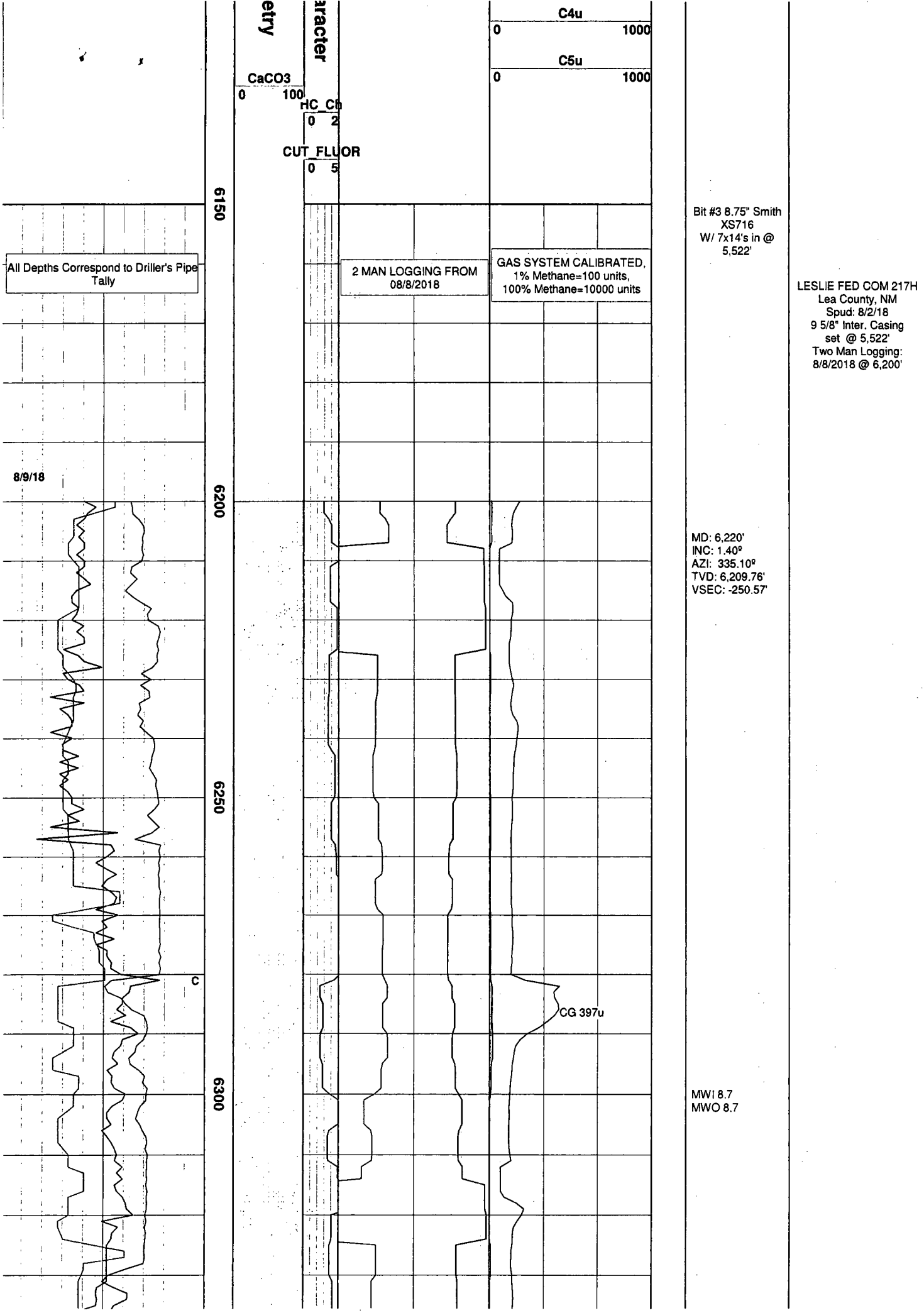
Gas Ratio
HC_Wh 1 100
HC_Bh 1 100

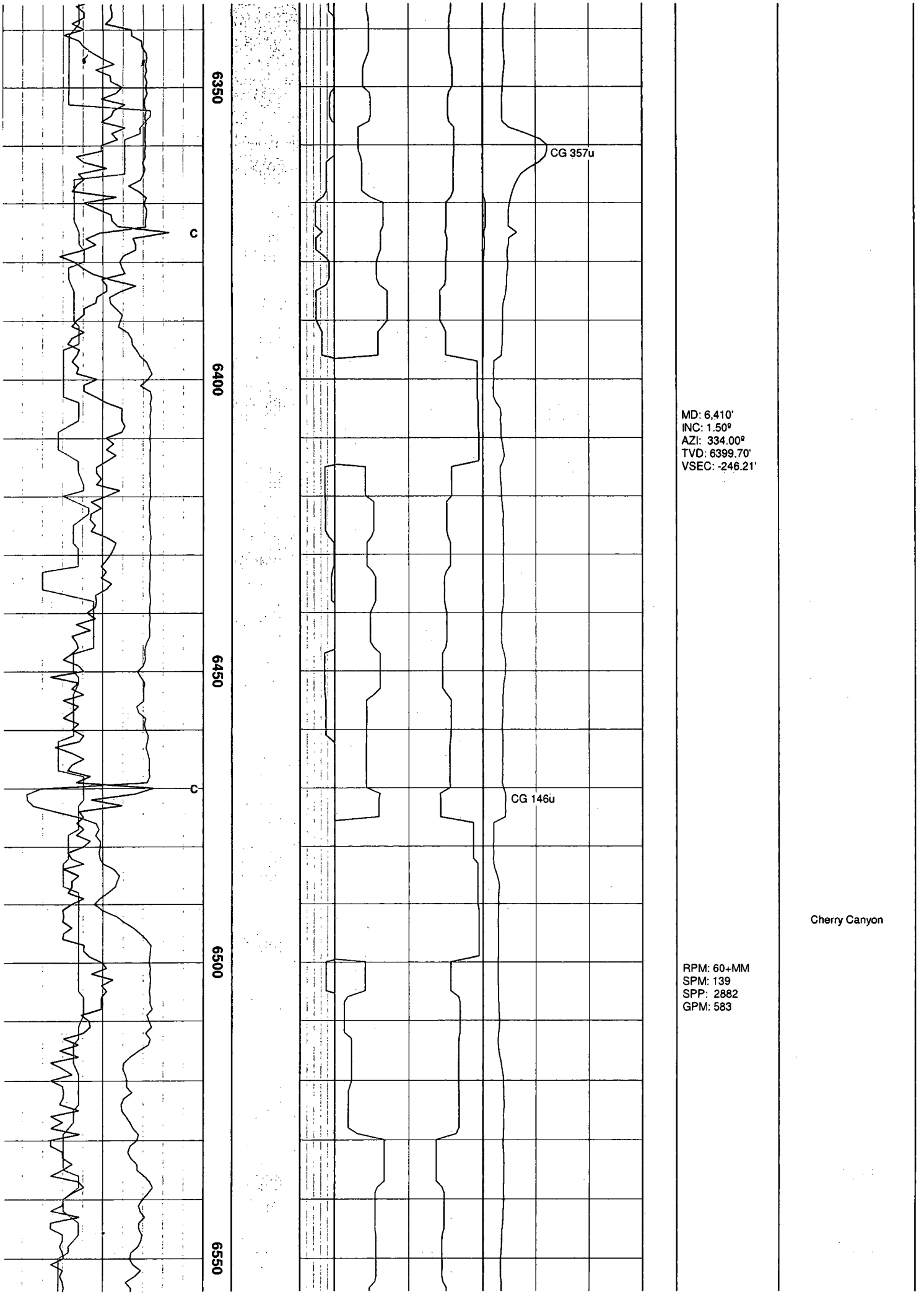
Show Values Fluor Cha

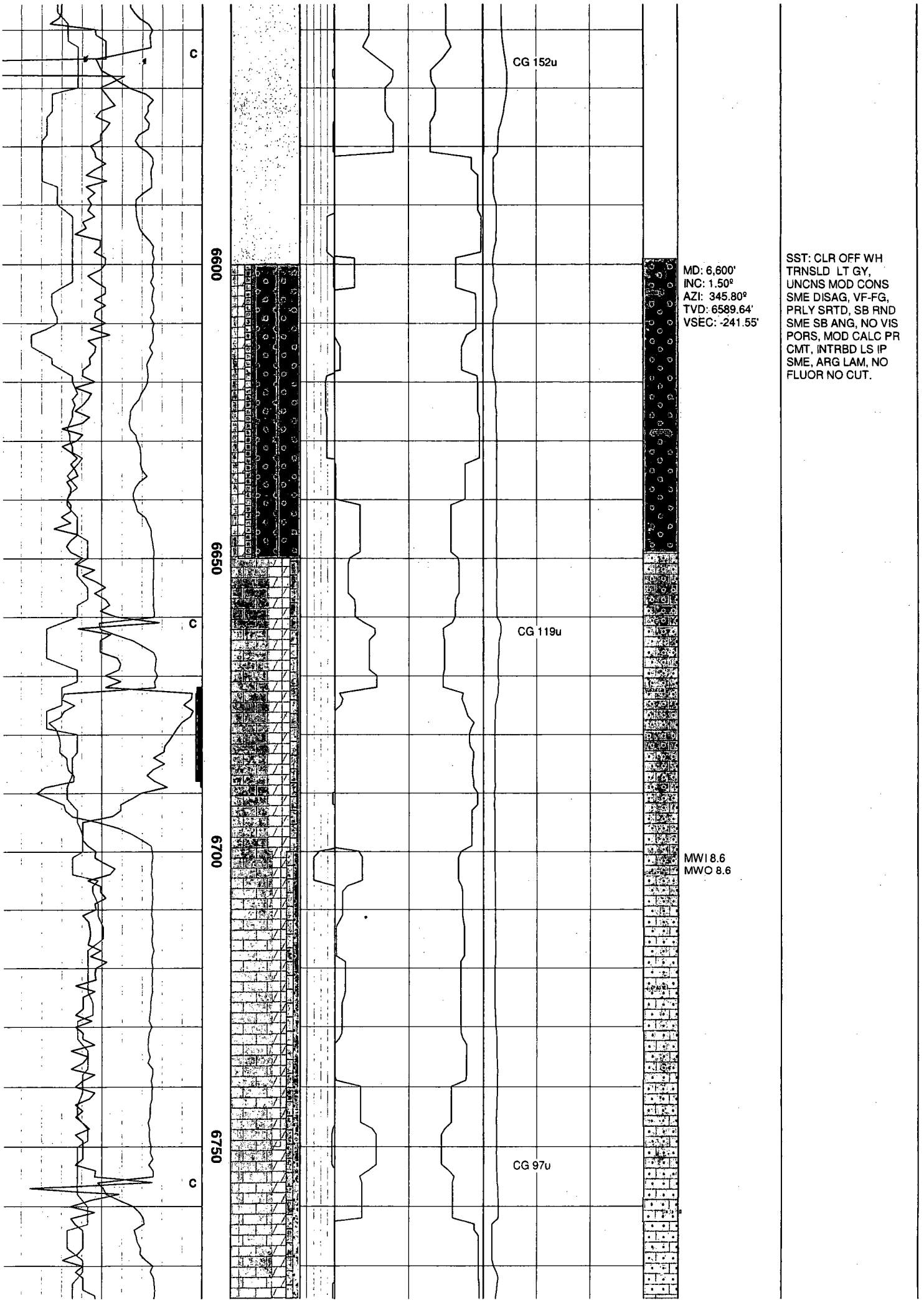
% Lithology Calcim

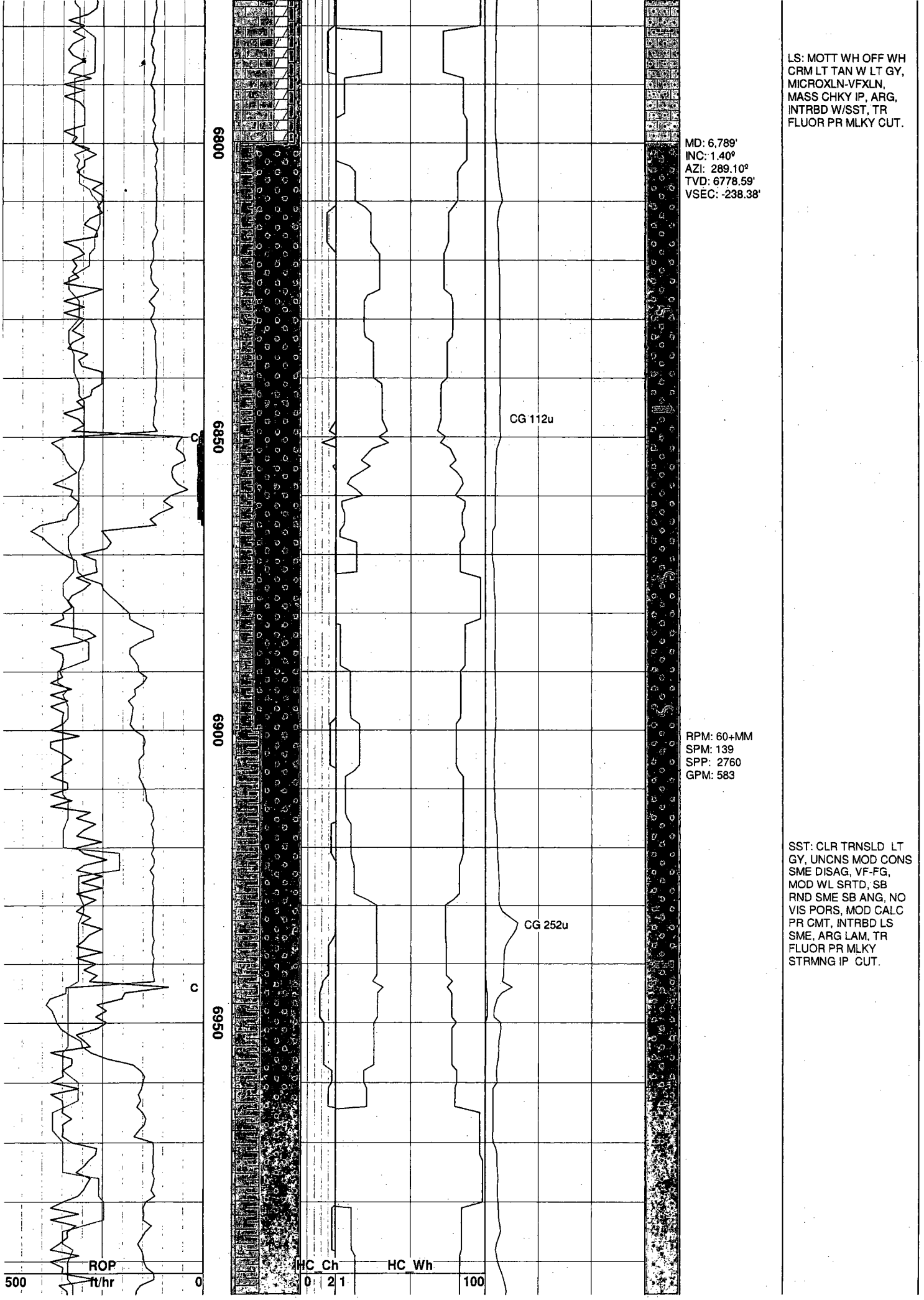
Depth

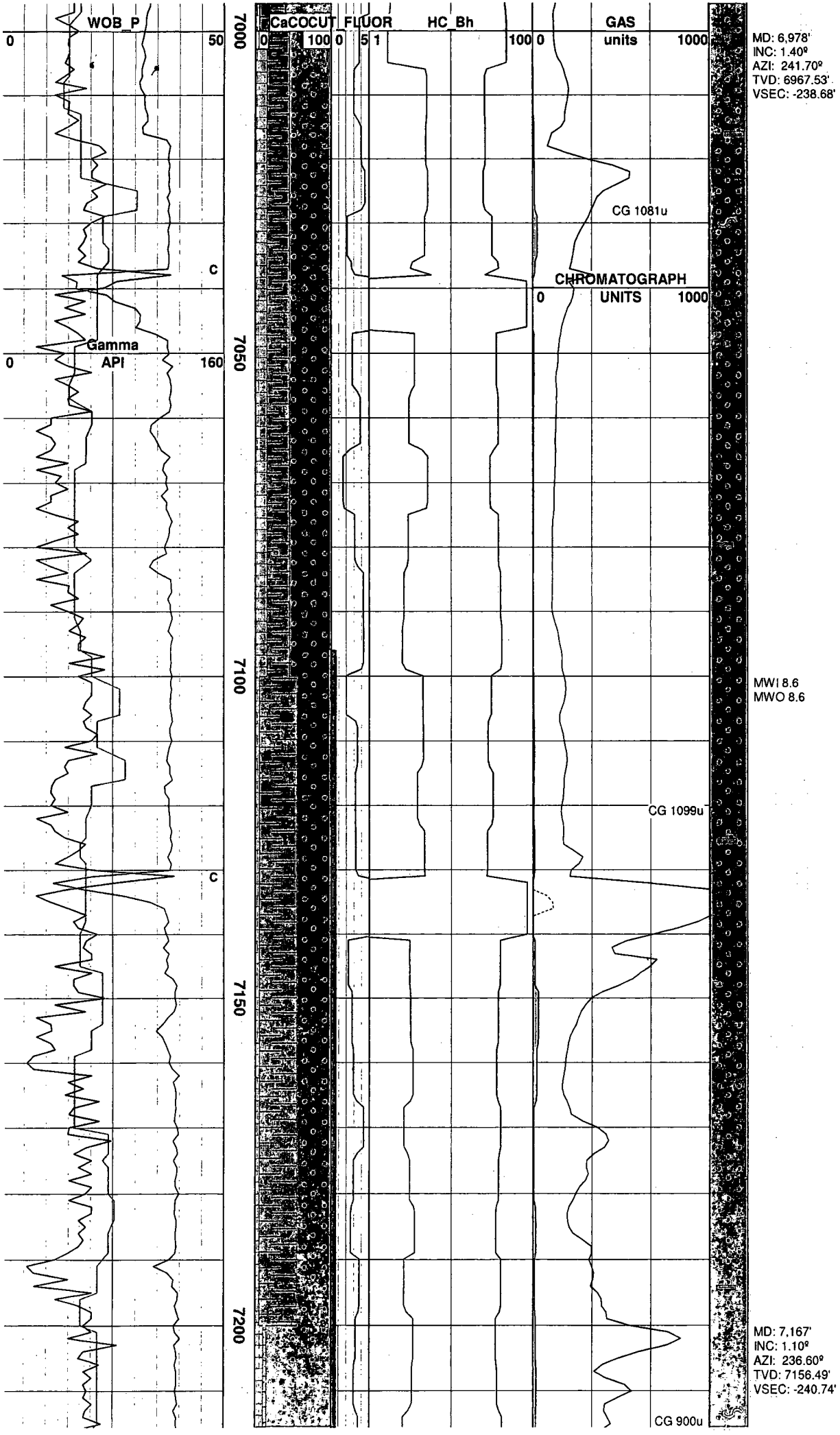
ROP
WOB
WOB_P 0 50
ROP 500 ft/hr 0
Gamma 0 API 160


etry
aracter
CaCO3
0 100
HC_Ch
0 2
CUT_FLUOR
0 5
C4u
0 1000
C5u
0 1000
6150
6200
6250
6300
All Depths Correspond to Driller's Pipe Tally
2 MAN LOGGING FROM 08/8/2018
GAS SYSTEM CALIBRATED, 1% Methane=100 units, 100% Methane=10000 units
8/9/18
C
CG 397u
Bit #3 8.75" Smith XS716 W/ 7x14's in @ 5,522'
MD: 6,220'
INC: 1.40º
AZI: 335.10º
TVD: 6,209.76'
VSEC: -250.57'
MWI 8.7
MWO 8.7
LESLIE FED COM 217H
Lea County, NM
Spud: 8/2/18
9 5/8" Inter. Casing set @ 5,522'
Two Man Logging: 8/8/2018 @ 6,200'

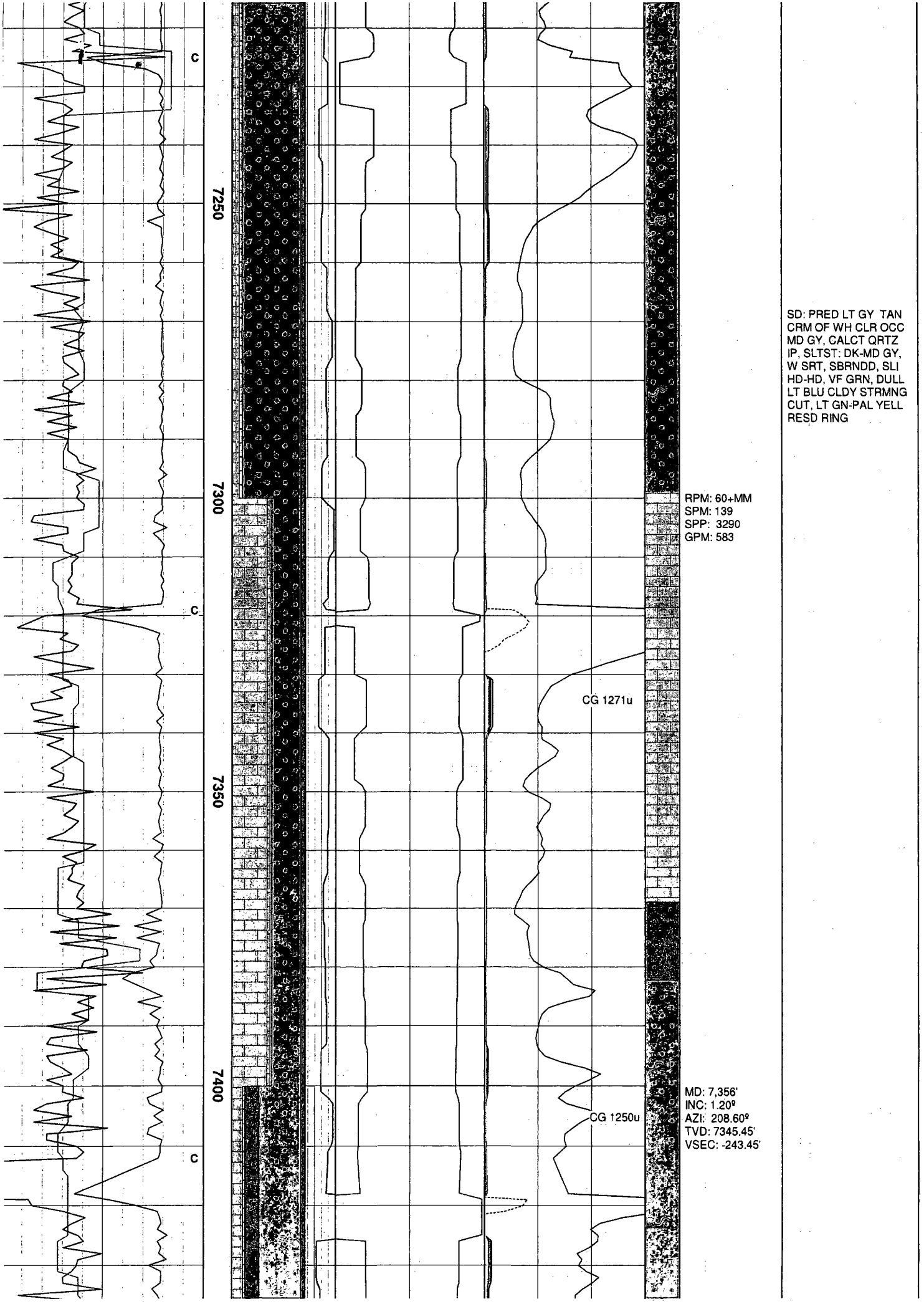

6350
6400
6450
6500
6550
C
C
CG 357u
CG 146u
MD: 6,410'
INC: 1.50°
AZI: 334.00°
TVD: 6399.70'
VSEC: -246.21'
RPM: 60+MM
SPM: 139
SPP: 2882
GPM: 583
Cherry Canyon

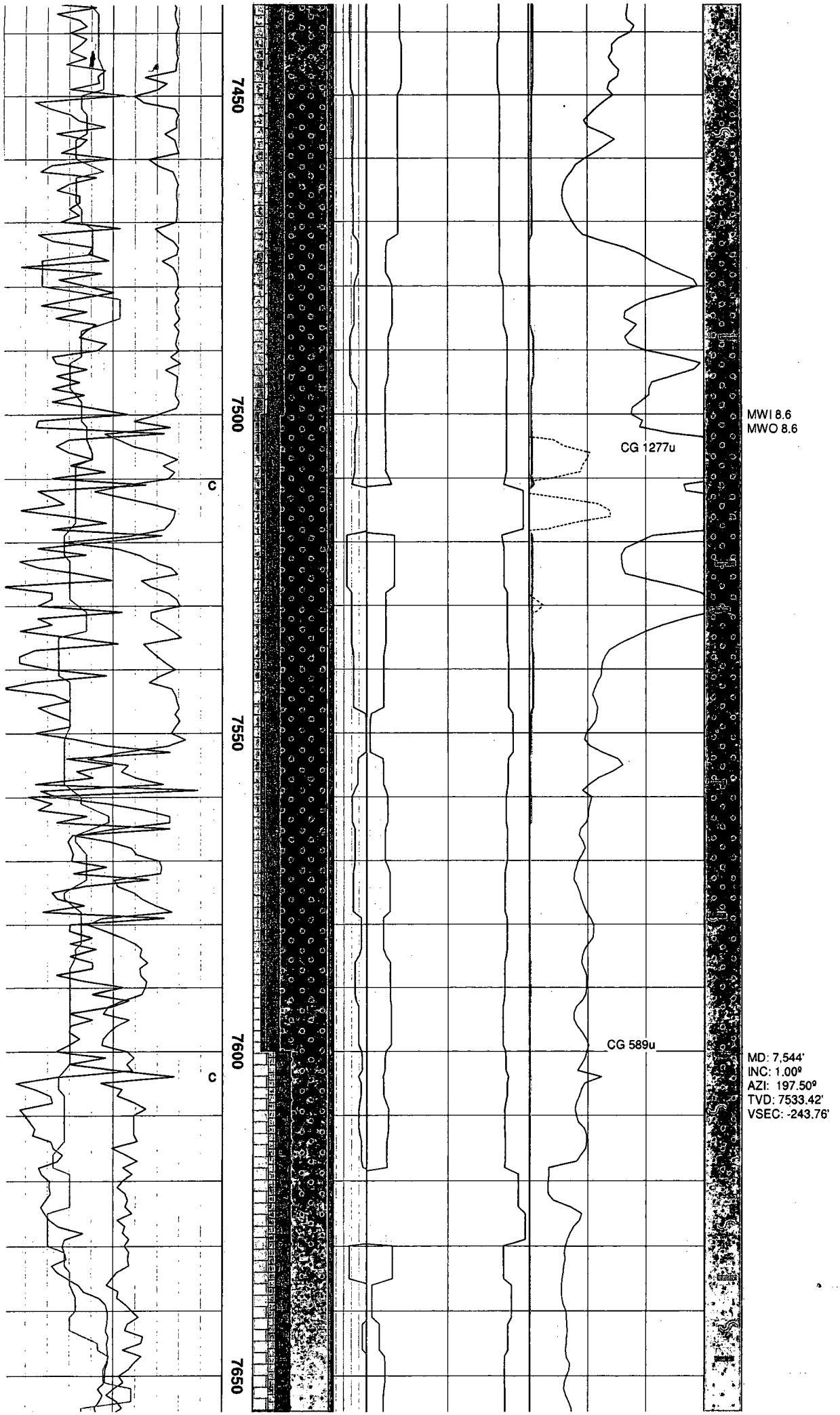

C
C
C
6600
6650
6700
6750
CG 152u
CG 119u
CG 97u
MD: 6,600'
INC: 1.50º
AZI: 345.80º
TVD: 6589.64'
VSEC: -241.55'
MWI 8.6
MWO 8.6
SST: CLR OFF WH TRNSLD LT GY, UNCNS MOD CONS SME DISAG, VF-FG, PRLY SRTD, SB RND SME SB ANG, NO VIS PORS, MOD CALC PR CMT, INTRBD LS IP SME, ARG LAM, NO FLUOR NO CUT.

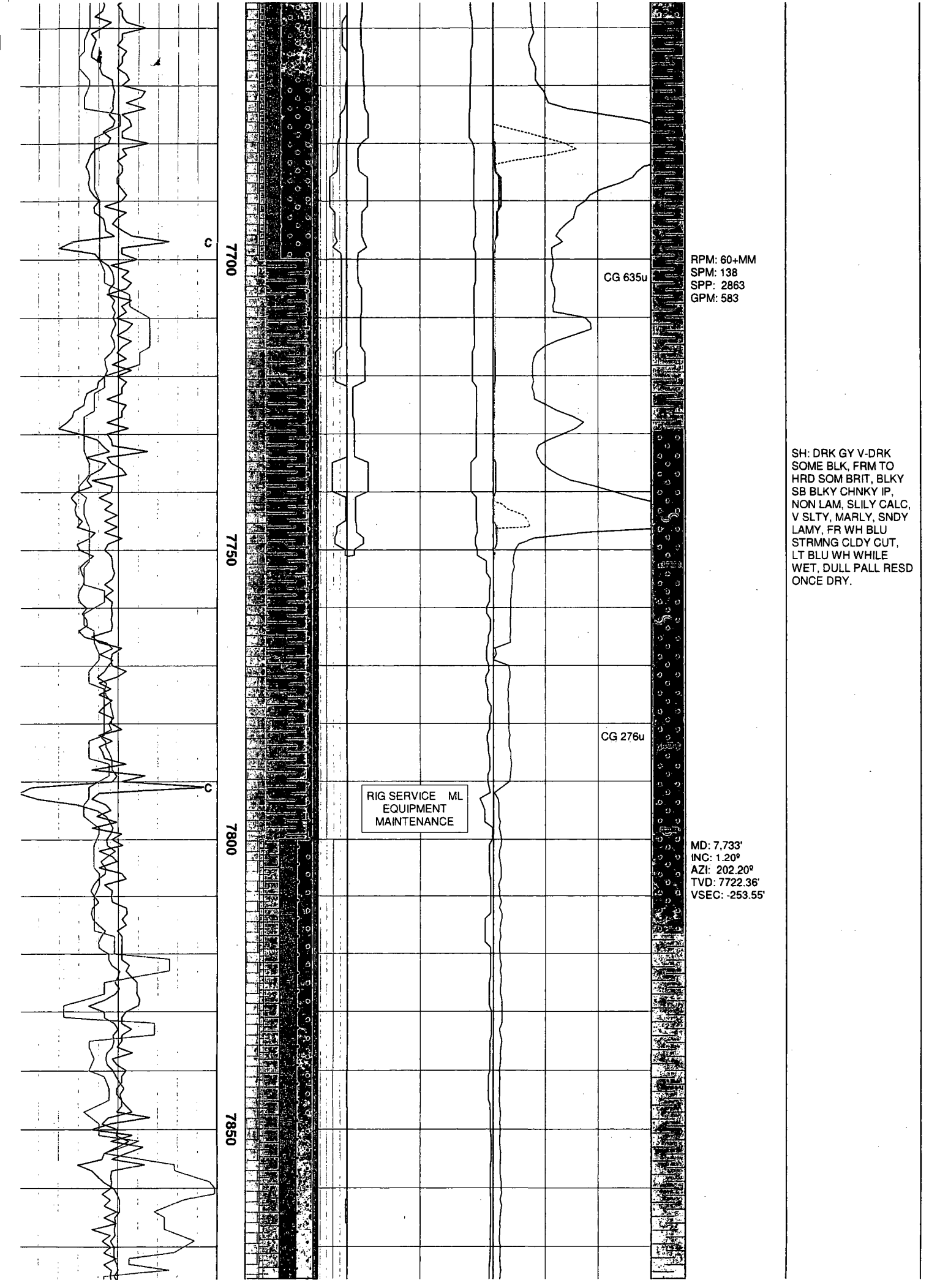

6900
6850
6800
6750
C
C
CG 112u
CG 252u
MD: 6,789'
INC: 1.40°
AZI: 289.10°
TVD: 6778.59'
VSEC: -238.38'
RPM: 60+MM
SPM: 139
SPP: 2760
GPM: 583
LS: MOTT WH OFF WH CRM LT TAN W LT GY, MICROXLN-VFXLN, MASS CHKY IP, ARG, INTRBD W/SST, TR FLUOR PR MLKY CUT.
SST: CLR TRNSLD LT GY, UNCNS MOD CONS SME DISAG, VF-FG, MOD WL SRTD, SB RND SME SB ANG, NO VIS PORS, MOD CALC PR CMT, INTRBD LS SME, ARG LAM, TR FLUOR PR MLKY STRMNG IP CUT.
ROP
500
ft/hr
0
HC_Ch
0
2 1
HC_Wh
100

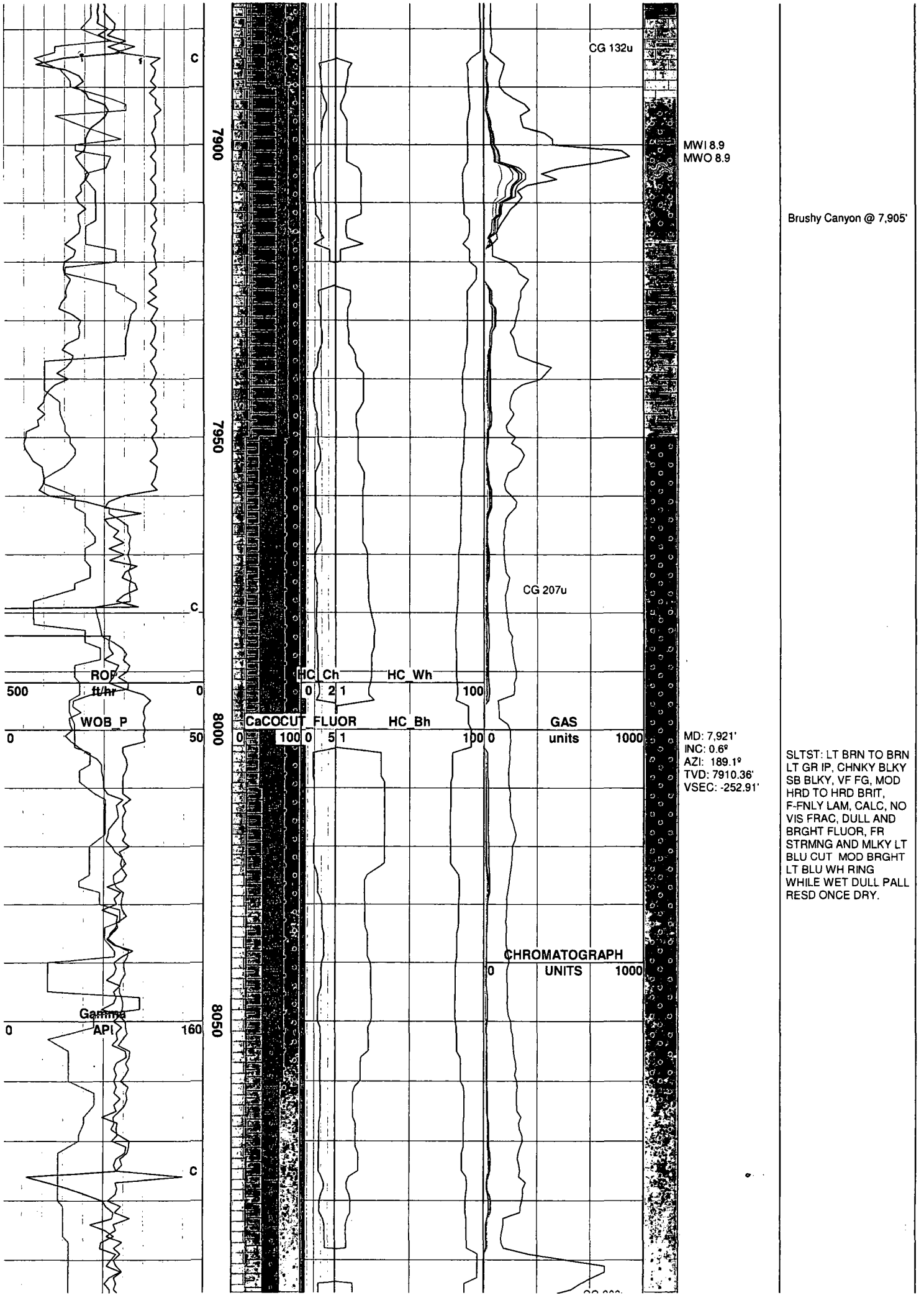


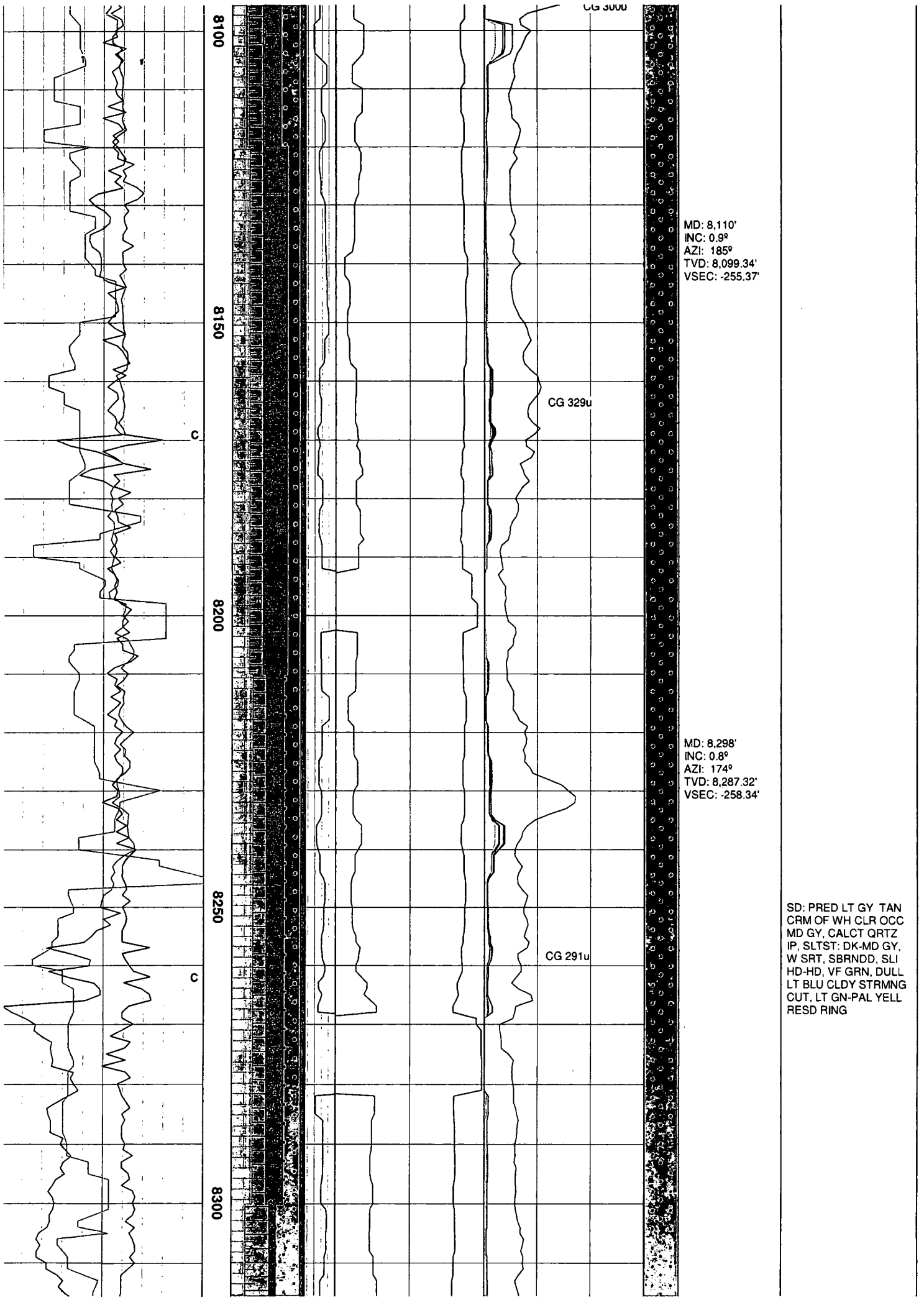
SST: CLR LT GY MD GY CLR OFF WH DK GY, MOD SRT, SBANG-SBRNDD, UNCNS IP, SLI FRI, CALC IP, PR LT GN CLDY STRMNG IP CUT, LT YEL PAL DUL DRY RSDL.

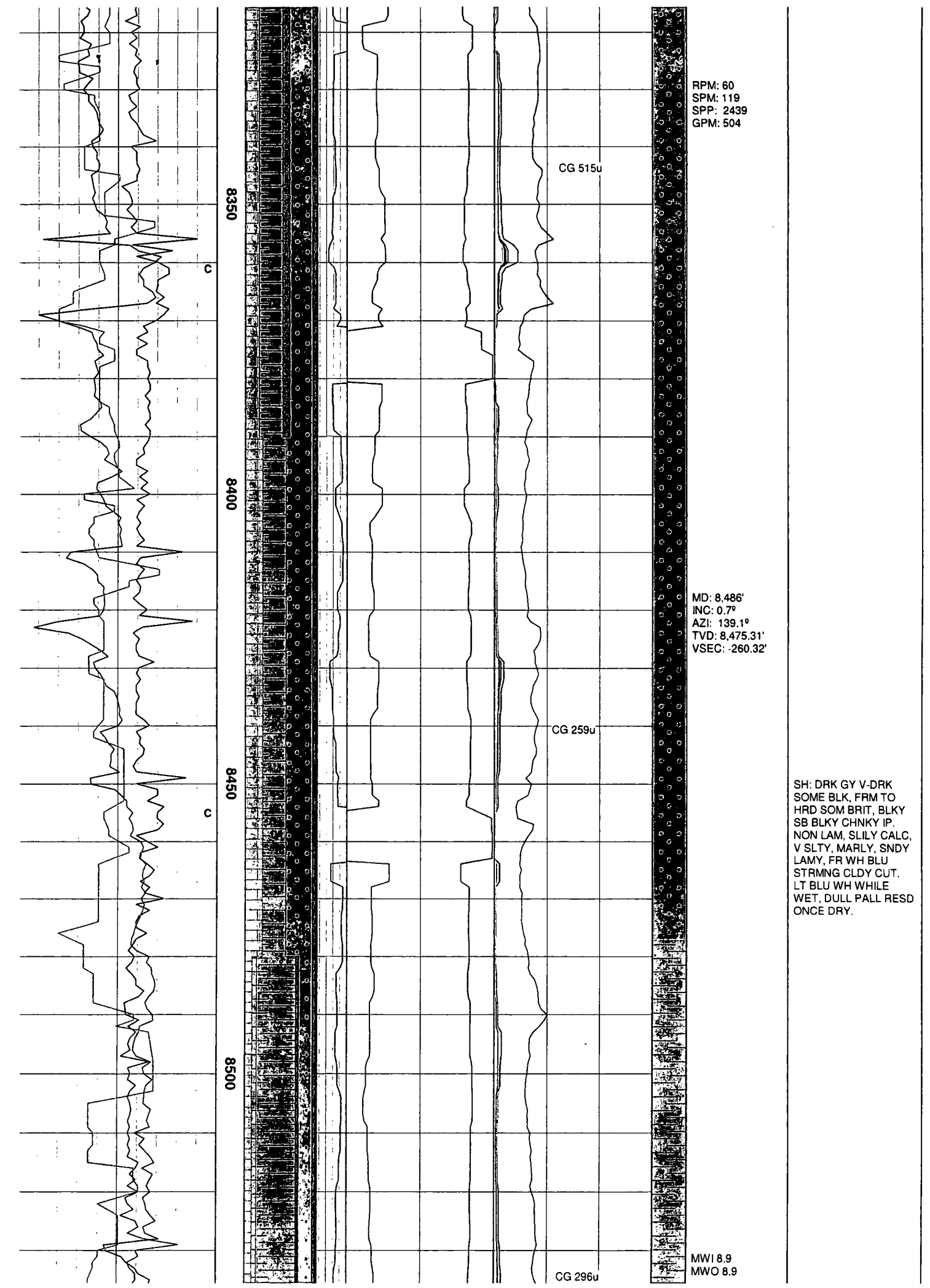

C
C
C
7250
7300
7350
7400
RPM: 60+MM
SPM: 139
SPP: 3290
GPM: 583
CG 1271u
CG 1250u
MD: 7,356'
INC: 1.20º
AZI: 208.60º
TVD: 7345.45'
VSEC: -243.45'
SD: PRED LT GY TAN CRM OF WH CLR OCC MD GY, CALCT QRTZ IP, SLTST: DK-MD GY, W SRT, SBRNDD, SLI HD-HD, VF GRN, DULL LT BLU CLDY STRMNG CUT, LT GN-PAL YELL RESD RING

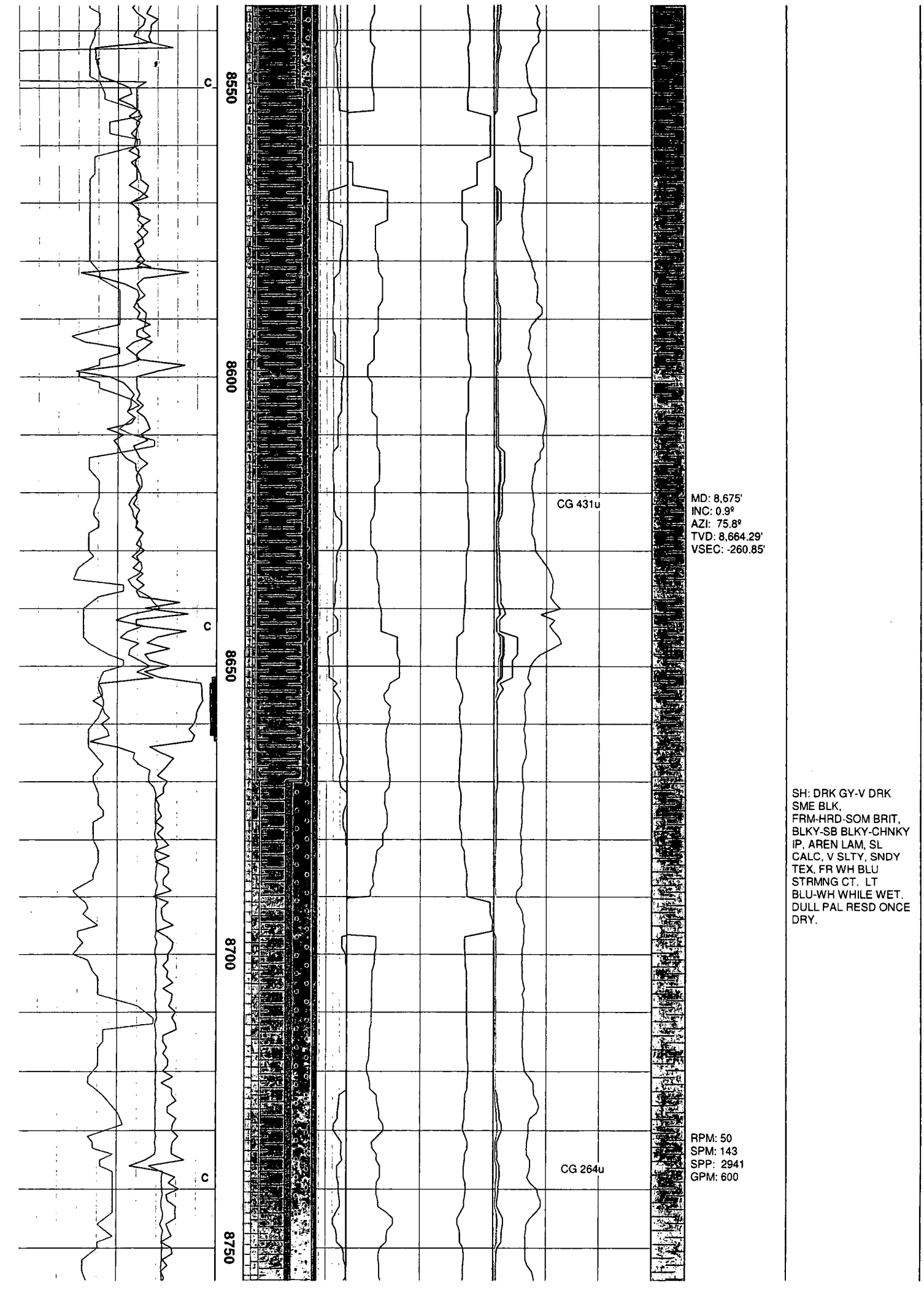

7450
7500
7550
7600
7650
C
C
CG 1277u
CG 589u
MWI 8.6
MWO 8.6
MD: 7,544'
INC: 1.00°
AZI: 197.50°
TVD: 7533.42'
VSEC: -243.76'
SLTST: LT BRN TO BRN LT GR IP, CHNKY BLKY SB BLKY, VF FG, MOD HRD TO HRD BRIT, F-FNLY LAM, CALC, NO VIS FRAC, DULL AND BRGHT FLUOR, FR STRMNG AND MLKY LT BLU CUT MOD BRGHT LT BLU WH RING WHILE WET DULL PALL RESD ONCE DRY.

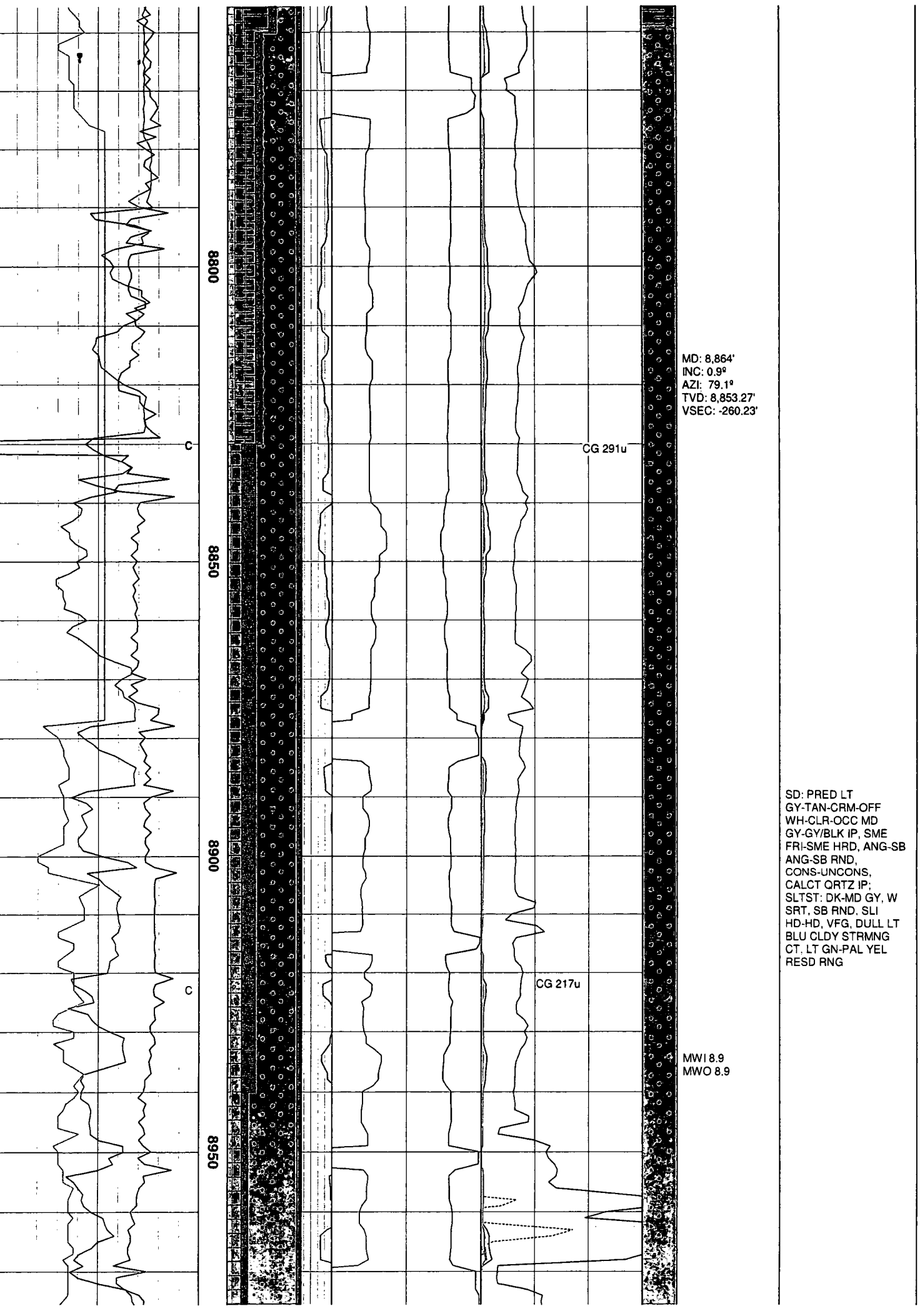

7700
7750
7800
7850
C
C
CG 635u
CG 276u
RIG SERVICE ML
EQUIPMENT
MAINTENANCE
RPM: 60+MM
SPM: 138
SPP: 2863
GPM: 583
MD: 7,733'
INC: 1.20°
AZI: 202.20°
TVD: 7722.36'
VSEC: -253.55'
SH: DRK GY V-DRK SOME BLK, FRM TO HRD SOM BRIT, BLKY SB BLKY CHNKY IP, NON LAM, SLILY CALC, V SLTY, MARLY, SNDY LAMY, FR WH BLU STRMNG CLDY CUT, LT BLU WH WHILE WET, DULL PALL RESD ONCE DRY.

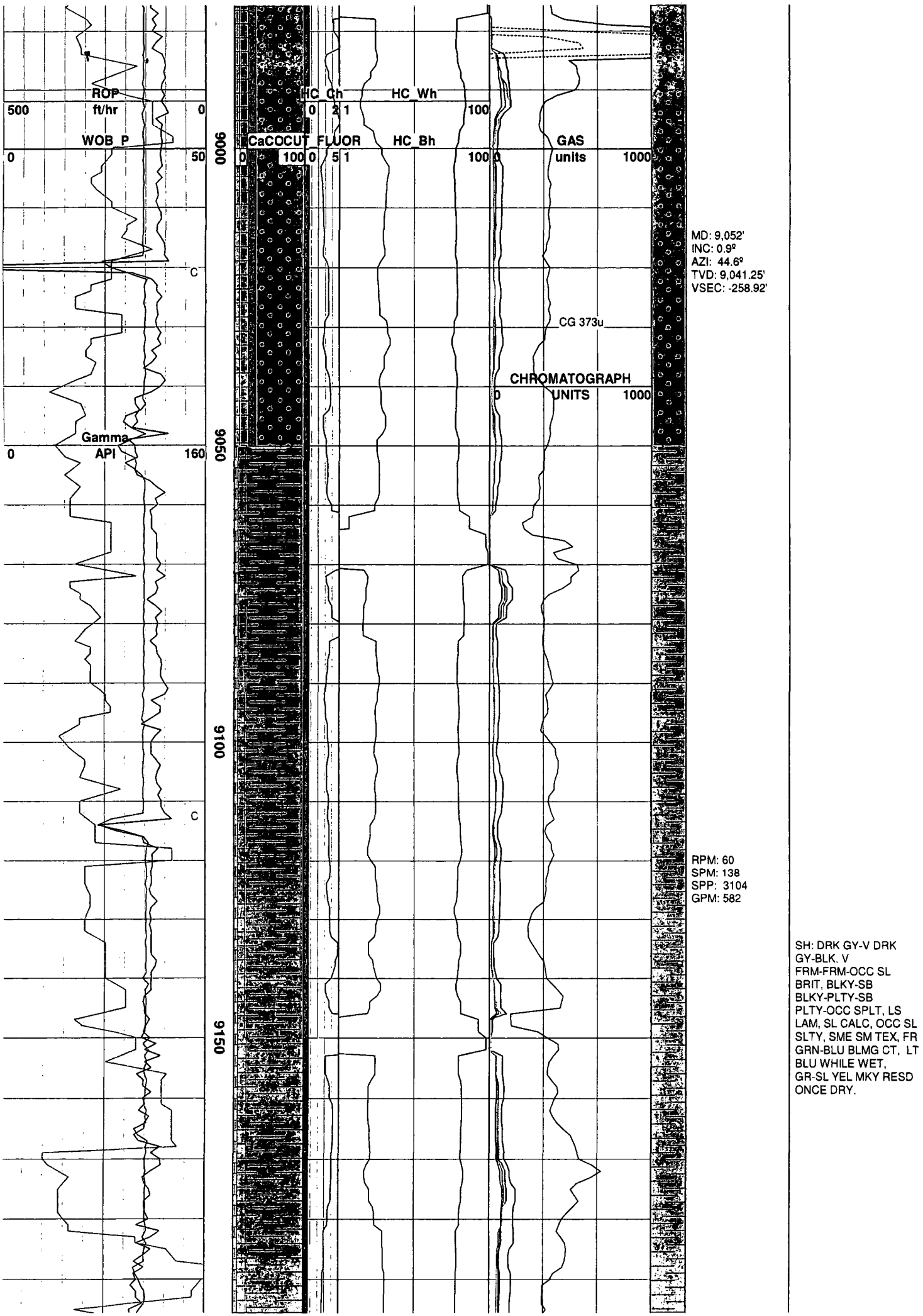

C
7900
7950
8000
8050
CG 132u
MWI 8.9
MWO 8.9
Brushy Canyon @ 7,905'
CG 207u
ROP
500
ft/hr
0
HC_Ch
0 2 1
HC_Wh
100
WOB_P
0
50
CaCOCUT_FLUOR
0 100 0 5 1
HC_Bh
100 0
GAS
units
1000
MD: 7,921'
INC: 0.6°
AZI: 189.1°
TVD: 7910.36'
VSEC: -252.91'
SLTST: LT BRN TO BRN LT GR IP, CHNKY BLKY SB BLKY, VF FG, MOD HRD TO HRD BRIT, F-FNLY LAM, CALC, NO VIS FRAC, DULL AND BRGHT FLUOR, FR STRMNG AND MLKY LT BLU CUT MOD BRGHT LT BLU WH RING WHILE WET DULL PALL RESD ONCE DRY.
CHROMATOGRAPH
0
UNITS
1000
Gamma
0
API
160

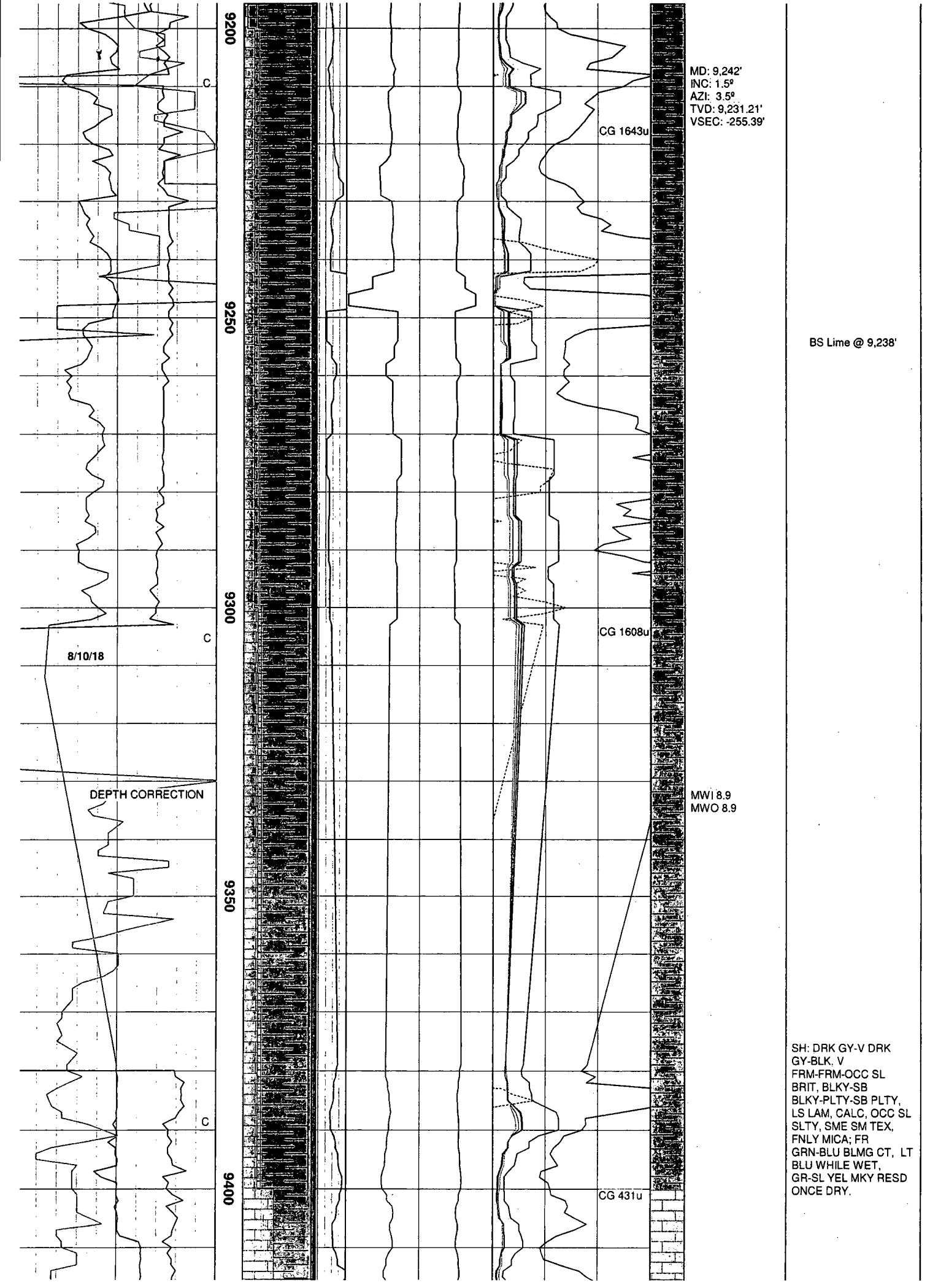

8100
8150
8200
8250
8300
CG 300u
CG 329u
CG 291u
C
C
MD: 8,110'
INC: 0.9º
AZI: 185º
TVD: 8,099.34'
VSEC: -255.37'
MD: 8,298'
INC: 0.8º
AZI: 174º
TVD: 8,287.32'
VSEC: -258.34'
SD: PRED LT GY TAN CRM OF WH CLR OCC MD GY, CALCT QRTZ IP, SLTST: DK-MD GY, W SRT, SBRNDD, SLI HD-HD, VF GRN, DULL LT BLU CLDY STRMNG CUT, LT GN-PAL YELL RESD RING

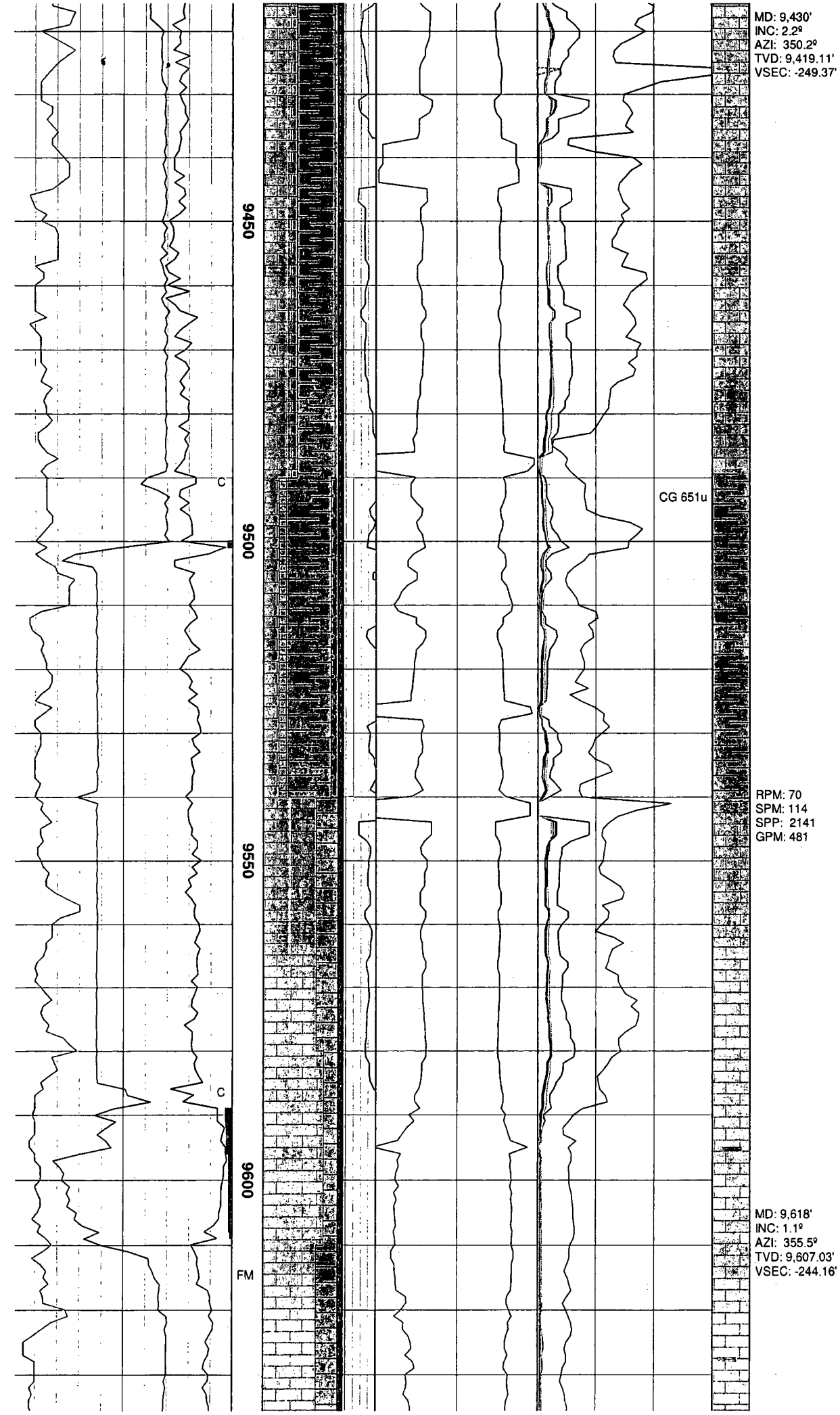

RPM: 60
SPM: 119
SPP: 2439
GPM: 504
CG 515u
8350
C
8400
MD: 8,486'
INC: 0.7°
AZI: 139.1°
TVD: 8,475.31'
VSEC: -260.32'
CG 259u
8450
C
SH: DRK GY V-DRK SOME BLK, FRM TO HRD SOM BRIT, BLKY SB BLKY CHNKY IP. NON LAM, SLILY CALC, V SLTY, MARLY, SNDY LAMY, FR WH BLU STRMNG CLDY CUT. LT BLU WH WHILE WET, DULL PALL RESD ONCE DRY.
8500
MWI 8.9
MWO 8.9
CG 296u

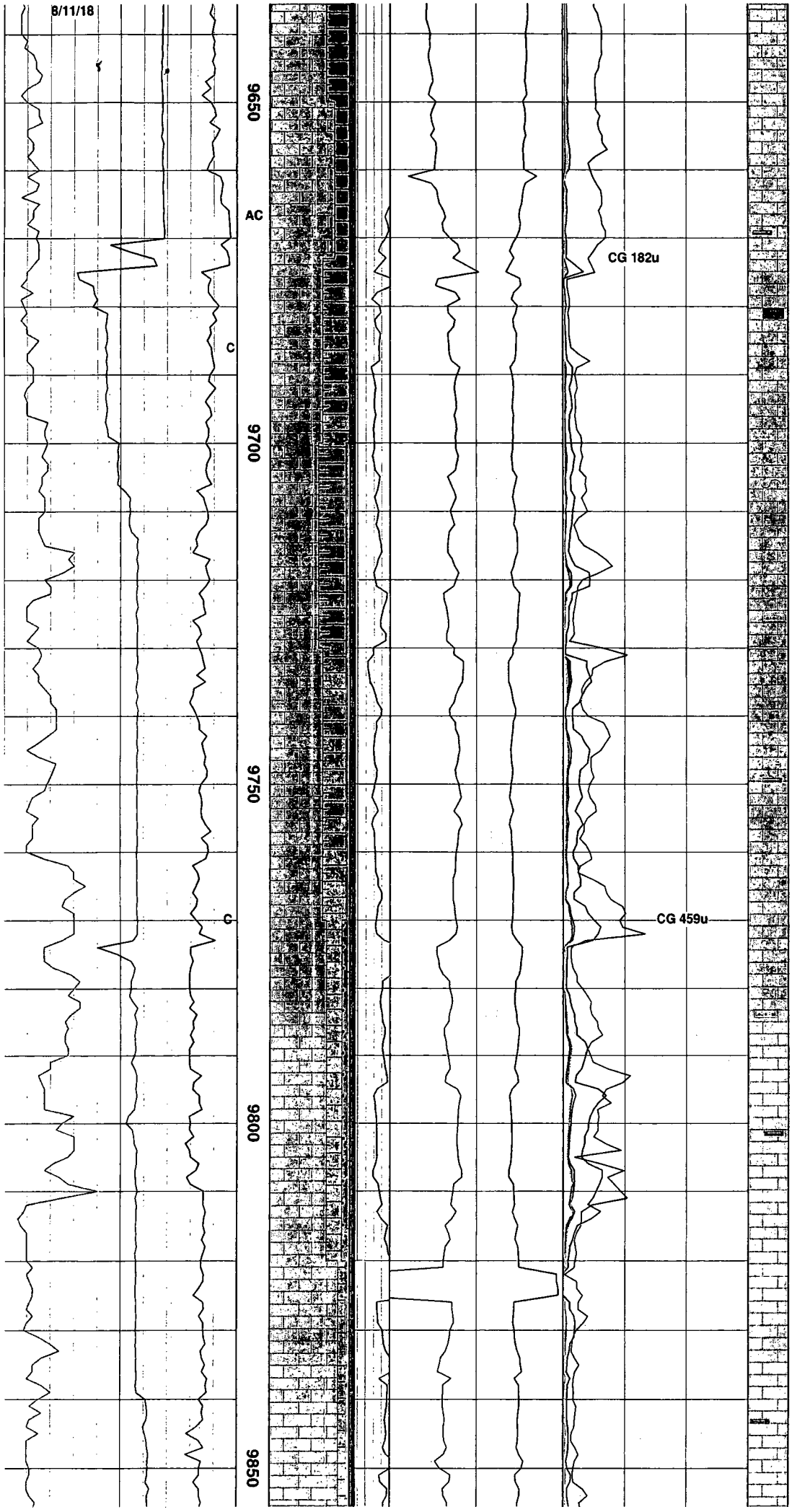

8550
8600
8650
8700
8750
C
C
C
CG 431u
CG 264u
MD: 8,675'
INC: 0.9º
AZI: 75.8º
TVD: 8,664.29'
VSEC: -260.85'
RPM: 50
SPM: 143
SPP: 2941
GPM: 600
SH: DRK GY-V DRK SME BLK, FRM-HRD-SOM BRIT, BLKY-SB BLKY-CHNKY IP, AREN LAM, SL CALC, V SLTY, SNDY TEX, FR WH BLU STRMNG CT. LT BLU-WH WHILE WET. DULL PAL RESD ONCE DRY.


8800
8850
8900
8950
C
C
CG 291u
CG 217u
MD: 8,864'
INC: 0.9°
AZI: 79.1°
TVD: 8,853.27'
VSEC: -260.23'
MWI 8.9
MWO 8.9
SD: PRED LT GY-TAN-CRM-OFF WH-CLR-OCC MD GY-GY/BLK IP, SME FRI-SME HRD, ANG-SB ANG-SB RND, CONS-UNCONS, CALCT QRTZ IP; SLTST: DK-MD GY, W SRT, SB RND, SLI HD-HD, VFG, DULL LT BLU CLDY STRMNG CT, LT GN-PAL YEL RESD RNG


ROP
500 ft/hr 0
WOB_P
0 50
Gamma
0 API 160
HC_Ch HC_Wh
0 2 1 100
CaCOCUT_FLUOR HC_Bh
0 100 0 5 1 100
GAS
0 units 1000
CHROMATOGRAPH
0 UNITS 1000
9000
9050
9100
9150
MD: 9,052'
INC: 0.9º
AZI: 44.6º
TVD: 9,041.25'
VSEC: -258.92'
CG 373u
RPM: 60
SPM: 138
SPP: 3104
GPM: 582
SH: DRK GY-V DRK GY-BLK. V FRM-FRM-OCC SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY-OCC SPLT, LS LAM, SL CALC, OCC SL SLTY, SME SM TEX, FR GRN-BLU BLMG CT, LT BLU WHILE WET, GR-SL YEL MKY RESD ONCE DRY.


9200
9250
9300
9350
9400
C
C
C
8/10/18
DEPTH CORRECTION
MD: 9,242'
INC: 1.5º
AZI: 3.5º
TVD: 9,231.21'
VSEC: -255.39'
CG 1643u
CG 1608u
CG 431u
BS Lime @ 9,238'
MWI 8.9
MWO 8.9
SH: DRK GY-V DRK GY-BLK. V FRM-FRM-OCC SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY, LS LAM, CALC, OCC SL SLTY, SME SM TEX, FNLY MICA; FR GRN-BLU BLMG CT, LT BLU WHILE WET, GR-SL YEL MKY RESD ONCE DRY.


MD: 9,430'
INC: 2.2º
AZI: 350.2º
TVD: 9,419.11'
VSEC: -249.37'
9450
C
9500
CG 651u
RPM: 70
SPM: 114
SPP: 2141
GPM: 481
9550
C
9600
FM
MD: 9,618'
INC: 1.1º
AZI: 355.5º
TVD: 9,607.03'
VSEC: -244.16'
LS: LTGY-DK GY-BLK, MDST- WKST. VFXL-FXL, MASS-DNS, ARG,CARB TR HALE

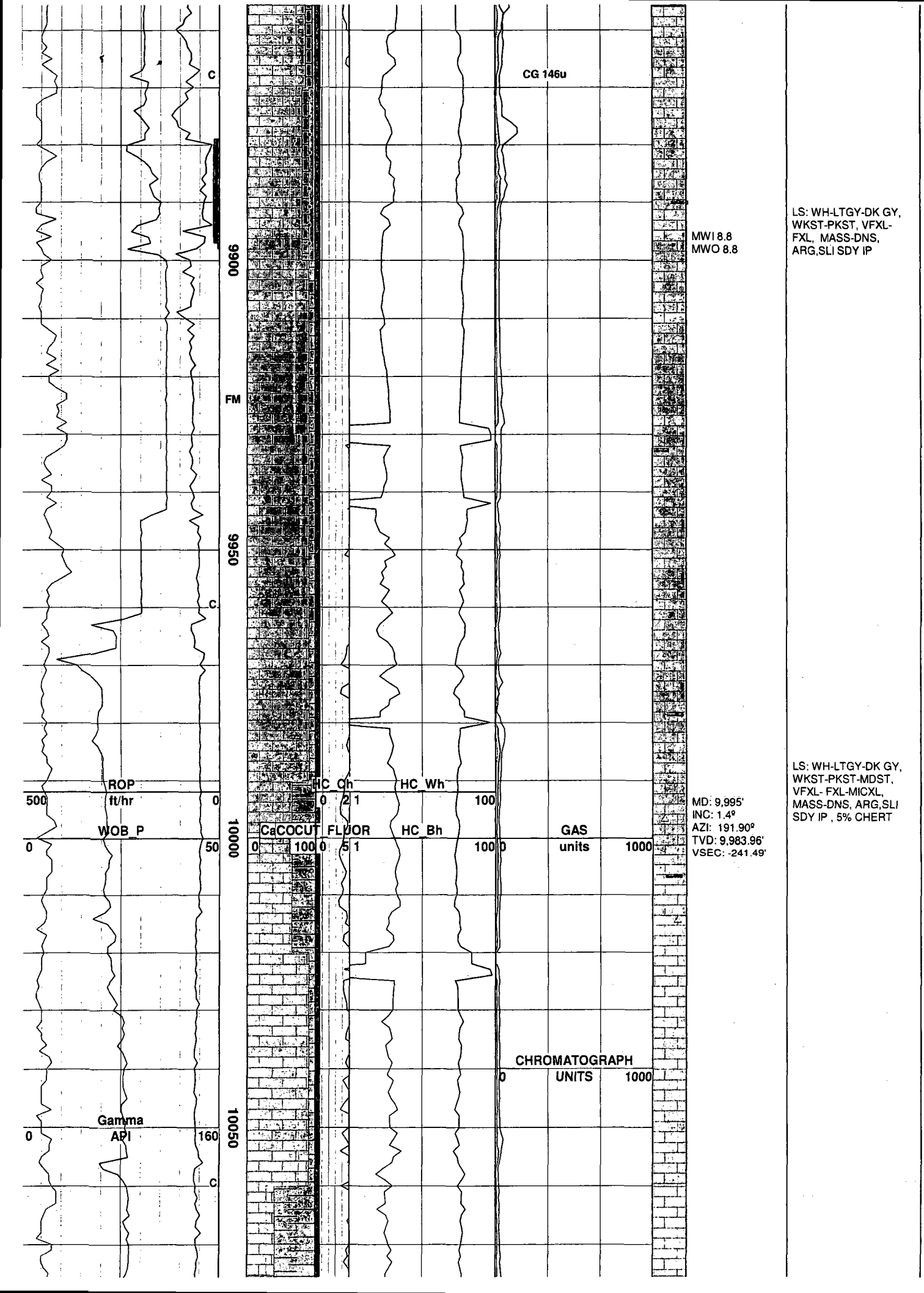


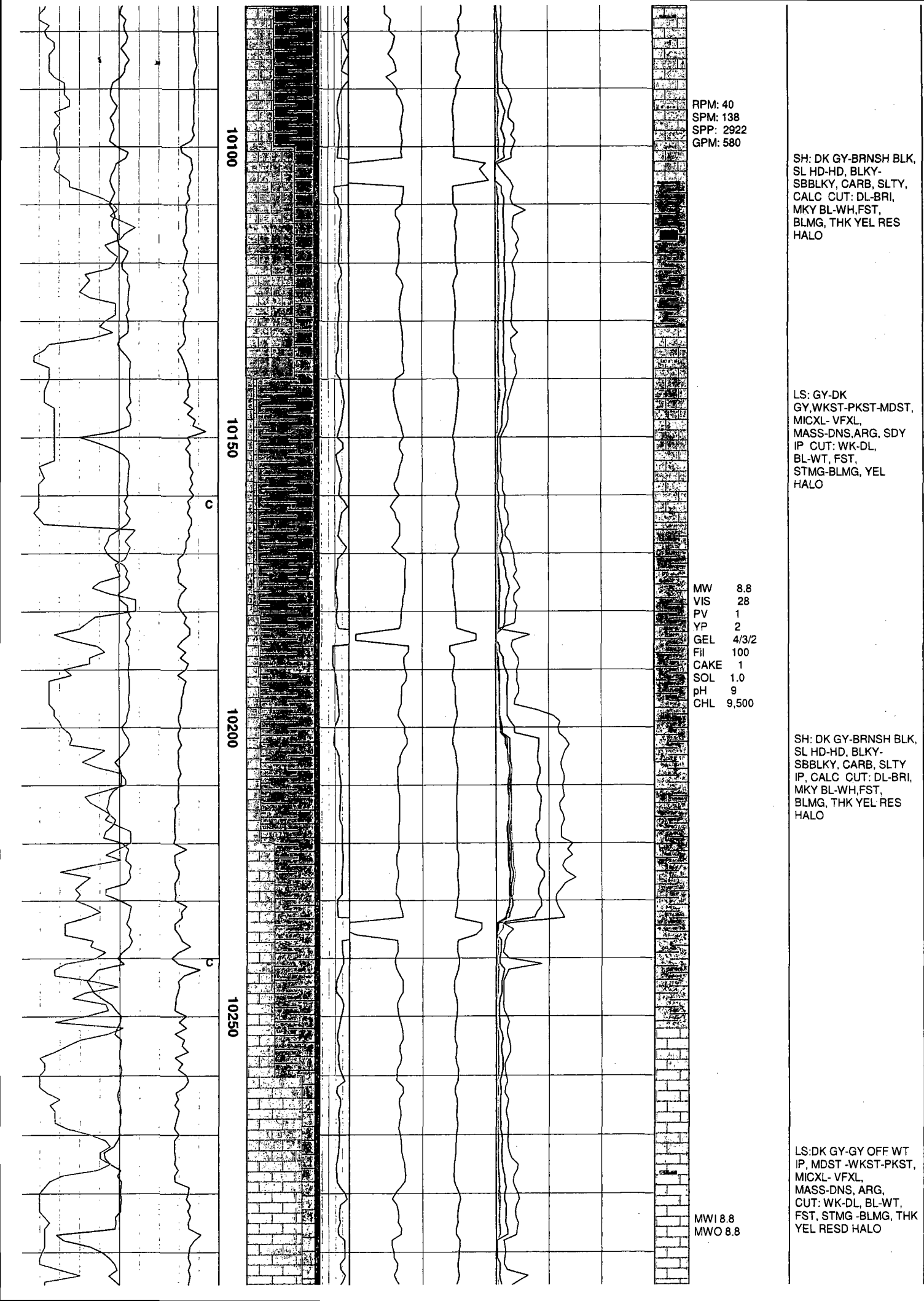
POOH @ 9,673'

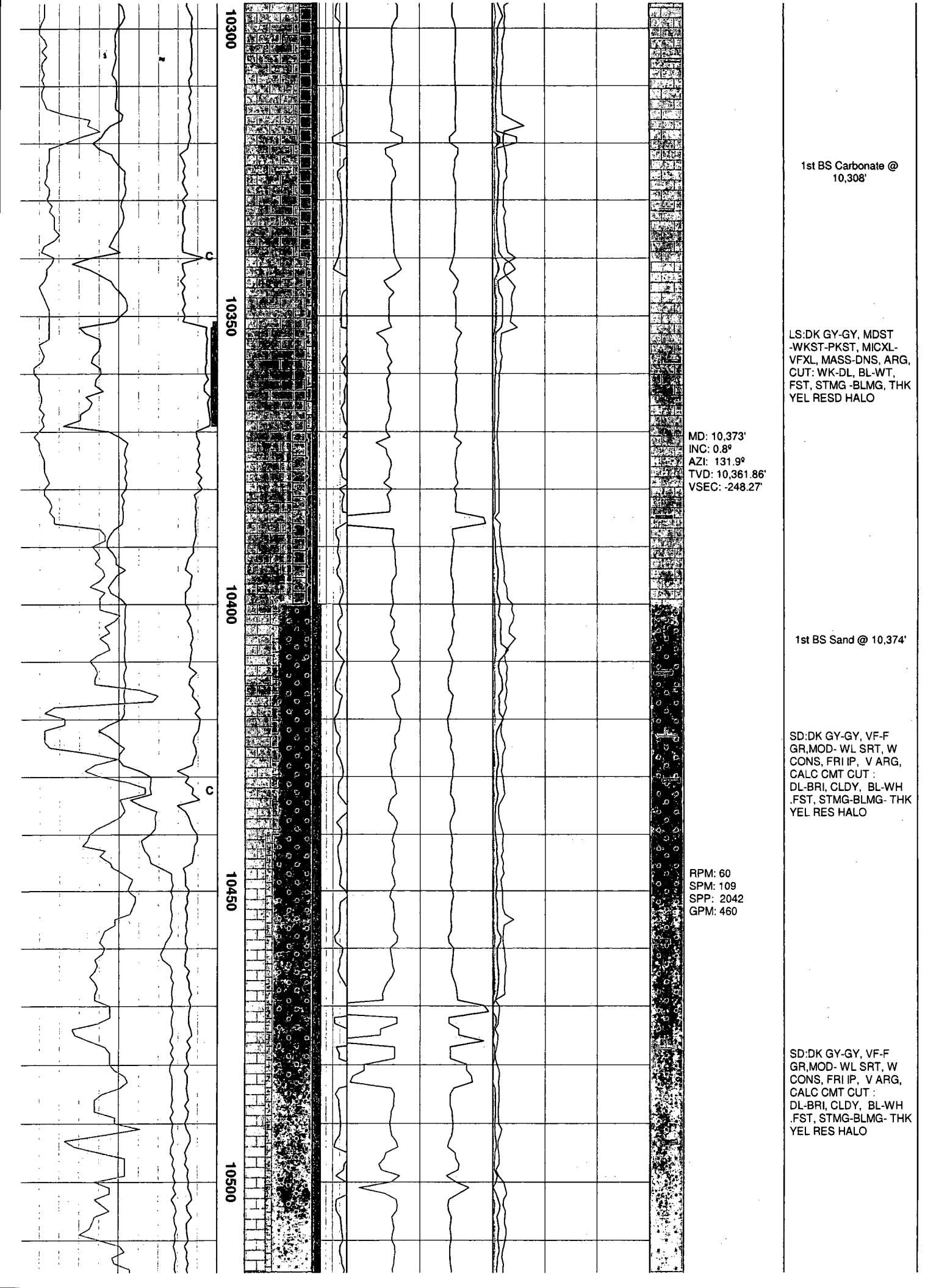
Bit #4 8.75" Smith
X619
W/ 6x14's in @
9,673'

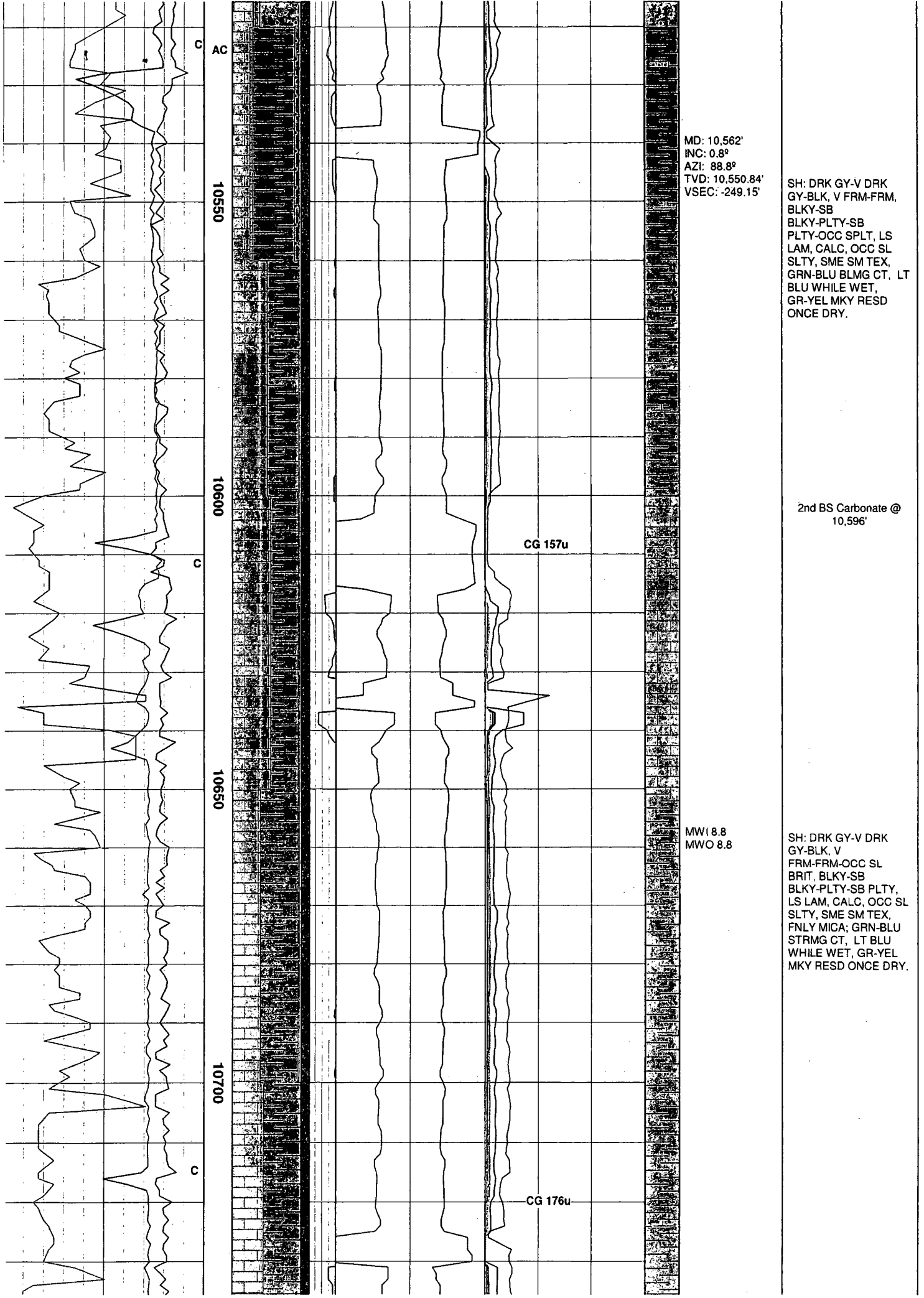
LS: LTGY-DK GY-BLK, MDST- WKST, VFXL-FXL, MASS-DNS-SME V DNS, OCC AREN LAM, ARG, CARB TR SS, MARL

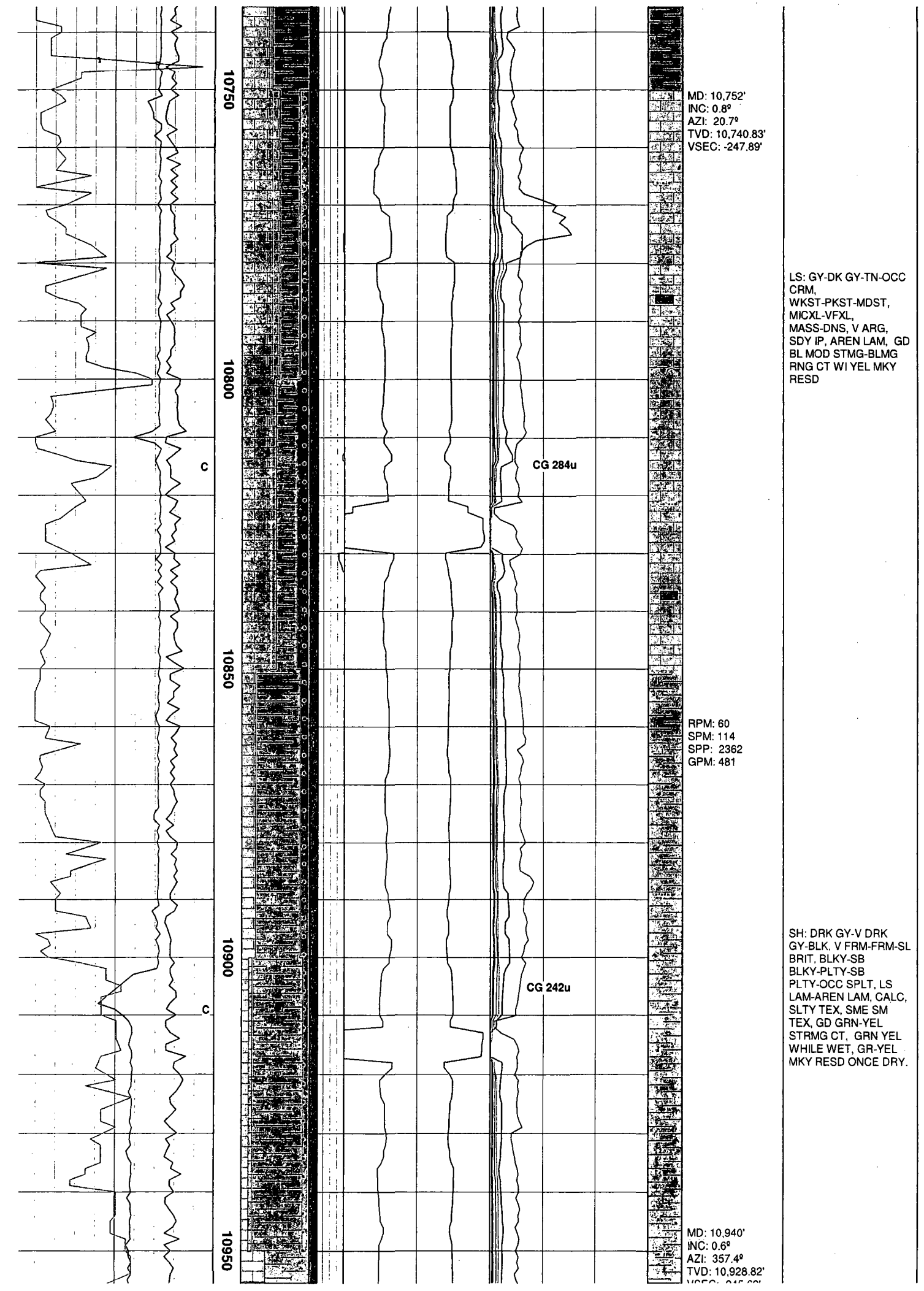
MW	8.8
VIS	28
PV	1
YP	2
GEL	4/3/2
Fil	100
CAKE	
SOL	1.0
pH	9
CHL	9,500

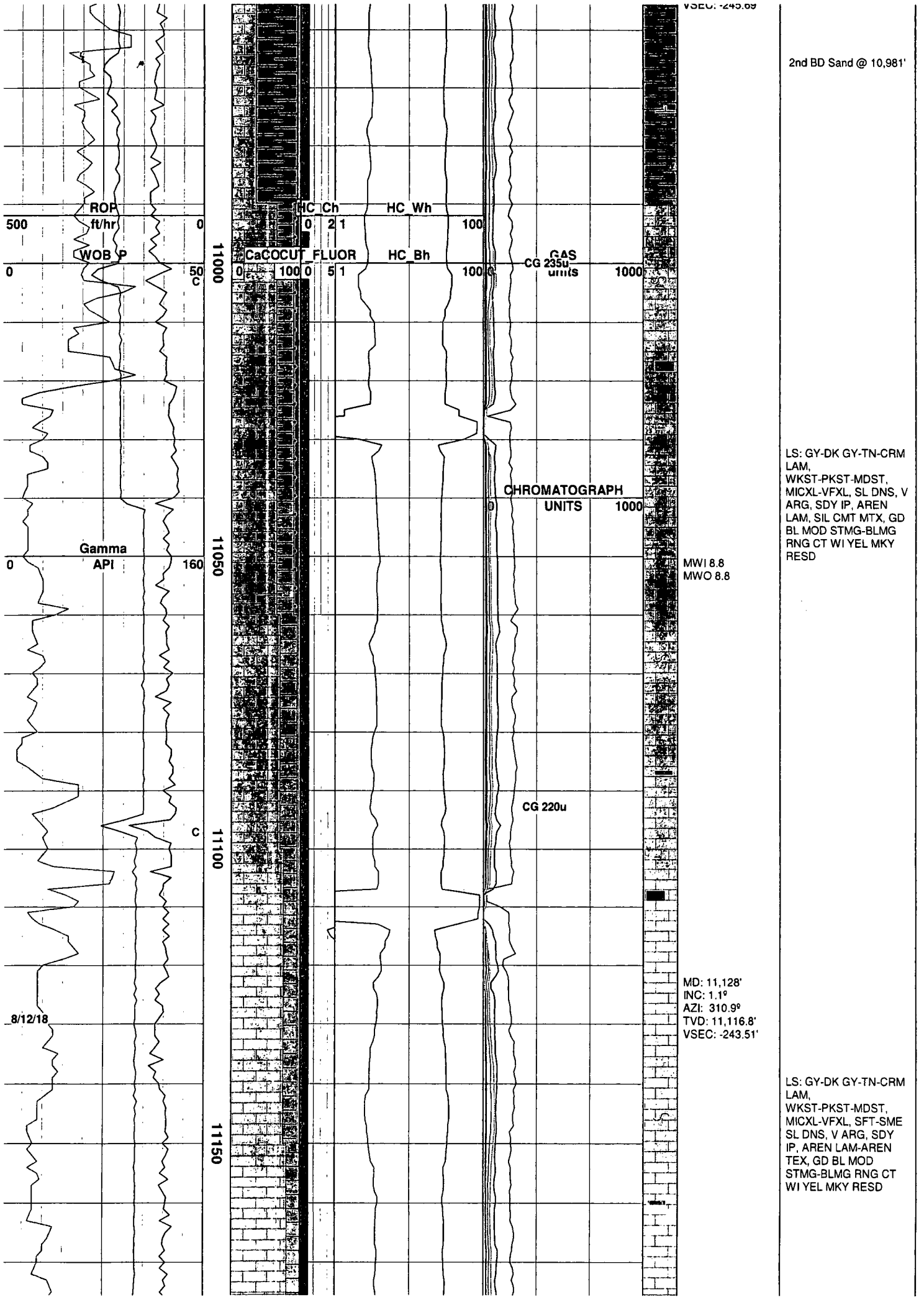

C
CG 146u
9900
FM
9950
C
ROP
500
ft/hr
0
HC_Ch
0
2
1
HC_Wh
100
WOB_P
0
50
10000
CaCOCUT_FLUOR
0
100
0
5
1
HC_Bh
100
GAS
0
units
1000
CHROMATOGRAPH
0
UNITS
1000
Gamma
0
API
160
C
10050
MWI 8.8
MWO 8.8
LS: WH-LTGY-DK GY, WKST-PKST, VFXL-FXL, MASS-DNS, ARG,SLI SDY IP
MD: 9,995'
INC: 1.4º
AZI: 191.90º
TVD: 9,983.96'
VSEC: -241.49'
LS: WH-LTGY-DK GY, WKST-PKST-MDST, VFXL- FXL-MICXL, MASS-DNS, ARG,SLI SDY IP , 5% CHERT

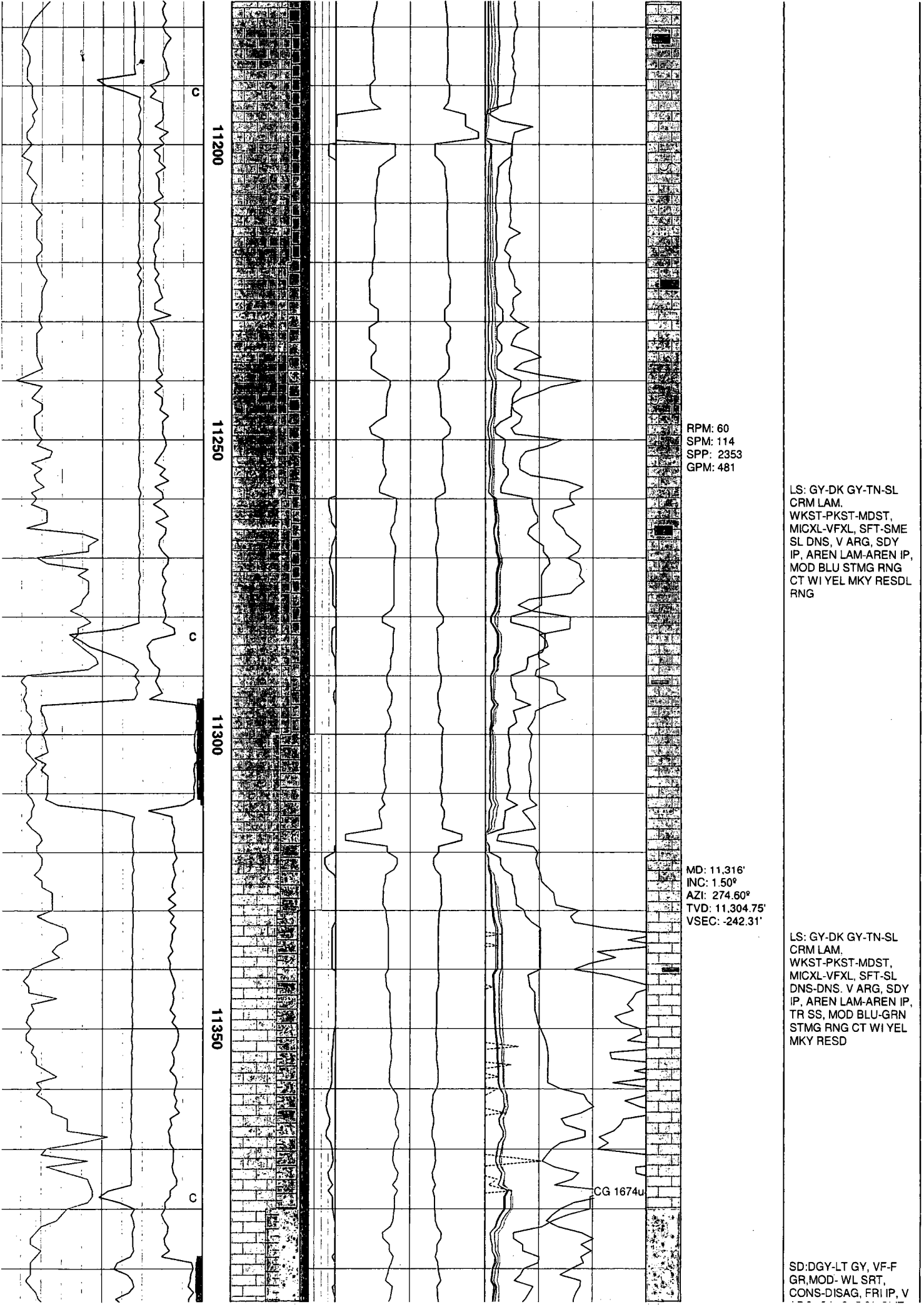

10100
10150
10200
10250
C
C
RPM: 40
SPM: 138
SPP: 2922
GPM: 580
MW 8.8
VIS 28
PV 1
YP 2
GEL 4/3/2
Fil 100
CAKE 1
SOL 1.0
pH 9
CHL 9,500
MWI 8.8
MWO 8.8
SH: DK GY-BRNSH BLK, SL HD-HD, BLKY-SBBLKY, CARB, SLTY, CALC CUT: DL-BRI, MKY BL-WH,FST, BLMG, THK YEL RES HALO
LS: GY-DK GY,WKST-PKST-MDST, MICXL- VFXL, MASS-DNS,ARG, SDY IP CUT: WK-DL, BL-WT, FST, STMG-BLMG, YEL HALO
SH: DK GY-BRNSH BLK, SL HD-HD, BLKY-SBBLKY, CARB, SLTY IP, CALC CUT: DL-BRI, MKY BL-WH,FST, BLMG, THK YEL RES HALO
LS:DK GY-GY OFF WT IP, MDST -WKST-PKST, MICXL- VFXL, MASS-DNS, ARG, CUT: WK-DL, BL-WT, FST, STMG -BLMG, THK YEL RESD HALO

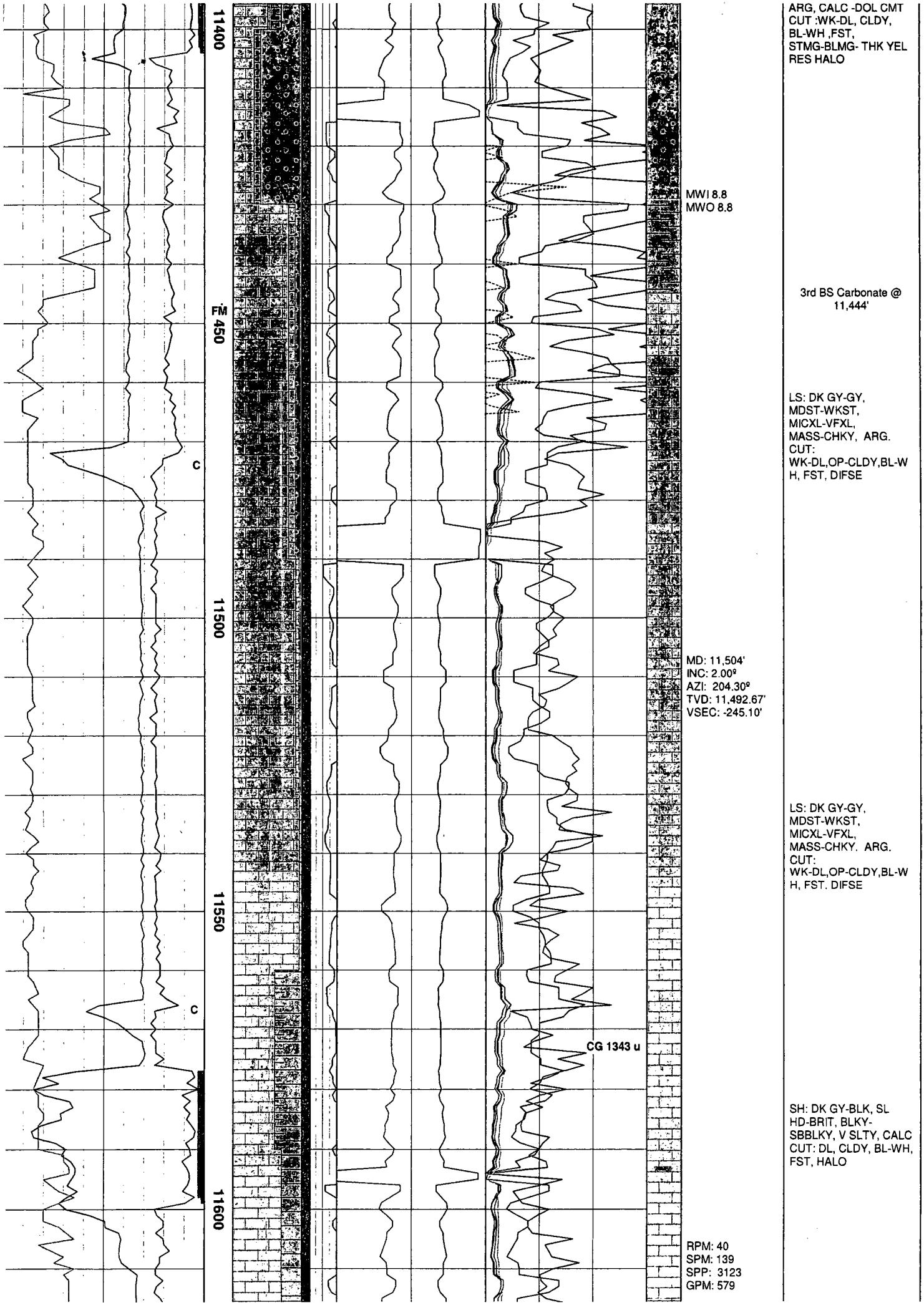

10300
10350
10400
10450
10500
C
C
1st BS Carbonate @ 10,308'
LS:DK GY-GY, MDST -WKST-PKST, MICXL-VFXL, MASS-DNS, ARG, CUT: WK-DL, BL-WT, FST, STMG -BLMG, THK YEL RESD HALO
MD: 10,373'
INC: 0.8º
AZI: 131.9º
TVD: 10,361.86'
VSEC: -248.27'
1st BS Sand @ 10,374'
SD:DK GY-GY, VF-F GR,MOD- WL SRT, W CONS, FRI IP, V ARG, CALC CMT CUT : DL-BRI, CLDY, BL-WH .FST, STMG-BLMG- THK YEL RES HALO
RPM: 60
SPM: 109
SPP: 2042
GPM: 460
SD:DK GY-GY, VF-F GR,MOD- WL SRT, W CONS, FRI IP, V ARG, CALC CMT CUT : DL-BRI, CLDY, BL-WH .FST, STMG-BLMG- THK YEL RES HALO

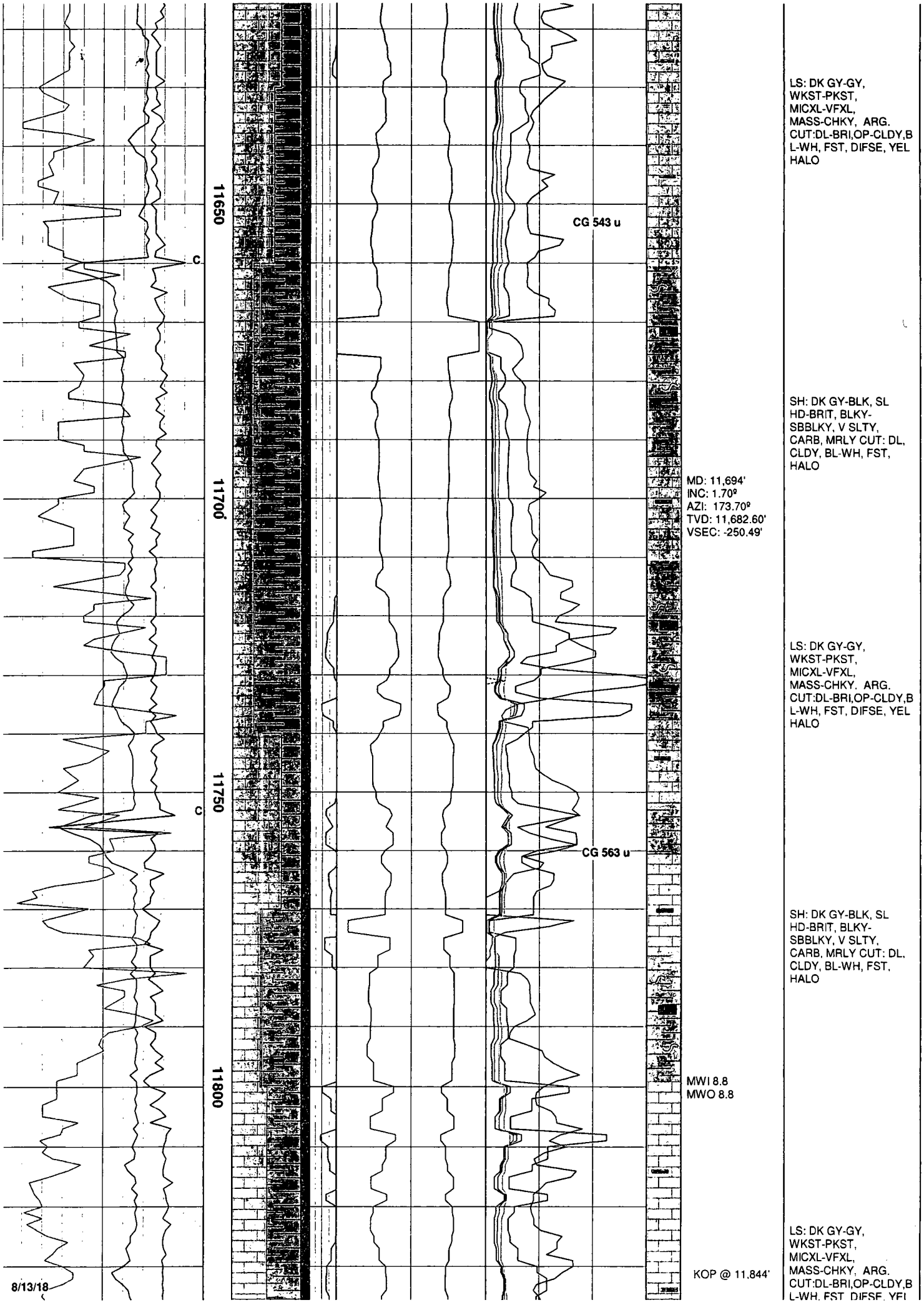

C
AC
10550
10600
C
10650
10700
C
CG 157u
CG 176u
MD: 10,562'
INC: 0.8º
AZI: 88.8º
TVD: 10,550.84'
VSEC: -249.15'
SH: DRK GY-V DRK GY-BLK, V FRM-FRM, BLKY-SB BLKY-PLTY-SB PLTY-OCC SPLT, LS LAM, CALC, OCC SL SLTY, SME SM TEX, GRN-BLU BLMG CT, LT BLU WHILE WET, GR-YEL MKY RESD ONCE DRY.
2nd BS Carbonate @ 10,596'
MWI 8.8
MWO 8.8
SH: DRK GY-V DRK GY-BLK, V FRM-FRM-OCC SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY, LS LAM, CALC, OCC SL SLTY, SME SM TEX, FNLY MICA; GRN-BLU STRMG CT, LT BLU WHILE WET, GR-YEL MKY RESD ONCE DRY.

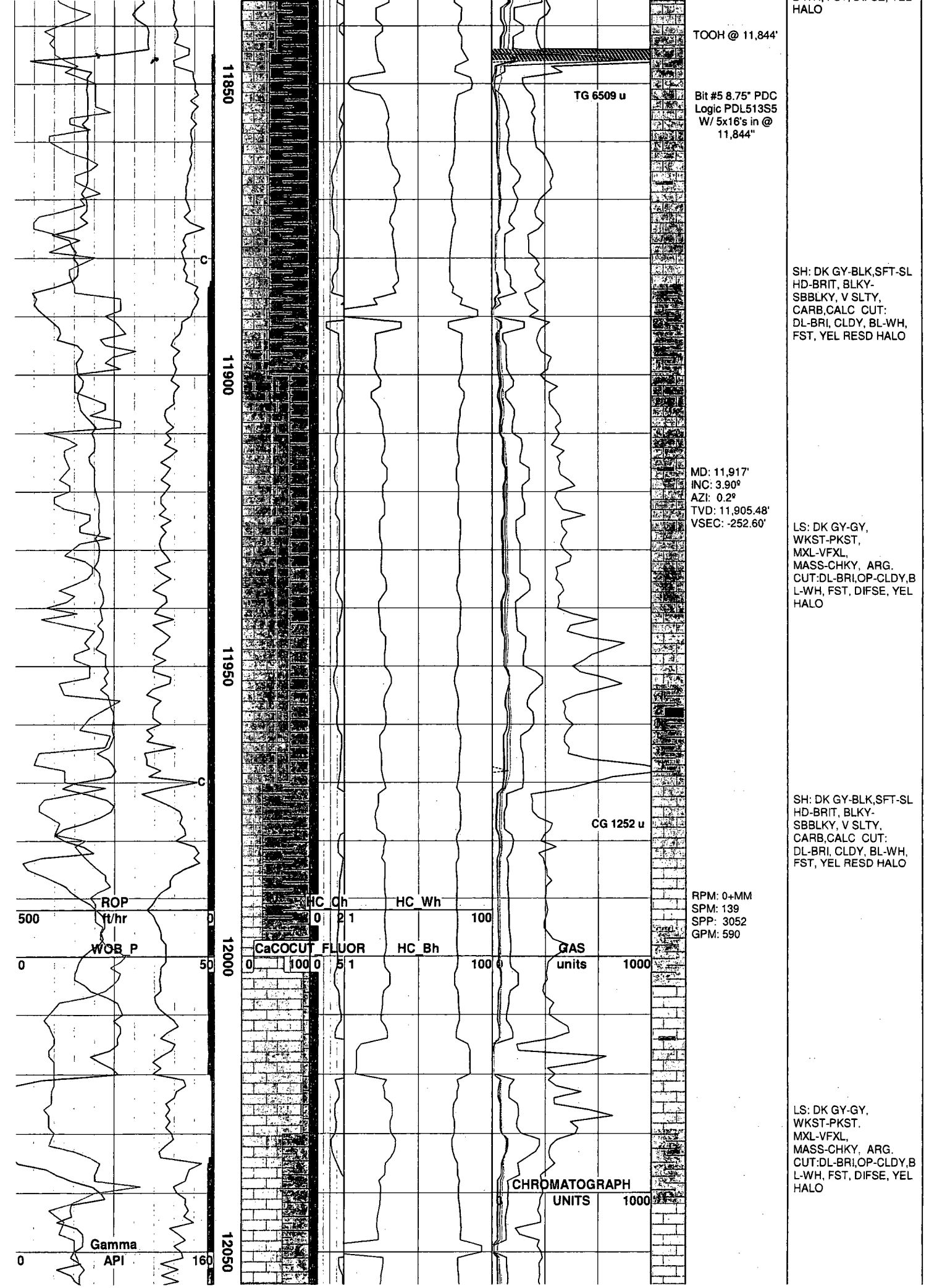

10750
10800
10850
10900
10950
C
C
CG 284u
CG 242u
MD: 10,752'
INC: 0.8°
AZI: 20.7°
TVD: 10,740.83'
VSEC: -247.89'
RPM: 60
SPM: 114
SPP: 2362
GPM: 481
MD: 10,940'
INC: 0.6°
AZI: 357.4°
TVD: 10,928.82'
LS: GY-DK GY-TN-OCC CRM, WKST-PKST-MDST, MICXL-VFXL, MASS-DNS, V ARG, SDY IP, AREN LAM, GD BL MOD STMG-BLMG RNG CT WI YEL MKY RESD
SH: DRK GY-V DRK GY-BLK, V FRM-FRM-SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY-OCC SPLT, LS LAM-AREN LAM, CALC, SLTY TEX, SME SM TEX, GD GRN-YEL STRMG CT, GRN YEL WHILE WET, GR-YEL MKY RESD ONCE DRY.

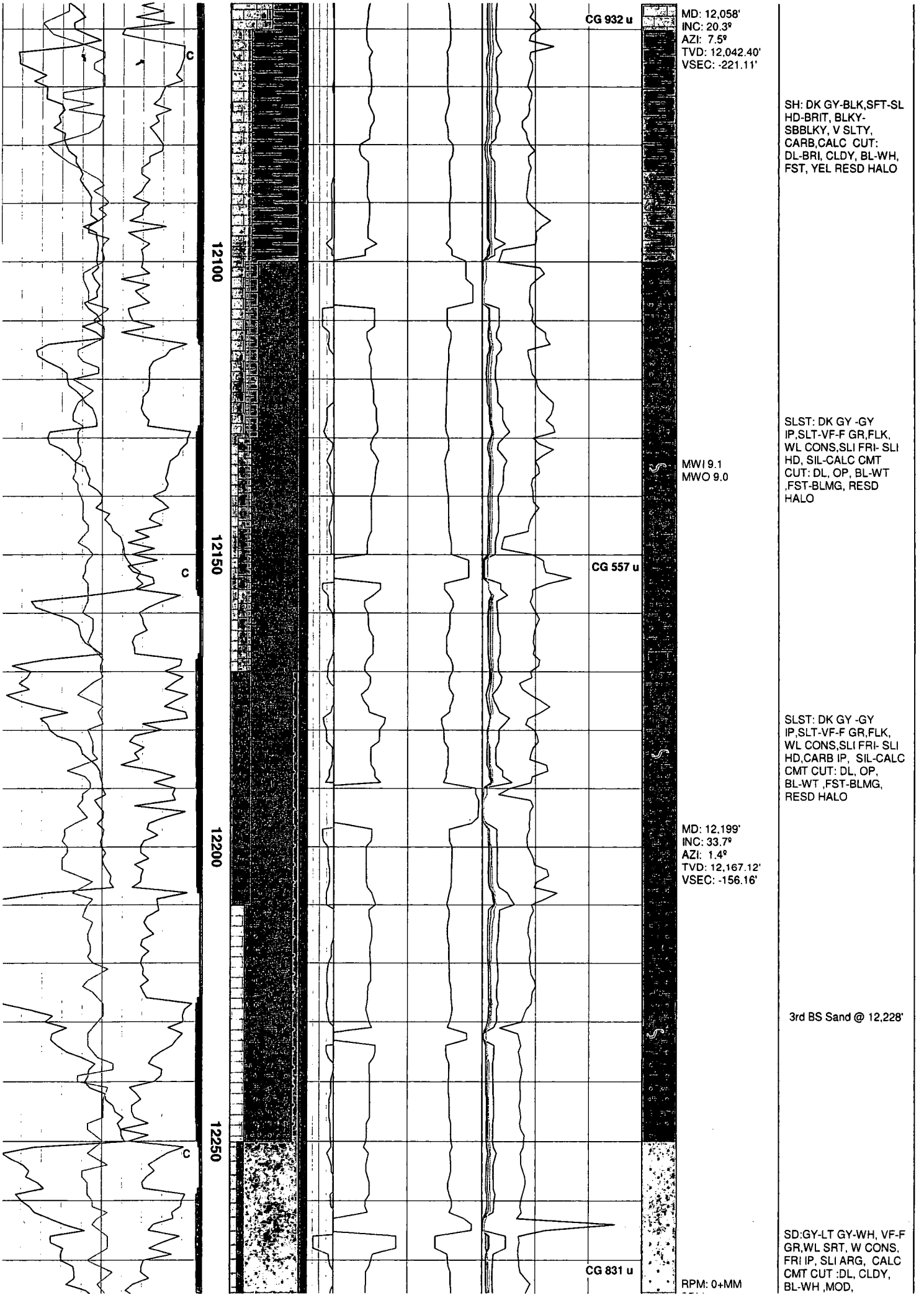

VSEC: -245.69
2nd BD Sand @ 10,981'
ROP
500
ft/hr
0
WOB_P
0
50
C
HC_Ch
0
2 1
HC_Wh
100
CaCOCUT_FLUOR
0
100
0
5 1
HC_Bh
100
GAS
CG 235u
units
1000
11000
CHROMATOGRAPH
UNITS
0
1000
LS: GY-DK GY-TN-CRM LAM, WKST-PKST-MDST, MICXL-VFXL, SL DNS, V ARG, SDY IP, AREN LAM, SIL CMT MTX, GD BL MOD STMG-BLMG RNG CT WI YEL MKY RESD
Gamma
0
API
160
11050
MWI 8.8
MWO 8.8
CG 220u
C
11100
MD: 11,128'
INC: 1.1°
AZI: 310.9°
TVD: 11,116.8'
VSEC: -243.51'
8/12/18
11150
LS: GY-DK GY-TN-CRM LAM, WKST-PKST-MDST, MICXL-VFXL, SFT-SME SL DNS, V ARG, SDY IP, AREN LAM-AREN TEX, GD BL MOD STMG-BLMG RNG CT WI YEL MKY RESD

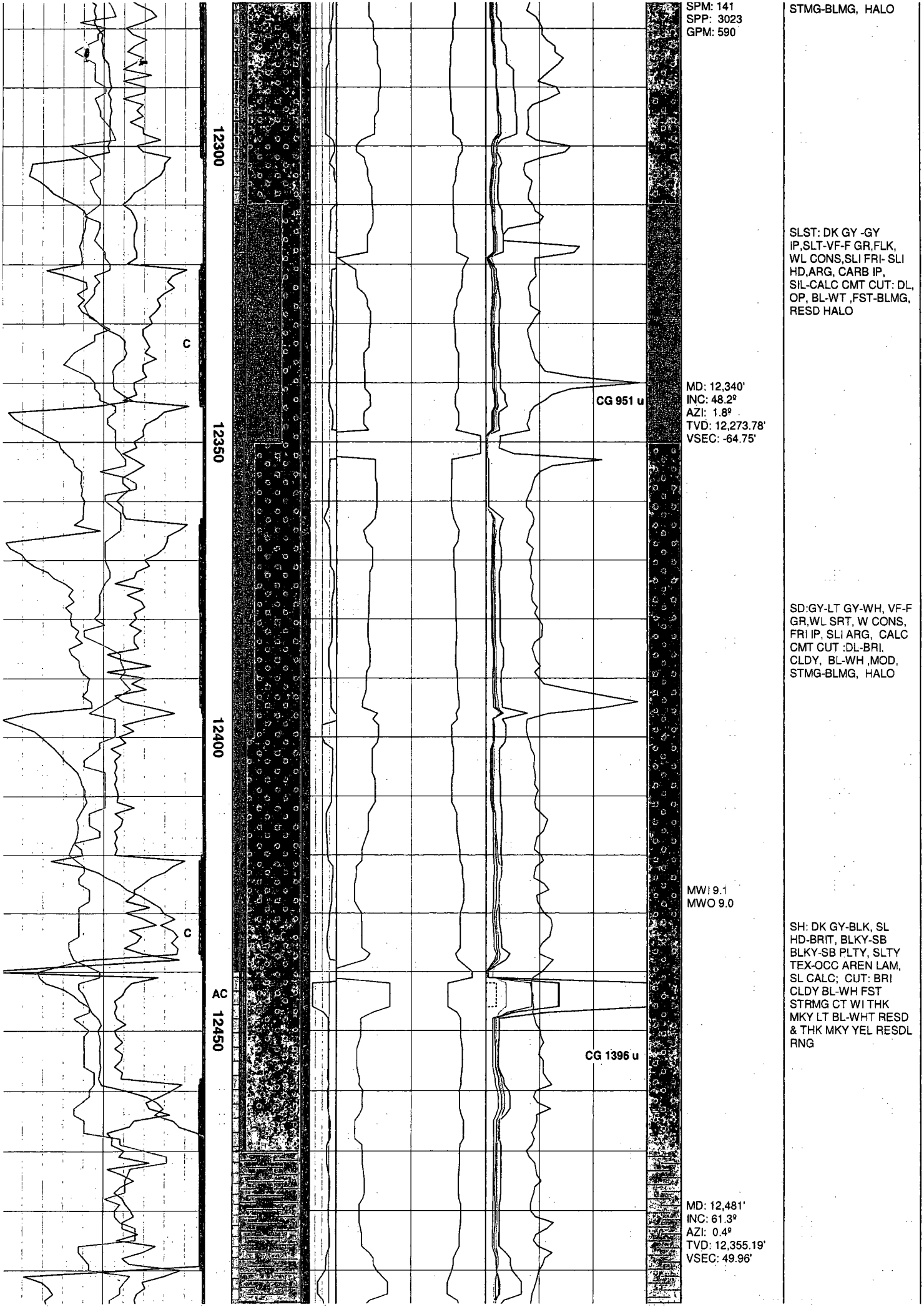

C
11200
11250
C
11300
11350
C
RPM: 60
SPM: 114
SPP: 2353
GPM: 481
MD: 11,316'
INC: 1.50°
AZI: 274.60°
TVD: 11,304.75'
VSEC: -242.31'
CG 1674u
LS: GY-DK GY-TN-SL CRM LAM. WKST-PKST-MDST, MICXL-VFXL, SFT-SME SL DNS, V ARG, SDY IP, AREN LAM-AREN IP, MOD BLU STMG RNG CT WI YEL MKY RESDL RNG
LS: GY-DK GY-TN-SL CRM LAM. WKST-PKST-MDST, MICXL-VFXL, SFT-SL DNS-DNS. V ARG, SDY IP, AREN LAM-AREN IP, TR SS, MOD BLU-GRN STMG RNG CT WI YEL MKY RESD
SD:DGY-LT GY, VF-F GR,MOD- WL SRT, CONS-DISAG, FRI IP, V

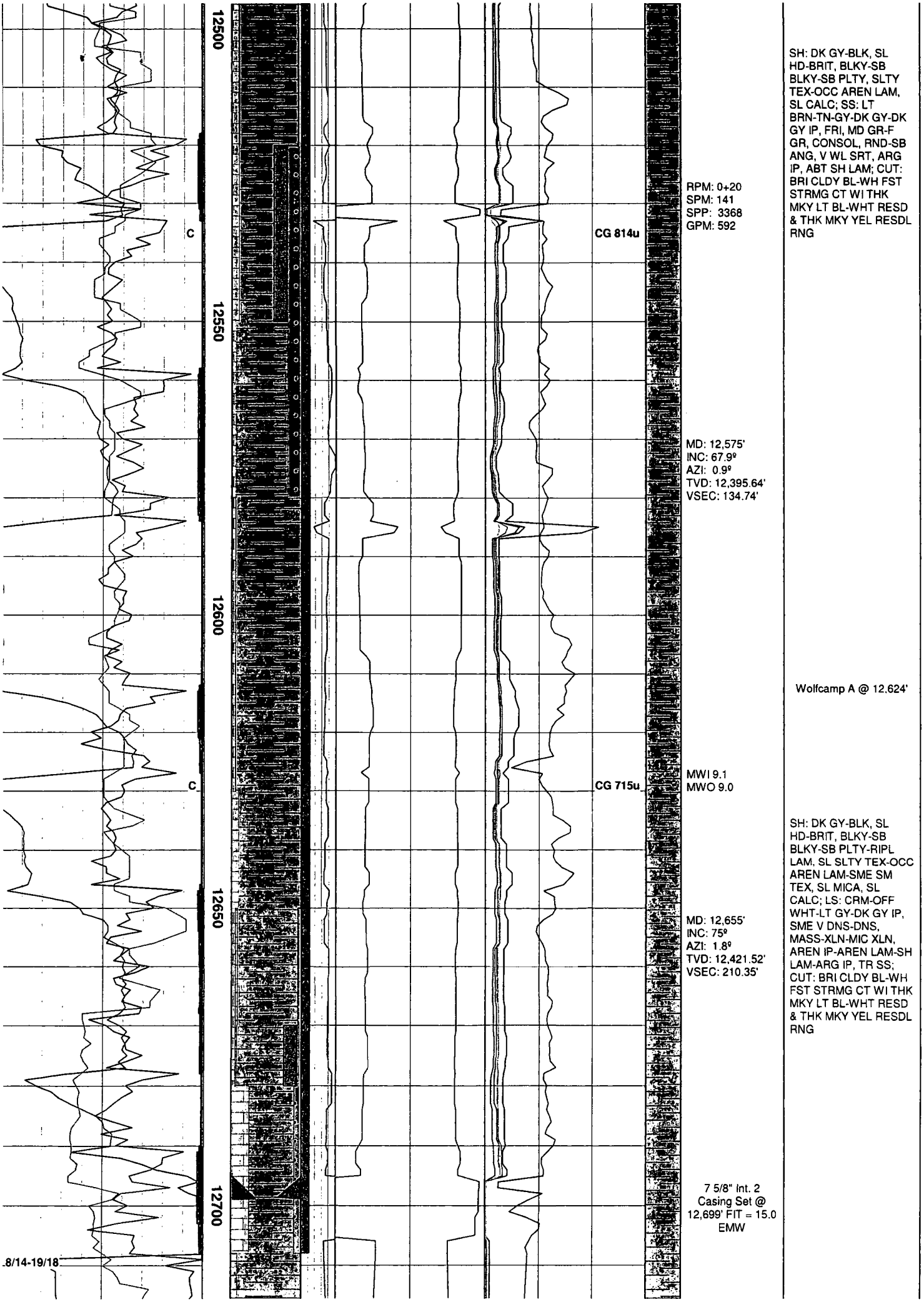

11400
FM 450
11500
11550
11600
C
C
MWI 8.8
MWO 8.8
MD: 11,504'
INC: 2.00°
AZI: 204.30°
TVD: 11,492.67'
VSEC: -245.10'
CG 1343 u
RPM: 40
SPM: 139
SPP: 3123
GPM: 579
ARG, CALC -DOL CMT CUT :WK-DL, CLDY, BL-WH ,FST, STMG-BLMG- THK YEL RES HALO
3rd BS Carbonate @ 11,444'
LS: DK GY-GY, MDST-WKST, MICXL-VFXL, MASS-CHKY, ARG. CUT: WK-DL,OP-CLDY,BL-WH, FST, DIFSE
LS: DK GY-GY, MDST-WKST, MICXL-VFXL, MASS-CHKY. ARG. CUT: WK-DL,OP-CLDY,BL-WH, FST. DIFSE
SH: DK GY-BLK, SL HD-BRIT, BLKY-SBBLKY, V SLTY, CALC CUT: DL, CLDY, BL-WH, FST, HALO

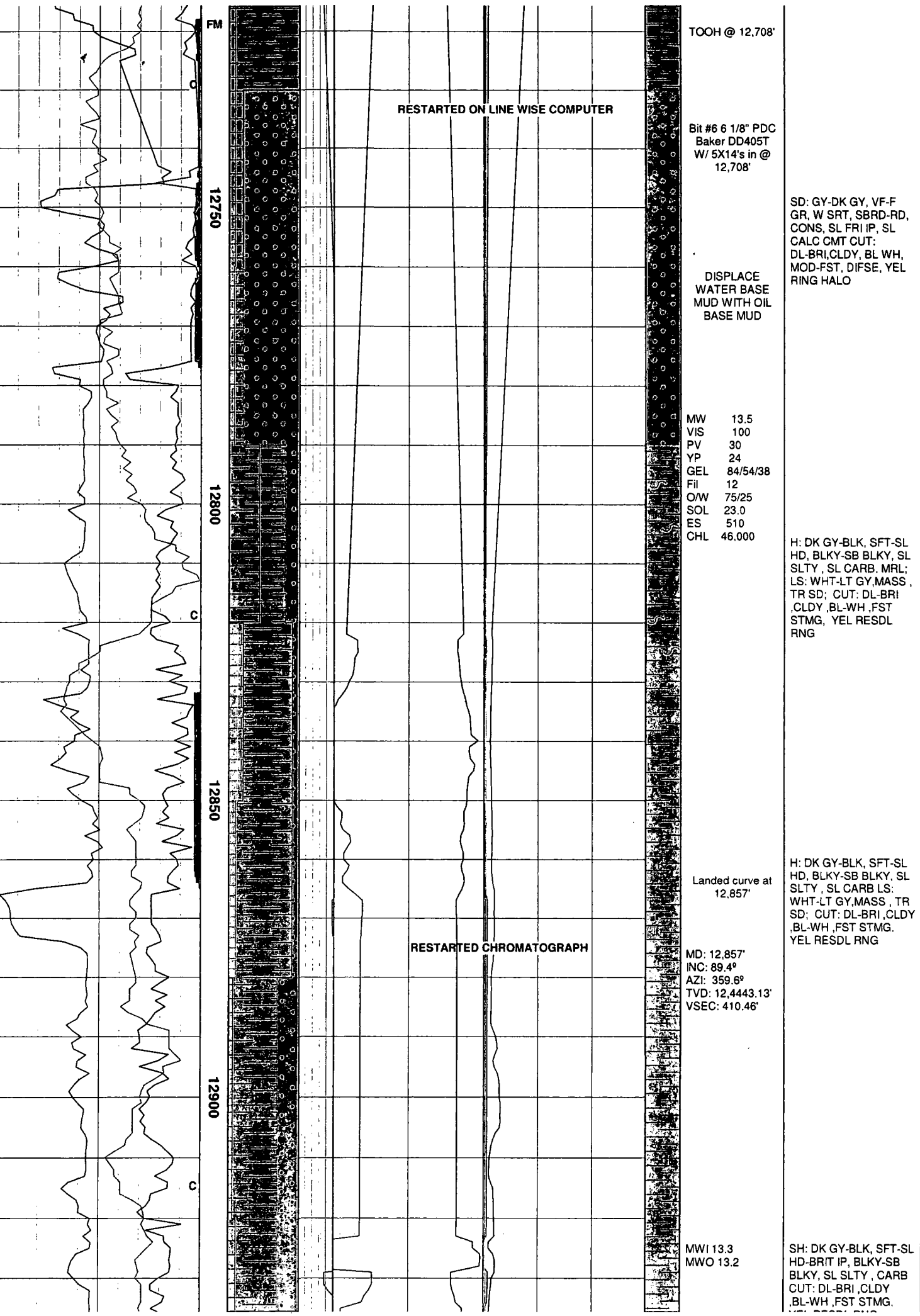

11650
11700
11750
11800
CG 543 u
CG 563 u
MD: 11,694'
INC: 1.70º
AZI: 173.70º
TVD: 11,682.60'
VSEC: -250.49'
MWI 8.8
MWO 8.8
KOP @ 11,844'
LS: DK GY-GY, WKST-PKST, MICXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK, SL HD-BRIT, BLKY-SBBLKY, V SLTY, CARB, MRLY CUT: DL, CLDY, BL-WH, FST, HALO
LS: DK GY-GY, WKST-PKST, MICXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK, SL HD-BRIT, BLKY-SBBLKY, V SLTY, CARB, MRLY CUT: DL, CLDY, BL-WH, FST, HALO
LS: DK GY-GY, WKST-PKST, MICXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL
8/13/18

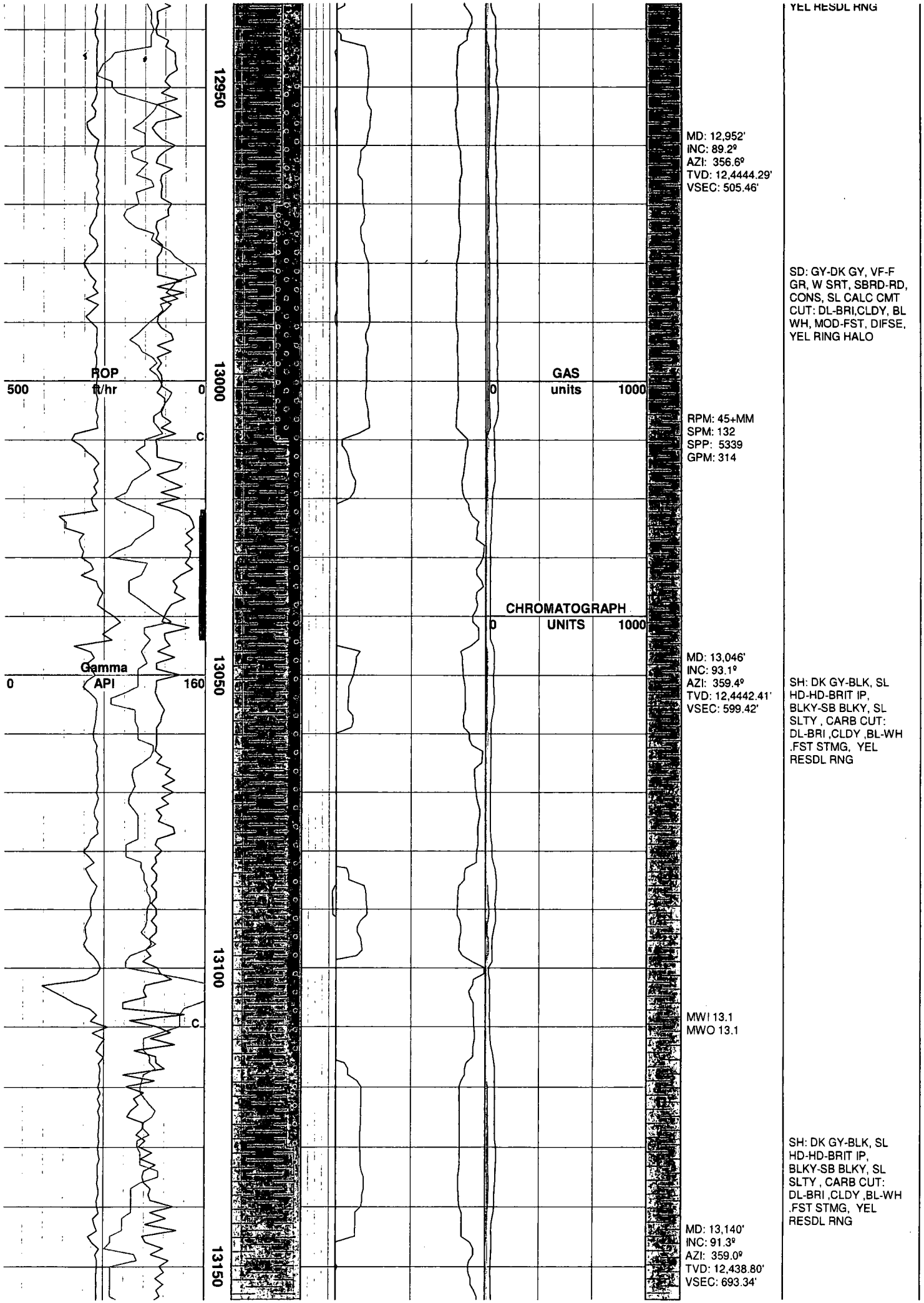

TOOH @ 11,844'
TG 6509 u
Bit #5 8.75" PDC
Logic PDL513S5
W/ 5x16's in @
11,844"
MD: 11,917'
INC: 3.90°
AZI: 0.2°
TVD: 11,905.48'
VSEC: -252.60'
CG 1252 u
RPM: 0+MM
SPM: 139
SPP: 3052
GPM: 590
SH: DK GY-BLK,SFT-SL HD-BRIT, BLKY-SBBLKY, V SLTY, CARB,CALC CUT: DL-BRI, CLDY, BL-WH, FST, YEL RESD HALO
LS: DK GY-GY, WKST-PKST, MXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK,SFT-SL HD-BRIT, BLKY-SBBLKY, V SLTY, CARB,CALC CUT: DL-BRI, CLDY, BL-WH, FST, YEL RESD HALO
LS: DK GY-GY, WKST-PKST, MXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
11850
11900
11950
12000
12050
ROP
500 ft/hr 0
WOB_P
0 50
Gamma
0 API 160
HC_Ch
0 2 1
HC_Wh
100
CaCOCUT_FLUOR
0 100
HC_Bh
0 5 1
100
GAS
units
0 1000
CHROMATOGRAPH
UNITS
0 1000

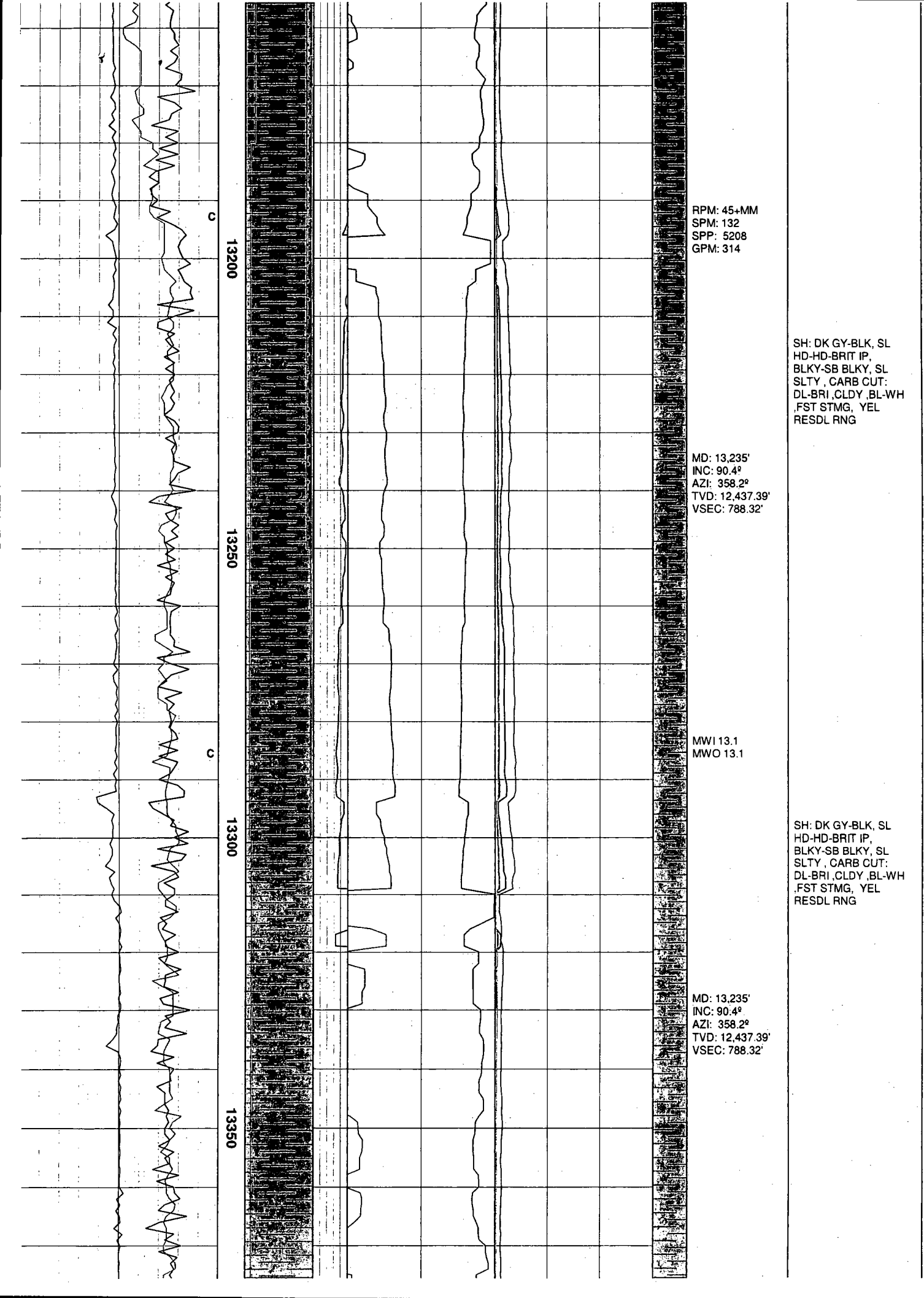

C
12100
C
12150
12200
C
12250
CG 932 u
CG 557 u
CG 831 u
MD: 12,058'
INC: 20.3°
AZI: 7.5°
TVD: 12,042.40'
VSEC: -221.11'
MWI 9.1
MWO 9.0
MD: 12,199'
INC: 33.7°
AZI: 1.4°
TVD: 12,167.12'
VSEC: -156.16'
RPM: 0+MM
SH: DK GY-BLK,SFT-SL HD-BRIT, BLKY-SBBLKY, V SLTY, CARB,CALC CUT: DL-BRI, CLDY, BL-WH, FST, YEL RESD HALO
SLST: DK GY -GY IP,SLT-VF-F GR,FLK, WL CONS,SLI FRI- SLI HD, SIL-CALC CMT CUT: DL, OP, BL-WT ,FST-BLMG, RESD HALO
SLST: DK GY -GY IP,SLT-VF-F GR,FLK, WL CONS,SLI FRI- SLI HD,CARB IP, SIL-CALC CMT CUT: DL, OP, BL-WT ,FST-BLMG, RESD HALO
3rd BS Sand @ 12,228'
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CALC CMT CUT :DL, CLDY, BL-WH ,MOD,

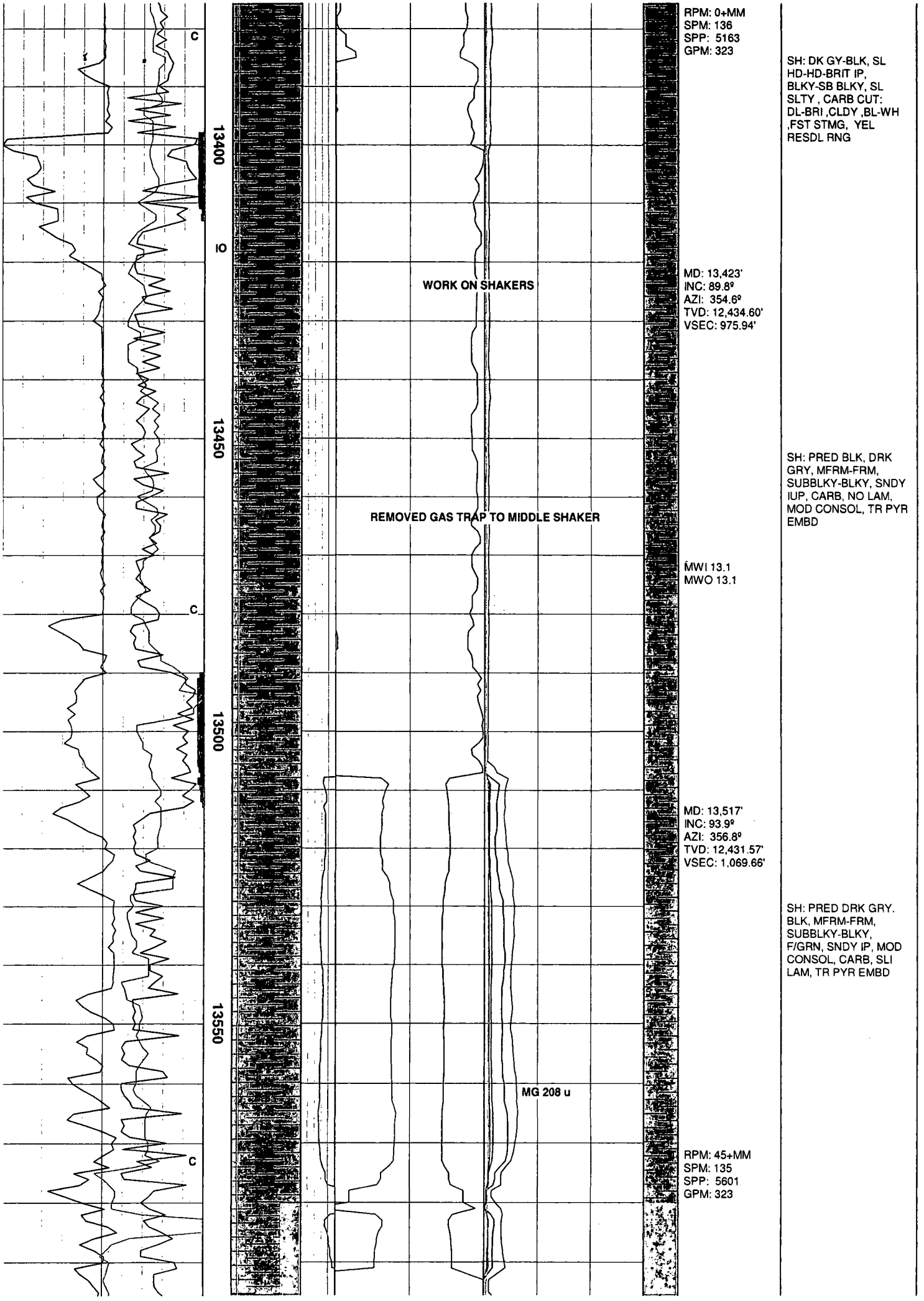

12300
12350
12400
12450
C
C
AC
CG 951 u
CG 1396 u
SPM: 141
SPP: 3023
GPM: 590
MD: 12,340'
INC: 48.2º
AZI: 1.8º
TVD: 12,273.78'
VSEC: -64.75'
MW I 9.1
MWO 9.0
MD: 12,481'
INC: 61.3º
AZI: 0.4º
TVD: 12,355.19'
VSEC: 49.96'
STMG-BLMG, HALO
SLST: DK GY -GY IP,SLT-VF-F GR,FLK, WL CONS,SLI FRI- SLI HD,ARG, CARB IP, SIL-CALC CMT CUT: DL, OP, BL-WT ,FST-BLMG, RESD HALO
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CALC CMT CUT :DL-BRI. CLDY, BL-WH ,MOD, STMG-BLMG, HALO
SH: DK GY-BLK, SL HD-BRIT, BLKY-SB BLKY-SB PLTY, SLTY TEX-OCC AREN LAM, SL CALC; CUT: BRI CLDY BL-WH FST STRMG CT WI THK MKY LT BL-WHT RESD & THK MKY YEL RESDL RNG

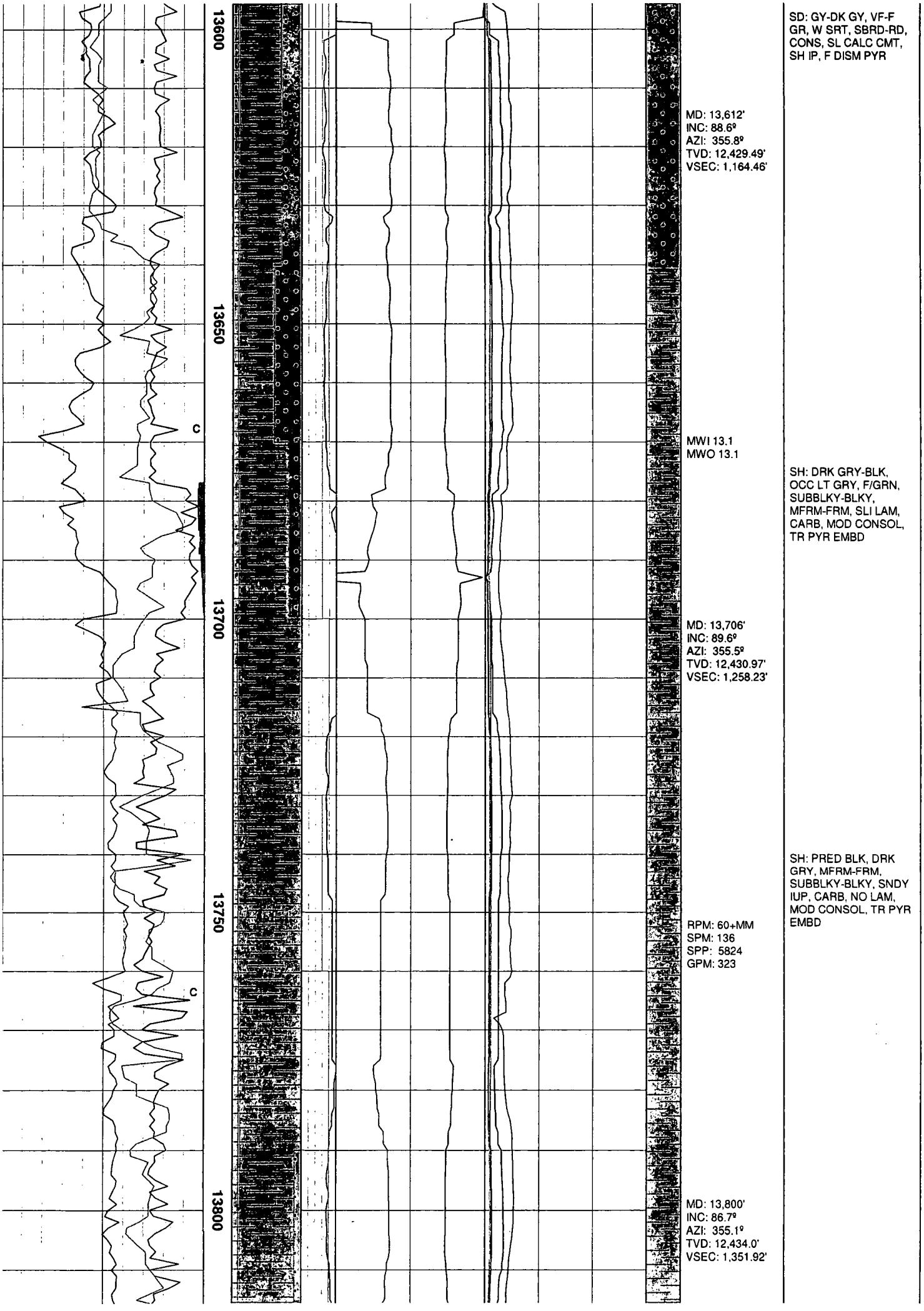

12500
12550
12600
12650
12700
C
C
CG 814u
CG 715u
RPM: 0+20
SPM: 141
SPP: 3368
GPM: 592
MD: 12,575'
INC: 67.9°
AZI: 0.9°
TVD: 12,395.64'
VSEC: 134.74'
MWI 9.1
MWO 9.0
MD: 12,655'
INC: 75°
AZI: 1.8°
TVD: 12,421.52'
VSEC: 210.35'
7 5/8" Int. 2 Casing Set @ 12,699' FIT = 15.0 EMW
SH: DK GY-BLK, SL HD-BRIT, BLKY-SB BLKY-SB PLTY, SLTY TEX-OCC AREN LAM, SL CALC; SS: LT BRN-TN-GY-DK GY-DK GY IP, FRI, MD GR-F GR, CONSOL, RND-SB ANG, V WL SRT, ARG IP, ABT SH LAM; CUT: BRI CLDY BL-WH FST STRMG CT WI THK MKY LT BL-WHT RESD & THK MKY YEL RESDL RNG
Wolfcamp A @ 12.624'
SH: DK GY-BLK, SL HD-BRIT, BLKY-SB BLKY-SB PLTY-RIPL LAM, SL SLTY TEX-OCC AREN LAM-SME SM TEX, SL MICA, SL CALC; LS: CRM-OFF WHT-LT GY-DK GY IP, SME V DNS-DNS, MASS-XLN-MIC XLN, AREN IP-AREN LAM-SH LAM-ARG IP, TR SS; CUT: BRI CLDY BL-WH FST STRMG CT WI THK MKY LT BL-WHT RESD & THK MKY YEL RESDL RNG
8/14-19/18

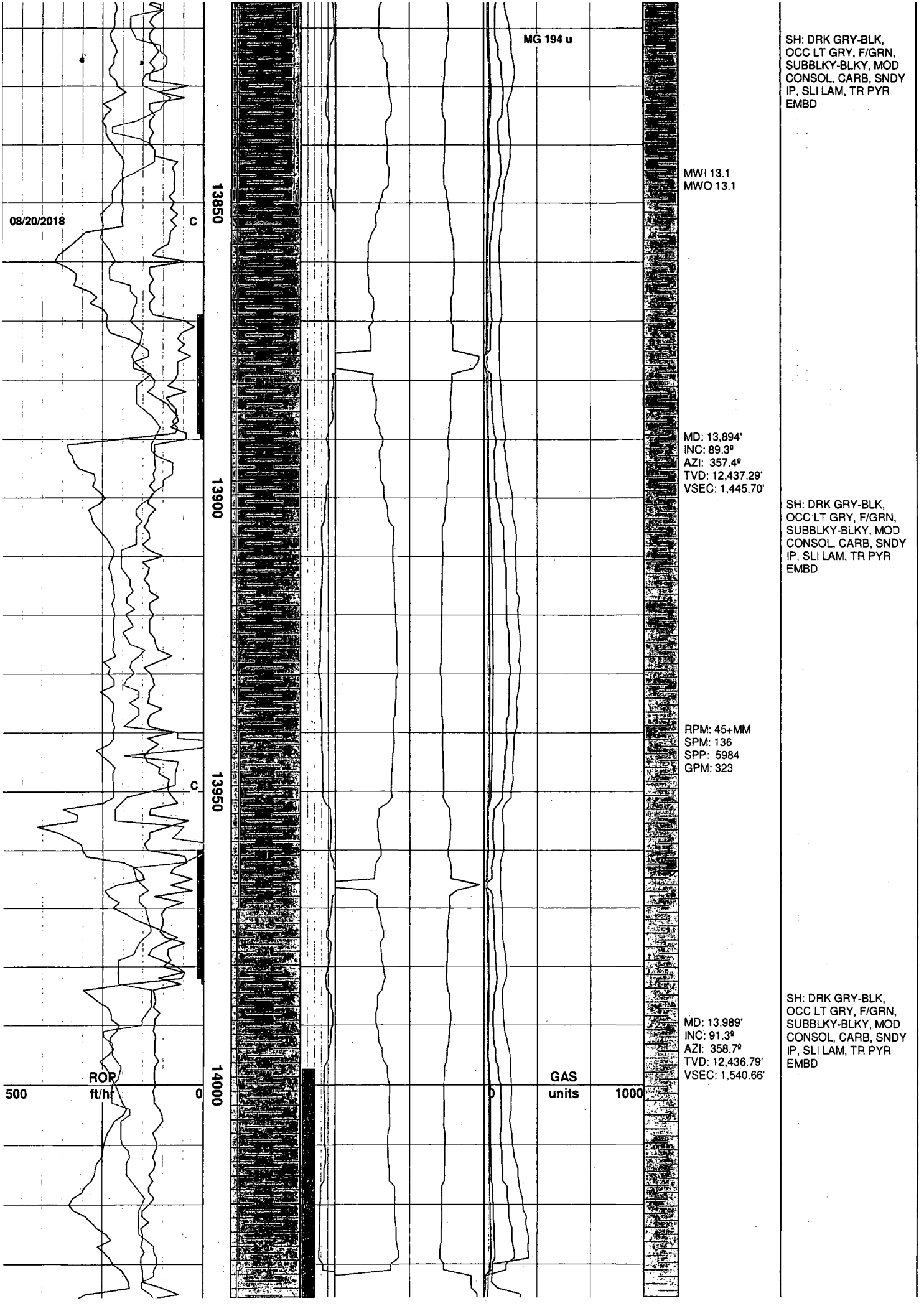

FM
12750
12800
12850
12900
RESTARTED ON LINE WISE COMPUTER
RESTARTED CHROMATOGRAPH
TOOH @ 12,708'
Bit #6 6 1/8" PDC Baker DD405T W/ 5X14's in @ 12,708'
DISPLACE WATER BASE MUD WITH OIL BASE MUD
MW 13.5
VIS 100
PV 30
YP 24
GEL 84/54/38
Fil 12
O/W 75/25
SOL 23.0
ES 510
CHL 46,000
Landed curve at 12,857'
MD: 12,857'
INC: 89.4º
AZI: 359.6º
TVD: 12,4443.13'
VSEC: 410.46'
MWI 13.3
MWO 13.2
SD: GY-DK GY, VF-F GR, W SRT, SBRD-RD, CONS, SL FRI IP, SL CALC CMT CUT: DL-BRI,CLDY, BL WH, MOD-FST, DIFSE, YEL RING HALO
H: DK GY-BLK, SFT-SL HD, BLKY-SB BLKY, SL SLTY , SL CARB. MRL; LS: WHT-LT GY,MASS , TR SD; CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
H: DK GY-BLK, SFT-SL HD, BLKY-SB BLKY, SL SLTY , SL CARB LS: WHT-LT GY,MASS , TR SD; CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG. YEL RESDL RNG
SH: DK GY-BLK, SFT-SL HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG.

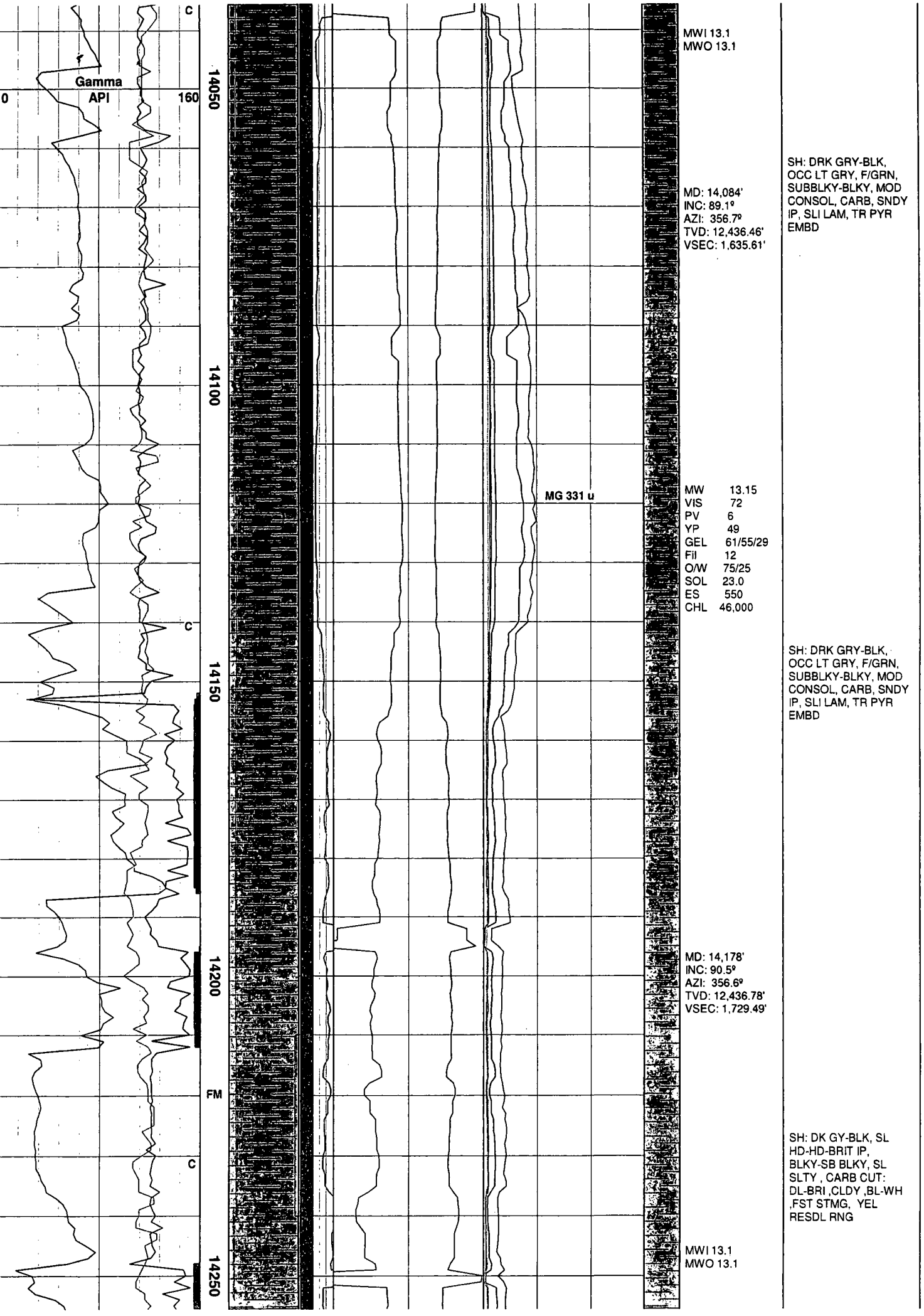

YEL RESDL RNG
12950
13000
13050
13100
13150
ROP
500 ft/hr 0
GAS
0 units 1000
CHROMATOGRAPH
0 UNITS 1000
Gamma
0 API 160
MD: 12,952'
INC: 89.2°
AZI: 356.6°
TVD: 12,4444.29'
VSEC: 505.46'
SD: GY-DK GY, VF-F GR, W SRT, SBRD-RD, CONS, SL CALC CMT CUT: DL-BRI,CLDY, BL WH, MOD-FST, DIFSE, YEL RING HALO
RPM: 45+MM
SPM: 132
SPP: 5339
GPM: 314
MD: 13,046'
INC: 93.1°
AZI: 359.4°
TVD: 12,4442.41'
VSEC: 599.42'
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH .FST STMG, YEL RESDL RNG
MWI 13.1
MWO 13.1
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH .FST STMG, YEL RESDL RNG
MD: 13,140'
INC: 91.3°
AZI: 359.0°
TVD: 12,438.80'
VSEC: 693.34'

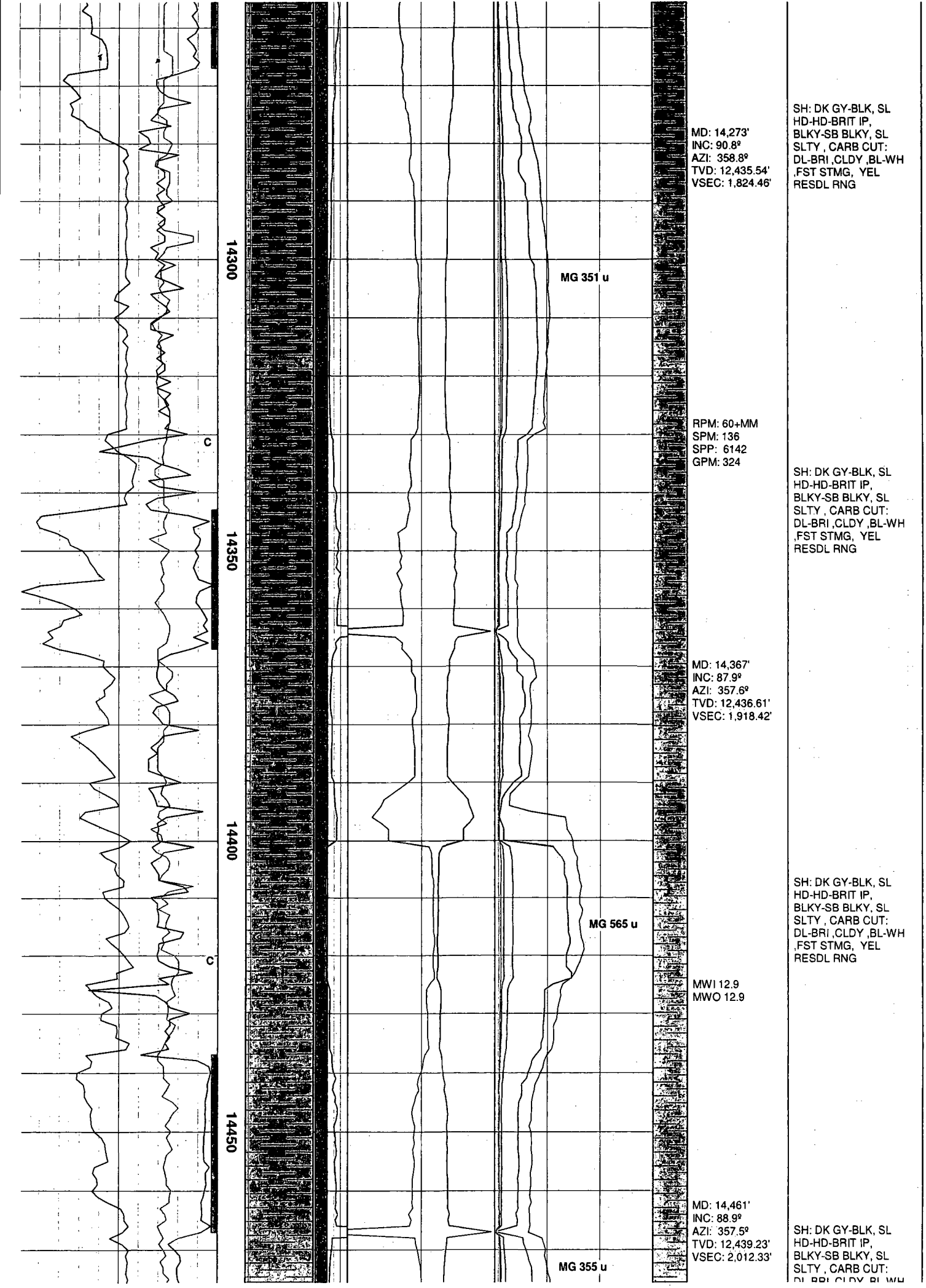

C
13200
13250
C
13300
13350
RPM: 45+MM
SPM: 132
SPP: 5208
GPM: 314
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
MD: 13,235'
INC: 90.4º
AZI: 358.2º
TVD: 12,437.39'
VSEC: 788.32'
MWI 13.1
MWO 13.1
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
MD: 13,235'
INC: 90.4º
AZI: 358.2º
TVD: 12,437.39'
VSEC: 788.32'

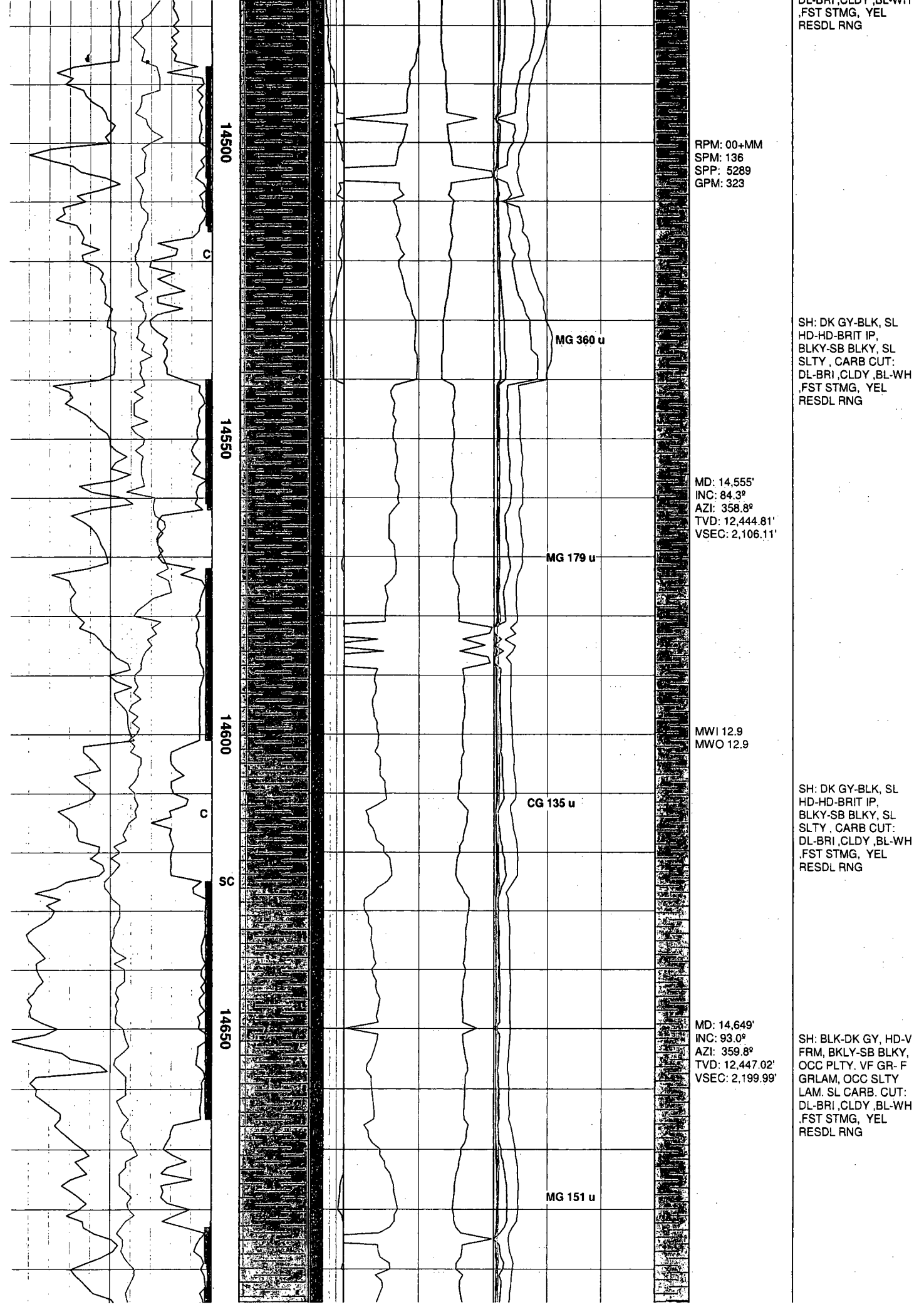

C
13400
IO
13450
C
13500
13550
C
RPM: 0+MM
SPM: 136
SPP: 5163
GPM: 323
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
WORK ON SHAKERS
MD: 13,423'
INC: 89.8°
AZI: 354.6°
TVD: 12,434.60'
VSEC: 975.94'
SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IUP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD
REMOVED GAS TRAP TO MIDDLE SHAKER
MWI 13.1
MWO 13.1
MD: 13,517'
INC: 93.9°
AZI: 356.8°
TVD: 12,431.57'
VSEC: 1,069.66'
SH: PRED DRK GRY. BLK, MFRM-FRM, SUBBLKY-BLKY, F/GRN, SNDY IP, MOD CONSOL, CARB, SLI LAM, TR PYR EMBD
MG 208 u
RPM: 45+MM
SPM: 135
SPP: 5601
GPM: 323

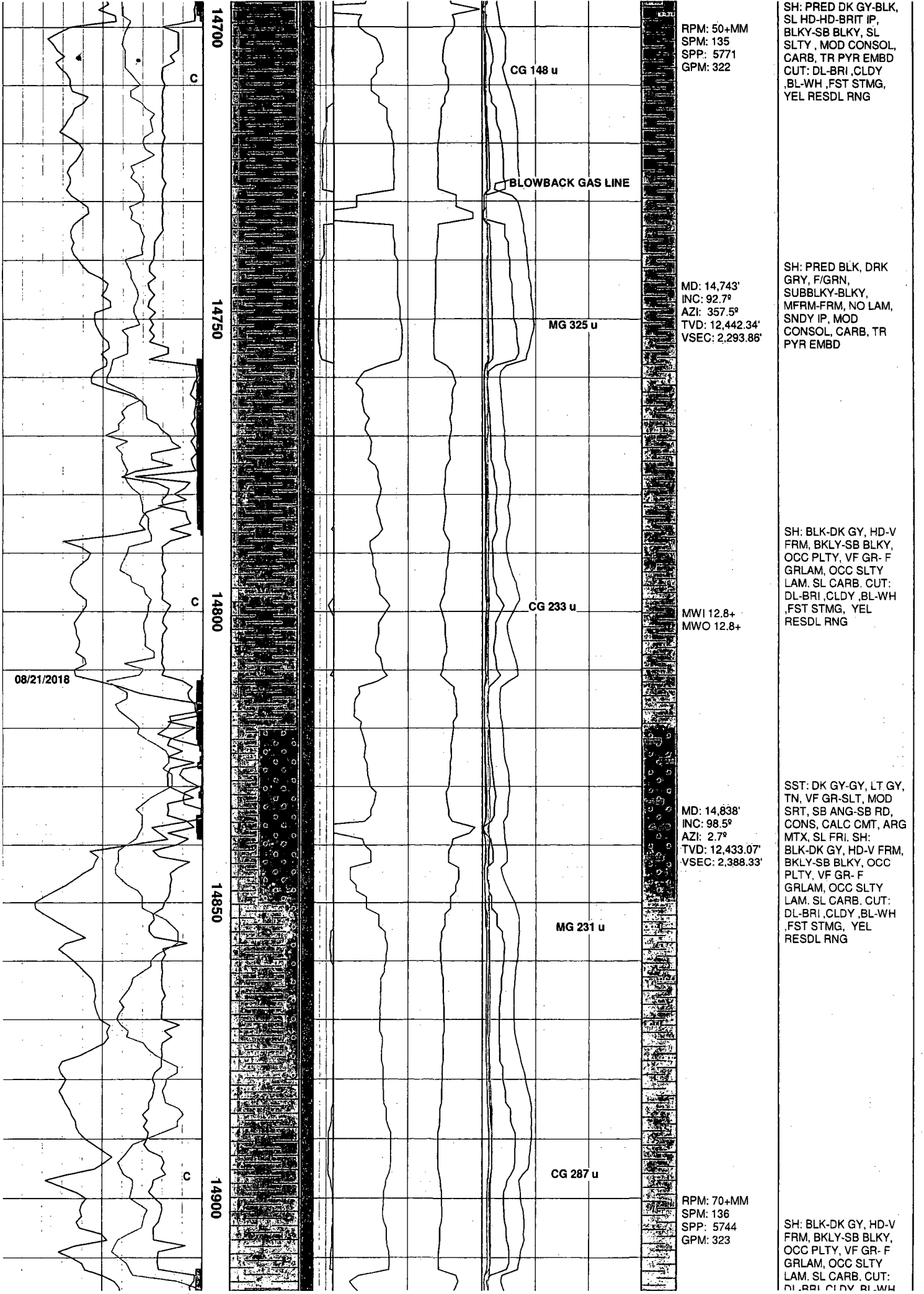

13600
13650
13700
13750
13800
C
C
MD: 13,612'
INC: 88.6°
AZI: 355.8°
TVD: 12,429.49'
VSEC: 1,164.46'
MWI 13.1
MWO 13.1
MD: 13,706'
INC: 89.6°
AZI: 355.5°
TVD: 12,430.97'
VSEC: 1,258.23'
RPM: 60+MM
SPM: 136
SPP: 5824
GPM: 323
MD: 13,800'
INC: 86.7°
AZI: 355.1°
TVD: 12,434.0'
VSEC: 1,351.92'
SD: GY-DK GY, VF-F GR, W SRT, SBRD-RD, CONS, SL CALC CMT, SH IP, F DISM PYR
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD
SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IUP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD

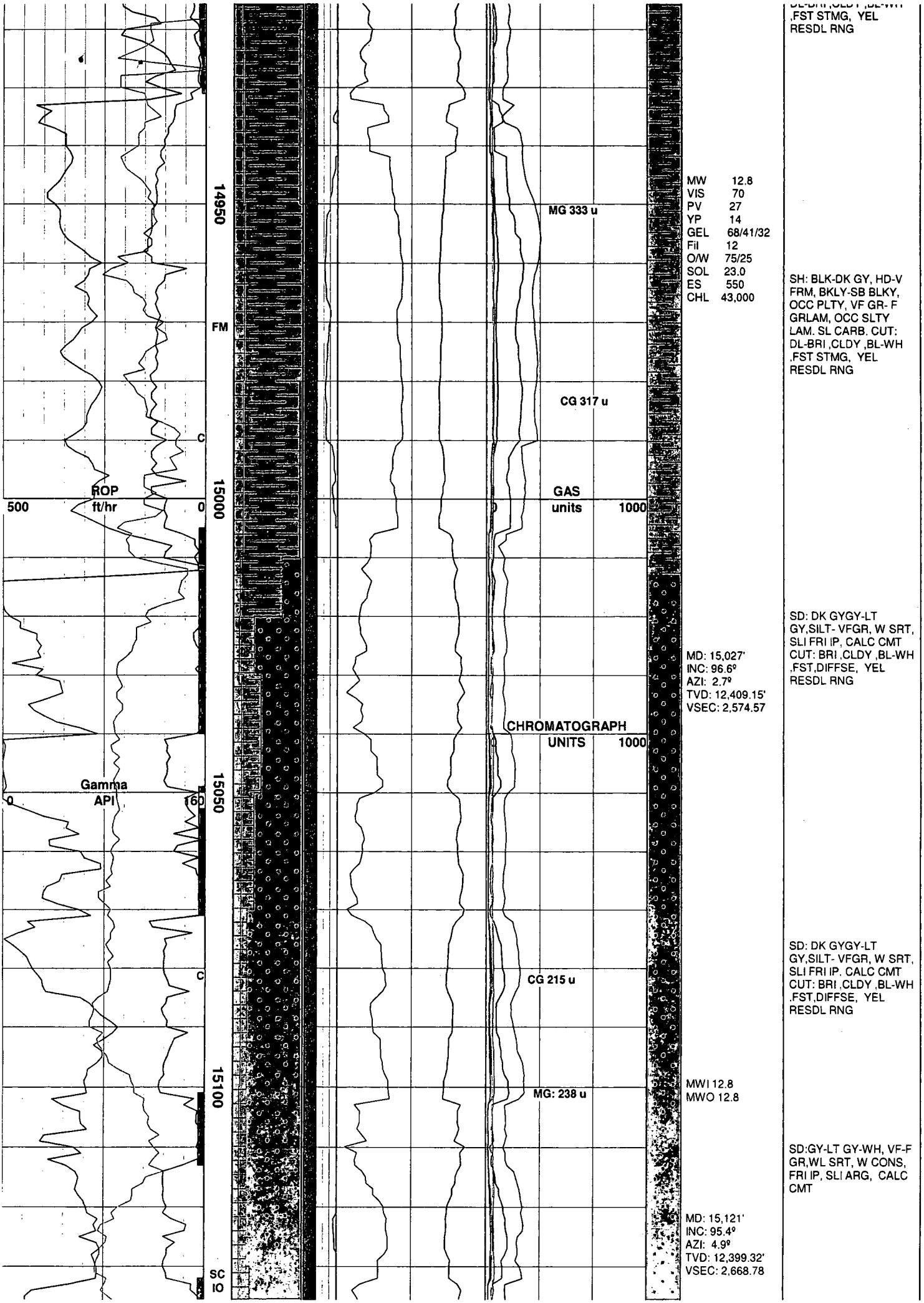

08/20/2018
C
C
13850
13900
13950
14000
ROR
500
ft/hr
0
MG 194 u
GAS
0
units
1000
MWI 13.1
MWO 13.1
MD: 13,894'
INC: 89.3º
AZI: 357.4º
TVD: 12,437.29'
VSEC: 1,445.70'
RPM: 45+MM
SPM: 136
SPP: 5984
GPM: 323
MD: 13,989'
INC: 91.3º
AZI: 358.7º
TVD: 12,436.79'
VSEC: 1,540.66'
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD

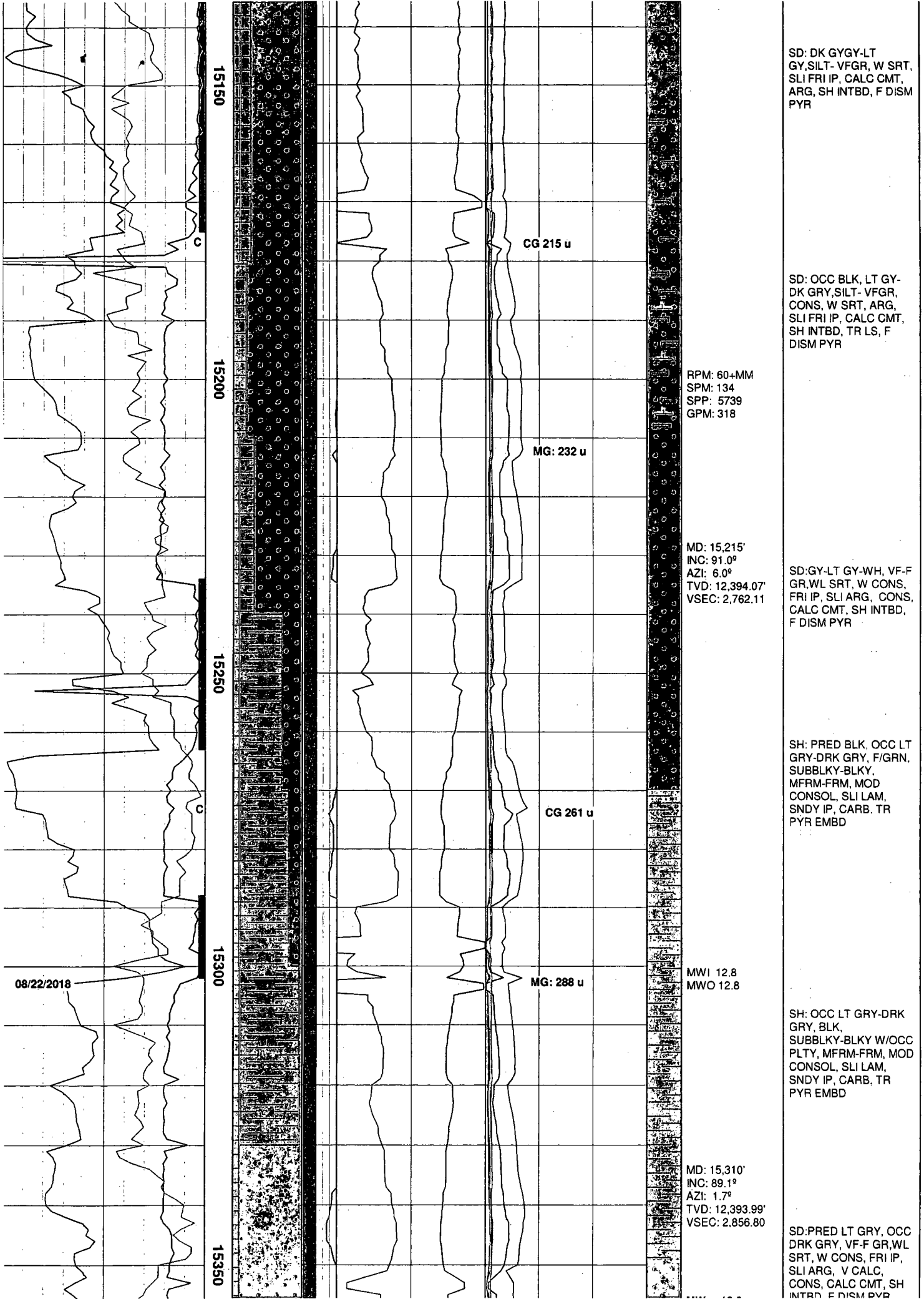

C
Gamma
API
0
160
14050
14100
14150
14200
14250
C
C
FM
MWI 13.1
MWO 13.1
MD: 14,084'
INC: 89.1º
AZI: 356.7º
TVD: 12,436.46'
VSEC: 1,635.61'
MG 331 u
MW 13.15
VIS 72
PV 6
YP 49
GEL 61/55/29
Fil 12
O/W 75/25
SOL 23.0
ES 550
CHL 46,000
MD: 14,178'
INC: 90.5º
AZI: 356.6º
TVD: 12,436.78'
VSEC: 1,729.49'
MWI 13.1
MWO 13.1
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

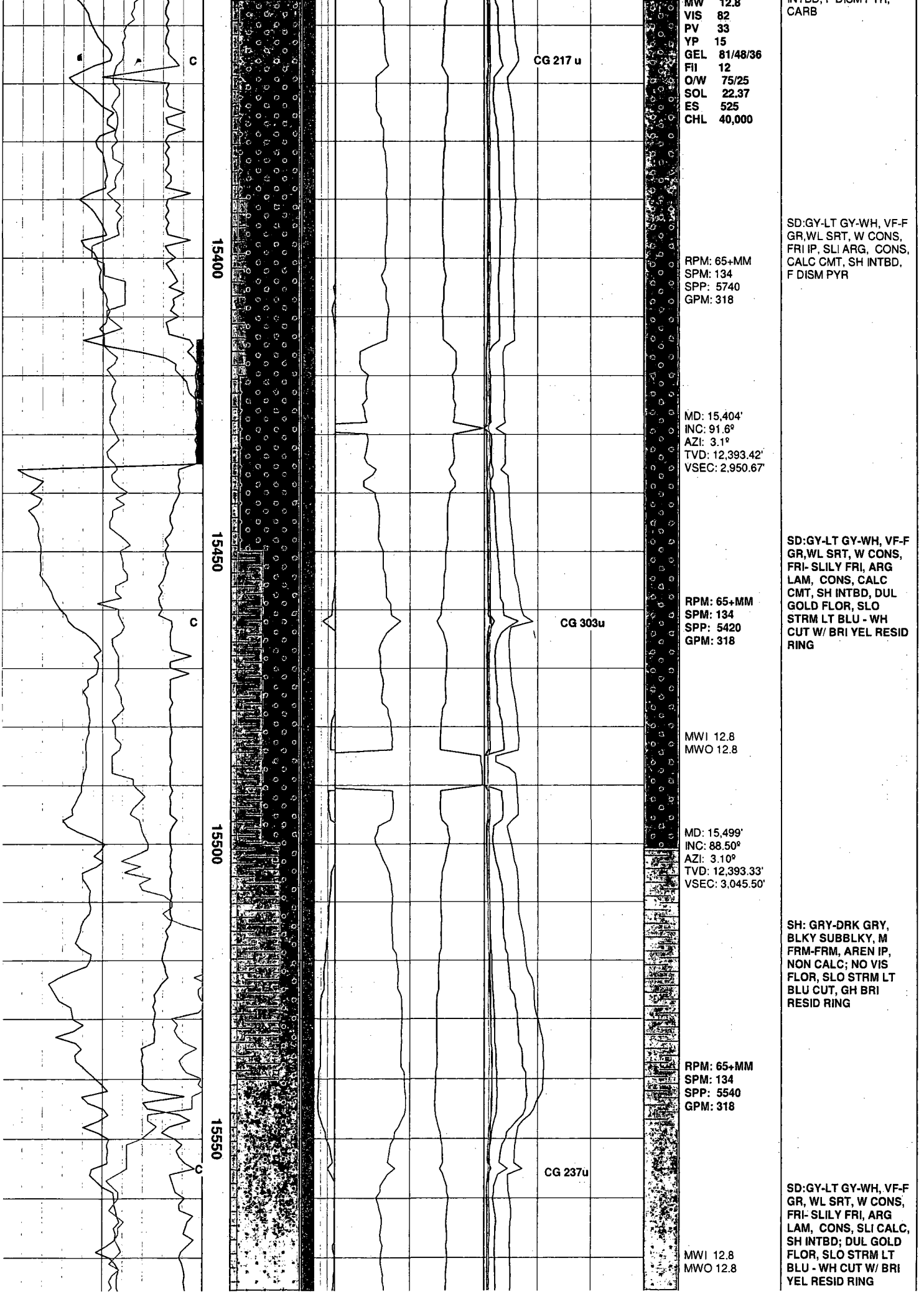

14300
14350
14400
14450
C
C
MG 351 u
MG 565 u
MG 355 u
MD: 14,273'
INC: 90.8º
AZI: 358.8º
TVD: 12,435.54'
VSEC: 1,824.46'
RPM: 60+MM
SPM: 136
SPP: 6142
GPM: 324
MD: 14,367'
INC: 87.9º
AZI: 357.6º
TVD: 12,436.61'
VSEC: 1,918.42'
MWI 12.9
MWO 12.9
MD: 14,461'
INC: 88.9º
AZI: 357.5º
TVD: 12,439.23'
VSEC: 2,012.33'
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT:

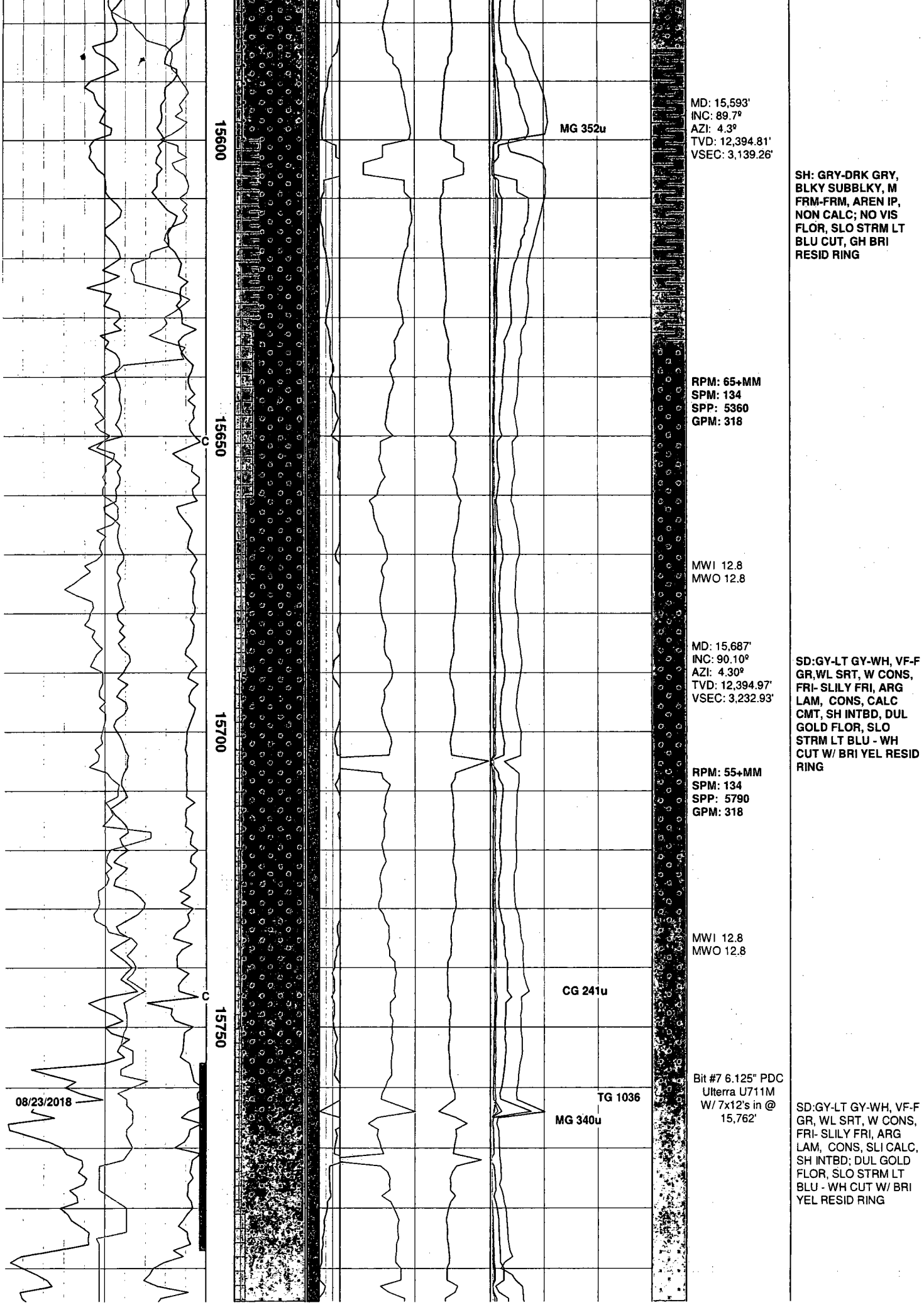

14500
14550
14600
14650
C
C
SC
MG 360 u
MG 179 u
CG 135 u
MG 151 u
RPM: 00+MM
SPM: 136
SPP: 5289
GPM: 323
MD: 14,555'
INC: 84.3°
AZI: 358.8°
TVD: 12,444.81'
VSEC: 2,106.11'
MWI 12.9
MWO 12.9
MD: 14,649'
INC: 93.0°
AZI: 359.8°
TVD: 12,447.02'
VSEC: 2,199.99'
,FST STMG, YEL
RESDL RNG
SH: DK GY-BLK, SL
HD-HD-BRIT IP,
BLKY-SB BLKY, SL
SLTY , CARB CUT:
DL-BRI ,CLDY ,BL-WH
,FST STMG, YEL
RESDL RNG
SH: DK GY-BLK, SL
HD-HD-BRIT IP,
BLKY-SB BLKY, SL
SLTY , CARB CUT:
DL-BRI ,CLDY ,BL-WH
,FST STMG, YEL
RESDL RNG
SH: BLK-DK GY, HD-V
FRM, BKLY-SB BLKY,
OCC PLTY. VF GR- F
GRLAM, OCC SLTY
LAM. SL CARB. CUT:
DL-BRI ,CLDY ,BL-WH
,FST STMG, YEL
RESDL RNG

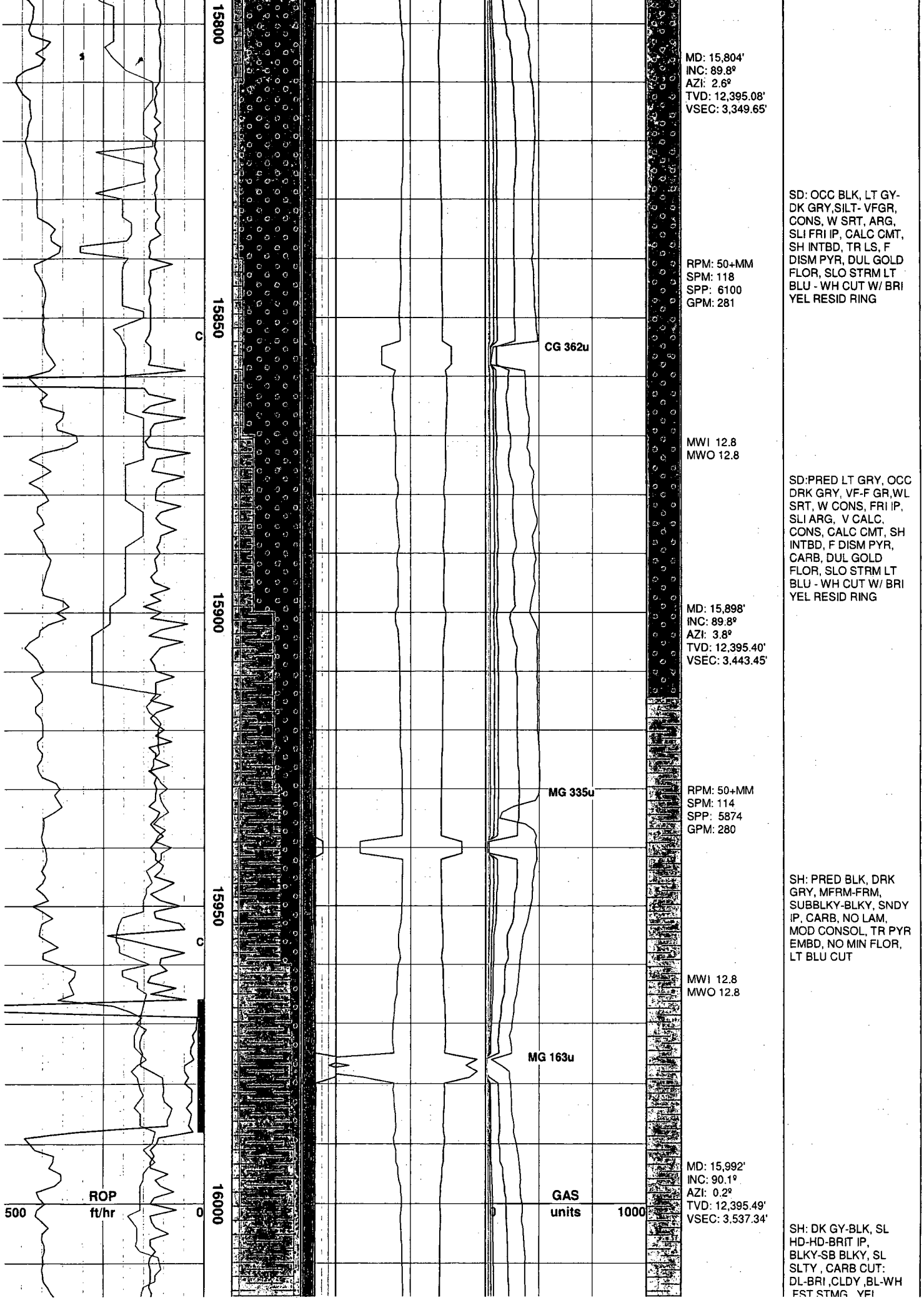

14700
14750
14800
14850
14900
C
C
C
C
08/21/2018
CG 148 u
BLOWBACK GAS LINE
MG 325 u
CG 233 u
MG 231 u
CG 287 u
RPM: 50+MM
SPM: 135
SPP: 5771
GPM: 322
MD: 14,743'
INC: 92.7º
AZI: 357.5º
TVD: 12,442.34'
VSEC: 2,293.86'
MWI 12.8+
MWO 12.8+
MD: 14,838'
INC: 98.5º
AZI: 2.7º
TVD: 12,433.07'
VSEC: 2,388.33'
RPM: 70+MM
SPM: 136
SPP: 5744
GPM: 323
SH: PRED DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , MOD CONSOL, CARB, TR PYR EMBD CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: PRED BLK, DRK GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, NO LAM, SNDY IP, MOD CONSOL, CARB, TR PYR EMBD
SH: BLK-DK GY, HD-V FRM, BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SST: DK GY-GY, LT GY, TN, VF GR-SLT, MOD SRT, SB ANG-SB RD, CONS, CALC CMT, ARG MTX, SL FRI. SH: BLK-DK GY, HD-V FRM, BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: BLK-DK GY, HD-V FRM, BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT:

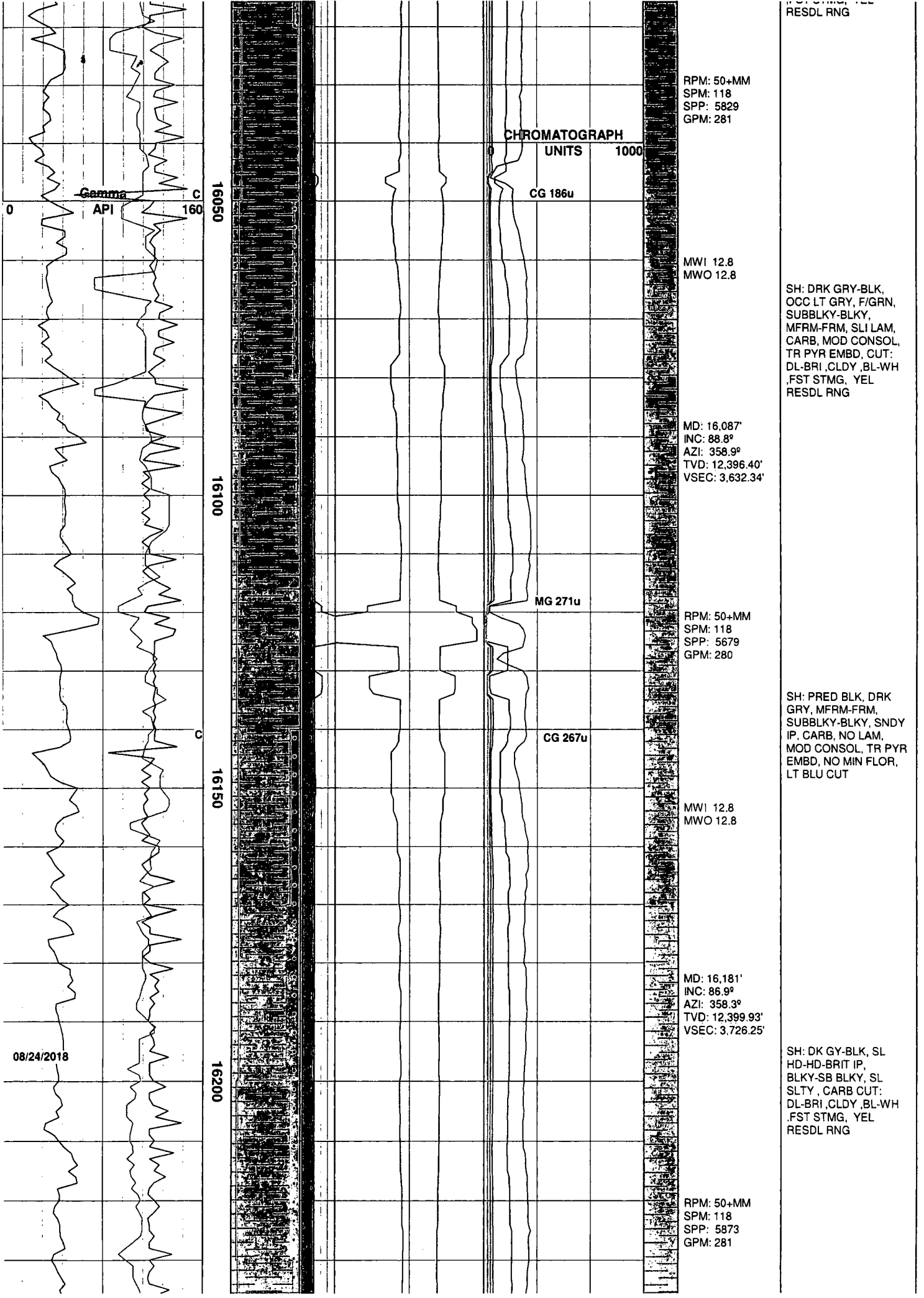

14950
FM
15000
15050
15100
ROP
500
ft/hr
0
Gamma
0
API
160
GAS
units
1000
CHROMATOGRAPH
UNITS
1000
MG 333 u
CG 317 u
CG 215 u
MG: 238 u
MW 12.8
VIS 70
PV 27
YP 14
GEL 68/41/32
Fil 12
O/W 75/25
SOL 23.0
ES 550
CHL 43,000
MD: 15,027'
INC: 96.6°
AZI: 2.7°
TVD: 12,409.15'
VSEC: 2,574.57
MWI 12.8
MWO 12.8
MD: 15,121'
INC: 95.4°
AZI: 4.9°
TVD: 12,399.32'
VSEC: 2,668.78
,FST STMG, YEL
RESDL RNG
SH: BLK-DK GY, HD-V
FRM, BKLY-SB BLKY,
OCC PLTY, VF GR- F
GRLAM, OCC SLTY
LAM. SL CARB. CUT:
DL-BRI ,CLDY ,BL-WH
,FST STMG, YEL
RESDL RNG
SD: DK GYGY-LT
GY,SILT- VFGR, W SRT,
SLI FRI IP, CALC CMT
CUT: BRI ,CLDY ,BL-WH
,FST,DIFFSE, YEL
RESDL RNG
SD: DK GYGY-LT
GY,SILT- VFGR, W SRT,
SLI FRI IP. CALC CMT
CUT: BRI ,CLDY ,BL-WH
,FST,DIFFSE, YEL
RESDL RNG
SD:GY-LT GY-WH, VF-F
GR,WL SRT, W CONS,
FRI IP, SLI ARG, CALC
CMT

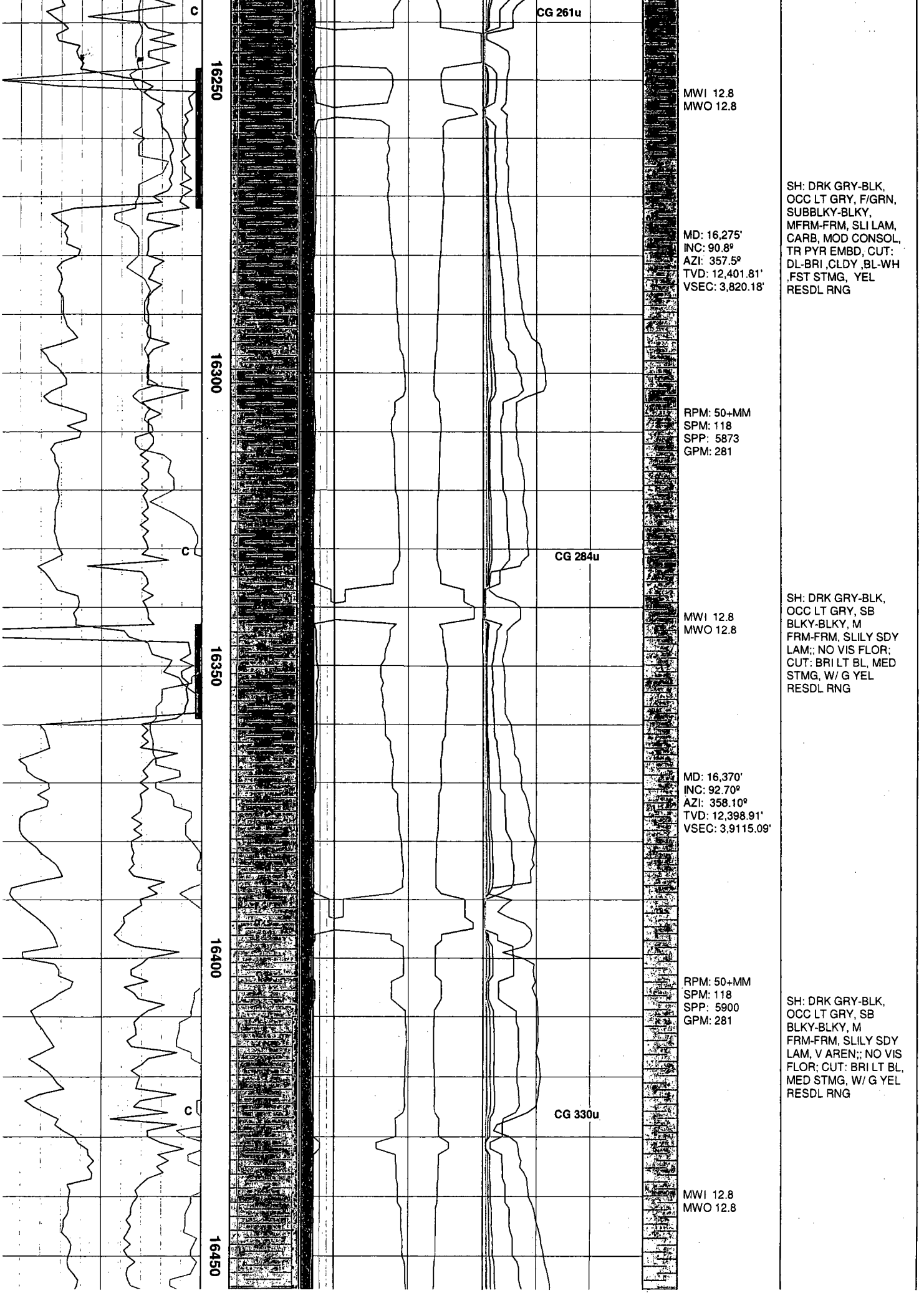

15150
15200
15250
15300
15350
C
C
CG 215 u
MG: 232 u
CG 261 u
MG: 288 u
08/22/2018
RPM: 60+MM
SPM: 134
SPP: 5739
GPM: 318
MD: 15,215'
INC: 91.0°
AZI: 6.0°
TVD: 12,394.07'
VSEC: 2,762.11
MWI 12.8
MWO 12.8
MD: 15,310'
INC: 89.1°
AZI: 1.7°
TVD: 12,393.99'
VSEC: 2,856.80
SD: DK GYGY-LT GY,SILT- VFGR, W SRT, SLI FRI IP, CALC CMT, ARG, SH INTBD, F DISM PYR
SD: OCC BLK, LT GY-DK GRY,SILT- VFGR, CONS, W SRT, ARG, SLI FRI IP, CALC CMT, SH INTBD, TR LS, F DISM PYR
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CONS, CALC CMT, SH INTBD, F DISM PYR
SH: PRED BLK, OCC LT GRY-DRK GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, MOD CONSOL, SLI LAM, SNDY IP, CARB. TR PYR EMBD
SH: OCC LT GRY-DRK GRY, BLK, SUBBLKY-BLKY W/OCC PLTY, MFRM-FRM, MOD CONSOL, SLI LAM, SNDY IP, CARB, TR PYR EMBD
SD:PRED LT GRY, OCC DRK GRY, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, V CALC, CONS, CALC CMT, SH INTBD, F DISM PYR

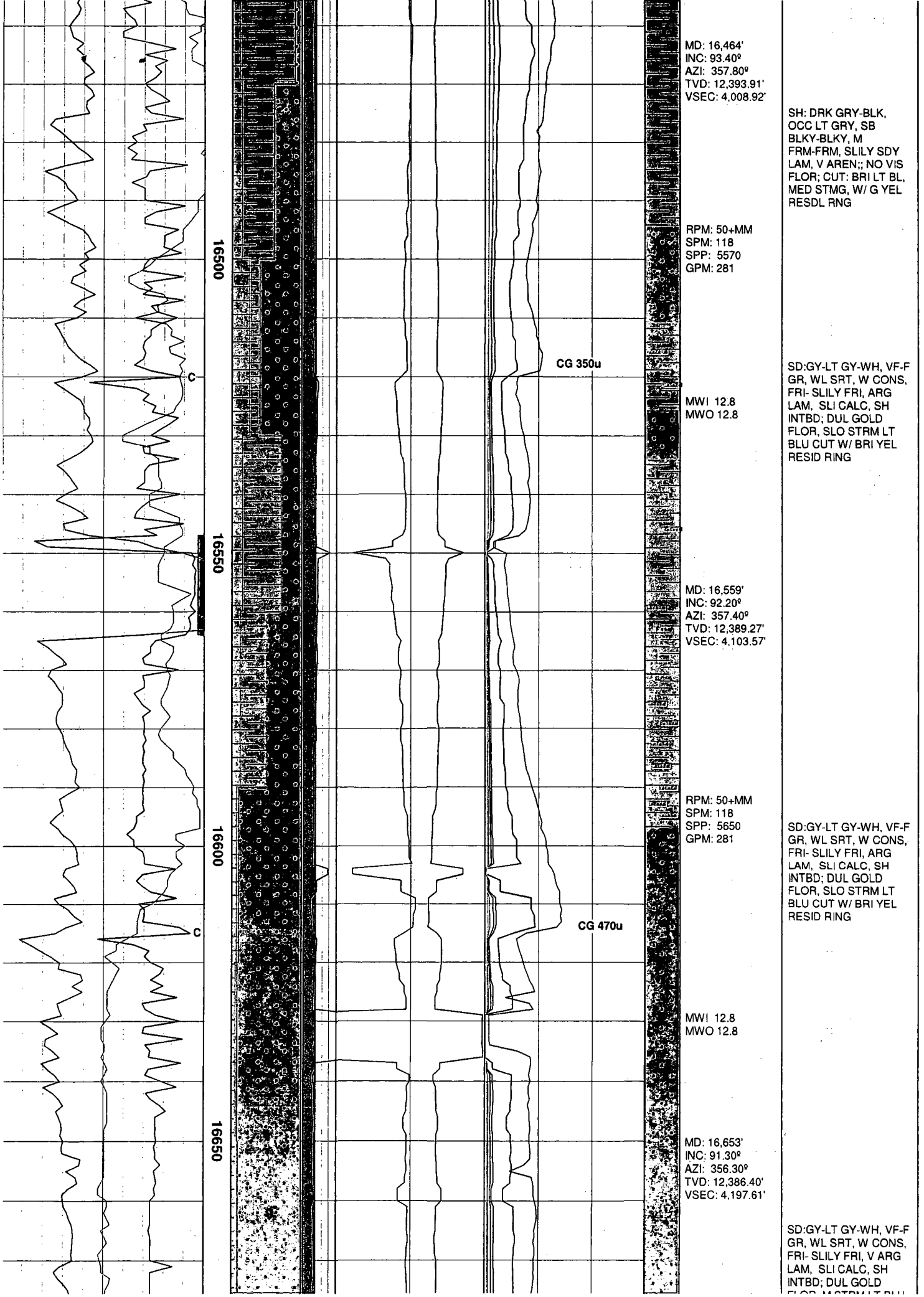

15400
15450
15500
15550
C
C
C
CG 217 u
CG 303u
CG 237u
MW 12.8
VIS 82
PV 33
YP 15
GEL 81/48/36
FIl 12
O/W 75/25
SOL 22.37
ES 525
CHL 40,000
RPM: 65+MM
SPM: 134
SPP: 5740
GPM: 318
MD: 15,404'
INC: 91.6°
AZI: 3.1°
TVD: 12,393.42'
VSEC: 2,950.67'
RPM: 65+MM
SPM: 134
SPP: 5420
GPM: 318
MWI 12.8
MWO 12.8
MD: 15,499'
INC: 88.50°
AZI: 3.10°
TVD: 12,393.33'
VSEC: 3,045.50'
RPM: 65+MM
SPM: 134
SPP: 5540
GPM: 318
MWI 12.8
MWO 12.8
CARB
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CONS, CALC CMT, SH INTBD, F DISM PYR
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, CALC CMT, SH INTBD, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING
SH: GRY-DRK GRY, BLKY SUBBLKY, M FRM-FRM, AREN IP, NON CALC; NO VIS FLOR, SLO STRM LT BLU CUT, GH BRI RESID RING
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING

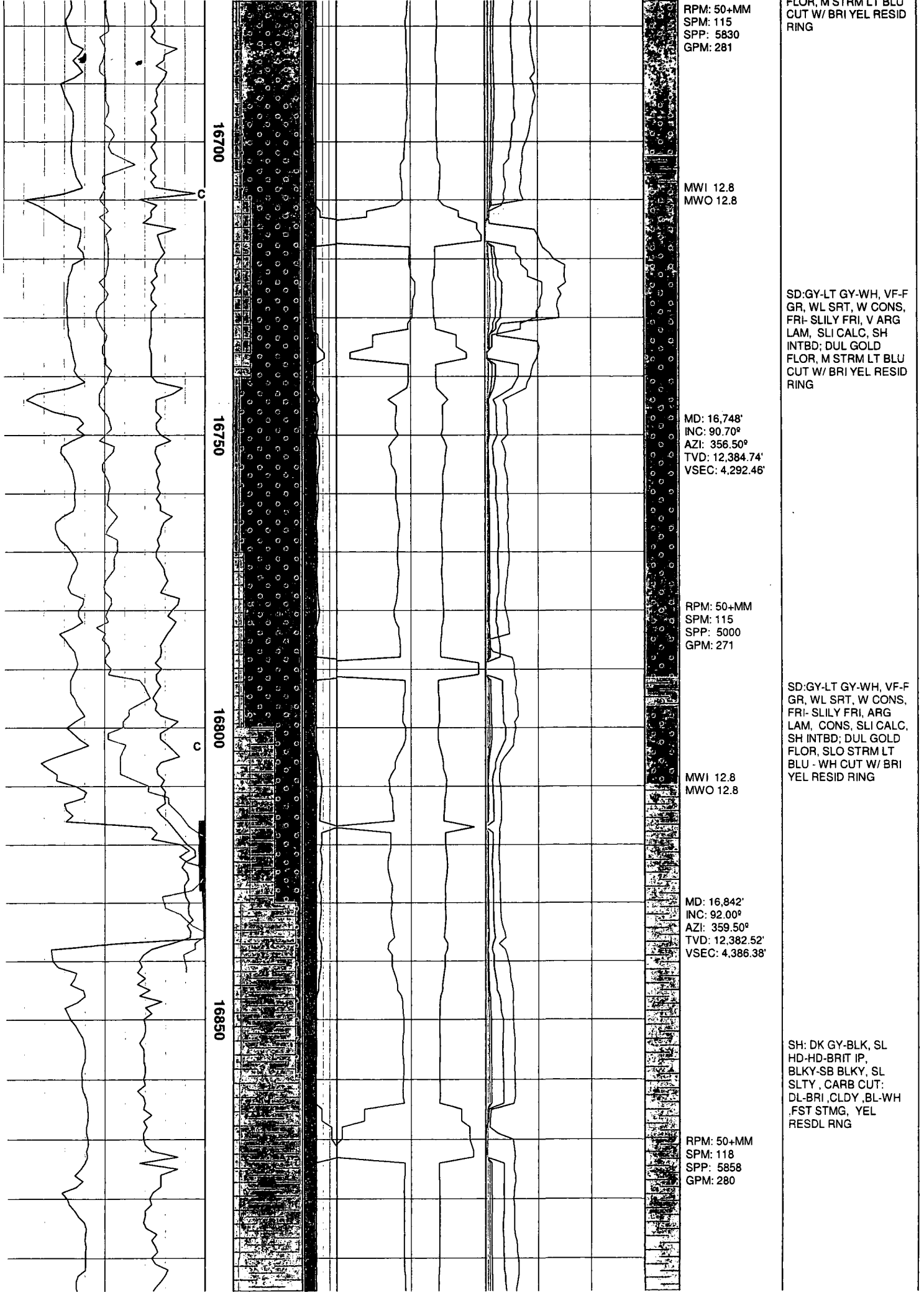

15600
15650
15700
15750
C
C
08/23/2018
MG 352u
MD: 15,593'
INC: 89.7º
AZI: 4.3º
TVD: 12,394.81'
VSEC: 3,139.26'
SH: GRY-DRK GRY, BLKY SUBBLKY, M FRM-FRM, AREN IP, NON CALC; NO VIS FLOR, SLO STRM LT BLU CUT, GH BRI RESID RING
RPM: 65+MM
SPM: 134
SPP: 5360
GPM: 318
MWI 12.8
MWO 12.8
MD: 15,687'
INC: 90.10º
AZI: 4.30º
TVD: 12,394.97'
VSEC: 3,232.93'
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, CALC CMT, SH INTBD, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING
RPM: 55+MM
SPM: 134
SPP: 5790
GPM: 318
MWI 12.8
MWO 12.8
CG 241u
Bit #7 6.125" PDC Ulterra U711M W/ 7x12's in @ 15,762'
TG 1036
MG 340u
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING

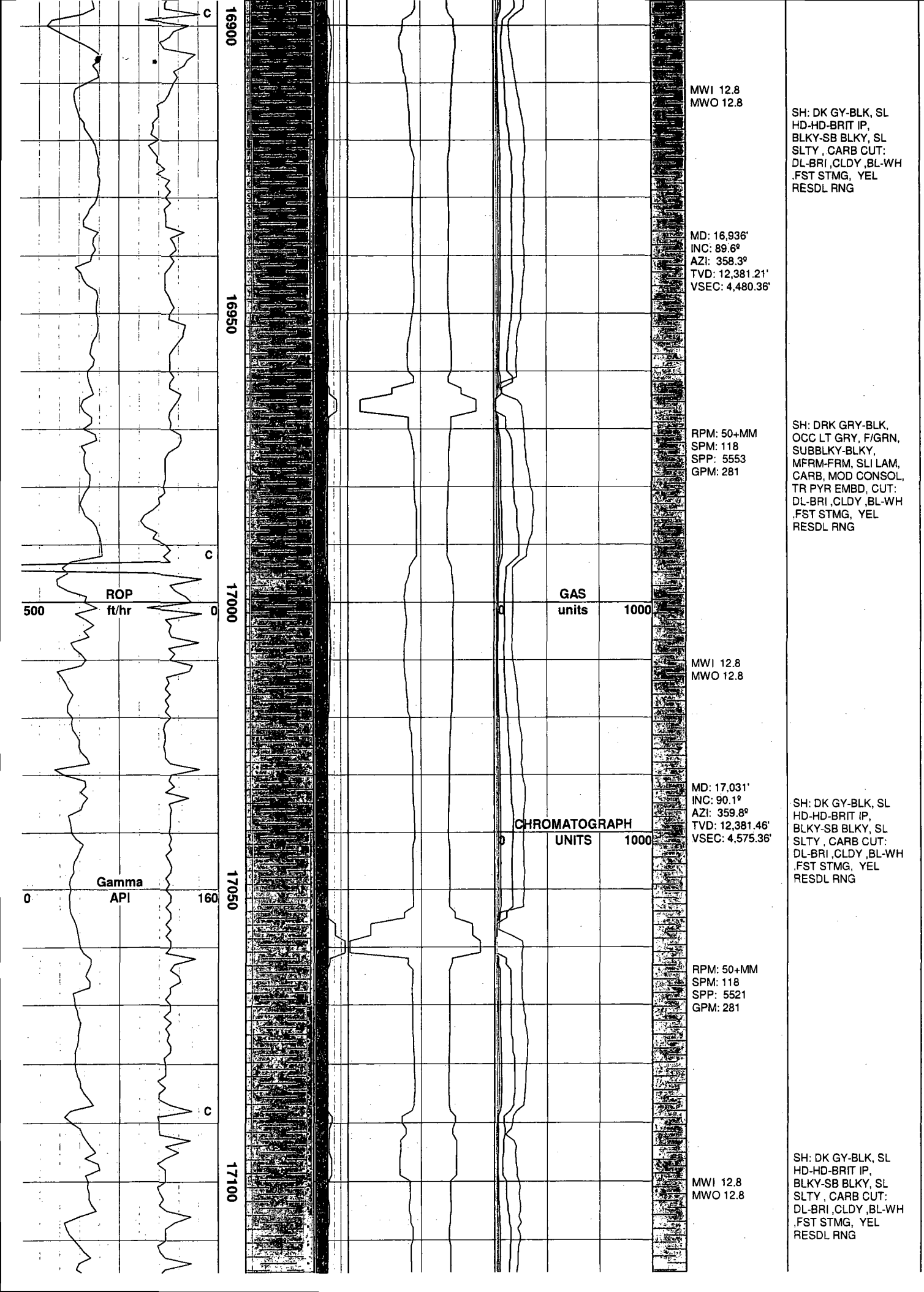

15800
15850
15900
15950
16000
C
C
ROP
500
ft/hr
0
GAS
0
units
1000
CG 362u
MG 335u
MG 163u
MD: 15,804'
INC: 89.8º
AZI: 2.6º
TVD: 12,395.08'
VSEC: 3,349.65'
RPM: 50+MM
SPM: 118
SPP: 6100
GPM: 281
MWI 12.8
MWO 12.8
MD: 15,898'
INC: 89.8º
AZI: 3.8º
TVD: 12,395.40'
VSEC: 3,443.45'
RPM: 50+MM
SPM: 114
SPP: 5874
GPM: 280
MWI 12.8
MWO 12.8
MD: 15,992'
INC: 90.1º
AZI: 0.2º
TVD: 12,395.49'
VSEC: 3,537.34'
SD: OCC BLK, LT GY-DK GRY,SILT- VFGR, CONS, W SRT, ARG, SLI FRI IP, CALC CMT, SH INTBD, TR LS, F DISM PYR, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING
SD:PRED LT GRY, OCC DRK GRY, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, V CALC, CONS, CALC CMT, SH INTBD, F DISM PYR, CARB, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING
SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD, NO MIN FLOR, LT BLU CUT
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH

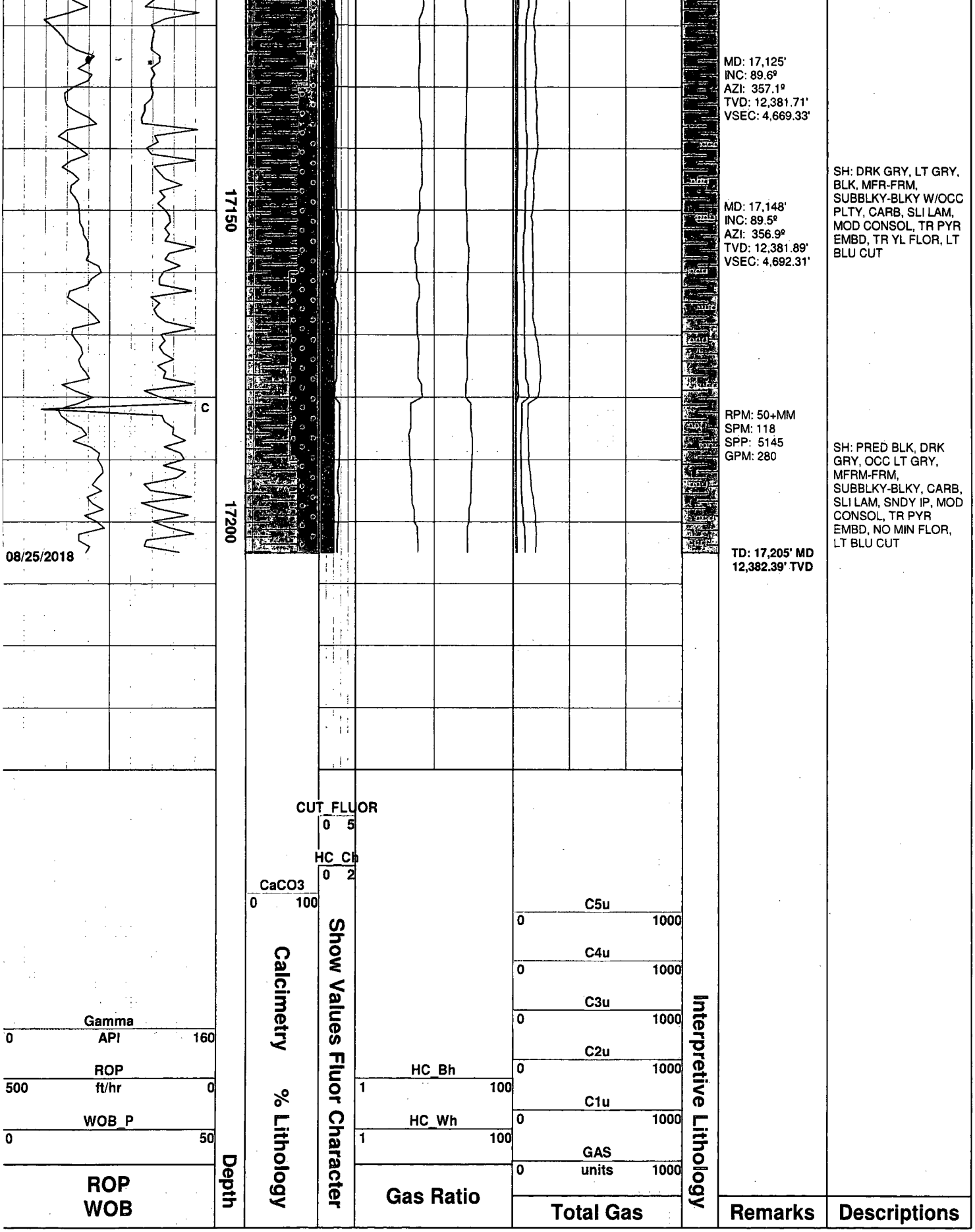

Gamma
API
0
160
C
16050
16100
16150
16200
CHROMATOGRAPH
UNITS
0
1000
CG 186u
MG 271u
CG 267u
RPM: 50+MM
SPM: 118
SPP: 5829
GPM: 281
MWI 12.8
MWO 12.8
MD: 16,087'
INC: 88.8°
AZI: 358.9°
TVD: 12,396.40'
VSEC: 3,632.34'
RPM: 50+MM
SPM: 118
SPP: 5679
GPM: 280
MWI 12.8
MWO 12.8
MD: 16,181'
INC: 86.9°
AZI: 358.3°
TVD: 12,399.93'
VSEC: 3,726.25'
RPM: 50+MM
SPM: 118
SPP: 5873
GPM: 281
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD, CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD, NO MIN FLOR, LT BLU CUT
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
08/24/2018


C
16250
16300
C
16350
C
16400
C
16450
CG 261u
MWI 12.8
MWO 12.8
MD: 16,275'
INC: 90.8º
AZI: 357.5º
TVD: 12,401.81'
VSEC: 3,820.18'
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD, CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
RPM: 50+MM
SPM: 118
SPP: 5873
GPM: 281
CG 284u
MWI 12.8
MWO 12.8
SH: DRK GRY-BLK, OCC LT GRY, SB BLKY-BLKY, M FRM-FRM, SLILY SDY LAM;; NO VIS FLOR; CUT: BRI LT BL, MED STMG, W/ G YEL RESDL RNG
MD: 16,370'
INC: 92.70º
AZI: 358.10º
TVD: 12,398.91'
VSEC: 3,9115.09'
RPM: 50+MM
SPM: 118
SPP: 5900
GPM: 281
SH: DRK GRY-BLK, OCC LT GRY, SB BLKY-BLKY, M FRM-FRM, SLILY SDY LAM, V AREN;; NO VIS FLOR; CUT: BRI LT BL, MED STMG, W/ G YEL RESDL RNG
CG 330u
MWI 12.8
MWO 12.8


16500
16550
16600
16650
C
C
CG 350u
CG 470u
MD: 16,464'
INC: 93.40º
AZI: 357.80º
TVD: 12,393.91'
VSEC: 4,008.92'
SH: DRK GRY-BLK, OCC LT GRY, SB BLKY-BLKY, M FRM-FRM, SLILY SDY LAM, V AREN;; NO VIS FLOR; CUT: BRI LT BL, MED STMG, W/ G YEL RESDL RNG
RPM: 50+MM
SPM: 118
SPP: 5570
GPM: 281
MWI 12.8
MWO 12.8
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU CUT W/ BRI YEL RESID RING
MD: 16,559'
INC: 92.20º
AZI: 357.40º
TVD: 12,389.27'
VSEC: 4,103.57'
RPM: 50+MM
SPM: 118
SPP: 5650
GPM: 281
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU CUT W/ BRI YEL RESID RING
MWI 12.8
MWO 12.8
MD: 16,653'
INC: 91.30º
AZI: 356.30º
TVD: 12,386.40'
VSEC: 4,197.61'
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, V ARG LAM, SLI CALC, SH INTBD; DUL GOLD


16700
16750
16800
16850
C
C
RPM: 50+MM
SPM: 115
SPP: 5830
GPM: 281
MWI 12.8
MWO 12.8
MD: 16,748'
INC: 90.70°
AZI: 356.50°
TVD: 12,384.74'
VSEC: 4,292.46'
RPM: 50+MM
SPM: 115
SPP: 5000
GPM: 271
MWI 12.8
MWO 12.8
MD: 16,842'
INC: 92.00°
AZI: 359.50°
TVD: 12,382.52'
VSEC: 4,386.38'
RPM: 50+MM
SPM: 118
SPP: 5858
GPM: 280
FLOR, M STRM LT BLU CUT W/ BRI YEL RESID RING
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, V ARG LAM, SLI CALC, SH INTBD; DUL GOLD FLOR, M STRM LT BLU CUT W/ BRI YEL RESID RING
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG


C
16900
16950
17000
17050
17100
ROP
500
ft/hr
0
GAS
0
units
1000
Gamma
0
API
160
CHROMATOGRAPH
0
UNITS
1000
MWI 12.8
MWO 12.8
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
MD: 16,936'
INC: 89.6º
AZI: 358.3º
TVD: 12,381.21'
VSEC: 4,480.36'
RPM: 50+MM
SPM: 118
SPP: 5553
GPM: 281
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD, CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
MWI 12.8
MWO 12.8
MD: 17,031'
INC: 90.1º
AZI: 359.8º
TVD: 12,381.46'
VSEC: 4,575.36'
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
RPM: 50+MM
SPM: 118
SPP: 5521
GPM: 281
MWI 12.8
MWO 12.8
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG


MD: 17,125'
INC: 89.6°
AZI: 357.1°
TVD: 12,381.71'
VSEC: 4,669.33'
MD: 17,148'
INC: 89.5°
AZI: 356.9°
TVD: 12,381.89'
VSEC: 4,692.31'
RPM: 50+MM
SPM: 118
SPP: 5145
GPM: 280
TD: 17,205' MD
12,382.39' TVD
SH: DRK GRY, LT GRY, BLK, MFR-FRM, SUBBLKY-BLKY W/OCC PLTY, CARB, SLI LAM, MOD CONSOL, TR PYR EMBD, TR YL FLOR, LT BLU CUT
SH: PRED BLK, DRK GRY, OCC LT GRY, MFRM-FRM, SUBBLKY-BLKY, CARB, SLI LAM, SNDY IP, MOD CONSOL, TR PYR EMBD, NO MIN FLOR, LT BLU CUT
17150
17200
08/25/2018
C
Gamma
0 API 160
ROP
500 ft/hr 0
WOB_P
0 50
ROP
WOB
Depth
CaCO3
0 100
CUT_FLUOR
0 5
HC_Ch
0 2
Calcimetry % Lithology
Show Values Fluor Character
HC_Bh
1 100
HC_Wh
1 100
Gas Ratio
C5u
0 1000
C4u
0 1000
C3u
0 1000
C2u
0 1000
C1u
0 1000
GAS
0 units 1000
Total Gas
Interpretive Lithology
Remarks
Descriptions

RESERVOIR GROUP

6360 West Sam Houston Pkwy N
Houston, Texas, 77041
Office: 713-466-7400 Fax: 281-653-0808
www.reservoirgroup.com

COUNTY Lea STATE NM
FIELD Wolfcamp A (Upper)
LOCATION JALL NM.
WELL Leslie Fed Com 217H
LOG TYPE 1"=100' MD
COMPANY Matador Resources
JOB NO. 1482PB1808

COMPANY **Matador Resources**
WELL **Leslie Fed Com 217H**
FIELD **Wolfcamp A (Upper)**
COUNTY/PARISH **Lea** STATE **NM** JOB NO. **1482PB1808**
UNIT MANAGER **Ruben Acevedo** ENGINEER **Francisco Muñiz**
Alexander Caraway
GEOLOGIST **Clark Collier** CO. ENGINEER **Blake Hermes**

LOCATION
Lat: 32.1238331 N, Long: 103.3873895 W
300' FSL & 2115' FEL
Sec. 17, TWP 25-S, RGE 35-E

API SERIAL NO	SEC	TWP	RANGE
30-025-44547	17	25-S	35-E

ELEVATIONS

KB	Top Drive
DRILL FLOOR	3,307.5'
ELEVATION	3,279'
WATER DEPTH	
AIR GAP	

SPUD DATE 08/02/2018 TOTAL DEPTH 17,205MD, 12,382'TVD
LOGGING DATE: FROM 08/08/2018 TO 08/25/2018
LOGGING DEPTH: FROM 6,200' TO 17,205MD, 12,382'TVD

BORE HOLE RECORD			CASING RECORD				
SIZE	FROM	TO	SIZE	WGT.	FROM	TO	TEST
17.5"	Surface	1,000'	13.375'	54.5#	Surface	1,000'	N/A
12.25"	1,000'	5,535'	9.625"	40#	Surface	5,522'	N/A
8.75"	5,535'	12,708'	7.625"	29.7#	Surface	12,698'	15.0 EMW
6.125"	12,708'	17,205'					

REMARKS: THANK YOU FOR USING Reservoir Group
ALL DEPTHS CORRESPOND TO DRILLERS TALLY
Start Date: 8/8/2018 End Date: TBD Release Date: TBD

SERVICES PROVIDED: 2-Man Logging, Calcimetry, Digital Sample Pictures
WISE COMPUTER LOGGING SYSTEM, Dual Channel FID Chromatograph

TOTAL Gas Analyzer
1% C1 = 100 units
20% C1 = 2,000 units

DRILLING FLUID COMPANY Stellar Drilling Fluids
DRILLING FLUID TYPE WATER BASE-BRINE CUT
DRILLING CONTRACTOR Patterson RIG NAME Patterson 282
LOG SCALE 1"=100' MD LOGGING UNIT NUMBER 071L

RESERVOIR GROUP GUARANTEES THE CUSTOMER BENEFIT OF ITS BEST JUDGEMENT, BUT DOES NOT WARRANT THE ACCURACY OF THE SURFACE DATA COLLECTED NOR SUBSEQUENT INTERPRETATIONS OR RECOMMENDATIONS

SHOW VALUES
2 ZONE OF INTEREST
5 POOR SHOW, PROB. NON-PRODUCTIVE
10 FAIR SHOW, POSSIBLY PRODUCTIVE
15 GOOD SHOW, PROBABLY PRODUCTIVE

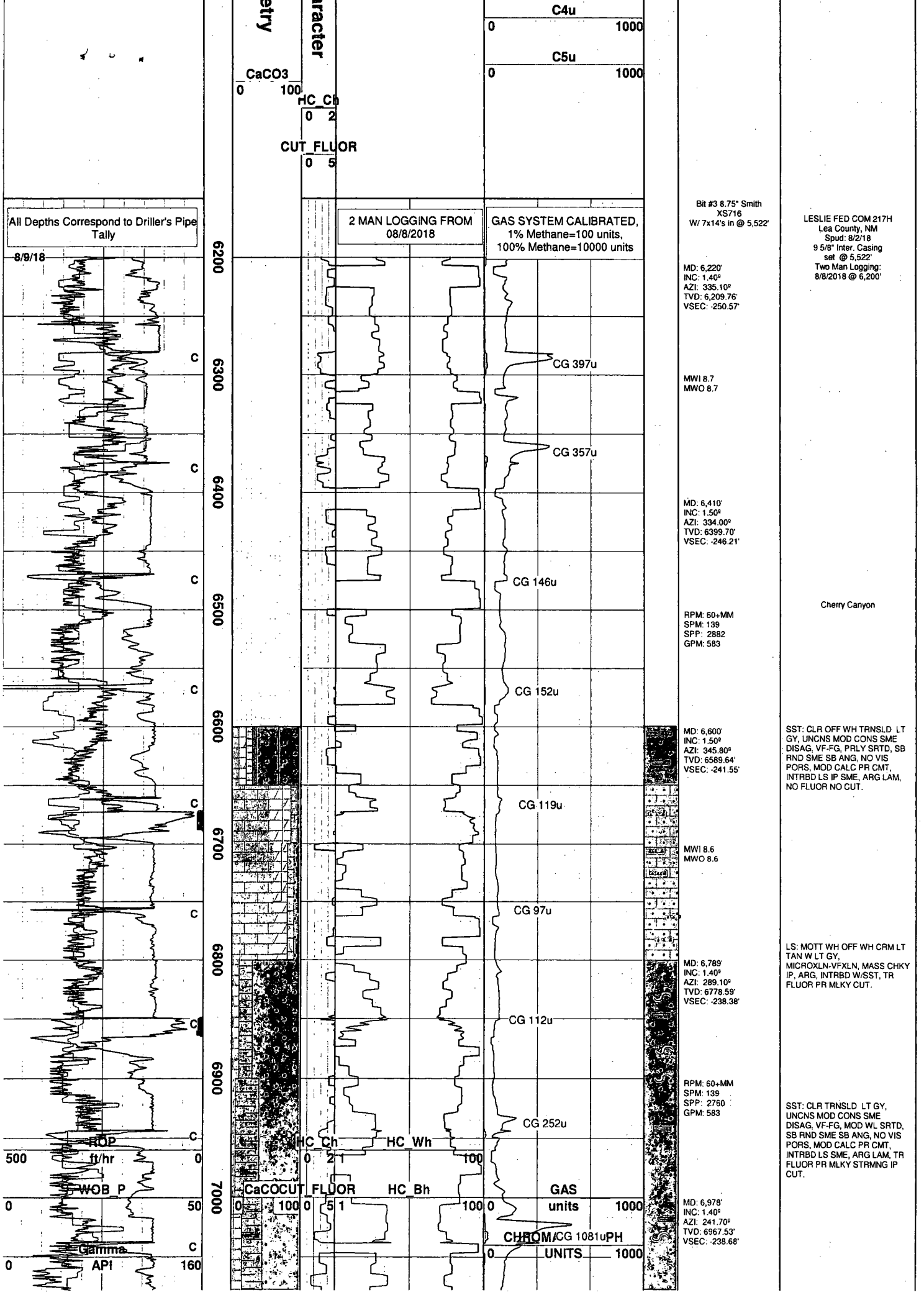
CG - CONNECTION GAS
CO - CIRCULATE OUT
CHL- CHLORIDE
DS - DIRECTIONAL SURVEY
DC - DEPTH CORRECTION
TG - TRIP GAS
GCM - GAS CUT MUD
LAT - LOGGED AFTER TRIP
LAST- LOGGED AFTER SHORT TRIP
NB - NEW BIT
ST - SHORT TRIP
NR - NO RETURNS
G&OCM - GAS & OIL CUT MUD

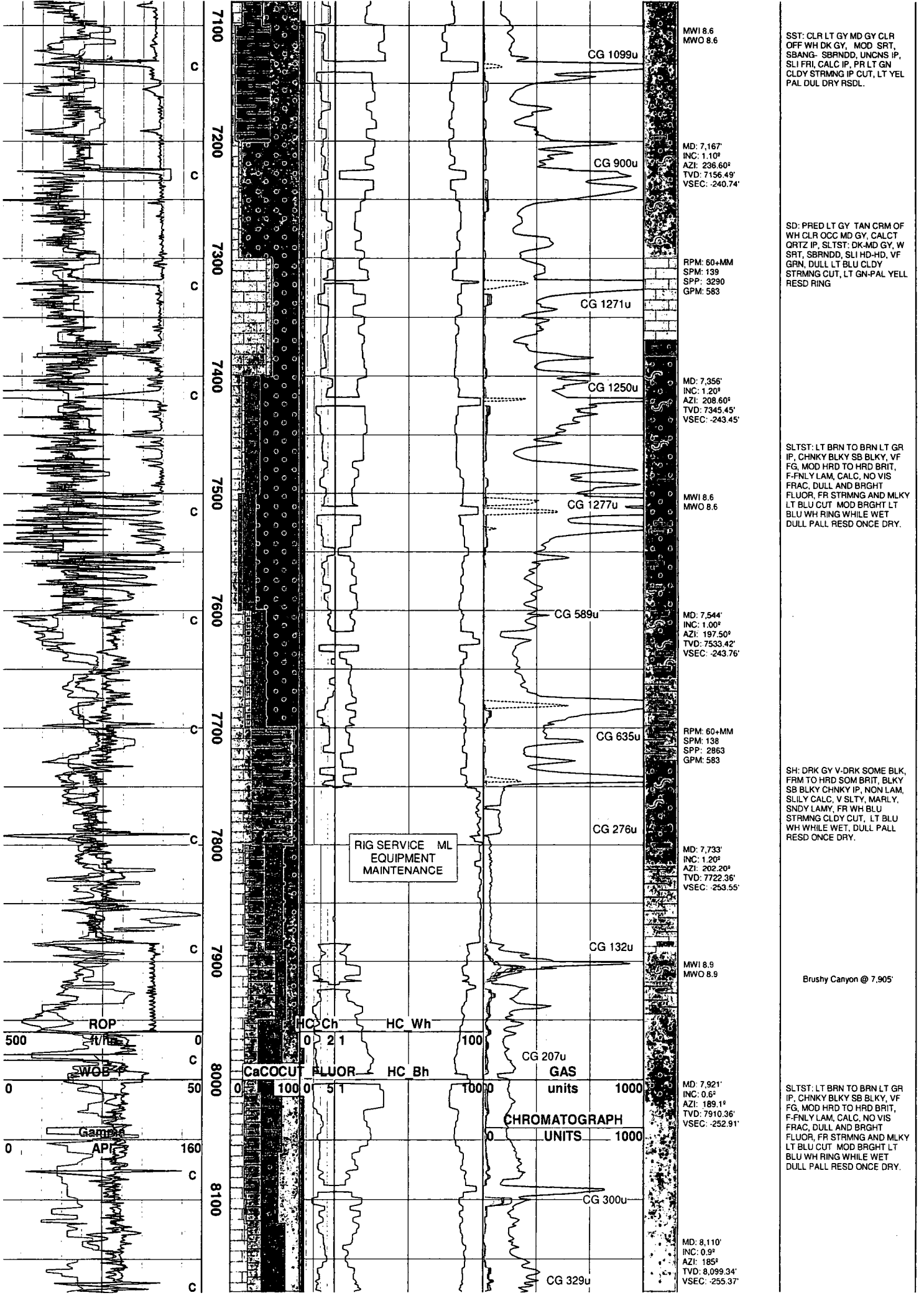
SYMBOLS
Fluorescence Bright
Fluorescence Dull
Fluorescence Mineral
Casing Shoe

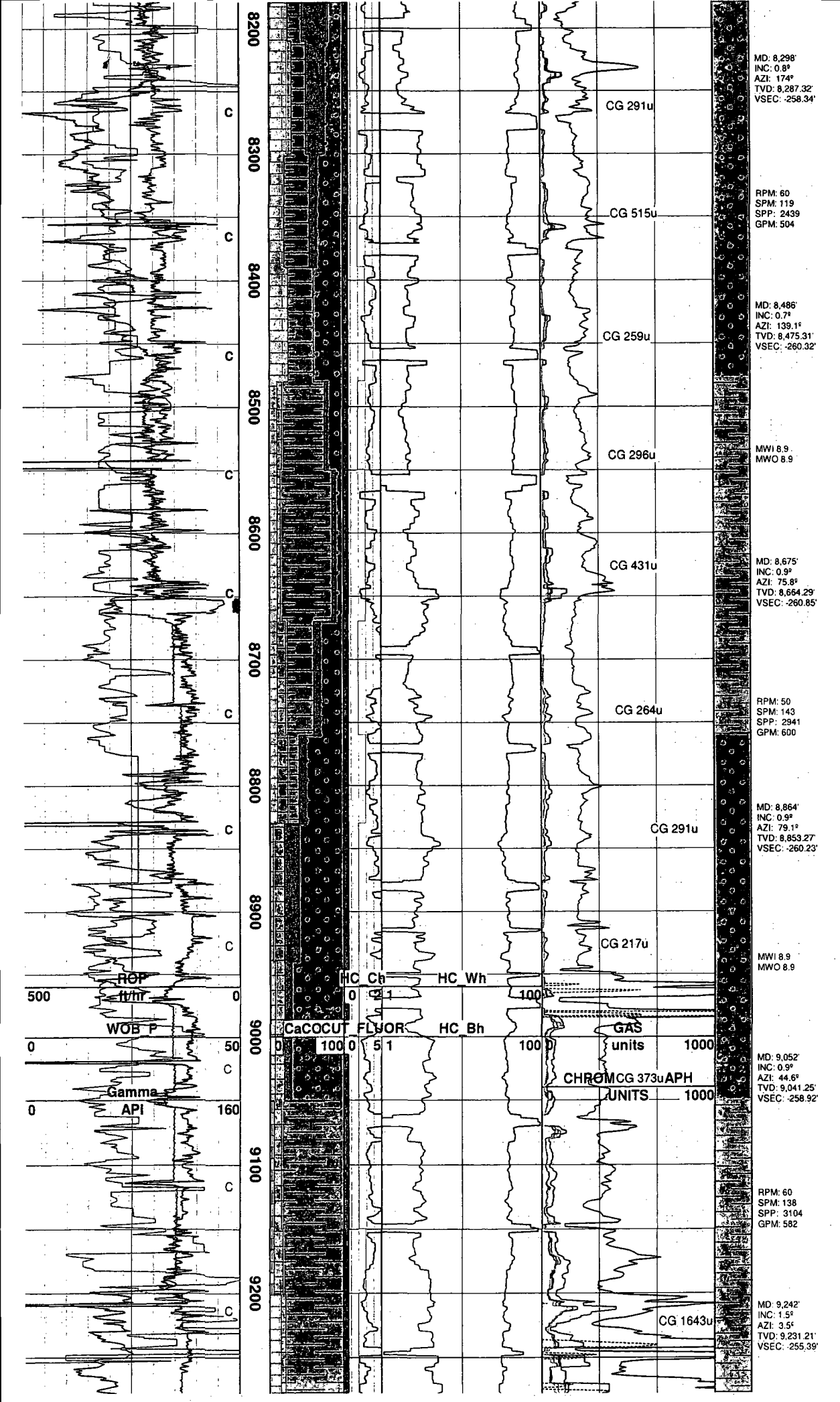
Lithology
Sand
Shale Green
Shale Grey
Ash
Anhydrite
Limestone (Sandy)
Marl
Dolomite
Siltstone
Cement
Coal
Limestone

Modifiers
Anhydritic
Argillaceous
Calcareous
Carbonaceous
Stylolitic
Glauconite
Dolomitic
Fossiliferous
Cherty
Sandy
Marly
Micaceous
Pyritic
Conglomeratic
Dolomite Stringer

Descriptions
Remarks
Interpretive Lithology
Total Gas
GAS units 0 1000
C1u 0 1000
C2u 0 1000
C3u 0 1000
Gas Ratio
HC_Wh 1 100
HC_Bh 1 100
Show Values Fluor Cha
% Lithology **Calcim**
Depth
ROP
WOB
WOB_P 0 50
ROP 500 ft/hr 0
Gamma API 0 160


All Depths Correspond to Driller's Pipe Tally
8/9/18
2 MAN LOGGING FROM 08/8/2018
GAS SYSTEM CALIBRATED, 1% Methane=100 units, 100% Methane=10000 units
Bit #3 8.75" Smith XS716 W/ 7x14's in @ 5,522'
LESLIE FED COM 217H
Lea County, NM
Spud: 8/2/18
9 5/8" Inter. Casing set @ 5,522'
Two Man Logging: 8/8/2018 @ 6,200'
CaCO3
HC_Ch
CUT_FLUOR
C4u
C5u
6200
6300
6400
6500
6600
6700
6800
6900
7000
CG 397u
CG 357u
CG 146u
CG 152u
CG 119u
CG 97u
CG 112u
CG 252u
CG 1081u
MD: 6,220'
INC: 1.40°
AZI: 335.10°
TVD: 6,209.76'
VSEC: -250.57'
MWI 8.7
MWO 8.7
MD: 6,410'
INC: 1.50°
AZI: 334.00°
TVD: 6399.70'
VSEC: -246.21'
Cherry Canyon
RPM: 60+MM
SPM: 139
SPP: 2882
GPM: 583
MD: 6,600'
INC: 1.50°
AZI: 345.80°
TVD: 6589.64'
VSEC: -241.55'
SST: CLR OFF WH TRNSLD LT GY, UNCNS MOD CONS SME DISAG, VF-FG, PRLY SRTD, SB RND SME SB ANG, NO VIS PORS, MOD CALC PR CMT, INTRBD LS IP SME, ARG LAM, NO FLUOR NO CUT.
MWI 8.6
MWO 8.6
MD: 6,789'
INC: 1.40°
AZI: 289.10°
TVD: 6778.59'
VSEC: -238.38'
LS: MOTT WH OFF WH CRM LT TAN W LT GY, MICROXLN-VFXLN, MASS CHKY IP, ARG, INTRBD W/SST, TR FLUOR PR MLKY CUT.
RPM: 60+MM
SPM: 139
SPP: 2760
GPM: 583
SST: CLR TRNSLD LT GY, UNCNS MOD CONS SME DISAG, VF-FG, MOD WL SRTD, SB RND SME SB ANG, NO VIS PORS, MOD CALC PR CMT, INTRBD LS SME, ARG LAM, TR FLUOR PR MLKY STRMNG IP CUT.
MD: 6,978'
INC: 1.40°
AZI: 241.70°
TVD: 6967.53'
VSEC: -238.68'
ROP
500 ft/hr 0
WOB_P
0 50
Gamma
0 API 160
HC_Wh
HC_Bh
GAS units
CHROM/PH
UNITS


7100
7200
7300
7400
7500
7600
7700
7800
7900
8000
8100
MWI 8.6
MWO 8.6
CG 1099u
MD: 7,167'
INC: 1.10°
AZI: 236.60°
TVD: 7156.49'
VSEC: -240.74'
CG 900u
RPM: 60+MM
SPM: 139
SPP: 3290
GPM: 583
CG 1271u
MD: 7,356'
INC: 1.20°
AZI: 208.60°
TVD: 7345.45'
VSEC: -243.45'
CG 1250u
CG 1277u
MWI 8.6
MWO 8.6
CG 589u
MD: 7,544'
INC: 1.00°
AZI: 197.50°
TVD: 7533.42'
VSEC: -243.76'
RPM: 60+MM
SPM: 138
SPP: 2863
GPM: 583
CG 635u
CG 276u
RIG SERVICE ML
EQUIPMENT
MAINTENANCE
MD: 7,733'
INC: 1.20°
AZI: 202.20°
TVD: 7722.36'
VSEC: -253.55'
CG 132u
MWI 8.9
MWO 8.9
Brushy Canyon @ 7,905'
CG 207u
MD: 7,921'
INC: 0.6°
AZI: 189.1°
TVD: 7910.36'
VSEC: -252.91'
CG 300u
MD: 8,110'
INC: 0.9°
AZI: 185°
TVD: 8,099.34'
VSEC: -255.37'
CG 329u
ROP
500 ft/hr 0
WOB
0 50
Gamma
0 API 160
HC_Ch
0 2 1 100
HC_Wh
CaCO
0 100
CUT_FLUOR
0 5 1 100
HC_Bh
0 100
GAS
units
CHROMATOGRAPH
0 UNITS 1000
SST: CLR LT GY MD GY CLR OFF WH DK GY, MOD SRT, SBANG- SBRNDD, UNCNS IP, SLI FRI, CALC IP, PR LT GN CLDY STRMNG IP CUT, LT YEL PAL DUL DRY RSDL.
SD: PRED LT GY TAN CRM OF WH CLR OCC MD GY, CALCT QRTZ IP, SLTST: DK-MD GY, W SRT, SBRNDD, SLI HD-HD, VF GRN, DULL LT BLU CLDY STRMNG CUT, LT GN-PAL YELL RESD RING
SLTST: LT BRN TO BRN LT GR IP, CHNKY BLKY SB BLKY, VF FG, MOD HRD TO HRD BRIT, F-FNLY LAM, CALC, NO VIS FRAC, DULL AND BRGHT FLUOR, FR STRMNG AND MLKY LT BLU CUT MOD BRGHT LT BLU WH RING WHILE WET DULL PALL RESD ONCE DRY.
SH: DRK GY V-DRK SOME BLK, FRM TO HRD SOM BRIT, BLKY SB BLKY CHNKY IP, NON LAM, SLILY CALC, V SLTY, MARLY, SNDY LAMY, FR WH BLU STRMNG CLDY CUT, LT BLU WH WHILE WET, DULL PALL RESD ONCE DRY.
SLTST: LT BRN TO BRN LT GR IP, CHNKY BLKY SB BLKY, VF FG, MOD HRD TO HRD BRIT, F-FNLY LAM, CALC, NO VIS FRAC, DULL AND BRGHT FLUOR, FR STRMNG AND MLKY LT BLU CUT MOD BRGHT LT BLU WH RING WHILE WET DULL PALL RESD ONCE DRY.


8200
8300
8400
8500
8600
8700
8800
8900
9000
9100
9200
ROP
ft/hr
500
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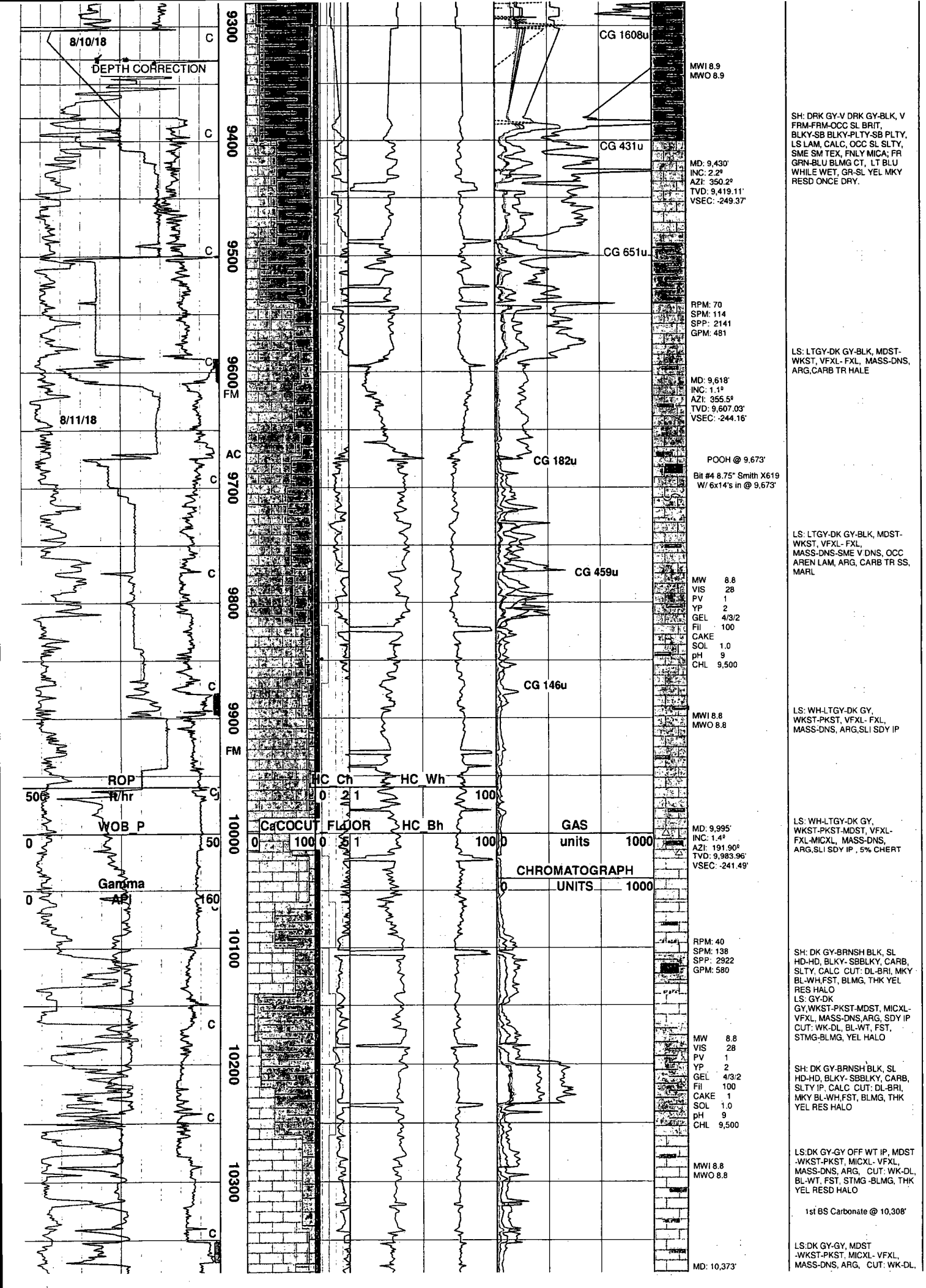
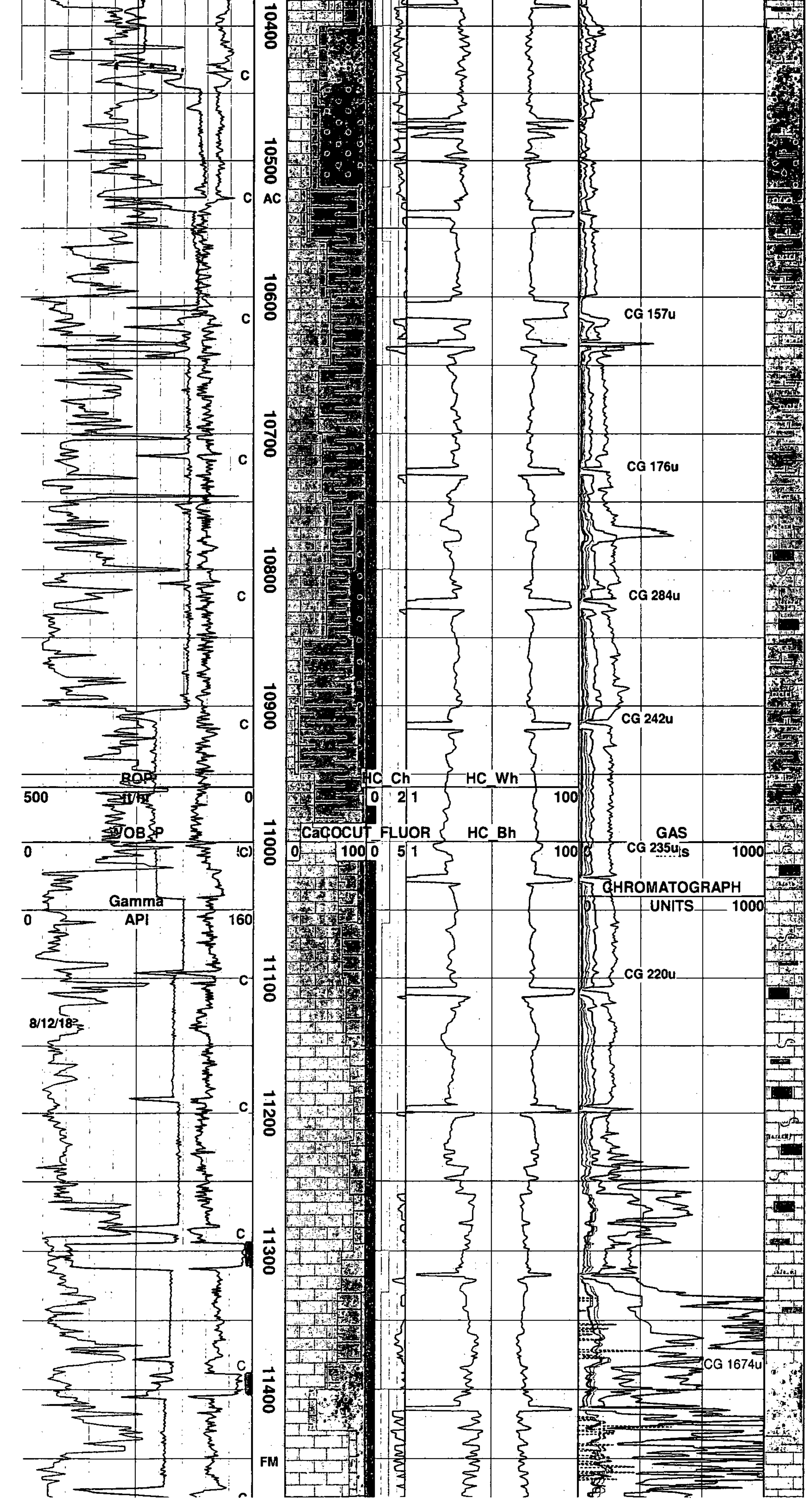
WOB P
0
50
Gamma
API
0
160
HC_Ch
HC_Wh
0
2 1
100
CaCO
CUT_FLUOR
HC_Bh
0
100
0
5 1
100
GAS
units
1000
CHROM
CG 373u
APH
UNITS
1000
CG 291u
CG 515u
CG 259u
CG 296u
CG 431u
CG 264u
CG 291u
CG 217u
CG 1643u
MD: 8,298'
INC: 0.8°
AZI: 174°
TVD: 8,287.32'
VSEC: -258.34'
RPM: 60
SPM: 119
SPP: 2439
GPM: 504
MD: 8,486'
INC: 0.7°
AZI: 139.1°
TVD: 8,475.31'
VSEC: -260.32'
MWI 8.9
MWO 8.9
MD: 8,675'
INC: 0.9°
AZI: 75.8°
TVD: 8,664.29'
VSEC: -260.85'
RPM: 50
SPM: 143
SPP: 2941
GPM: 600
MD: 8,864'
INC: 0.9°
AZI: 79.1°
TVD: 8,853.27'
VSEC: -260.23'
MWI 8.9
MWO 8.9
MD: 9,052'
INC: 0.9°
AZI: 44.6°
TVD: 9,041.25'
VSEC: -258.92'
RPM: 60
SPM: 138
SPP: 3104
GPM: 582
MD: 9,242'
INC: 1.5°
AZI: 3.5°
TVD: 9,231.21'
VSEC: -255.39'
SD: PRED LT GY TAN CRM OF WH CLR OCC MD GY, CALCT QRTZ IP, SLTST: DK-MD GY, W SRT, SBRNDD, SLI HD-HD, VF GRN, DULL LT BLU CLDY STRMNG CUT, LT GN-PAL YELL RESD RING
SH: DRK GY V-DRK SOME BLK, FRM TO HRD SOM BRIT, BLKY SB BLKY CHNKY IP, NON LAM, SLILY CALC, V SLTY, MARLY, SNDY LAMY, FR WH BLU STRMNG CLDY CUT, LT BLU WH WHILE WET, DULL PALL RESD ONCE DRY.
SH: DRK GY-V DRK SME BLK, FRM-HRD-SOM BRIT, BLKY-SB BLKY-CHNKY IP, AREN LAM, SL CALC, V SLTY, SNDY TEX, FR WH BLU STRMNG CT, LT BLU-WH WHILE WET, DULL PAL RESD ONCE DRY.
SD: PRED LT GY-TAN-CRM-OFF WH-CLR-OCC MD GY-GY/BLK IP, SME FRI-SME HRD, ANG-SB ANG-SB RND, CONS-UNCONS, CALCT QRTZ IP; SLTST: DK-MD GY, W SRT, SB RND, SLI HD-HD, VFG, DULL LT BLU CLDY STRMNG CT, LT GN-PAL YEL RESD RNG
SH: DRK GY-V DRK GY-BLK, V FRM-FRM-OCC SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY-OCC SPLT, LS LAM, SL CALC, OCC SL SLTY, SME SM TEX, FR GRN-BLU BLMG CT, LT BLU WHILE WET, GR-SL YEL MKY RESD ONCE DRY.
BS Lime @ 9,238'


8/10/18
DEPTH CORRECTION
8/11/18
9300
9400
9500
9600
FM
AC
9700
9800
9900
FM
10000
10100
10200
10300
ROP
ft/hr
500
WOB_P
0
50
Gamma
API
0
160
HC_Ch
0
2
1
HC_Wh
100
CaCOCUT_FLOOR
0
100
0
2
1
100
HC_Bh
GAS
units
0
1000
CHROMATOGRAPH
UNITS
0
1000
CG 1608u
CG 431u
CG 651u
CG 182u
CG 459u
CG 146u
MWI 8.9
MWO 8.9
MD: 9,430'
INC: 2.2°
AZI: 350.2°
TVD: 9,419.11'
VSEC: -249.37'
RPM: 70
SPM: 114
SPP: 2141
GPM: 481
MD: 9,618'
INC: 1.1°
AZI: 355.5°
TVD: 9,607.03'
VSEC: -244.16'
POOH @ 9,673'
Bit #4 8.75" Smith X619
W/ 6x14's in @ 9,673'
MW 8.8
VIS 28
PV 1
YP 2
GEL 4/3/2
Fil 100
CAKE
SOL 1.0
pH 9
CHL 9,500
MWI 8.8
MWO 8.8
MD: 9,995'
INC: 1.4°
AZI: 191.90°
TVD: 9,983.96'
VSEC: -241.49'
RPM: 40
SPM: 138
SPP: 2922
GPM: 580
MW 8.8
VIS 28
PV 1
YP 2
GEL 4/3/2
Fil 100
CAKE 1
SOL 1.0
pH 9
CHL 9,500
MWI 8.8
MWO 8.8
MD: 10,373'
SH: DRK GY-V DRK GY-BLK, V FRM-FRM-OCC SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY, LS LAM, CALC, OCC SL SLTY, SME SM TEX, FNLY MICA; FR GRN-BLU BLMG CT, LT BLU WHILE WET, GR-SL YEL MKY RESD ONCE DRY.
LS: LTGY-DK GY-BLK, MDST-WKST, VFXL- FXL, MASS-DNS, ARG,CARB TR HALE
LS: LTGY-DK GY-BLK, MDST-WKST, VFXL- FXL, MASS-DNS-SME V DNS, OCC AREN LAM, ARG, CARB TR SS, MARL
LS: WH-LTGY-DK GY, WKST-PKST, VFXL- FXL, MASS-DNS, ARG,SLI SDY IP
LS: WH-LTGY-DK GY, WKST-PKST-MDST, VFXL-FXL-MICXL, MASS-DNS, ARG,SLI SDY IP , 5% CHERT
SH: DK GY-BRNSH BLK, SL HD-HD, BLKY- SBBLKY, CARB, SLTY, CALC CUT: DL-BRI, MKY BL-WH,FST, BLMG, THK YEL RES HALO
LS: GY-DK GY,WKST-PKST-MDST, MICXL-VFXL, MASS-DNS,ARG, SDY IP CUT: WK-DL, BL-WT, FST, STMG-BLMG, YEL HALO
SH: DK GY-BRNSH BLK, SL HD-HD, BLKY- SBBLKY, CARB, SLTY IP, CALC CUT: DL-BRI, MKY BL-WH,FST, BLMG, THK YEL RES HALO
LS:DK GY-GY OFF WT IP, MDST -WKST-PKST, MICXL- VFXL, MASS-DNS, ARG, CUT: WK-DL, BL-WT, FST, STMG -BLMG, THK YEL RESD HALO
1st BS Carbonate @ 10,308'
LS:DK GY-GY, MDST -WKST-PKST, MICXL- VFXL, MASS-DNS, ARG, CUT: WK-DL,



INC: 0.8°
AZI: 131.9°
TVD: 10,361.86'
VSEC: -248.27'

BL-WT, FST, STMG-BLMG, THK YEL RESD HALO

1st BS Sand @ 10,374'

SD:DK GY-GY, VF-F GR,MOD-WL SRT, W CONS, FRI IP, V ARG, CALC CMT CUT : DL-BRI, CLDY, BL-WH ,FST, STMG-BLMG- THK YEL RES HALO

RPM: 60
SPM: 109
SPP: 2042
GPM: 460

SD:DK GY-GY, VF-F GR,MOD-WL SRT, W CONS, FRI IP, V ARG, CALC CMT CUT : DL-BRI, CLDY, BL-WH ,FST, STMG-BLMG- THK YEL RES HALO

MD: 10,562'
INC: 0.8°
AZI: 88.8°
TVD: 10,550.84'
VSEC: -249.15'

SH: DRK GY-V DRK GY-BLK, V FRM-FRM, BLKY-SB BLKY-PLTY-SB PLTY-OCC SPLT, LS LAM, CALC, OCC SL SLTY. SME SM TEX, GRN-BLU BLMG CT, LT BLU WHILE WET, GR-YEL MKY RESD ONCE DRY.

2nd BS Carbonate @ 10,596'

MWI 8.8
MWO 8.8

SH: DRK GY-V DRK GY-BLK, V FRM-FRM-OCC SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY, LS LAM, CALC, OCC SL SLTY, SME SM TEX, FNLY MICA; GRN-BLU STRMG CT, LT BLU WHILE WET, GR-YEL MKY RESD ONCE DRY.

MD: 10,752'
INC: 0.8°
AZI: 20.7°
TVD: 10,740.83'
VSEC: -247.89'

LS: GY-DK GY-TN-OCC CRM, WKST-PKST-MDST, MICXL-VFXL, MASS-DNS, V ARG, SDY IP, AREN LAM, GD BL MOD STMG-BLMG RNG CT WI YEL MKY RESD

RPM: 60
SPM: 114
SPP: 2362
GPM: 481

SH: DRK GY-V DRK GY-BLK, V FRM-FRM-SL BRIT, BLKY-SB BLKY-PLTY-SB PLTY-OCC SPLT, LS LAM-AREN LAM, CALC, SLTY TEX, SME SM TEX, GD GRN-YEL STRMG CT, GRN YEL WHILE WET, GR-YEL MKY RESD ONCE DRY.

MD: 10,940'
INC: 0.6°
AZI: 357.4°
TVD: 10,928.82'
VSEC: -245.69'

2nd BD Sand @ 10,981'

LS: GY-DK GY-TN-CRM LAM, WKST-PKST-MDST, MICXL-VFXL, SL DNS, V ARG, SDY IP, AREN LAM, SIL CMT MTX, GD BL MOD STMG-BLMG RNG CT WI YEL MKY RESD

MWI 8.8
MWO 8.8

MD: 11,128'
INC: 1.1°
AZI: 310.9°
TVD: 11,116.8'
VSEC: -243.51'

LS: GY-DK GY-TN-CRM LAM, WKST-PKST-MDST, MICXL-VFXL, SFT-SME SL DNS, V ARG, SDY IP, AREN LAM-AREN TEX, GD BL MOD STMG-BLMG RNG CT WI YEL MKY RESD

RPM: 60
SPM: 114
SPP: 2353
GPM: 481

LS: GY-DK GY-TN-SL CRM LAM, WKST-PKST-MDST, MICXL-VFXL, SFT-SME SL DNS, V ARG, SDY IP, AREN LAM-AREN IP, MOD BLU STMG RNG CT WI YEL MKY RESDL RNG

MD: 11,316'
INC: 1.50°
AZI: 274.60°
TVD: 11,304.75'
VSEC: -242.31'

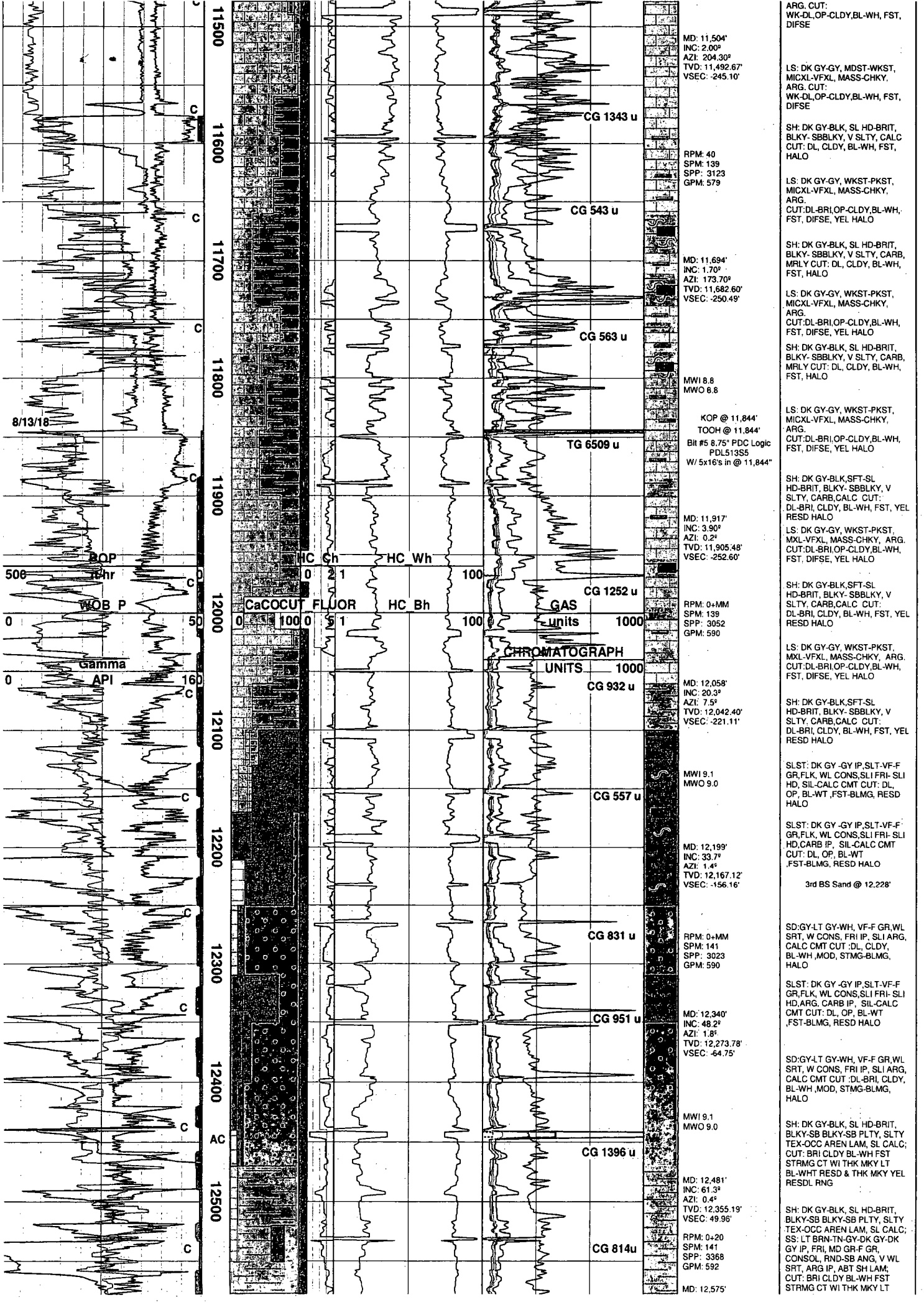
LS: GY-DK GY-TN-SL CRM LAM, WKST-PKST-MDST, MICXL-VFXL, SFT-SL DNS-DNS, V ARG, SDY IP, AREN LAM-AREN IP, TR SS, MOD BLU-GRN STMG RNG CT WI YEL MKY RESD

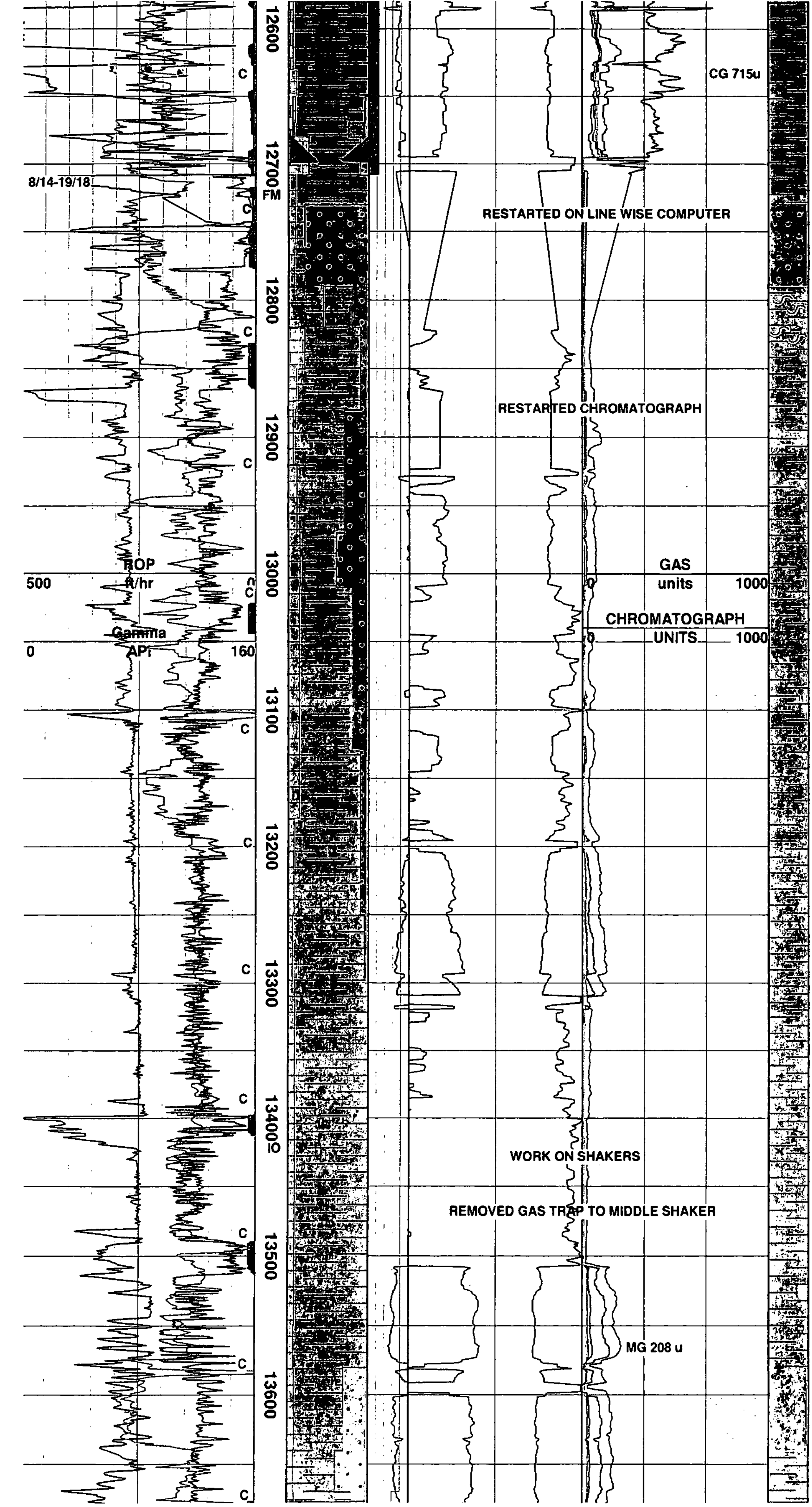
SD:DGY-LT GY, VF-F GR,MOD-WL SRT, CONS-DISAG, FRI IP, V ARG, CALC -DOL CMT CUT :WK-DL, CLDY, BL-WH ,FST, STMG-BLMG- THK YEL RES HALO

MWI 8.8
MWO 8.8

3rd BS Carbonate @ 11,444'

LS: DK GY-GY, MDST-WKST, MICXL-VFXL, MASS-CHKY,


11500
11600
11700
11800
11900
12000
12100
12200
12300
12400
12500
8/13/18
ROP
506
0
1/hr
WOB P
0
50
Gamma
API
0
160
HC_Ch
0
2
1
100
HC_Wh
CaCOCUT_FLUOR
0
100
0
1
100
HC_Bh
GAS
units
1000
CHROMATOGRAPH
UNITS
1000
CG 1343 u
CG 543 u
CG 563 u
TG 6509 u
CG 1252 u
CG 932 u
CG 557 u
CG 831 u
CG 951 u
CG 1396 u
CG 814u
MD: 11,504'
INC: 2.00°
AZI: 204.30°
TVD: 11,492.67'
VSEC: -245.10'
RPM: 40
SPM: 139
SPP: 3123
GPM: 579
MD: 11,694'
INC: 1.70°
AZI: 173.70°
TVD: 11,682.60'
VSEC: -250.49'
MWI 8.8
MWO 8.8
KOP @ 11,844'
TOOH @ 11,844'
Bit #5 8.75" PDC Logic PDL513S5 W/ 5x16's in @ 11,844"
MD: 11,917'
INC: 3.90°
AZI: 0.2°
TVD: 11,905.48'
VSEC: -252.60'
RPM: 0+MM
SPM: 139
SPP: 3052
GPM: 590
MD: 12,058'
INC: 20.3°
AZI: 7.5°
TVD: 12,042.40'
VSEC: -221.11'
MWI 9.1
MWO 9.0
MD: 12,199'
INC: 33.7°
AZI: 1.4°
TVD: 12,167.12'
VSEC: -156.16'
RPM: 0+MM
SPM: 141
SPP: 3023
GPM: 590
MD: 12,340'
INC: 48.2°
AZI: 1.8°
TVD: 12,273.78'
VSEC: -64.75'
MWI 9.1
MWO 9.0
MD: 12,481'
INC: 61.3°
AZI: 0.4°
TVD: 12,355.19'
VSEC: 49.96'
RPM: 0+20
SPM: 141
SPP: 3368
GPM: 592
MD: 12,575'
ARG. CUT: WK-DL,OP-CLDY,BL-WH, FST, DIFSE
LS: DK GY-GY, MDST-WKST, MICXL-VFXL, MASS-CHKY, ARG. CUT: WK-DL,OP-CLDY,BL-WH, FST, DIFSE
SH: DK GY-BLK, SL HD-BRIT, BLKY- SBBLKY, V SLTY, CALC CUT: DL, CLDY, BL-WH, FST, HALO
LS: DK GY-GY, WKST-PKST, MICXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK, SL HD-BRIT, BLKY- SBBLKY, V SLTY, CARB, MRLY CUT: DL, CLDY, BL-WH, FST, HALO
LS: DK GY-GY, WKST-PKST, MICXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK, SL HD-BRIT, BLKY- SBBLKY, V SLTY, CARB, MRLY CUT: DL, CLDY, BL-WH, FST, HALO
LS: DK GY-GY, WKST-PKST, MICXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK,SFT-SL HD-BRIT, BLKY- SBBLKY, V SLTY, CARB,CALC CUT: DL-BRI, CLDY, BL-WH, FST, YEL RESD HALO
LS: DK GY-GY, WKST-PKST, MXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK,SFT-SL HD-BRIT, BLKY- SBBLKY, V SLTY, CARB,CALC CUT: DL-BRI, CLDY, BL-WH, FST, YEL RESD HALO
LS: DK GY-GY, WKST-PKST, MXL-VFXL, MASS-CHKY, ARG. CUT:DL-BRI,OP-CLDY,BL-WH, FST, DIFSE, YEL HALO
SH: DK GY-BLK,SFT-SL HD-BRIT, BLKY- SBBLKY, V SLTY, CARB,CALC CUT: DL-BRI, CLDY, BL-WH, FST, YEL RESD HALO
SLST: DK GY -GY IP,SLT-VF-F GR,FLK, WL CONS,SLI FRI- SLI HD, SIL-CALC CMT CUT: DL, OP, BL-WT ,FST-BLMG, RESD HALO
SLST: DK GY -GY IP,SLT-VF-F GR,FLK, WL CONS,SLI FRI- SLI HD,CARB IP, SIL-CALC CMT CUT: DL, OP, BL-WT ,FST-BLMG, RESD HALO
3rd BS Sand @ 12,228'
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CALC CMT CUT :DL, CLDY, BL-WH ,MOD, STMG-BLMG, HALO
SLST: DK GY -GY IP,SLT-VF-F GR,FLK, WL CONS,SLI FRI- SLI HD,ARG. CARB IP, SIL-CALC CMT CUT: DL, OP, BL-WT ,FST-BLMG, RESD HALO
SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CALC CMT CUT :DL-BRI, CLDY, BL-WH ,MOD, STMG-BLMG, HALO
SH: DK GY-BLK, SL HD-BRIT, BLKY-SB BLKY-SB PLTY, SLTY TEX-OCC AREN LAM, SL CALC; CUT: BRI CLDY BL-WH FST STRMG CT WI THK MKY LT BL-WHT RESD & THK MKY YEL RESDL RNG
SH: DK GY-BLK, SL HD-BRIT, BLKY-SB BLKY-SB PLTY, SLTY TEX-OCC AREN LAM, SL CALC; SS: LT BRN-TN-GY-DK GY-DK GY IP, FRI, MD GR-F GR, CONSOL, RND-SB ANG, V WL SRT, ARG IP, ABT SH LAM; CUT: BRI CLDY BL-WH FST STRMG CT WI THK MKY LT



INC: 67.9°
AZI: 0.9°
TVD: 12,395.64'
VSEC: 134.74'

MWI 9.1
MWO 9.0

MD: 12,655'
INC: 75°
AZI: 1.8°
TVD: 12,421.52'
VSEC: 210.35'

7 5/8" Int. 2 Casing Set @ 12,699' FIT = 15.0 EMW

TOOH @ 12,708'

Bit #6 6 1/8" PDC Baker DD405T W/ 5X14's in @ 12,708'

DISPLACE WATER BASE MUD WITH OIL BASE MUD

Landed curve at 12,857'

MD: 12,857'
INC: 89.4°
AZI: 359.6°
TVD: 12,4443.13'
VSEC: 410.46'

MWI 13.3
MWO 13.2

MD: 12,952'
INC: 89.2°
AZI: 356.6°
TVD: 12,4444.29'
VSEC: 505.46'

RPM: 45+MM
SPM: 132
SPP: 5339
GPM: 314

MD: 13,046'
INC: 93.1°
AZI: 359.4°
TVD: 12,4442.41'
VSEC: 599.42'

MWI 13.1
MWO 13.1

MD: 13,140'
INC: 91.3°
AZI: 359.0°
TVD: 12,438.80'
VSEC: 693.34'

RPM: 45+MM
SPM: 132
SPP: 5208
GPM: 314

MD: 13,235'
INC: 90.4°
AZI: 358.2°
TVD: 12,437.39'
VSEC: 788.32'

MWI 13.1
MWO 13.1

MD: 13,235'
INC: 90.4°
AZI: 358.2°
TVD: 12,437.39'
VSEC: 788.32'

RPM: 0+MM
SPM: 136
SPP: 5163
GPM: 323

MD: 13,423'
INC: 89.8°
AZI: 354.6°
TVD: 12,434.60'
VSEC: 975.94'

MWI 13.1
MWO 13.1

MD: 13,517'
INC: 93.9°
AZI: 356.8°
TVD: 12,431.57'
VSEC: 1,069.66'

RPM: 45+MM
SPM: 135
SPP: 5601
GPM: 323

MD: 13,612'
INC: 88.6°
AZI: 355.8°
TVD: 12,429.49'
VSEC: 1,164.46'

MWI 13.1

BL-WHT RESD & THK MKY YEL RESDL RNG

Wolfcamp A @ 12,624'

SH: DK GY-BLK, SL HD-BRIT, BLKY-SB BLKY-SB PLTY-RIPL LAM, SL SLTY TEX-OCC AREN LAM-SME SM TEX, SL MICA, SL CALC; LS: CRM-OFF WHT-LT GY-DK GY IP, SME V DNS-DNS, MASS-XLN-MIC XLN, AREN IP-AREN LAM-SH LAM-ARG IP, TR SS; CUT: BRI CLDY BL-WH FST STRMG CT W/ THK MKY LT BL-WHT RESD & THK MKY YEL RESDL RNG

SD: GY-DK GY, VF-F GR, W SRT, SBRD-RD, CONS, SL FRI IP, SL CALC CMT CUT: DL-BRI,CLDY, BL WH, MOD-FST, DIFSE, YEL RING HALO

H: DK GY-BLK, SFT-SL HD, BLKY-SB BLKY, SL SLTY , SL CARB. MRL; LS: WHT-LT GY,MASS , TR SD; CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

H: DK GY-BLK, SFT-SL HD, BLKY-SB BLKY, SL SLTY , SL CARB LS: WHT-LT GY,MASS , TR SD; CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SFT-SL HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SD: GY-DK GY, VF-F GR, W SRT, SBRD-RD, CONS, SL CALC CMT CUT: DL-BRI,CLDY, BL WH, MOD-FST, DIFSE, YEL RING HALO

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

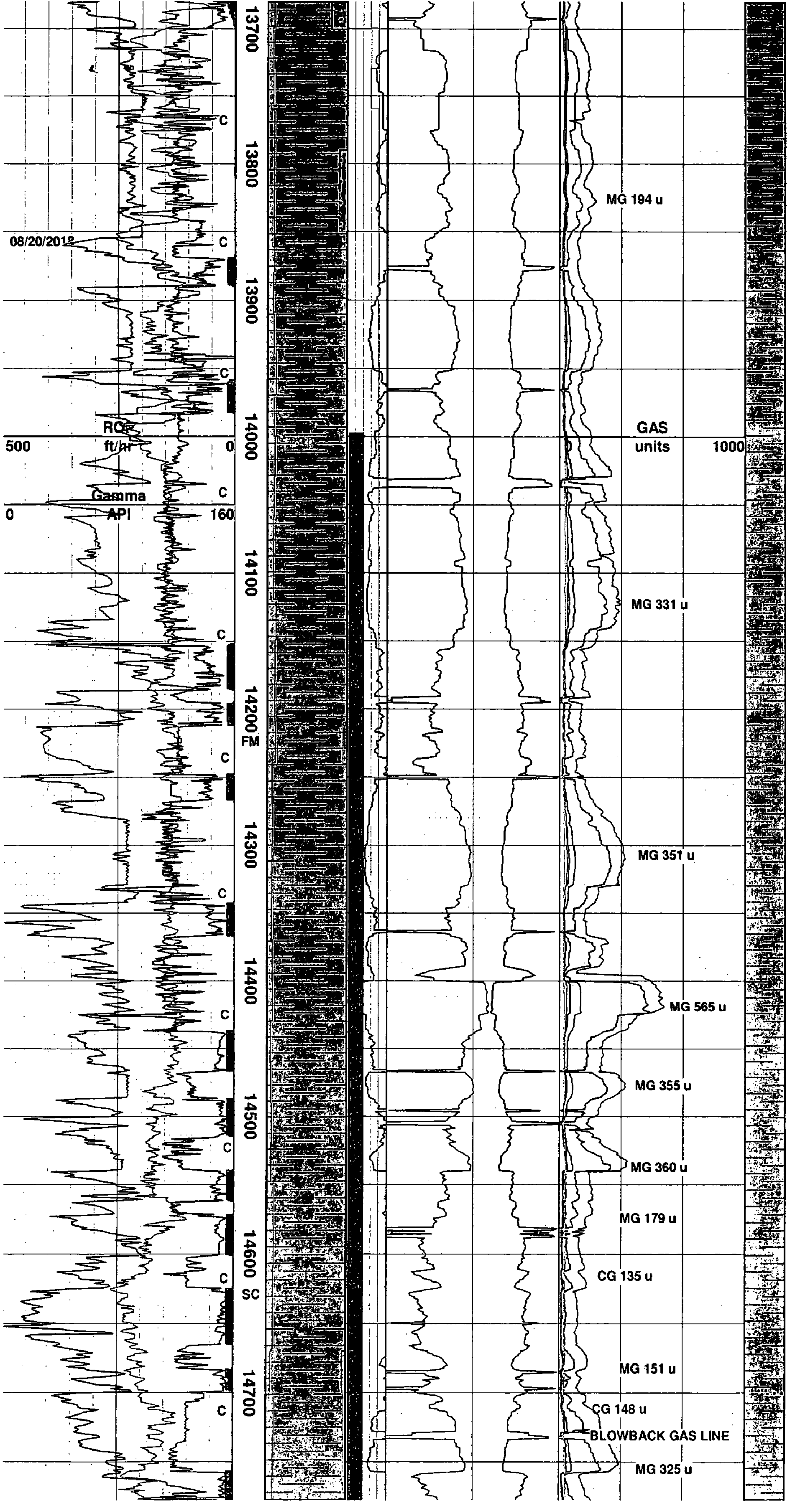
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IUP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD

SH: PRED DRK GRY, BLK, MFRM-FRM, SUBBLKY-BLKY, F/GRN, SNDY IP, MOD CONSOL, CARB, SLI LAM, TR PYR EMBD

SD: GY-DK GY, VF-F GR, W SRT, SBRD-RD, CONS, SL CALC CMT, SH IP, F DISM PYR

SH: DRK GRY BLK, OCC LT



MWO 13.1

MD: 13,706'
INC: 89.6º
AZI: 355.5º
TVD: 12,430.97'
VSEC: 1,258.23'

RPM: 60+MM
SPM: 136
SPP: 5824
GPM: 323

MD: 13,800'
INC: 86.7º
AZI: 355.1º
TVD: 12,434.0'
VSEC: 1,351.92'

MWI 13.1
MWO 13.1

MD: 13,894'
INC: 89.3º
AZI: 357.4º
TVD: 12,437.29'
VSEC: 1,445.70'

RPM: 45+MM
SPM: 136
SPP: 5984
GPM: 323

MD: 13,989'
INC: 91.3º
AZI: 358.7º
TVD: 12,436.79'
VSEC: 1,540.66'

MWI 13.1
MWO 13.1

MD: 14,084'
INC: 89.1º
AZI: 356.7º
TVD: 12,436.46'
VSEC: 1,635.61'

MW 13.15
VIS 72
PV 6
YP 49
GEL 61/55/29
Fil 12
O/W 75/25
SOL 23.0
ES 550
CHL 46,000

MD: 14,178'
INC: 90.5º
AZI: 356.6º
TVD: 12,436.78'
VSEC: 1,729.49'

MWI 13.1
MWO 13.1

MD: 14,273'
INC: 90.8º
AZI: 358.8º
TVD: 12,435.54'
VSEC: 1,824.46'

RPM: 60+MM
SPM: 136
SPP: 6142
GPM: 324

MD: 14,367'
INC: 87.9º
AZI: 357.6º
TVD: 12,436.61'
VSEC: 1,918.42'

MWI 12.9
MWO 12.9

MD: 14,461'
INC: 88.9º
AZI: 357.5º
TVD: 12,439.23'
VSEC: 2,012.33'

RPM: 00+MM
SPM: 136
SPP: 5289
GPM: 323

MD: 14,555'
INC: 84.3º
AZI: 358.8º
TVD: 12,444.81'
VSEC: 2,106.11'

MWI 12.9
MWO 12.9

MD: 14,649'
INC: 93.0º
AZI: 359.8º
TVD: 12,447.02'
VSEC: 2,199.99'

RPM: 50+MM
SPM: 135
SPP: 5771
GPM: 322

MD: 14,743'
INC: 92.7º
AZI: 357.5º
TVD: 12,442.34'

GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD

SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IUP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD

SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD

SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD

SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD

SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD

SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MOD CONSOL, CARB, SNDY IP, SLI LAM, TR PYR EMBD

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

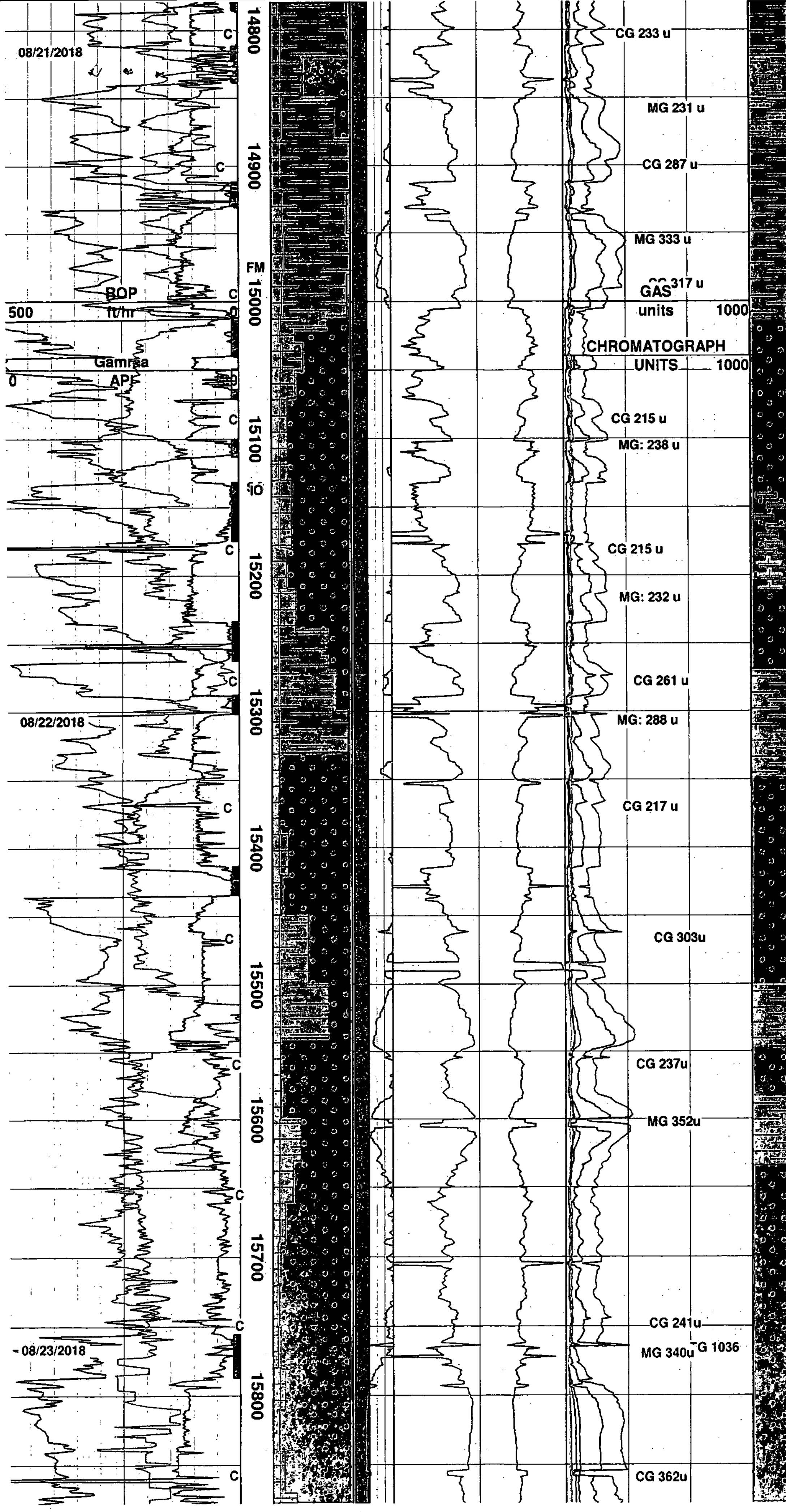
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY . CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: BLK-DK GY, HD-V FRM, BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: PRED DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , MOD CONSOL, CARB, TR PYR EMBD CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: BLK-DK GY, HD-V FRM,



VSEC: 2,293.86

MWI 12.8+
MWO 12.8+

MD: 14,838'
INC: 98.5°
AZI: 2.7°
TVD: 12,433.07'
VSEC: 2,388.33'

RPM: 70+MM
SPM: 136
SPP: 5744
GPM: 323

MW	12.8
VIS	70
PV	27
YP	14
GEL	68/41/32
Fil	12
O/W	75/25
SOL	23.0
ES	550
CHL	43,000

MD: 15,027'
INC: 96.6°
AZI: 2.7°
TVD: 12,409.15'
VSEC: 2,574.57

MWI 12.8
MWO 12.8

MD: 15,121'
INC: 95.4°
AZI: 4.9°
TVD: 12,399.32'
VSEC: 2,668.78

RPM: 60+MM
SPM: 134
SPP: 5739
GPM: 318

MD: 15,215'
INC: 91.0°
AZI: 6.0°
TVD: 12,394.07'
VSEC: 2,762.11

MWI 12.8
MWO 12.8

MW	12.8
VIS	82
PV	33
YP	15
GEL	81/48/36
Fil	12
O/W	75/25
SOL	22.37
ES	525
CHL	40,000

RPM: 65+MM
SPM: 134
SPP: 5740
GPM: 318

MD: 15,404'
INC: 91.6°
AZI: 3.1°
TVD: 12,393.42'
VSEC: 2,950.67'

MWI 12.8
MWO 12.8

MD: 15,499'
INC: 88.50°
AZI: 3.10°
TVD: 12,393.33'
VSEC: 3,045.50'

MWI 12.8
MWO 12.8

MD: 15,593'
INC: 89.7°
AZI: 4.3°
TVD: 12,394.81'
VSEC: 3,139.26'

RPM: 65+MM
SPM: 134
SPP: 5360
GPM: 318

MD: 15,687'
INC: 90.10°
AZI: 4.30°
TVD: 12,394.97'
VSEC: 3,232.93'

MWI 12.8
MWO 12.8

Bit #7 6.125" PDC
Ulterra U711M
W/ 7x12's in @ 15,762'

MD: 15,804'
INC: 89.8°
AZI: 2.6°
TVD: 12,395.08'
VSEC: 3,349.65'

RPM: 50+MM
SPM: 118
SPP: 6100

BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SST: DK GY-GY, LT GY, TN, VF GR-SLT, MOD SRT, SB ANG-SB RD, CONS, CALC CMT, ARG MTX, SL FRI. SH: BLK-DK GY, HD-V FRM, BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: BLK-DK GY, HD-V FRM, BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SH: BLK-DK GY, HD-V FRM, BKLY-SB BLKY, OCC PLTY, VF GR- F GRLAM, OCC SLTY LAM. SL CARB. CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG

SD: DK GYGY-LT GY,SILT-VFGR, W SRT, SLI FRI IP, CALC CMT CUT: BRI ,CLDY ,BL-WH ,FST,DIFFSE, YEL RESDL RNG

SD: DK GYGY-LT GY,SILT-VFGR, W SRT, SLI FRI IP, CALC CMT CUT: BRI ,CLDY ,BL-WH ,FST,DIFFSE, YEL RESDL RNG

SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CALC CMT

SD: DK GYGY-LT GY,SILT-VFGR, W SRT, SLI FRI IP, CALC CMT, ARG, SH INTBD, F DISM PYR

SD: OCC BLK, LT GY- DK GRY,SILT- VFGR, CONS, W SRT, ARG, SLI FRI IP. CALC CMT, SH INTBD, TR LS, F DISM PYR

SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CONS, CALC CMT, SH INTBD, F DISM PYR

SH: OCC LT GRY-DRK GRY, BLK, SUBBLKY-BLKY W/OCC PLTY, MFRM-FRM, MOD CONSOL, SLI LAM, SNDY IP, CARB, TR PYR EMBD

SD:PRED LT GRY, OCC DRK GRY, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, V CALC, CONS, CALC CMT, SH INTBD, F DISM PYR, CARB

SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, CONS, CALC CMT, SH INTBD, F DISM PYR

SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, CALC CMT, SH INTBD, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING

SH: GRY-DRK GRY, BLKY SUBBLKY, M FRM-FRM, AREN IP, NON CALC; NO VIS FLOR, SLO STRM LT BLU CUT, GH BRI RESID RING

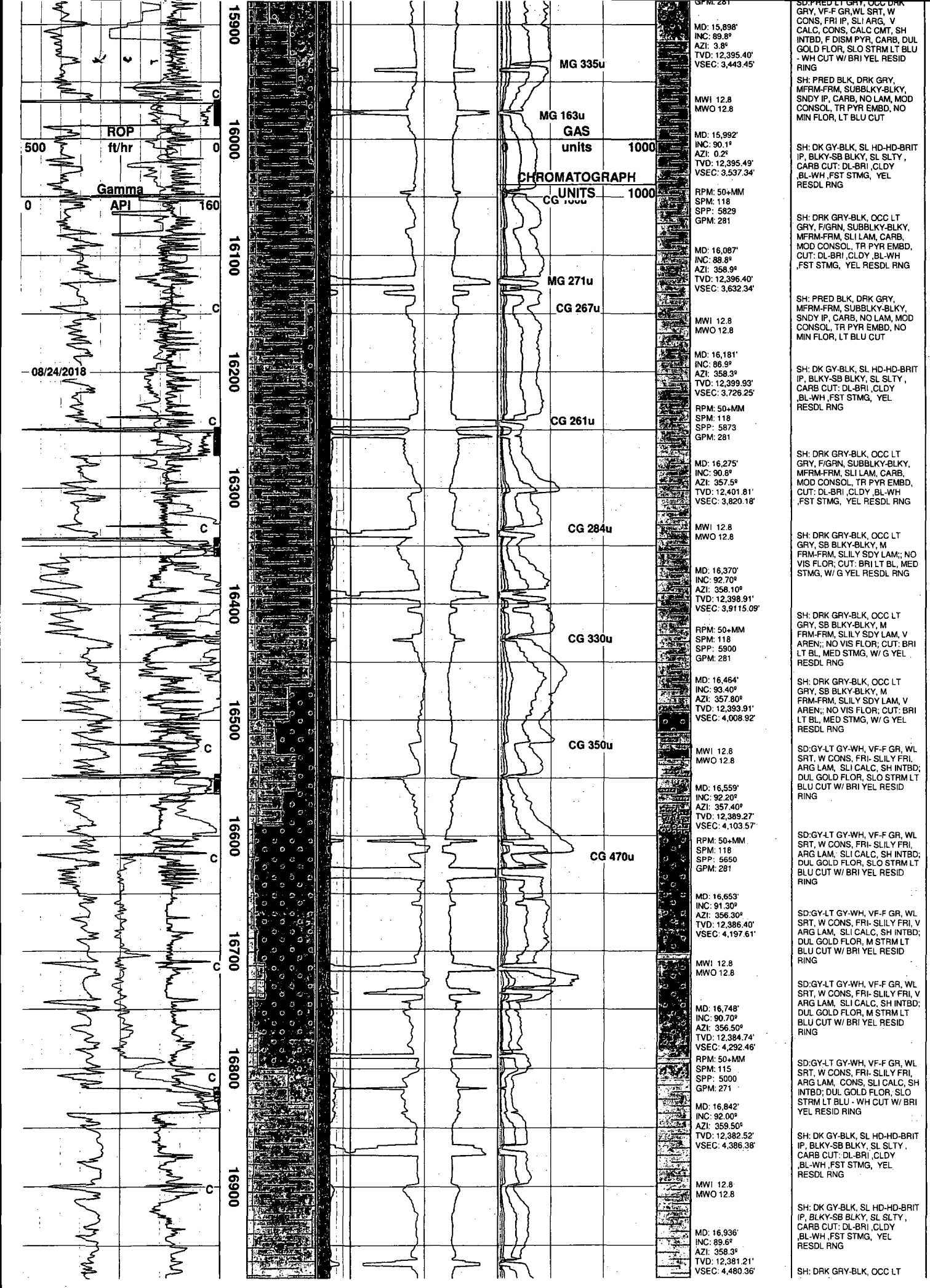
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING

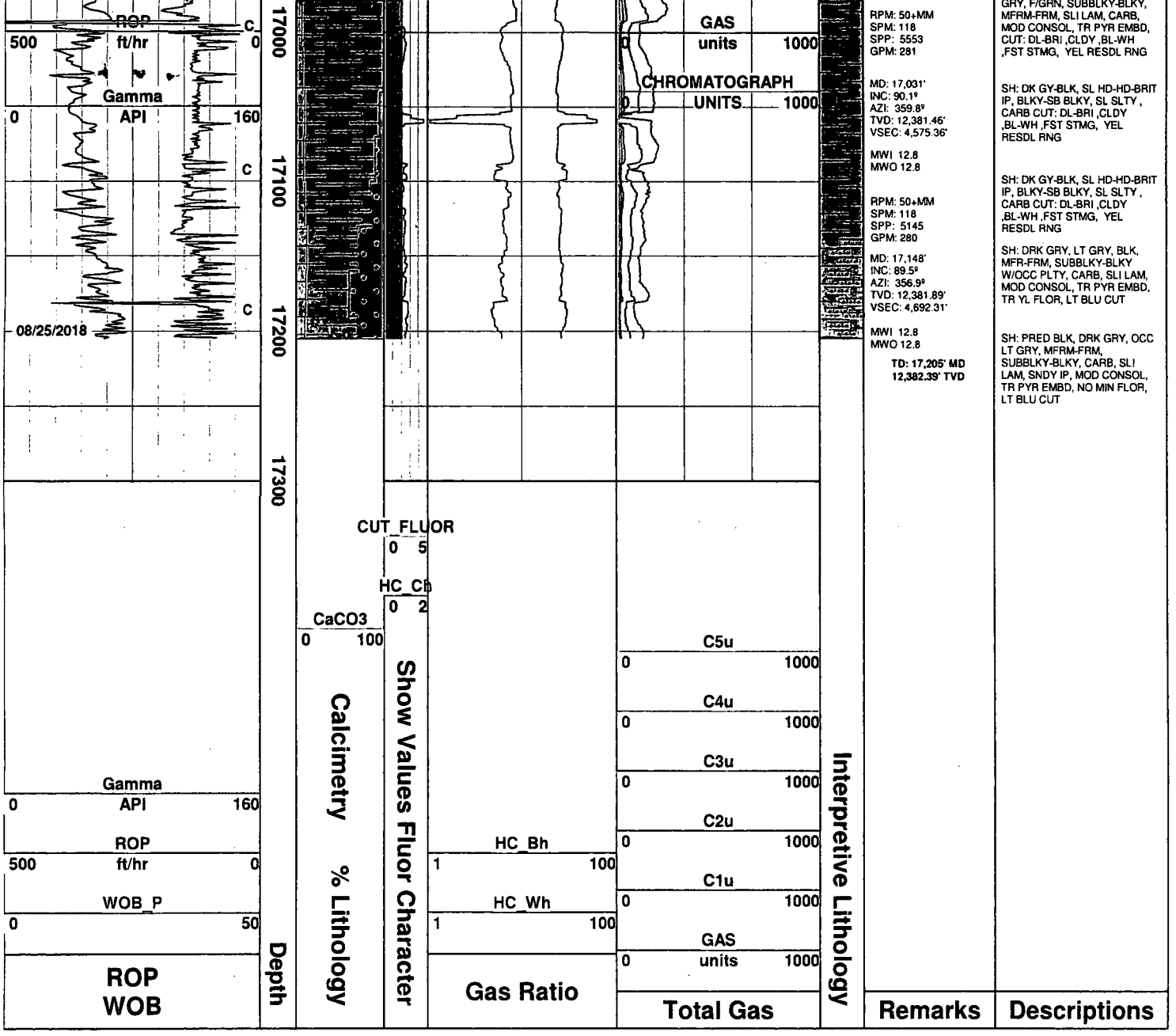
SH: GRY-DRK GRY, BLKY SUBBLKY, M FRM-FRM, AREN IP, NON CALC; NO VIS FLOR, SLO STRM LT BLU CUT, GH BRI RESID RING

SD:GY-LT GY-WH, VF-F GR,WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, CALC CMT, SH INTBD, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING

SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS; FRI- SLILY FRI, ARG LAM, CONS, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING

SD: OCC BLK, LT GY- DK GRY,SILT- VFGR, CONS, W SRT, ARG, SLI FRI IP, CALC CMT, SH INTBD, TR LS, F DISM PYR, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING


ROP
500 ft/hr 0
Gamma
0 API 160
08/24/2018
15900
16000
16100
16200
16300
16400
16500
16600
16700
16800
16900
MG 335u
MG 163u
GAS
units 1000
CHROMATOGRAPH
UNITS 1000
MG 271u
CG 267u
CG 261u
CG 284u
CG 330u
CG 350u
CG 470u
MD: 15,898'
INC: 89.8°
AZI: 3.8°
TVD: 12,395.40'
VSEC: 3,443.45'
MWI 12.8
MWO 12.8
MD: 15,992'
INC: 90.1°
AZI: 0.2°
TVD: 12,395.49'
VSEC: 3,537.34'
RPM: 50+MM
SPM: 118
SPP: 5829
GPM: 281
MD: 16,087'
INC: 88.8°
AZI: 358.9°
TVD: 12,396.40'
VSEC: 3,632.34'
MWI 12.8
MWO 12.8
MD: 16,181'
INC: 86.9°
AZI: 358.3°
TVD: 12,399.93'
VSEC: 3,726.25'
RPM: 50+MM
SPM: 118
SPP: 5873
GPM: 281
MD: 16,275'
INC: 90.8°
AZI: 357.5°
TVD: 12,401.81'
VSEC: 3,820.18'
MWI 12.8
MWO 12.8
MD: 16,370'
INC: 92.70°
AZI: 358.10°
TVD: 12,398.91'
VSEC: 3,9115.09'
RPM: 50+MM
SPM: 118
SPP: 5900
GPM: 281
MD: 16,464'
INC: 93.40°
AZI: 357.80°
TVD: 12,393.91'
VSEC: 4,008.92'
MWI 12.8
MWO 12.8
MD: 16,559'
INC: 92.20°
AZI: 357.40°
TVD: 12,389.27'
VSEC: 4,103.57'
RPM: 50+MM
SPM: 118
SPP: 5650
GPM: 281
MD: 16,653'
INC: 91.30°
AZI: 356.30°
TVD: 12,386.40'
VSEC: 4,197.61'
MWI 12.8
MWO 12.8
MD: 16,748'
INC: 90.70°
AZI: 356.50°
TVD: 12,384.74'
VSEC: 4,292.46'
RPM: 50+MM
SPM: 115
SPP: 5000
GPM: 271
MD: 16,842'
INC: 92.00°
AZI: 359.50°
TVD: 12,382.52'
VSEC: 4,386.38'
MWI 12.8
MWO 12.8
MD: 16,936'
INC: 89.6°
AZI: 358.3°
TVD: 12,381.21'
VSEC: 4,480.36'
SD:PRED LT GRY, OCC DRK GRY, VF-F GR,WL SRT, W CONS, FRI IP, SLI ARG, V CALC, CONS, CALC CMT, SH INTBD, F DISM PYR, CARB, DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING
SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD, NO MIN FLOR, LT BLU CUT
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD, CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: PRED BLK, DRK GRY, MFRM-FRM, SUBBLKY-BLKY, SNDY IP, CARB, NO LAM, MOD CONSOL, TR PYR EMBD, NO MIN FLOR, LT BLU CUT
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DRK GRY-BLK, OCC LT GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD, CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DRK GRY-BLK, OCC LT GRY, SB BLKY-BLKY, M FRM-FRM, SLILY SDY LAM;; NO VIS FLOR; CUT: BRI LT BL, MED STMG, W/ G YEL RESDL RNG
SH: DRK GRY-BLK, OCC LT GRY, SB BLKY-BLKY, M FRM-FRM, SLILY SDY LAM, V AREN;; NO VIS FLOR; CUT: BRI LT BL, MED STMG, W/ G YEL RESDL RNG
SH: DRK GRY-BLK, OCC LT GRY, SB BLKY-BLKY, M FRM-FRM, SLILY SDY LAM, V AREN;; NO VIS FLOR; CUT: BRI LT BL, MED STMG, W/ G YEL RESDL RNG
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU CUT W/ BRI YEL RESID RING
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU CUT W/ BRI YEL RESID RING
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, V ARG LAM, SLI CALC, SH INTBD; DUL GOLD FLOR, M STRM LT BLU CUT W/ BRI YEL RESID RING
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, V ARG LAM, SLI CALC, SH INTBD; DUL GOLD FLOR, M STRM LT BLU CUT W/ BRI YEL RESID RING
SD:GY-LT GY-WH, VF-F GR, WL SRT, W CONS, FRI- SLILY FRI, ARG LAM, CONS, SLI CALC, SH INTBD; DUL GOLD FLOR, SLO STRM LT BLU - WH CUT W/ BRI YEL RESID RING
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DRK GRY-BLK, OCC LT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Gamma
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08/25/2018
17000
17100
17200
17300
Depth
GAS
0 units 1000
CHROMATOGRAPH
0 UNITS 1000
RPM: 50+MM
SPM: 118
SPP: 5553
GPM: 281
MD: 17,031'
INC: 90.1°
AZI: 359.8°
TVD: 12,381.46'
VSEC: 4,575.36'
MWI 12.8
MWO 12.8
RPM: 50+MM
SPM: 118
SPP: 5145
GPM: 280
MD: 17,148'
INC: 89.5°
AZI: 356.9°
TVD: 12,381.89'
VSEC: 4,692.31'
MWI 12.8
MWO 12.8
TD: 17,205' MD
12,382.39' TVD
GRY, F/GRN, SUBBLKY-BLKY, MFRM-FRM, SLI LAM, CARB, MOD CONSOL, TR PYR EMBD, CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DK GY-BLK, SL HD-HD-BRIT IP, BLKY-SB BLKY, SL SLTY , CARB CUT: DL-BRI ,CLDY ,BL-WH ,FST STMG, YEL RESDL RNG
SH: DRK GRY, LT GRY, BLK, MFR-FRM, SUBBLKY-BLKY W/OCC PLTY, CARB, SLI LAM, MOD CONSOL, TR PYR EMBD, TR YL FLOR, LT BLU CUT
SH: PRED BLK, DRK GRY, OCC LT GRY, MFRM-FRM, SUBBLKY-BLKY, CARB, SLI LAM, SNDY IP, MOD CONSOL, TR PYR EMBD, NO MIN FLOR, LT BLU CUT
Gamma
0 API 160
ROP
500 ft/hr 0
WOB_P
0 50
ROP
WOB
CUT_FLUOR
0 5
HC_Ch
0 2
CaCO3
0 100
Calcimetry % Lithology
Show Values Fluor Character
HC_Bh
1 100
HC_Wh
1 100
Gas Ratio
C5u
0 1000
C4u
0 1000
C3u
0 1000
C2u
0 1000
C1u
0 1000
GAS
0 units 1000
Total Gas
Interpretive Lithology
Remarks
Descriptions