Confidentiality Requested:
☐ Yes ☑ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1227617

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 33491
Name: King, Rodney L. dba King Oil Operation
Address 1: 1746 150TH AVE.
Address 2:
City: ELLIS State: KS Zip: 67637 + 9300
Contact Person: Rodney L. King
Phone: (785) 726-3498
CONTRACTOR: License # 34908
Name: Skytop Drilling LLC
Wellsite Geologist: David Gould
Purchaser:

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☑ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

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

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

09/05/2013 Spud Date or Recompletion Date
09/16/2013 Date Reached TD
06/04/2014 Completion Date or Recompletion Date

API No. 15 - 15-113-21360-00-00
Spot Description:
SW NE NW SE Sec. 14 Twp. 18 S. R. 3 ☐ East ☑ West
2123 Feet from ☐ North / ☑ South Line of Section
1840 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: McPherson
Lease Name: JOHNSON Well #: 1
Field Name:
Producing Formation: Simpson
Elevation: Ground: 1495 Kelly Bushing: 1500
Total Vertical Depth: 3825 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 229 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 0 ppm Fluid volume: 333 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: K-Bar Oil
Lease Name: Dean License #: 32361
Quarter SE Sec. 24 Twp. 19 S. R. 3 ☐ East ☑ West
County: McPherson Permit #: E-18708

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date:
☐ **Confidential Release Date:**
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 10/24/2014

1227617

Operator Name: King, Rodney L. dba King Oil Operation Lease Name: JOHNSON Well #: 1

Sec. 14 Twp. 18 S. R. 3 ☐ East ☑ West County: McPherson

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

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

Drill Stem Tests Taken ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Attached

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

Name	Top	Datum
Viola	3674	2165
Simpson	3752	2243

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	229	Common	180	
Long string	7.875	5.5	15.50	3820	Common	125	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

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

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

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

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

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

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

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

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

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

PRODUCTION INTERVAL:

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

Form	ACO1 - Well Completion
Operator	King, Rodney L. dba King Oil Operation
Well Name	JOHNSON 1
Doc ID	1227617

All Electric Logs Run

Cement Bond Log
Compensated density Neutron Log
Micro Resistivity Log
Dual Induction Log

Form	ACO1 - Well Completion
Operator	King, Rodney L. dba King Oil Operation
Well Name	JOHNSON 1
Doc ID	1227617

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3806-3810		
4	3798-3802		
4	3778-3781		
4	3764-3767		
4	3756-3759		
4	3684-3692	400 7.5% MCA	

QUALITY WELL SERVICE, INC.

5947

Federal Tax I.D. # 481187368

Home Office 324 Simpson St., Pratt, KS 67124

OFFICE
Heath's Cell 620-727-3410
Office / Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-16-13	14	18	3	McPherson	Ks	2:45 P.M	9:30 P.M

Lease Johnson Well No. #1 Location McPherson N on 135 to Pawnee Exit E to 17Rd 2.2 N W into

Contractor SKYTOP Drlg

Type Job LS

Hole Size 7 7/8 T.D. 3323

Csg. 5 1/2 15.5 Depth

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint 19.70

Meas Line Displace 90.45

To Quality Well Service, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To King Oil Operations

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 155sx Q Pro C 10% Salt 5#/sx A-Lonite

EQUIPMENT

Pumptrk No.	3	Mike
Bulktrk No.	9	Chad
Bulktrk No.		
Pickup No.		Todd

JOB SERVICES & REMARKS

Rat Hole 30sx

Mouse Hole

Centralizers 1-3-5-7-9-11-13-15-17-19

Baskets 6-14

D/V or Port Collar

Run 90 jts 5 1/2 15.5# csg
Set @ 3320'
1 jt = 19.70 Float Shoe & LD Baffle
csg on Bottom Hook up to csg
Break Circ w/rig 1 hr
Pump 3 Bbls H2O 12 Bbl Mflush 3 Bbls H2O
Plug R-hole
Mix & Pump 125sx Pro C @ 14.8#/gal
Shut down Wash up Pump & Lines
Release 5 1/2 LD Plug
Disp 90.45 Bbls total
Lift PSI 700#
Plug down @ 9:05 1500#
Release & Held
Good Circ thru Job
thanks Todd Mike & Chad

PLEASE CALL AGAIN

X Signature

Rodney

Common	155	
Poz. Mix		
Gel.		
Calcium		
Hulls		
Salt	17	
Flowseal		
Kol-Seal	775#	
Mud CLR 48	500	
CFL-117 or CD110 CAF 38		
Sand		
Handling	172	
Mileage	50	
5 1/2 **FLOAT EQUIPMENT**		
Guide Shoe		
Centralizer	10 EA	
Baskets	2 EA	
AFU Inserts		
Float Shoe	1 EA	
Latch Down	1 EA	
LMV	50	
Pumptrk Charge	Longstring	
Mileage	50	
Tax		
Discount		
Total Charge		

Taylor Printing, Inc.

QUALITY WELL SERVICE, INC.

5944

Federal Tax I.D. # 481187368

Home Office 324 Simpson St., Pratt, KS 67124

OFFICE ~~Home Cell~~ 620-727-3410
Office / Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-5-13	14	18	3	McPherson	Ks	6:30 PM	1:00 A.M

Lease Johnson Well No. #1 Location McPherson Ks W on Hwy 81 to Pawnee Exit E to 17th Rd 2.2 N W into

Contractor SKY TOP Drlg

Type Job Surface

Hole Size 12¼ T.D. 229

Csg. 8 5/8 24# Depth 229

Tbg. Size Depth

Pool Depth

Cement Left in Csg. Shoe Joint 20

Meas Line Displace 13.3 Bbls

Owner to Quality Well Service, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To King O.L Operations

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 180 sx Common 2% Gel 3% CC ¼# CF

EQUIPMENT

Pumptrk No.	8	Mike
Bulktrk No.	4	Chad
Bulktrk No.		
Pickup No.		TODD

JOB SERVICES & REMARKS

Ran 5 Jts 8 5/8 24# Csg Set 226

Took up to Csg & Break Circ w/ Rig

Mix & Pump 180 sx Common 2% Gel 3% CC ¼# CF 15#/gal

SHUT DOWN Release 8 5/8 Wood Plug

Disp 13.3 Bbls total

Close Valve on Csg 200#

Good Circ thru Job

Circ Cmt to Pit

Thanks Todd Mike & Chad

Please call again

Signature

Common	180
Poz. Mix	
Gel.	3
Calcium	6
Hulls	
Salt	
Flowseal	50
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	189
Mileage	50

8 5/8 FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	8 5/8 Wooden plug
LHV	50
Pumptrk Charge	SURFACE
Mileage	50
Tax	
Discount	
Total Charge	

Taylor Printing, Inc.

COPELAND
Acid & Cement

POST OFFICE BOX 438
HAYSVILLE, KS 67060
(316) 524-1225
(316) 524-1027 FAX

BURRTON, KS
(620) 463-5161
FAX (620) 463-2104

GREAT BEND, KS
(620) 793-3366
FAX (620) 793-3536

Invoice

INVOICE NUMBER:
C40039-IN

BILL TO:
KING OIL OPERATIONS
RODNEY KING
696 D FAIRGROUNDS RD
ELLIS, KS 67637

LEASE: **JOHNSON 1**

DATE	ORDER	SALESMAN	ORDER DATE	PURCHASE ORDER	SPECIAL INSTRUCTIONS
04/15/2014	C40039		04/10/2014		NET 30

QUANTITY	U/M	ITEM NO./DESCRIPTION	D/C	PRICE	EXTENSION
50.00	MI	CEMENT MILEAGE PUMP TRUCK	0.00	4.00	200.00
50.00	MI	CEMENT MILEAGE PU TRUCK	0.00	2.00	100.00
1.00	EA	CEMENT PUMP CHARGE	0.00	650.00	650.00
145.00	SAX	60-40 POZ MIX 2% GEL	0.00	10.00	1,450.00
3.00	SAX	2% ADDITIONAL GEL	0.00	22.00	66.00
148.00	EA	BULK CHARGE	0.00	1.25	185.00
326.50	MI	BULK TRUCK - TON MILES	0.00	1.10	359.15

Paid 4/18/14 CK# 2514

REMIT TO:
P.O. BOX 438
HAYSVILLE, KS 67060

RECEIVED BY

COP

FUEL SURCHARGE IS NOT TAXABLE AND IS ADDED TO MILEAGE, PUMP AND OR DELIVERY CHARGES ONLY.

NET 30 DAYS

Net Invoice:	3,010.15
MCPCO Sales Tax:	46.48
Invoice Total:	**3,056.63**

There will be a charge of 1.5% "per month" (18% annual rate) on all accounts over 30 days past due.

COPELAND
Acid & Cement

TREATMENT REPORT

Acid Stage No. _____

Date 4/10/2014 District G.B. F.O. No. C40039

Company King Oil

Well Name & No. Johnson #1

Location _____ Field _____

County Mcpherson State KS

Casing: Size 5.5" Type & Wt. _____ Set at _____ ft.

Formation: _____ Perf. _____ to _____

Formation: _____ Perf. _____ to _____

Formation: _____ Perf. _____ to _____

Liner: Size _____ Type & Wt. _____ Top at _____ ft. Bottom at _____ ft.

Cemented: Yes Perforated from _____ ft. to _____ ft.

Tubing: Size & Wt. _____ Swung at _____ ft.

Perforated from _____ ft. to _____ ft.

Open Hole Size _____ T.D. _____ ft. P.B. to _____ ft.

Type Treatment:	Amt.		Type Fluid	Sand Size	Pounds of Sand
Bkdown		Bbl./Gal.			
		Bbl./Gal.			
		Bbl./Gal.			
		Bbl./Gal.			
Flush		Bbl./Gal.			

Treated from _____ ft. to _____ ft. No. ft. 0

from _____ ft. to _____ ft. No. ft. 0

from _____ ft. to _____ ft. No. ft. 0

Actual Volume of Oil / Water to Load Hole: _____ Bbl./Gal.

Pump Trucks. No. Used: Std. 320 Sp. _____ Twin _____

Auxiliary Equipment 360/310

Personnel Nathan Greg Mike

Auxiliary Tools _____

Plugging or Sealing Materials: Type _____

_____ Gals. _____ lb.

Company Representative Kelso Treater Nathan W.

TIME	PRESSURES		Total Fluid Pumped	REMARKS
a.m./p.m.	Tubing	Casing		
1:00		5.5"		On Location.
				Mix 35sks 60/40poz 4% Gel at 500'
2:00				Mix 110sks at 325' Circulated cement to surface.
				Thank You!
				Nathan W.

COPELAND
Acid & Cement

FIELD ORDER № C 40039

BOX 438 • HAYSVILLE, KANSAS 67060
316-524-1225

DATE 4-10-11 20____

IS AUTHORIZED BY: King Oil
(NAME OF CUSTOMER)

Address _____ City _____ State _____

To Treat Well As Follows: Lease Johnson Well No. 1 Customer Order No. _____

Sec. Twp. Range 14-17-3W County McPherson State ks

CONDITIONS: As a part of the consideration hereof it is agreed that Copeland Acid Service is to service or treat at owners risk, the hereinbefore mentioned well and is not to be held liable for any damage that may accrue in connection with said service or treatment. Copeland Acid Service has made no representation, expressed or implied, and no representations have been relied on, as to what may be the results or effect of the servicing or treating said well. The consideration of said service or treatment is payable. There will be no discount allowed subsequent to such date. 6% interest will be charged after 60 days. Total charges are subject to correction by our invoicing department in accordance with latest published price schedules.

The undersigned represents himself to be duly authorized to sign this order for well owner or operator.

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED _____ By _____
Well Owner or Operator Agent

CODE	QUANTITY	DESCRIPTION	UNIT COST	AMOUNT
2	50	mileage pump truck	4.00	200.00
2	50	mileage pickup	2.00	100.00
2	1	Pump Charge - Plug		650.00
2	145	60/40 poz 2% gel	10.00	1,450.00
2	3	2% add. gel	22.00	66.00
2	145	Bulk Charge	1.25	155.00
2		Bulk Truck Miles 6.53T x 50m = 326.5Tm x 1.10	1.10	359.15
		Process License Fee on _____ Gallons		
		TOTAL BILLING		3,010.15

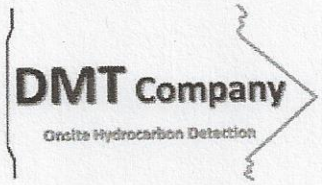
I certify that the above material has been accepted and used; that the above service was performed in a good and workmanlike manner under the direction, supervision and control of the owner, operator or his agent, whose signature appears below.

Copeland Representative Nathan W.

Station G.B. Kelso
Well Owner, Operator or Agent

Remarks _____

NET 30 DAYS



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

Well Name:	JOHNSON #1
Location:	SW NE NW SE SECTION 14 18S 3W
License Number:	33491, API# 15-113-21360
Region:	MCPHERSON CO. KS.
Spud Date:	9/4/2013
Drilling Completed:	9/16/2013
Surface Coordinates:	2123' FROM SOUTH LINE OF SECTION 1840' FROM EAST LINE OF SECTION
Bottom Hole Coordinates:	2123' FROM SOUTH LINE OF SECTION 1840' FROM EAST LINE OF SECTION
Ground Elevation (ft):	1502'
K.B. Elevation (ft):	1509'
Logged Interval (ft):	3000' To: 3825'
Total Depth (ft):	3825'
Formation:	SIMPSON
Type of Drilling Fluid:	CHEMICAL, MUD-CO

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: KING OIL OPERATION
Address: 1746 150TH AVE
ELLIS, KANSAS 67637
(785) 259-3038

GEOLOGIST

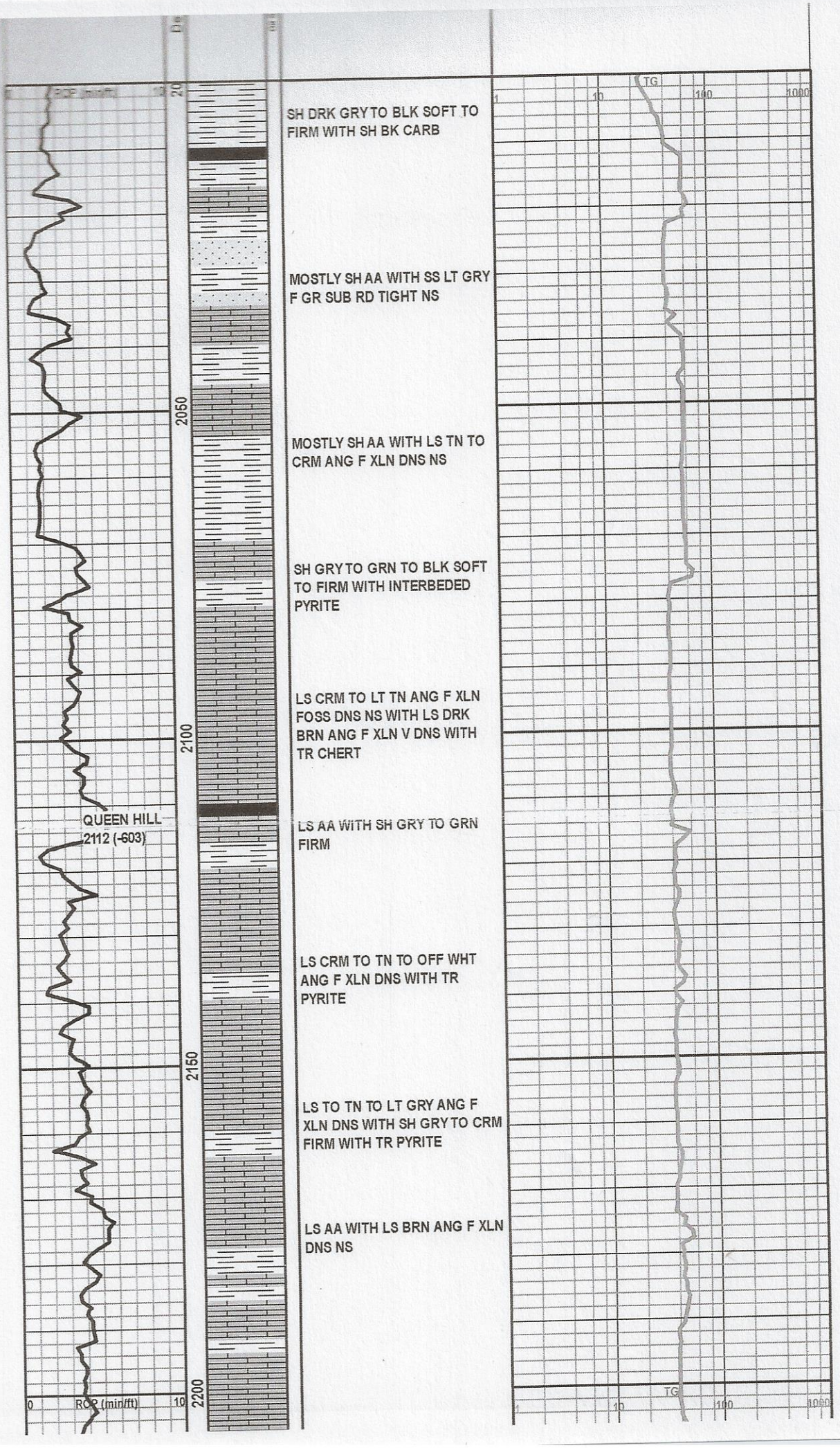
Name: DAVID GOULD (LOGGER)
Company: DMT COMPANY
Address: 532 SUNRISE
PRATT, KANSAS 67124
(620) 388-2847

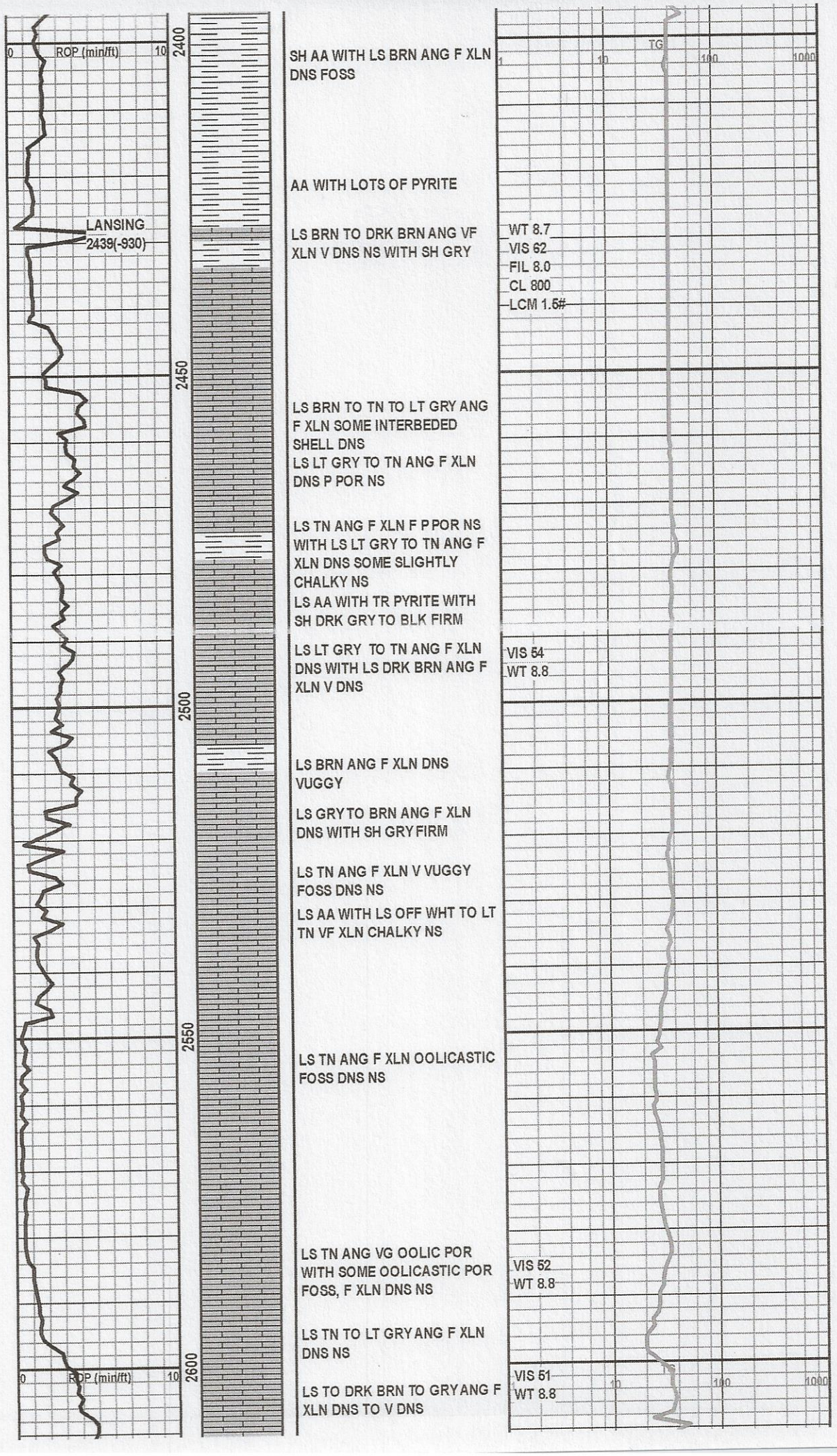
Comments

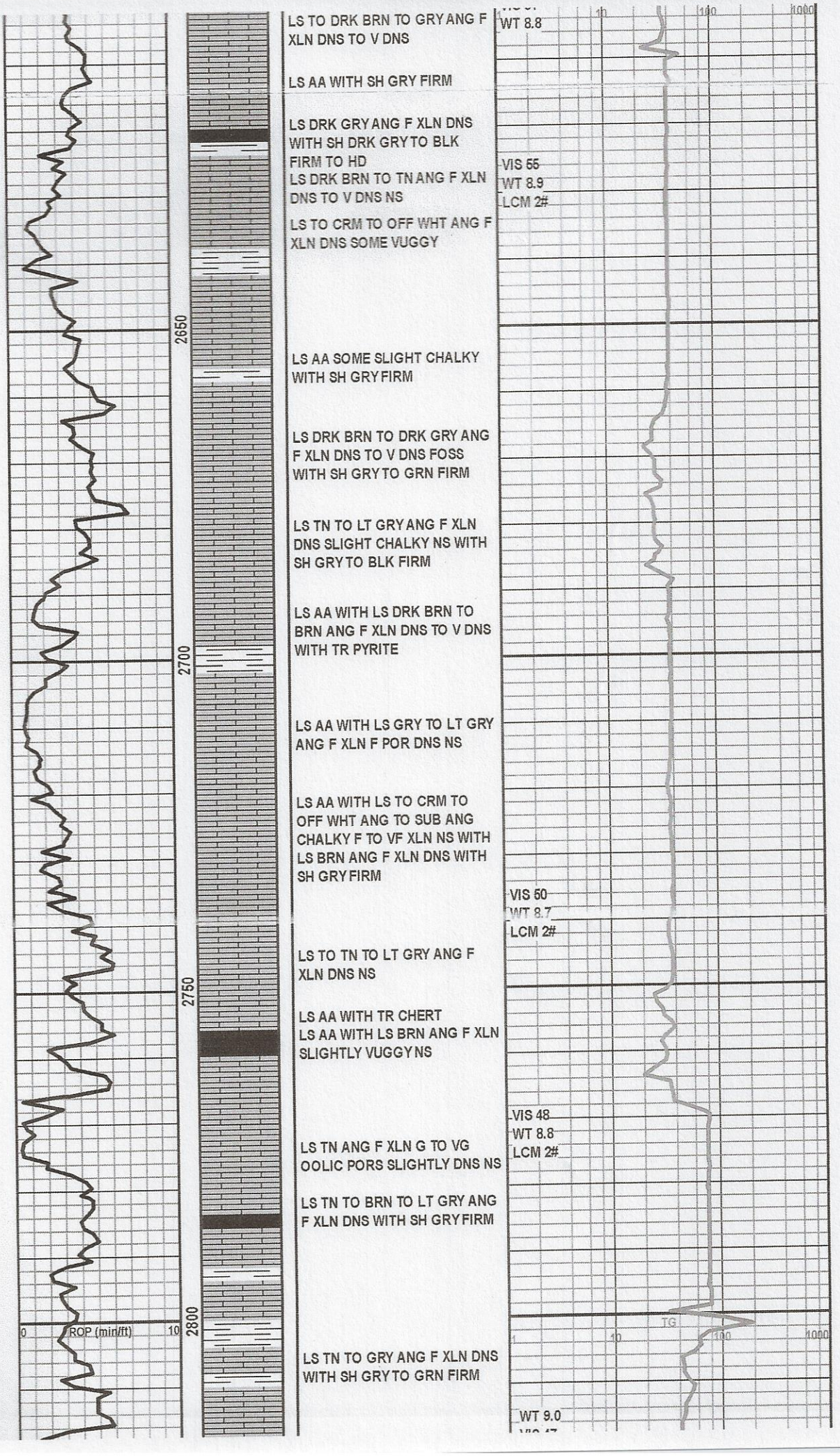
CONTRACTOR:
SKYTOP Rig #1

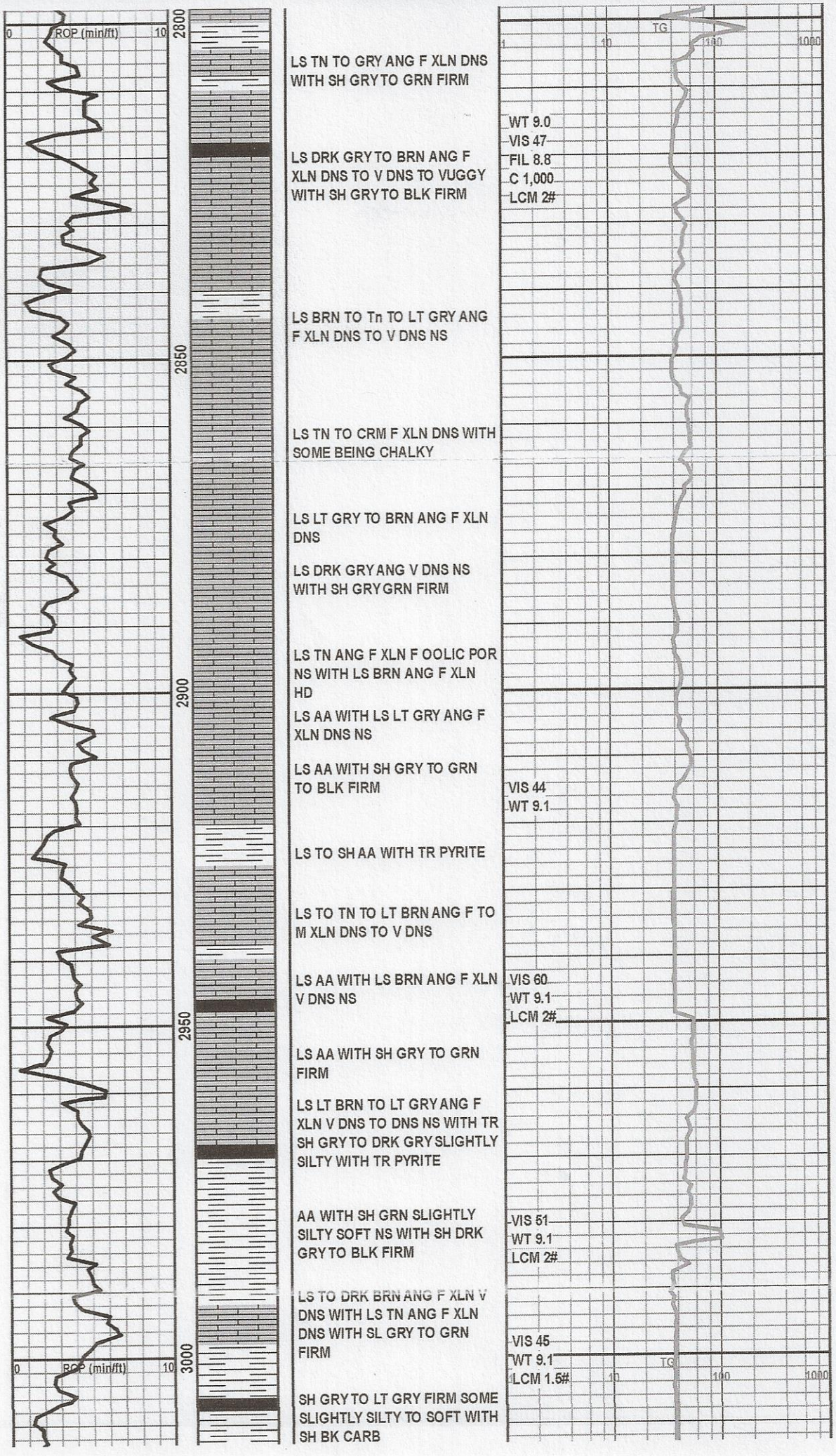
DAILY STATUS: (7:00 AM)
9/10/13 1929', DRILL AHEAD
9/11/13 2269', DRILL AHEAD
9/12/13 2744', DRILL AHEAD
9/13/13 2985', DRILL AHEAD
9/14/13 3425', DRILL AHEAD
9/15/13 3740', DRILL AHEAD

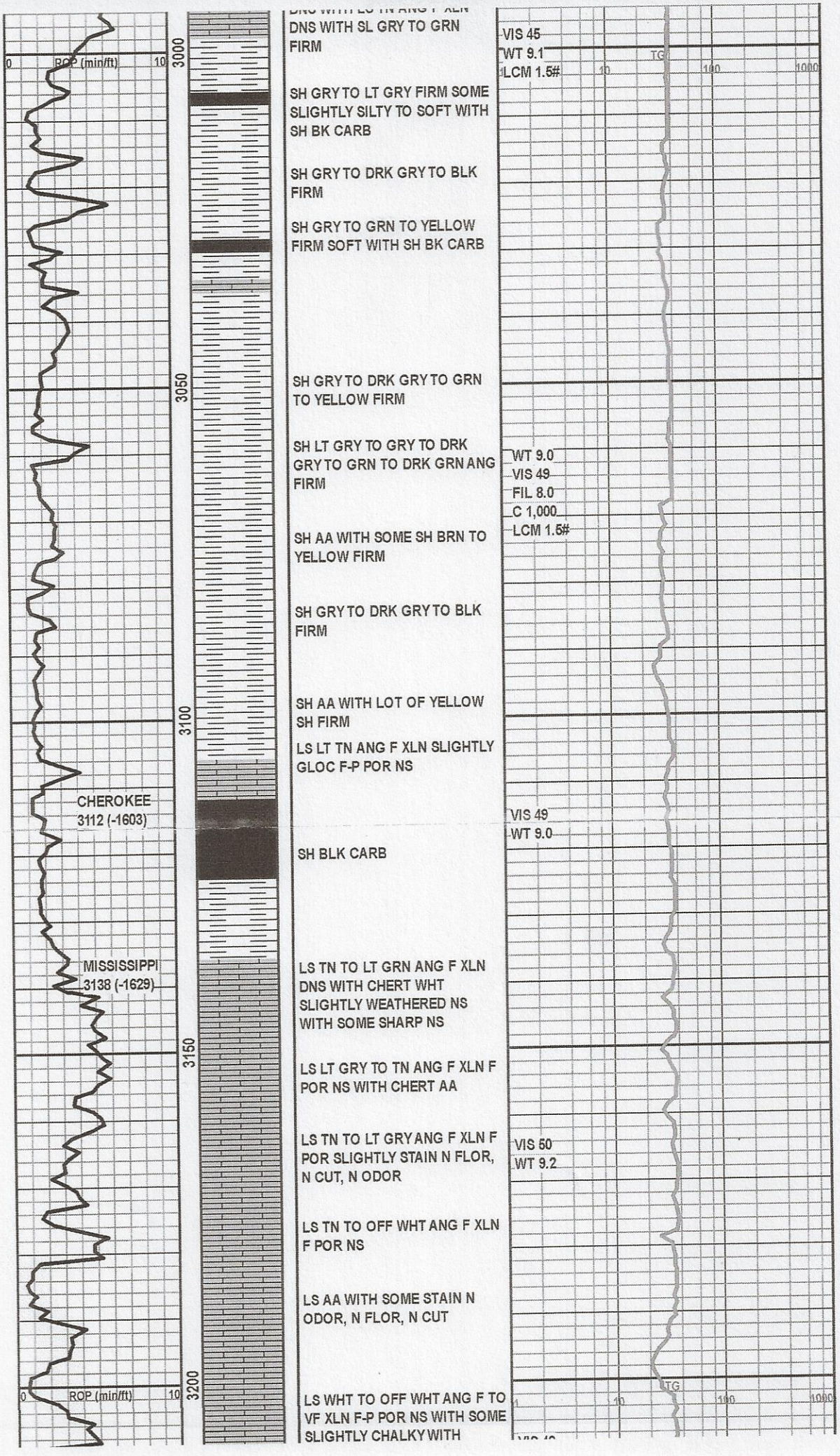
ROCK TYPES

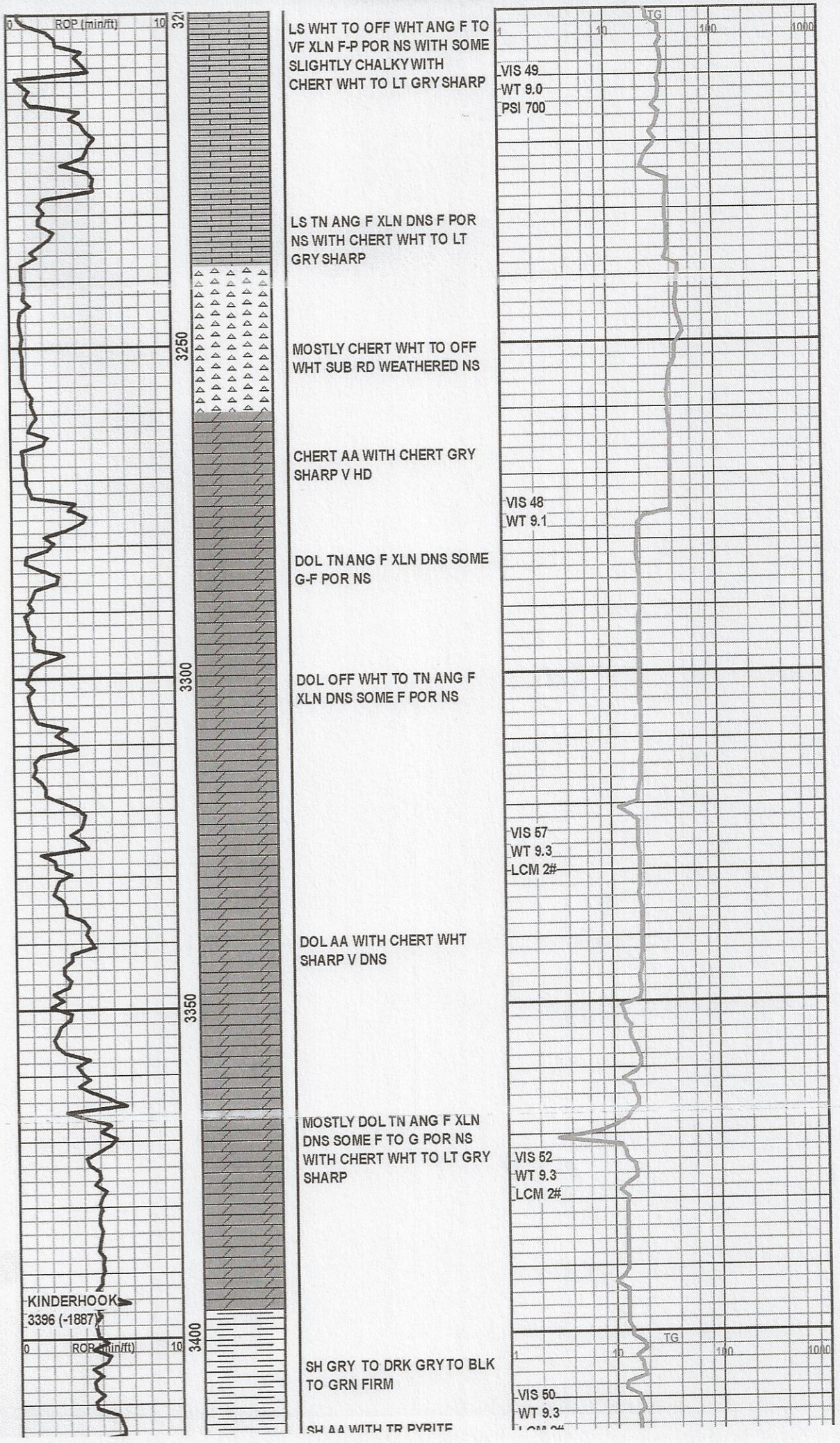

ROP (min/ft)
0
10
2050
2100
2150
2200
QUEEN HILL
2112 (-603)
SH DRK GRY TO BLK SOFT TO FIRM WITH SH BK CARB
MOSTLY SH AA WITH SS LT GRY F GR SUB RD TIGHT NS
MOSTLY SH AA WITH LS TN TO CRM ANG F XLN DNS NS
SH GRY TO GRN TO BLK SOFT TO FIRM WITH INTERBEDED PYRITE
LS CRM TO LT TN ANG F XLN FOSS DNS NS WITH LS DRK BRN ANG F XLN V DNS WITH TR CHERT
LS AA WITH SH GRY TO GRN FIRM
LS CRM TO TN TO OFF WHT ANG F XLN DNS WITH TR PYRITE
LS TO TN TO LT GRY ANG F XLN DNS WITH SH GRY TO CRM FIRM WITH TR PYRITE
LS AA WITH LS BRN ANG F XLN DNS NS
TG
1
10
100
1000

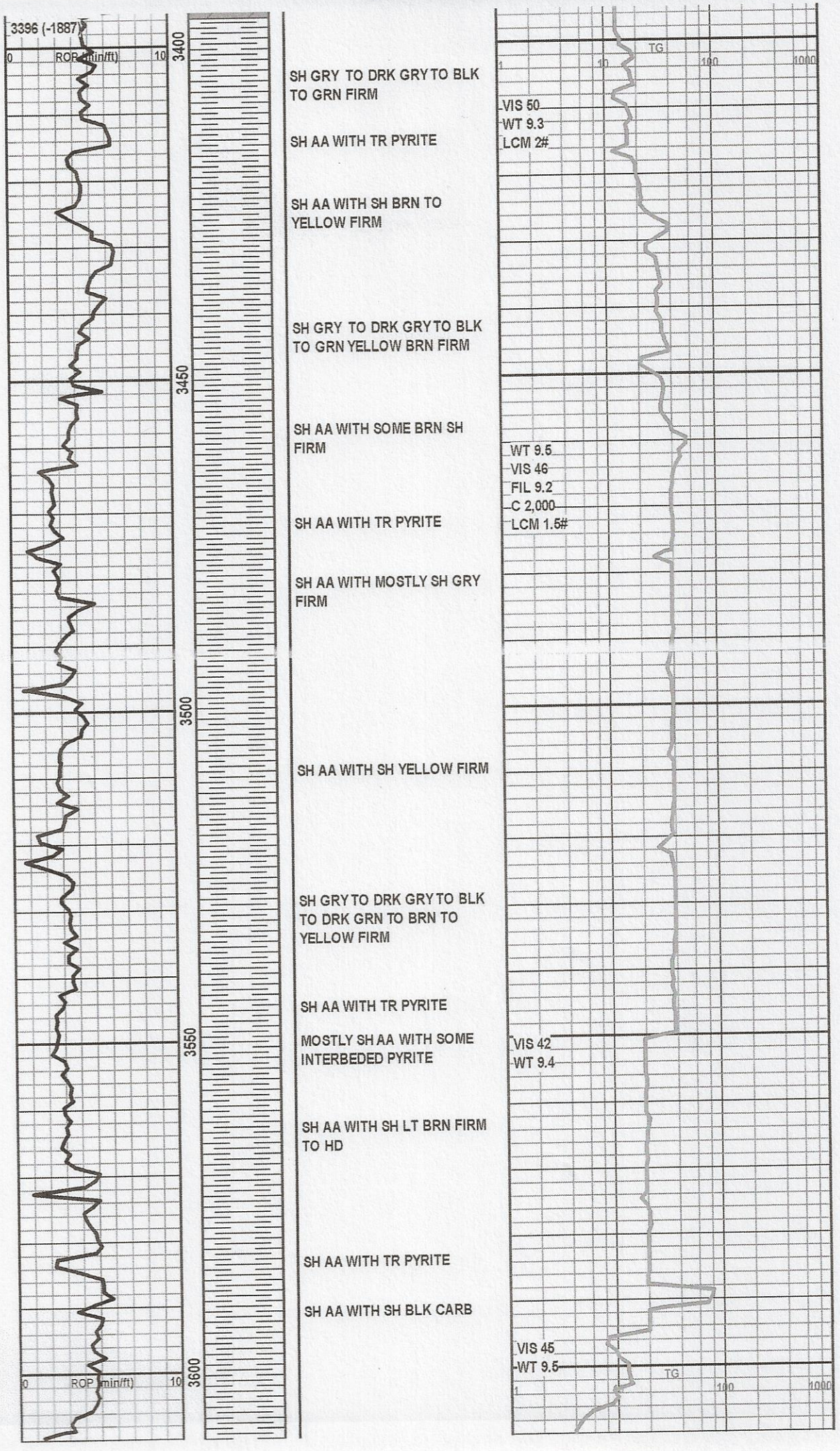

0
ROP (min/ft)
10
2400
LANSING
2439(-930)
2450
2500
2550
2600
0
ROP (min/ft)
10
SH AA WITH LS BRN ANG F XLN DNS FOSS
AA WITH LOTS OF PYRITE
LS BRN TO DRK BRN ANG VF XLN V DNS NS WITH SH GRY
LS BRN TO TN TO LT GRY ANG F XLN SOME INTERBEDED SHELL DNS
LS LT GRY TO TN ANG F XLN DNS P POR NS
LS TN ANG F XLN F P POR NS WITH LS LT GRY TO TN ANG F XLN DNS SOME SLIGHTLY CHALKY NS
LS AA WITH TR PYRITE WITH SH DRK GRY TO BLK FIRM
LS LT GRY TO TN ANG F XLN DNS WITH LS DRK BRN ANG F XLN V DNS
LS BRN ANG F XLN DNS VUGGY
LS GRY TO BRN ANG F XLN DNS WITH SH GRY FIRM
LS TN ANG F XLN V VUGGY FOSS DNS NS
LS AA WITH LS OFF WHT TO LT TN VF XLN CHALKY NS
LS TN ANG F XLN OOLICASTIC FOSS DNS NS
LS TN ANG VG OOLIC POR WITH SOME OOLICASTIC POR FOSS, F XLN DNS NS
LS TN TO LT GRY ANG F XLN DNS NS
LS TO DRK BRN TO GRY ANG F XLN DNS TO V DNS
TG
1
10
100
1000
WT 8.7
VIS 62
FIL 8.0
CL 800
LCM 1.5#
VIS 54
WT 8.8
VIS 52
WT 8.8
VIS 51
WT 8.8
10
100
1000

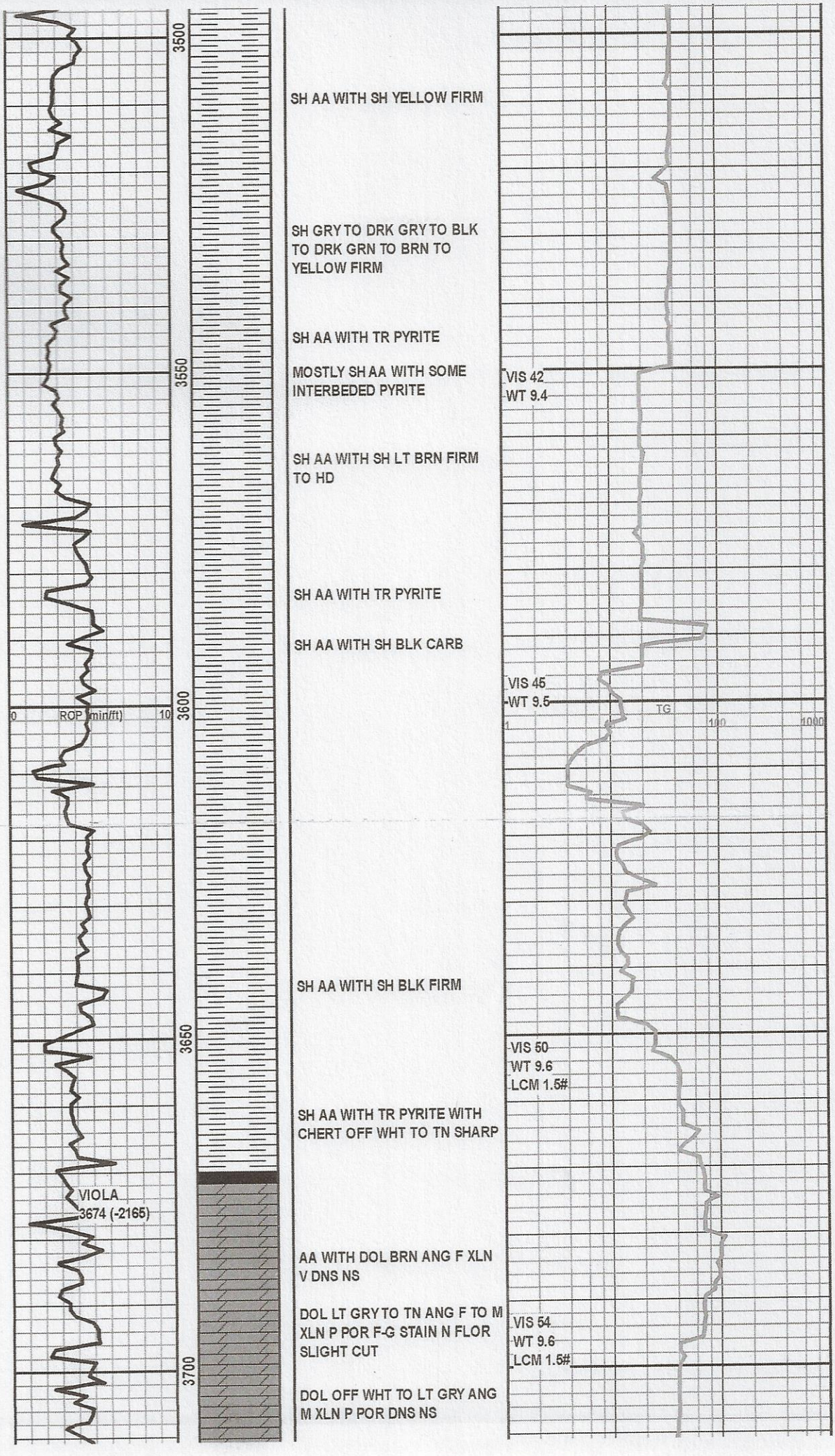

LS TO DRK BRN TO GRY ANG F XLN DNS TO V DNS
LS AA WITH SH GRY FIRM
LS DRK GRY ANG F XLN DNS WITH SH DRK GRY TO BLK FIRM TO HD
LS DRK BRN TO TN ANG F XLN DNS TO V DNS NS
LS TO CRM TO OFF WHT ANG F XLN DNS SOME VUGGY
LS AA SOME SLIGHT CHALKY WITH SH GRY FIRM
LS DRK BRN TO DRK GRY ANG F XLN DNS TO V DNS FOSS WITH SH GRY TO GRN FIRM
LS TN TO LT GRY ANG F XLN DNS SLIGHT CHALKY NS WITH SH GRY TO BLK FIRM
LS AA WITH LS DRK BRN TO BRN ANG F XLN DNS TO V DNS WITH TR PYRITE
LS AA WITH LS GRY TO LT GRY ANG F XLN F POR DNS NS
LS AA WITH LS TO CRM TO OFF WHT ANG TO SUB ANG CHALKY F TO VF XLN NS WITH LS BRN ANG F XLN DNS WITH SH GRY FIRM
LS TO TN TO LT GRY ANG F XLN DNS NS
LS AA WITH TR CHERT
LS AA WITH LS BRN ANG F XLN SLIGHTLY VUGGY NS
LS TN ANG F XLN G TO VG OOLIC PORS SLIGHTLY DNS NS
LS TN TO BRN TO LT GRY ANG F XLN DNS WITH SH GRY FIRM
LS TN TO GRY ANG F XLN DNS WITH SH GRY TO GRN FIRM
2650
2700
2750
2800
0
ROP (min/ft)
10
1
10
100
1000
WT 8.8
VIS 55
WT 8.9
LCM 2#
VIS 50
WT 8.7
LCM 2#
VIS 48
WT 8.8
LCM 2#
TG
WT 9.0

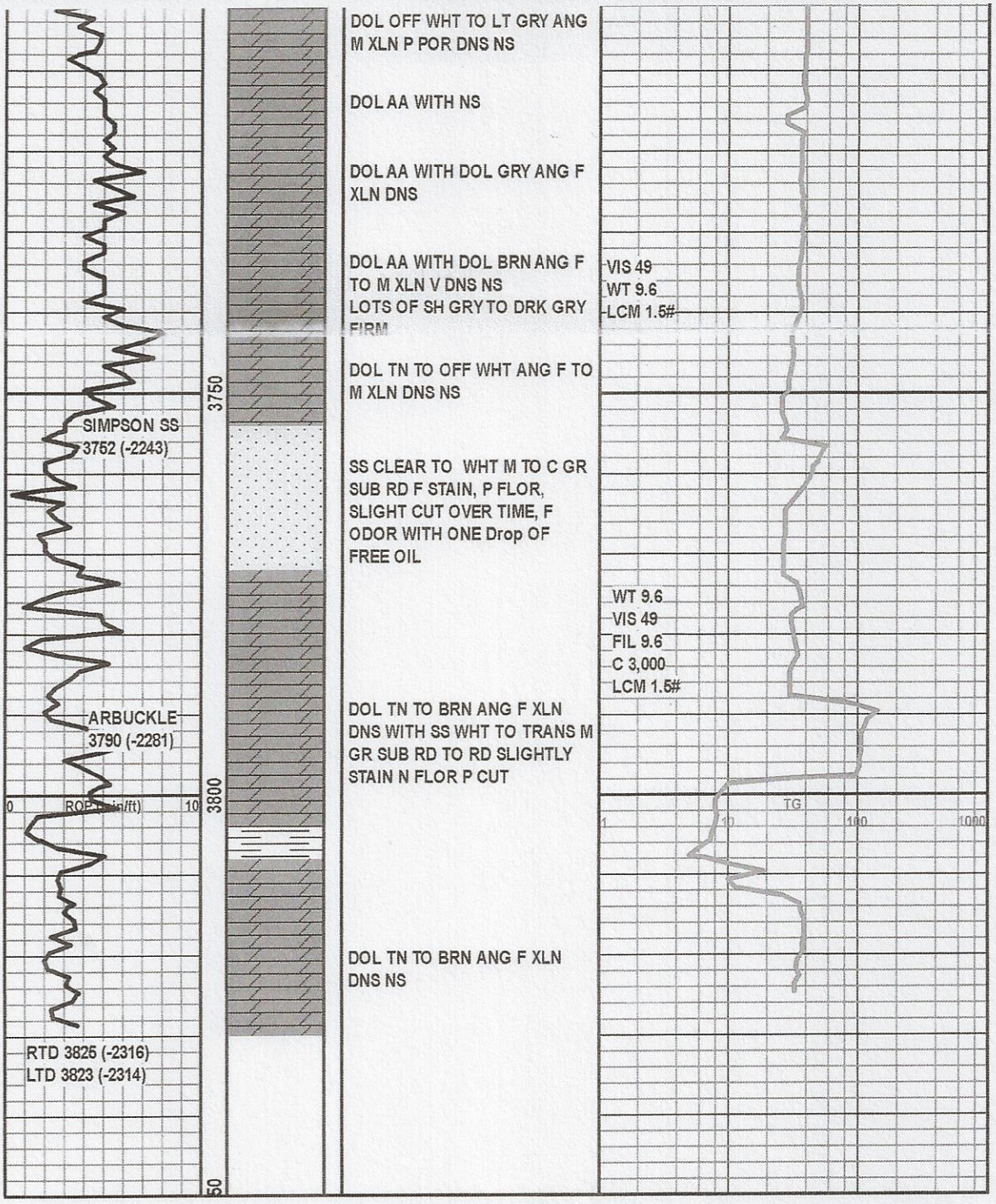

0
ROP (min/ft)
10
2800
2850
2900
2950
3000
LS TN TO GRY ANG F XLN DNS WITH SH GRY TO GRN FIRM
LS DRK GRY TO BRN ANG F XLN DNS TO V DNS TO VUGGY WITH SH GRY TO BLK FIRM
LS BRN TO Tn TO LT GRY ANG F XLN DNS TO V DNS NS
LS TN TO CRM F XLN DNS WITH SOME BEING CHALKY
LS LT GRY TO BRN ANG F XLN DNS
LS DRK GRY ANG V DNS NS WITH SH GRY GRN FIRM
LS TN ANG F XLN F OOLIC POR NS WITH LS BRN ANG F XLN HD
LS AA WITH LS LT GRY ANG F XLN DNS NS
LS AA WITH SH GRY TO GRN TO BLK FIRM
LS TO SH AA WITH TR PYRITE
LS TO TN TO LT BRN ANG F TO M XLN DNS TO V DNS
LS AA WITH LS BRN ANG F XLN V DNS NS
LS AA WITH SH GRY TO GRN FIRM
LS LT BRN TO LT GRY ANG F XLN V DNS TO DNS NS WITH TR SH GRY TO DRK GRY SLIGHTLY SILTY WITH TR PYRITE
AA WITH SH GRN SLIGHTLY SILTY SOFT NS WITH SH DRK GRY TO BLK FIRM
LS TO DRK BRN ANG F XLN V DNS WITH LS TN ANG F XLN DNS WITH SL GRY TO GRN FIRM
SH GRY TO LT GRY FIRM SOME SLIGHTLY SILTY TO SOFT WITH SH BK CARB
TG
1
10
100
1000
WT 9.0
VIS 47
FIL 8.8
C 1,000
LCM 2#
VIS 44
WT 9.1
VIS 60
WT 9.1
LCM 2#
VIS 51
WT 9.1
LCM 2#
VIS 45
WT 9.1
LCM 1.5#
TG
10
100
1000


0 ROP (min/ft) 10
3000
3050
3100
3150
3200
CHEROKEE
3112 (-1603)
MISSISSIPPI
3138 (-1629)
DNS WITH SL GRY TO GRN FIRM
SH GRY TO LT GRY FIRM SOME SLIGHTLY SILTY TO SOFT WITH SH BK CARB
SH GRY TO DRK GRY TO BLK FIRM
SH GRY TO GRN TO YELLOW FIRM SOFT WITH SH BK CARB
SH GRY TO DRK GRY TO GRN TO YELLOW FIRM
SH LT GRY TO GRY TO DRK GRY TO GRN TO DRK GRN ANG FIRM
SH AA WITH SOME SH BRN TO YELLOW FIRM
SH GRY TO DRK GRY TO BLK FIRM
SH AA WITH LOT OF YELLOW SH FIRM
LS LT TN ANG F XLN SLIGHTLY GLOC F-P POR NS
SH BLK CARB
LS TN TO LT GRN ANG F XLN DNS WITH CHERT WHT SLIGHTLY WEATHERED NS WITH SOME SHARP NS
LS LT GRY TO TN ANG F XLN F POR NS WITH CHERT AA
LS TN TO LT GRY ANG F XLN F POR SLIGHTLY STAIN N FLOR, N CUT, N ODOR
LS TN TO OFF WHT ANG F XLN F POR NS
LS AA WITH SOME STAIN N ODOR, N FLOR, N CUT
LS WHT TO OFF WHT ANG F TO VF XLN F-P POR NS WITH SOME SLIGHTLY CHALKY WITH
VIS 45
WT 9.1
LCM 1.5#
TG
1 10 100 1000
WT 9.0
VIS 49
FIL 8.0
C 1,000
LCM 1.5#
VIS 49
WT 9.0
VIS 50
WT 9.2
TG
1 10 100 1000


0
ROP (min/ft)
10
3250
3300
3350
3400
KINDERHOOK
3396 (-1887)
0
ROP (min/ft)
10
LS WHT TO OFF WHT ANG F TO VF XLN F-P POR NS WITH SOME SLIGHTLY CHALKY WITH CHERT WHT TO LT GRY SHARP
LS TN ANG F XLN DNS F POR NS WITH CHERT WHT TO LT GRY SHARP
MOSTLY CHERT WHT TO OFF WHT SUB RD WEATHERED NS
CHERT AA WITH CHERT GRY SHARP V HD
DOL TN ANG F XLN DNS SOME G-F POR NS
DOL OFF WHT TO TN ANG F XLN DNS SOME F POR NS
DOL AA WITH CHERT WHT SHARP V DNS
MOSTLY DOL TN ANG F XLN DNS SOME F TO G POR NS WITH CHERT WHT TO LT GRY SHARP
SH GRY TO DRK GRY TO BLK TO GRN FIRM
SH AA WITH TR PYRITE
TG
1
10
100
1000
VIS 49
WT 9.0
PSI 700
VIS 48
WT 9.1
VIS 57
WT 9.3
LCM 2#
VIS 52
WT 9.3
LCM 2#
TG
1
10
100
1000
VIS 50
WT 9.3


3396 (-1887)
0 ROP (min/ft) 10
3400
3450
3500
3550
3600
0 ROP (min/ft) 10
SH GRY TO DRK GRY TO BLK TO GRN FIRM
SH AA WITH TR PYRITE
SH AA WITH SH BRN TO YELLOW FIRM
SH GRY TO DRK GRY TO BLK TO GRN YELLOW BRN FIRM
SH AA WITH SOME BRN SH FIRM
SH AA WITH TR PYRITE
SH AA WITH MOSTLY SH GRY FIRM
SH AA WITH SH YELLOW FIRM
SH GRY TO DRK GRY TO BLK TO DRK GRN TO BRN TO YELLOW FIRM
SH AA WITH TR PYRITE
MOSTLY SH AA WITH SOME INTERBEDED PYRITE
SH AA WITH SH LT BRN FIRM TO HD
SH AA WITH TR PYRITE
SH AA WITH SH BLK CARB
TG
1 10 100 1000
VIS 50
WT 9.3
LCM 2#
WT 9.5
VIS 46
FIL 9.2
C 2,000
LCM 1.5#
VIS 42
WT 9.4
VIS 45
WT 9.5
TG
1 100 1000


3500
3550
3600
3650
3700
0
ROP (min/ft)
10
VIOLA
3674 (-2165)
SH AA WITH SH YELLOW FIRM
SH GRY TO DRK GRY TO BLK TO DRK GRN TO BRN TO YELLOW FIRM
SH AA WITH TR PYRITE
MOSTLY SH AA WITH SOME INTERBEDED PYRITE
SH AA WITH SH LT BRN FIRM TO HD
SH AA WITH TR PYRITE
SH AA WITH SH BLK CARB
SH AA WITH SH BLK FIRM
SH AA WITH TR PYRITE WITH CHERT OFF WHT TO TN SHARP
AA WITH DOL BRN ANG F XLN V DNS NS
DOL LT GRY TO TN ANG F TO M XLN P POR F-G STAIN N FLOR SLIGHT CUT
DOL OFF WHT TO LT GRY ANG M XLN P POR DNS NS
VIS 42
WT 9.4
VIS 45
WT 9.5
TG
1
100
1000
VIS 50
WT 9.6
LCM 1.5#
VIS 54
WT 9.6
LCM 1.5#


DOL OFF WHT TO LT GRY ANG M XLN P POR DNS NS
DOL AA WITH NS
DOL AA WITH DOL GRY ANG F XLN DNS
DOL AA WITH DOL BRN ANG F TO M XLN V DNS NS
LOTS OF SH GRY TO DRK GRY FIRM
DOL TN TO OFF WHT ANG F TO M XLN DNS NS
SS CLEAR TO WHT M TO C GR SUB RD F STAIN, P FLOR, SLIGHT CUT OVER TIME, F ODOR WITH ONE Drop OF FREE OIL
DOL TN TO BRN ANG F XLN DNS WITH SS WHT TO TRANS M GR SUB RD TO RD SLIGHTLY STAIN N FLOR P CUT
DOL TN TO BRN ANG F XLN DNS NS
VIS 49
WT 9.6
LCM 1.5#
WT 9.6
VIS 49
FIL 9.6
C 3,000
LCM 1.5#
SIMPSON SS
3752 (-2243)
ARBUCKLE
3790 (-2281)
RTD 3825 (-2316)
LTD 3823 (-2314)
3750
3800
50
0
ROP (min/ft)
10
TG
1
10
100
1000

DAILY STATUS: (7:00 AM)

9/10/13 1929', DRILL AHEAD
9/11/13 2269', DRILL AHEAD
9/12/13 2744', DRILL AHEAD
9/13/13 2985', DRILL AHEAD
9/14/13 3425', DRILL AHEAD
9/15/13 3740', DRILL AHEAD

ROCK TYPES

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