

Sec. _____ Twp. _____ S. R. _____ ☐ East ☐ West County: _____

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 <i>(Attach Additional Sheets)</i>	☐ Yes	☐ No	☐ Log	Formation (Top), Depth and Datum	☐ Sample
Samples Sent to Geological Survey	☐ Yes	☐ No	Name	Top	Datum
Cores Taken	☐ Yes	☐ No			
Electric Log Run	☐ Yes	☐ No			
Geologist Report / Mud Logs	☐ Yes	☐ No			
List All E. Logs Run:					

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

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				

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No (If No, skip questions 2 and 3)
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No (If No, skip question 3)
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)

Date of first Production/Injection or Resumed Production/Injection:		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 <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. ☐ Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record (Amount and Kind of Material Used)

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Mustang Energy Corporation
Well Name	HARMAN 2
Doc ID	1483768

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.63	23	222	common	150	2% gel 3% cc

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071

Home Office P.O. Box 32 Russell, KS 67665

No. 1731

Cell 785-324-1041

Date	10-26-19	Sec.	6	Twp.	12	Range	18	County	Ellis	State	Ks	On Location		Finish	12:30 AM
Lease								Location							
Harmon								Hay's - N to Buckeye Rd, 2W to 230Rd							
Contractor								Owner							
Flex Drilling								2 1/2 N to Homestead Rd, 3/4 W, 5/4th							
Type Job								To Quality Oilwell Cementing, Inc.							
plug								You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size								Charge To							
7 7/8"								Mustang Energy							
Csg.								Street							
Tbg. Size								City							
4 1/2" D.P.								State							
Tool								The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.								Cement Amount Ordered							
Shoe Joint								255 60/40 4% Gel 1/4# Fls-seal							
Meas Line								Displace							
H2O/mud															
EQUIPMENT															
Pumptrk								Common							
S								153							
No. Cementer								Poz. Mix							
Tony L.								102							
Bulktrk								Gel.							
14								9							
No. Driver								Calcium							
Doug															
Bulktrk								Hulls							
p.u.								Salt							
Rick								Flowseal							
								60#							
JOB SERVICES & REMARKS															
Remarks:								Kol-Seal							
1455' - 50 5x								Mud CLR 48							
Rat Hole								CFL-117 or CD110 CAF 38							
750' - 100 5x								Sand							
Mouse Hole								Handling							
270' - 50 5x								264							
Centralizers								Mileage							
40' - 10 5x w/ plug															
Baskets								FLOAT EQUIPMENT							
Rathole w/ 30 5x								Guide Shoe							
D/V or Port Collar								Dry hole plug							
Mousehole w/ 15 5x								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge							
								plug							
								Mileage							
								15							
								Tax							
								Discount							
								Total Charge							
X Signature															
[Signature]															

Thanks

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071

Home Office P.O. Box 32 Russell, KS 67665

No. 1758

Cell 785-324-1041

Date	10.20.19	Sec.	6	Twp.	12	Range	18	County	Ellis	State	KS	On Location		Finish	6 ⁰⁰ P.M.
Lease								HARMAN							
Well No.								2							
Contractor								Flex Drilling							
Type Job								Surface							
Hole Size								T.D.							
Csg.								23# 8 7/8							
Tbg. Size								Depth							
Tool								Depth							
Cement Left in Csg.								Shoe Joint 15'							
Meas Line								Displace 13 5/16							
EQUIPMENT															
Pumptrk #16								No. Cementer Tom P							
Bulktrk								No. Driver Tim							
Bulktrk #9								No. Driver Doug							
JOB SERVICES & REMARKS															
Remarks:								USED: 150SL 8/20 31.							
Rat Hole								21.							
Mouse Hole								21.							
Centralizers								Mud CLR 48							
Baskets								CFL-117 or CD110 CAF 38							
D/V or Port Collar								Sand							
* Set 8 7/8 @ 221.02								Handling 159							
Break Circulation.								Mileage							
FLOAT EQUIPMENT															
* mixed 150 SL 8/20 31-21.								Guide Shoe							
Displaced cement @ 13 5/16								Centralizer							
Cement to Surface.								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge Surface							
								Mileage 15							
Tax															
Discount															
Total Charge															
X Signature								Coff Maffuck							



MUSTANG

ENERGY CORPORATION

Scale 1:240 Imperial

Well Name: HARMAN #2
Surface Location: N2 N2 NW, Sec. 6- T12S- R18W
Bottom Location:
API: 15-051-26975
License Number: 33922
Spud Date: 10/20/2019 Time: 9:00 AM
Region: ELLIS COUNTY
Drilling Completed: 10/25/2019 Time: 5:30 PM
Surface Coordinates: 330' FNL & 1320' FWL
Bottom Hole Coordinates:
Ground Elevation: 2094.00ft
K.B. Elevation: 2100.00ft
Logged Interval: 3050.00ft To: 3707.00ft
Total Depth: 3707.00ft
Formation: ARBUCKLE/ LKC
Drilling Fluid Type: FRESH WATER/ CHEMICAL GEL

OPERATOR

Company: MUSTANG ENERGY CORP.
Address: PO BOX 1121

Contact Geologist: ROD BRIN
Contact Phone Nbr: (785) 623-0533
Well Name: HARMAN #2
Location: N2 N2 NW, Sec. 6- T12S- R18W
API: 15-051-26975
Pool:
State: KS Field: BUCKEYE NORTH
Country:

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.365736
Latitude: 39.044
N/S Co-ord: 330' FNL
E/W Co-ord: 1320' FWL

LOGGED BY

Company:
Address: 2717 HICKORY ST
HAYS, KS 67601

Phone Nbr: (785) 639-0721
Logged By: Geologist Name: CAMERON BRIN

CONTRACTOR

Contractor: FLEX DRILLING INC.
Rig #: 1
Rig Type: MUD ROTARY
Spud Date: 10/20/2019 Time: 9:00 AM
TD Date: 10/25/2019 Time: 5:30 PM

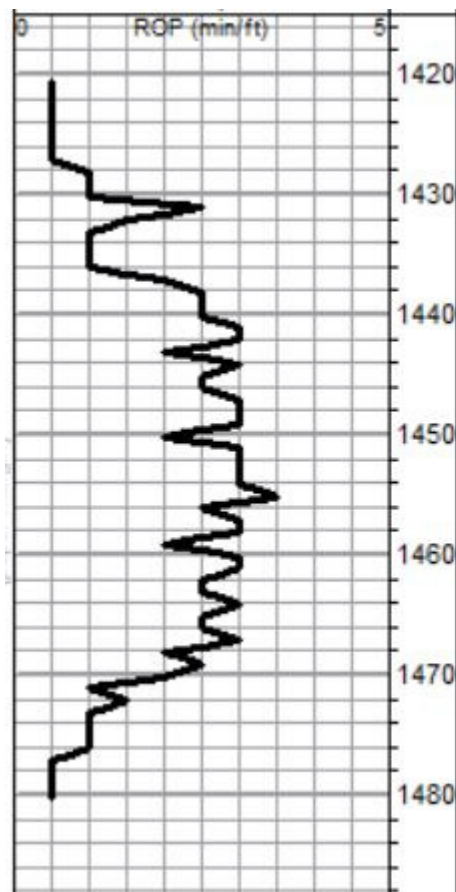
ELEVATIONS

K.B. Elevation: 2100.00ft
K.B. to Ground: 6.00ft

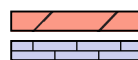
Ground Elevation: 2094.00ft

NOTES

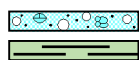
DUE TO LACK OF SHOWS AND BEING STRUCTURALLY LOW TO BOTH THE HARMAN #1 AND DESMARTEAU #1, DECISION WAS MADE TO PLUG AND ABANDON THE HARMAN #2 WELL.

ANHYDRITE

ANHYDRITE: SPL 1437' (+663)
BASE: SPL 1470' (+630)

ROCK TYPES

Dolsec



Lscongl



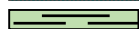
shale, gry



shale, red



Lmst fw7>



shale, grn



Carbon Sh

ACCESSORIES**MINERAL**

P Pyrite
• Sandy
△ Chert White

FOSSIL

F Fossils < 20%
φ Oolite
✱ Oomoldic

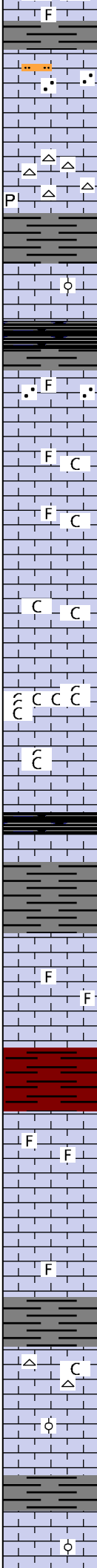
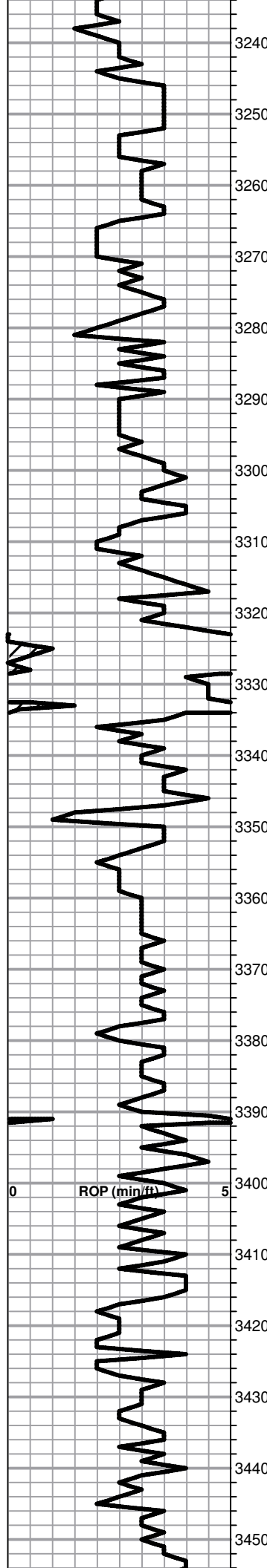
STRINGER

••• Siltstone

TEXTURE

C Chalky

		Depth Interval	DST	Lithology	Oil Show	Geological Descriptions	
		Cored Interval DST Interval					1:240 Imperial
0	1:240 Imperial ROP (min/ft)	5				START 1' DRILL TIME FROM 1410'- 1490' FOR ANHYDRITE START 1' DRILL TIME FROM 3050'- RTD 10' WET/ DRY SAMPLES SAVED FROM 3090'- RTD	GEO ON LOCATION @ 9:20 10/24/19 8 5/8 SURFACE CASTING SET @222' SURVEY 1/2° BIT TRIP @ 2995' SURVEY 3/4° DISPLACE @ 2950'
		3050				Lm- crm- gray, fnxln, muddy trashy spls	
		3060					
		3070					
		3080				Sh- gray, soft, clumpy, muddy	
		3090				Sh- A/A	
		3100				Lm- crm- gry, fn-mdxln, spl trashy, muddy	
		3110				Sh- gray, soft, waxy	
		3120				<u>TOPEKA: SPL 3118' (-1018)</u> Lm- tan, micro-fnxln, scat dense	
		3130				Lm- crm- brn, vfn-fnxln, sltly sandy in prt, scat pr inxln por, scar foss	
		3140		△ △		Lm- crm- brn, fn-mdxln, sltly chalky in prt, cherty in prt,	
		3150		F		Lm- off wt-gry, foss	
		3160				Lm- crm- gry, fnxln-mdgrn, mostly soft brittle	
		3170		□ □		Lm- crm- gry, fnxln, sltly sandy, scat pr inxln por	
		3180				Lm- A/A	
		3190			○	Lm- crm-tan, fnxln, 1-2 pcs w/ pr inxln por, pr brn stn, slt SFO upon crush, no odor	
		3200		C C		Lm- crm- gry, fnxln- fngrn, chalky in prt, scat foss	
		3210					
		3220			○	Lm- gray- crm, fnxln, scar pr inxln por, 1-2 pcs w/ pr blk flky oil stn, FO sheen upon crush, no odor	
		3230				Sh- blk-gray	
						Lm- tan, fnxln, chalky throughout, foss	
				C C			



Lm- crm-gry, vfn-fnxln, mostly chalky & soft, scat foss

Lm- gry-tan, fnxln, scat sandy, muddy red wash

Lm- crm-tan, micro-fnxln, chert throughout, dense

Lm- crm-tan, v. fn-fnxln, cherty, sltly oolitic, scat pyrite

Lm- crm, v. fn-fnxln, scat oolitic, few scat w/ pr ppt por, NSO

Sh- blk, carb

Lm- crm-gry, fn-mdxln, foss throughout, few scat well consolidated SS clusters

Lm- tan- gry, fnxln, chalky in prt, scat foss

Lm- crm- tan, fnxln, chalky in prt, scat foss, mostly dense

Lm- off wt, v. fn-fnxln, chalky throughout, mostly dense, no vis por, NSO, v. pr gassy odor

Lm- crm, fnxln, chalky, scat v. pr ppt-inxln por, few pcs v. pr brn stn possibly dead oil, NFO, no odor

Lm- A/A

HEEBNER: SPL 3348' (-1248)

Sh- blk, carb

Lm- crm-off wt, vfn-fnxln, chalky, scat chert, scat foss, barren, few scat pr ppt-inxln por, NSO

TORONTO: SPL 3365' (-1265)

Lm- crm-off wt, micro-v. fnxln, scat foss, scat v. pr inxln por, scat v. pr lt brn stn in por, NSFO, v. pr odor

Sh- red, muddy red wash

LKC: SPL 3390' (-1290)

Lm- crm, micro- v. fnxln, foss throughout, mostly barren

Lm-crm- gry, v. fn-fnxln, dense, barren, v. few pcs w/ v. pr inxln por, NSO

Lm- crm w/ few pcs pinkish purple, v. fnxln, scat foss

Lm- crm-gry, fnxln, mostly dnse, chlky in prt, scat chert, sltly foss, v. few pcs w/ v. pr inxln por, v. lt brn stn, NSFO, no odor

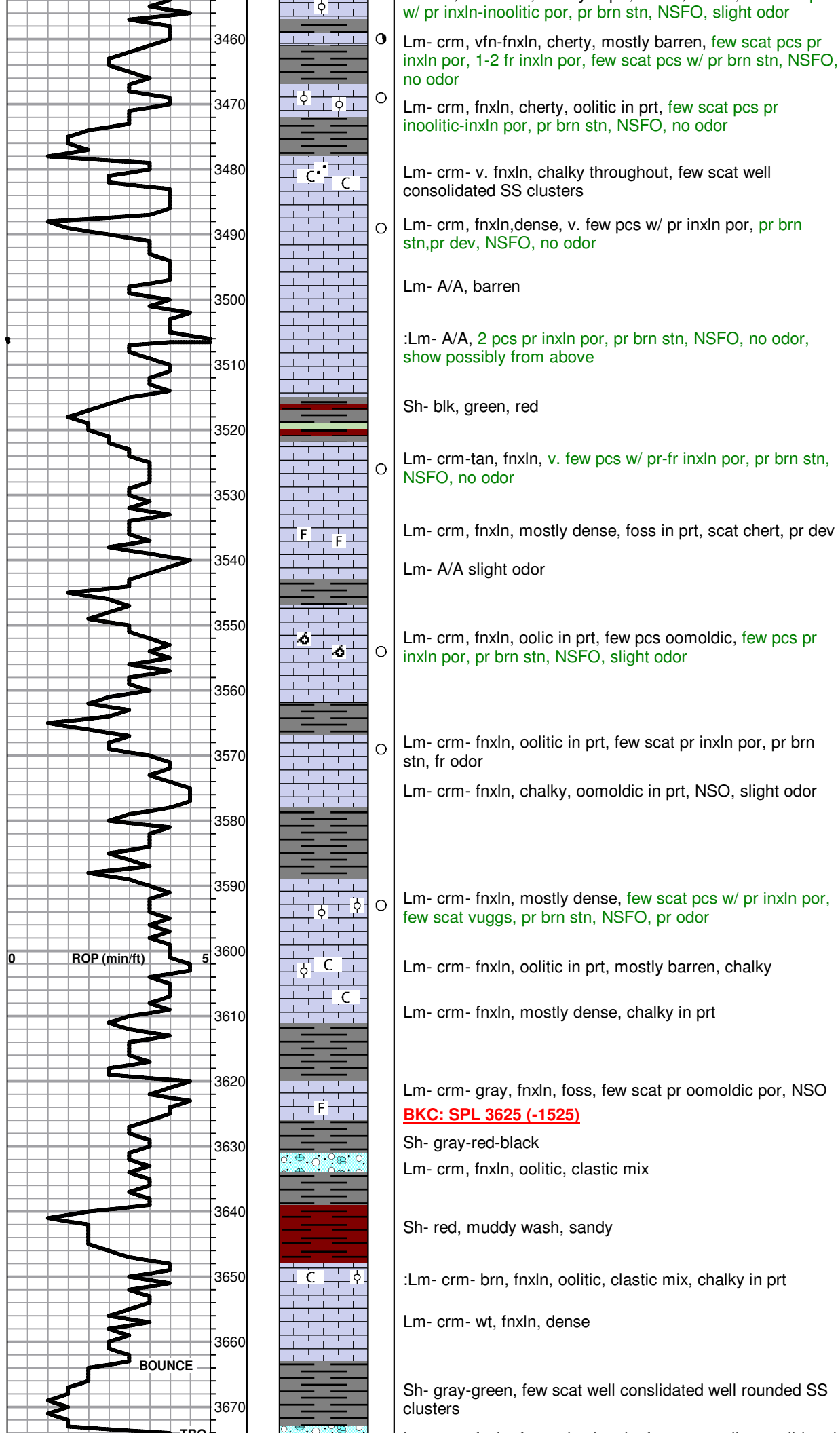
Lm- crm, fnxln, oolitic, few scat pcs w/ pr inoolitic- ppt por, pr brn stn, NSFO, pr odor

Lm- crm, fnxln, few pcs w/ pr inxln por, pr lt brn stn, 1-2 pcs fr infoss por, pr-fr brn stn, mostly pr dev, NSFO, slight odor

Lm- wt, v.fn-fnxln, chalky in prt, oolitic, dense, few scat pcs

VIS 58
WT 8.5
LCM 2#

VIS 60
WT 8.5
LCM 2#



VIS 54
WT 8.6
LCM 2#

CFS @ 3670

