



M. Bradford Rine

Consulting Geologist

Licensed/Certified: Kansas, Wyoming, AAPG/DPA, SIPES

Phone: (316) 250-5941

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

Well Name: Bahm #1-16 - Norstar Petroleum, Inc.
API: 15-101-22620-00-00
Location: NW-NW-SE-NW, Section 16-T19S-R27W
License Number: KCC #31652
Spud Date: February 08, 2019
Surface Coordinates: 1573' FNL & 1643' FWL,
of Section
Bottom Hole Vertical Wellbore
Coordinates:
Ground Elevation (ft): 2687 Ft. **K.B. Elevation (ft):** 2694 Ft.
Logged Interval (ft): 3700 Ft. **To:** 4700 Ft. **Total Depth (ft):** RTD 4700 Ft. LTD 4700 Ft.
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Chemical

Region: Lane County, Kansas
Drilling Completed: February 19, 2019
Results: P & A
Field: Unnamed

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

Operator

Company: Norstar Petroleum, Inc.
Address: 88 Inverness Circle E, Unit F104
Englewood, Colorado 80112-5514

Geologist

Name: M. Bradford Rine
Company: Consulting Geologist, Kansas Lic. #204, Wyo #189, AAPG Cert. #2647
Address: 100 South Main, Suite #320A
Wichita, Kansas 67202

Remarks

Based on sample observations, drill stem test results, and electric log evaluation, it was the decision of the Operator, to plug and abandon the "Bahm #1-16", on February 19, 2019.

Respectfully submitted,
M. Bradford Rine, geologist

Drilling Information

Rig: Pickrell Drilling, Rig # 10
Pump: Emsco D-375 6x14
Drawworks: Unit U15
Collars: 525' 2-1/4 x 6-1/4
Drillpipe: 4-1/2" 16.6# XH
Toolpusher: Mike Kern

Mud: Mudco (Michael Carroll)
Gas Detector: None
Drill Stem Tests: Trilobite (Spencer Staab)
Logs: ELI (Jason Cappellucci)
Water: Pond adjacent location
Company Representatives:
Office: Brady Pfeiffer
Field: None

Daily Drilling Status

Date:	Operations/Depth/Comments
02-06-19	Begin MIRT @ 0'
02-07-19	Continue MIRT @ 0'
02-08-19	Complete MIRT, RU, Spud @ 0'
02-09-19	Waiting on Cement @ 222'
02-10-19	Drilling @ 476'
02-11-19	Drilling @ 1892'
02-12-19	Drilling @ 2870'
02-13-19	Drilling @ 3387'
02-14-19	Drilling @ 3955'
02-15-19	Circulating for Samples @ 4272'
02-16-19	Circulating for Samples @ 4545'
02-17-19	Circulating for Samples @ 4600'
02-18-19	Drilling @ 4681'
02-19-19	TIH to Prepare to P&A @ 4700' RTD Complete plugging at 8:00 PM

		Results: D & A		(Well A)	Oil	(Well B)	D & A			
		Norstar Petroleum, Inc.		Norstar Petroleum, Inc.		Gypsy Exploration, LLC				
		Bahm #1-16		Hineman Unit #1-16		Whipple "B" #16-1				
		1573' FNL & 1643' FWL		1222' FSL & 1086' FEL		2301' FSL & 2309' FEL				
		Sec. 16-T19S-R27W		Sec. 16-T19S-R27W		Sec. 16-T19S-R27W				
		KB	2694	KB	2709	KB	2715	Well A	Well B	
Formations	Sample	E-Log	Datum	E-Log	Datum	E-Log	Datum	Comparison(s)		
Anhydrite	2026	2024	670	2037	672	2040	675	-2	-5	
B/Anhydrite	2055	2053	641	2070	639	2072	643	2	-2	
Heebner Sh.	3955	3955	-1261	3975	-1266	3973	-1258	5	-3	
Toronto	3971	3973	-1279	3992	-1283	3989	-1274	4	-5	
Lansing	3995	3995	-1301	4016	-1307	4014	-1299	6	-2	
Muncie Creek Sh	4165	4167	-1473	4184	-1475	4181	-1466	2	-7	
Stark Sh.	4260	4264	-1570	4277	-1568	4282	-1567	-2	-3	
Marmaton	4377	4374	-1680	4393	-1684	4394	-1679	4	-1	
Ft. Scott	4517	4518	-1824	4533	-1824	4534	-1819	0	-5	
Cherokee Sh.	4541	4542	-1848	4555	-1846	4556	-1841	-2	-7	
Cherokee Sd.	4600	4600	-1906	4605	-1896	4606	-1891	-10	-15	
Mississippian	4647	4648	-1954	4646	-1937	4641	-1926	-17	-28	
Total Depth	4700	4700	-2006	4722	-2013	4748	-2033	7	27	

Casing Record, Bit Record, Deviation Surveys

CASING:

Conductor: None

Surface: Ran 5 jts new 8-5/8" 23# surface casing, set @ 220'. (Quality) Cement with 165 sx Common, 2% gel, 3%CC. Plug down at 8:00 am, February 09, 2019. Cement did circulate.

Production: P & A, as follows: (Quality) Cement used: 60/40 POZ with 4% gel and 1/4# flocele per sack. Plug with 50 sx at 2040', 80 sx at 1180', 40 sx at 600', 50 sx at 270', 20 sx at 60' and 30 sx in rahole. Final plug down at 8:00 PM on February 19, 2019.

BITS:

No.	Size	Make	Model	Depth In	Depth Out	Hours
1	12-1/4	JZ	?	0	222	4.00
2	7-7/8	JZ	ENPO	222	4545	102.00
3	7-7/8	JZ	HA20C	4545	4610	4.25
4	7-7/8	JZ	HA41	4610	4700	7.25

DEVIATION SURVEYS:

Deviation:	Depth:	Deviation:	Depth:
1.00*	222'	0.75*	1955'
1.00*	755'	0.75*	2522'
1.50*	1261'	1.50*	4545'
1.25*	1450'	0.25*	4700'

PIPE STRAPS:

Difference: depth:
.25' short 4545'

Remarks:

DST #1: 4512-4545 (Ft. Scott)

Times: 05-30-30-30

Initial Open: Wk Surface Blow thruout

Final Open: V Wk surface blow, died 2 min

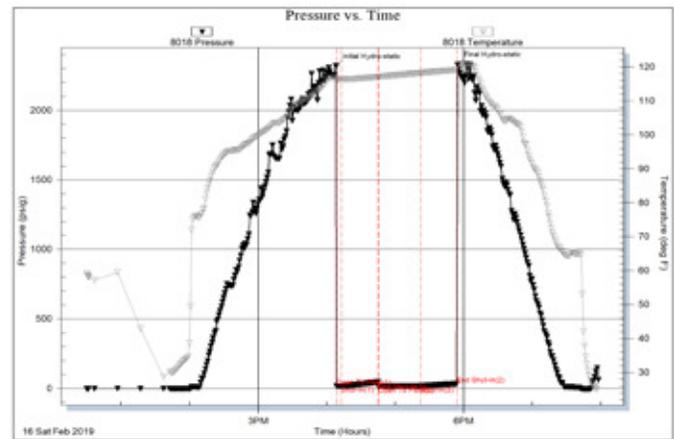
Rec: 2' mud/oil spots

IHP: 2315 FHP: 2327

IFP: 17-17 FFP: 16-17

ISIP: 45 FSIP: 32

BHT: 110°F



DST #2: 4591-4633 (CKE Sd)

***Straddle Test after logs!**

Initial Open: Wk Blow, built to 2" i.b.

Final Open: Stg Blow, b.o.b. 45 min

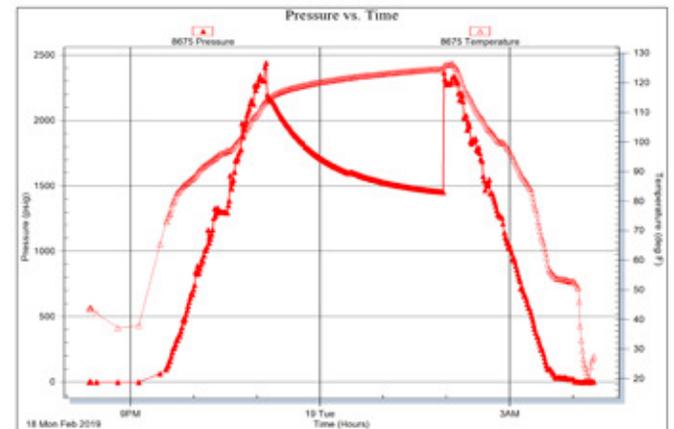
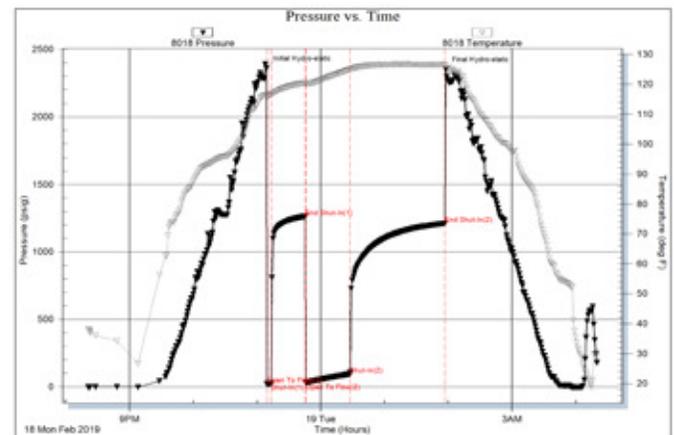
**Rec: 160' WCM with oil spots
(Chlorides of Water 28000 ppm)**

IHP: 2359 FHP: 2351

IFP: 21-27 FFP: 30-94

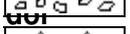
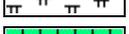
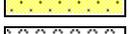
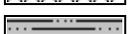
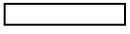
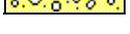
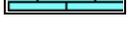
ISIP: 1263 FSIP: 1210

BHT: 126°F



Straddle Packer Verification

Rock Types

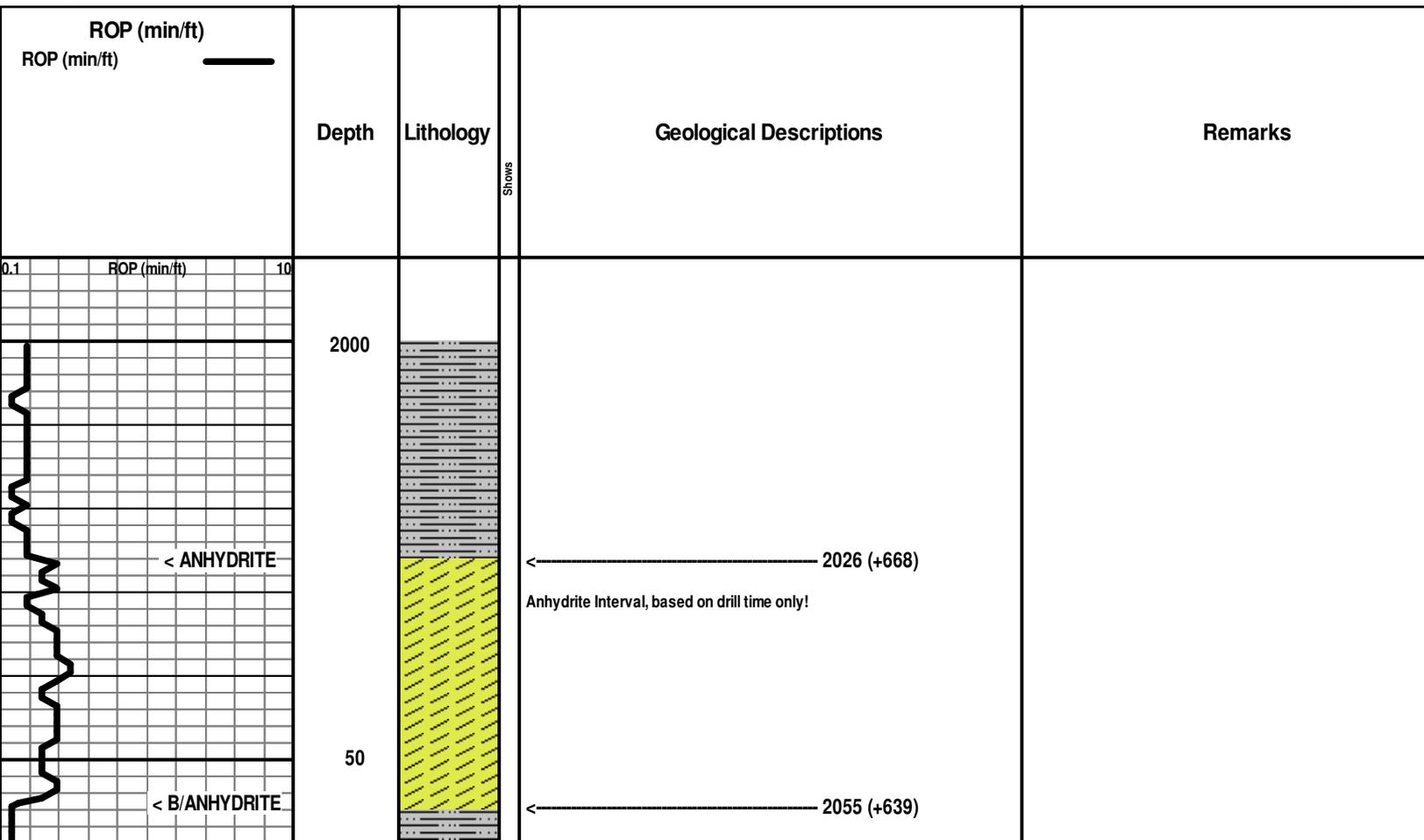
	Congl granite wash		Bent		Dol		Meta		Sltst
	dol ls limey		Brec		Dol		Mrlst		Ss
	New symbol		Cht		Dol		Salt		Till
	Dolom ls limey		Clyst		Gyp		Shale		Sltyst
	New symbol		Black shale/coal		Igne		Shcol		Shlysiltst
	Anhy		Congl		Lmst		Shgy		Sandyls

Accessories

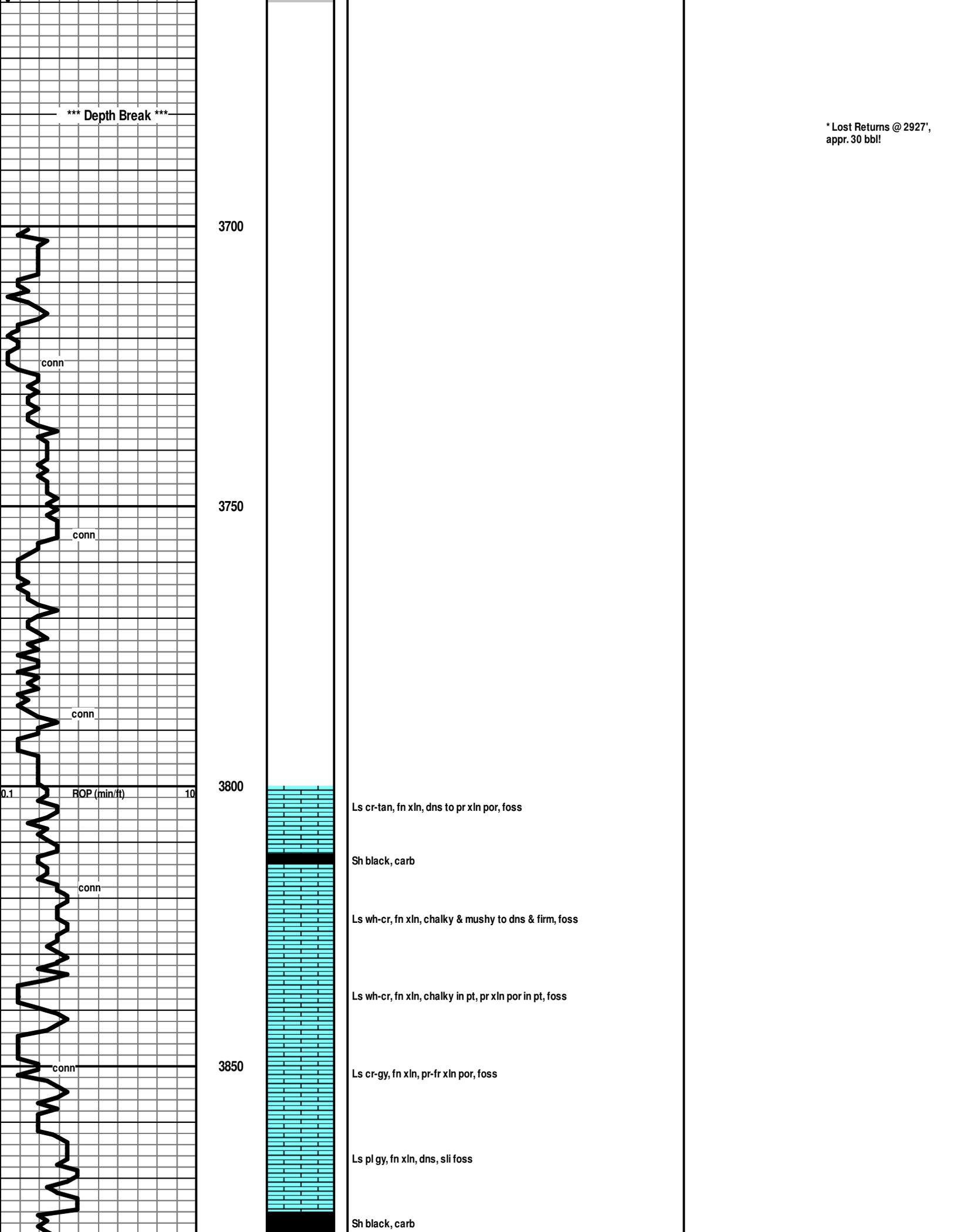
MINERAL		Gyp	FOSSIL		Ostra		Sltstrg
	Anhy		Hvymin		Pelec		Ssstrg
	Arggrn		Kaol		Pellet	TEXTURE	
	Arg		Marl		Pisolite		Boundst
	Bent		Minxl		Plant		Chalky
	Bit		Nodule		Strom		Cryxln
	Brecfrag		Phos	STRINGER			Earthy
	Calc		Pyr		Anhy		Finexln
	Carb		Salt		Shale		Grainst
	Chtdk		Sandy		Bent		Lithogr
	Chtlt		Silt		Coal		Microxln
	Dol		Sil		Gyp		Mudst
	Feldspar		Sulphur		Ls		Packst
	Ferrpel		Tuff		Mrst		Wackst
	Ferr						
	Glau						

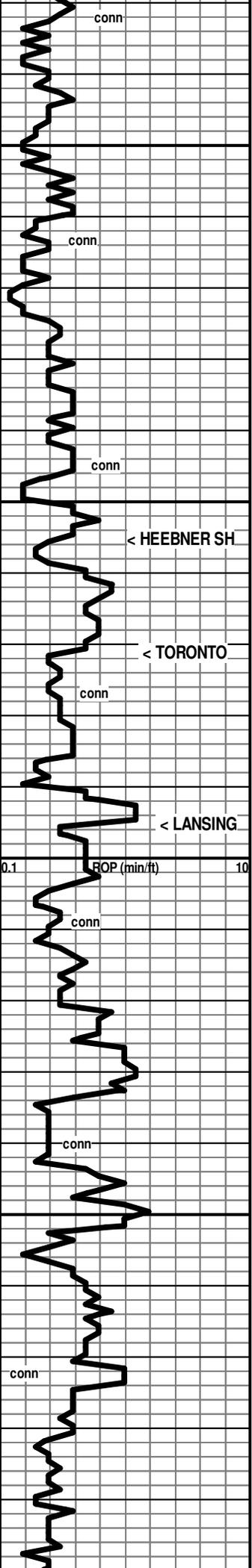
Other Symbols

OIL SHOW		Even		Dead	INTERVAL
	Oil & gas show		Spotted		Gas
	Gas show		Trace or questionable		Core
					Dst



* Lost Returns @ 2927',
appr. 30 bbl!





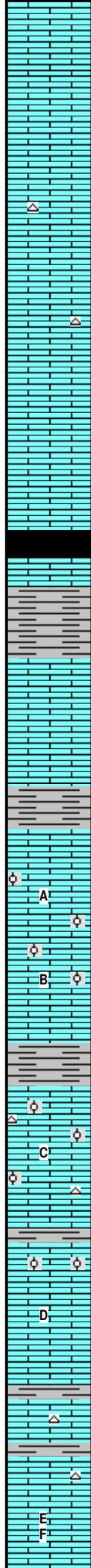
3900

3950

4000

4050

4100



Ls wh-cr, fn xln, chalky & mushy in pt, pr xln por in pt, foss in pt

Ls wh-cr, fn xln, subchalky in pt, pr-fr xln por in pt, foss to abund foss

Ls wh-cr-gy, fn xln, dns in pt, chalky in pt, pr-fr xln por in pt, foss, Rr chart: fresh, vitreous-subgrainy text, subopaq

Ls wh-cr-tan-gy, fn xln, dns in pt, chalky in pt, pr-fr xln por in pt, foss

Ls cr, fn xln, pr-fr xln por, abund pp pores, abund foss

← 3955 (-1261)

Sh black, carb

Ls cr, fn xln, dns, foss

Sh gy-dk gy-pl gm-gm

← 3971 (-1277)

Ls wh-cr-tan, fn xln, pr xln por in pt subchalky in pt, foss

Sh gy-dk gy

← 3995 (-1301)

Ls wh-cr, fn xln, subchalky in pt, abund packed ool, with scatt interool pores, pr xln por, foss

Ls wh-cr-tan, fn xln, pr xln por in pt, dns in pt, abund foss

Sh gy

Ls cr-tan, fn xln, pr xln por in pt, dns in pt, abund packed sm ool with scatt interool pores, foss in pt, chert: fresh, white, foss & ool in pt, opa

Sh gy

Ls wh-cr, fn xln, pr xln por, abund pp pores & interfoss and interool pores

Ls cr-gy, fn xln, dns, sli foss in pt

Ls cr, fn xln, pr xln por to dns, foss, chert: fresh to subgrainy text, gy; incr % of shale in spls

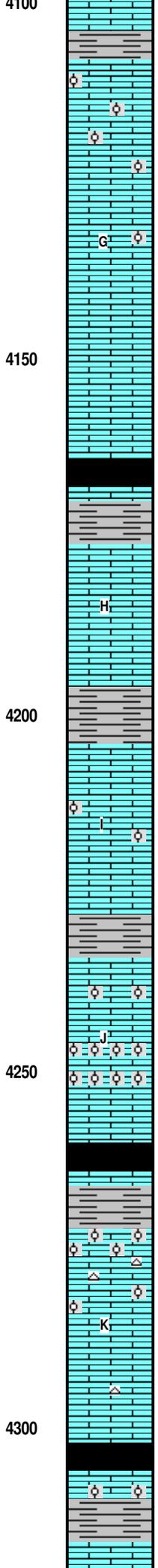
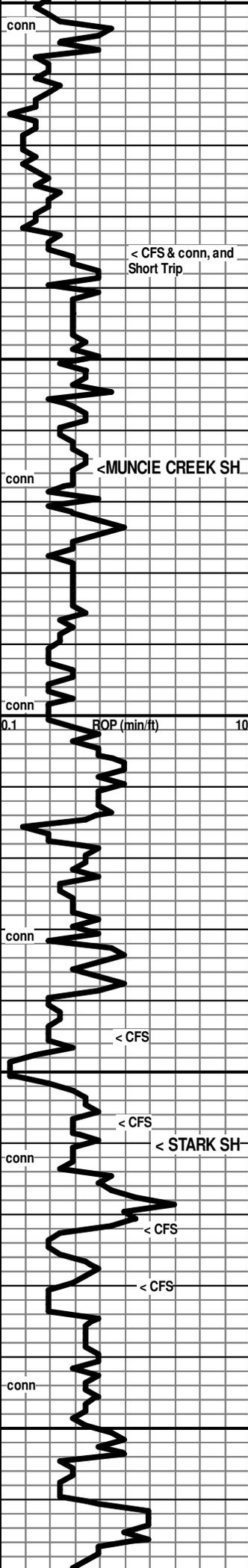
Ls sh-cr-tan, fn xln, pr xln por in pt, chalky in pt, abund foss in pt, more chert as above

7:00 AM, February 14, 2019

Mud Check, Drlg @ 4046':

Vis	Wt	WL	LCM	PV	YP
55	9.1	9.6	2	18	16
Chl	Hd	pH	Solids		
4100	80	9.0	5.5		

* Add Premix!



Sh gy-dk gy-blk

Ls wh-cr-tan, fn xln, abund pr-fr xln por, dns in pt, abund ool & foss with scatt interool pores, chert: fresh, cr, subopaq

G

Ls wh-cr,fn xln, mostly dns, some pr xln por, some subchalky, foss

4150

Ls cr-tan, fn xln, dns, foss

<----- 4165 (-1471)

Sh black, carb

Sh gy-grmish

Ls wh-cr-tan, vfn-fn xln, mostly dns, some pr xln por, some chalky, foss in pt

H

Ls wh-cr-tan, vfn-fn xln, mostly dns, some pr xln por, some chalky, scatt transl calcite patches, foss in pt

4200

Sh gy-grmish

Ls wh-cr-tan, fn xln, dns in great pt, subchalky in pt, some pr-fr xln por, foss, Rr ool pcs

I

Ls wh-cr-tan-pl gy, fn xln, dns to prxln por, foss

Sh gy-dk gy-grmish

Ls wh-cr-tan, fn xln, abund dns, some pr xln por, some chalky & mushy pcs, some ool in pt (no oom), foss in pt

J

Ls wh-cr-pl gy, fn xln, pr xln por, some wh chalky & mushy pcs, oom with mix of pr-fr-gd oom por, foss

Ls tan-gy, vfn xln, vitreous text in pt, foss

<----- 4260 (-1566)

Sh black, carb

Sh gy-grm

Ls cr-tan, fn xln, mostly pr xln por, some fr xln por in patches and pcs, Mod am't of white chalky-mushy pcs, foss to abund foss, ool in pt-mostly well cem, some oom pcs from above J zn?, chert: fresh wh-gy, foss, ool, opaque

[No Odor, Abund Mineral Fluor-no distinguishable hydrocarbon fluor, No Stn, NSO]

K

Ls wh-cr-tan, vfn-fn xln, dns, Chert: fresh, gy, foss

4300

Sh black, carb

Ls wh-cr-tan-brn, vfn-fn xln, mostly dns, some chalky, scatt pr xln por, foss, sometiny ool pcs

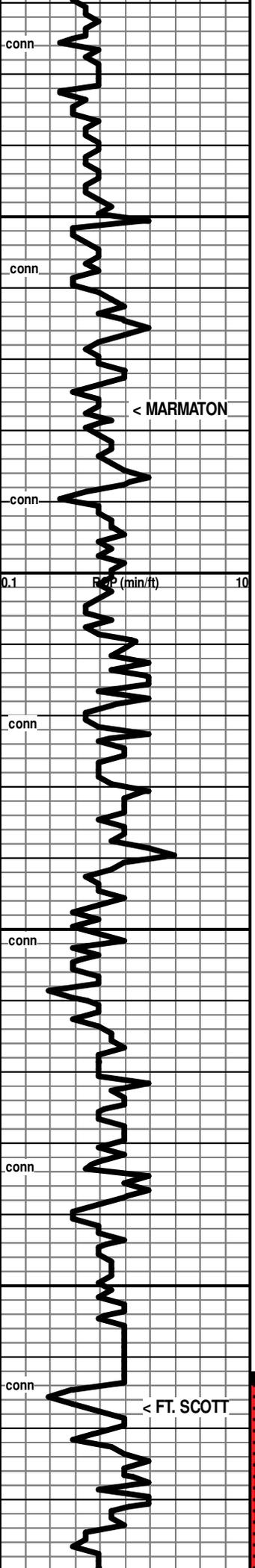
Sh gy

* Short Trip 38 stds @ 4135 ft, to Condition Hole for DSTs!

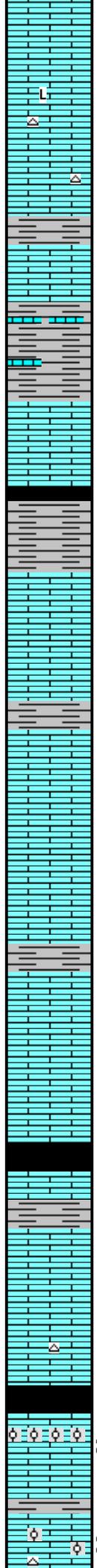
7:00 AM, February 15, 2019

Mud Check, Drlg @ 4295':

Vis	Wt	WL	LCM	PV	YP
60	9.4	9.2	1	17	18
Chl	Hd	pH	Solids		
5900	80	9.0	7.5		



4350
4400
4450
4500



Ls wh-cr, fn xln, mostly pr xln por, some interfoss pores, subchalky in pt, foss to packed foss

Ls wh-cr, fn xln, mostly dns, some chalky, foss to abund foss

Ls wh-cr-tan, vfn-fnxln, dns in pt, chalky in pt, pr xln por in pt, foss, chert: fresh, tan, transl, foss

Sh gy

Ls wh-cr-tan, vfn-fnxln, dns in pt, chalky in pt, pr xln por in pt, foss

Sh gy-dk gy-grmish, mic text in pt, limey in pt

← 4377 (-1683)

Ls wh-cr-tan-brn, fn xln, mostly dns, some chalky to subchalky, foss in pt

Sh black, carb

Sh red-gy-grn, possibly calc in pt-some Ls in spls

Ls wh-cr-tan, fn xln, pr xln por to dns, some subchalky, foss, scatt glauc gm patches

Sh pl grn-dk gm, mic

Ls wh-cr-tan, fn xln, pr xln por to dns, some subchalky, foss

Ls wh-cr-tan, vfn-fn xln, vitreous text in pt, pr xln por to dns, some subchalky, foss

Sh gy-grmish- gm

Ls wh-cr, vfn-fn xln, dns to subchalky, Rr scatt foss

Sh gy-black, carb in pt

Ls wh-cr-tan-brn, vfn-fn xln, some softer chalky, much dns, foss in pt

Ls wh-cr-tan-brn, vfn-fn xln, some softer chalky, much dns, foss in greater abund, chert: subfresh, wh-gy, subopaq, foss

Sh black, carb

← 4517 (-1823)

Ls cr, fn xln, pr xln por, scatt pp pores, abund foss-with scatt foss mold pp pores, ool in pt-well cem to some interool pr xln por

Sh gy

Ls cr, fn xln, pr xln por to dns, scatt pp pores, ool in pt with pr interool xln por, foss, chert: fresh, wh-tan, foss, opa-q-transl

< MARMATON

< FT. SCOTT

* 4421' Begin losing partial returns. From 4421-4445, lost appr 20-30 bbls. Contact TF and Mud man. Build premix and lower PP!

* Premix added, full returns regained!

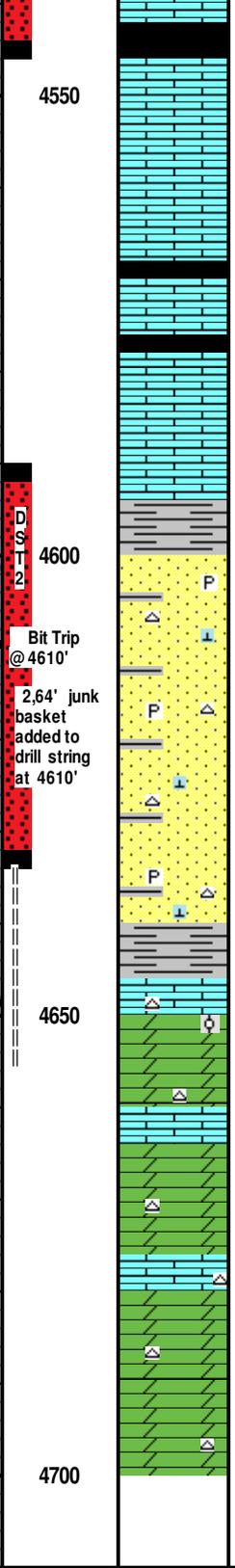
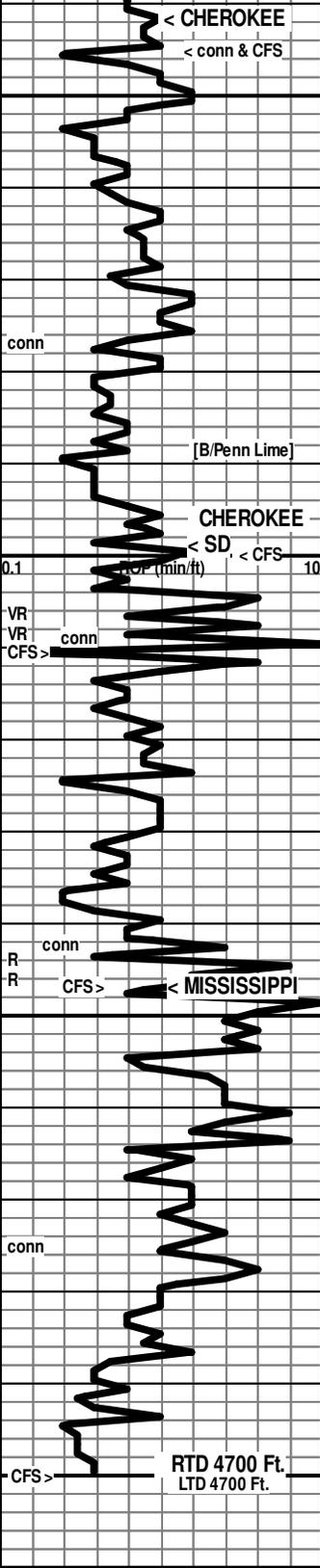
DST #1: 4512-4545 (Ft. Scott)
Times: 05-30-30-30
Initial Open: Wk Surface Blow thruout
Final Open: V Wk surface blow, died 2 min
Rec: 2' mud/oil spots
IHP: 2315 FHP: 2327
IFP: 17-17 FFP: 16-17
ISIP: 45 FSIP: 32
BHT: 110°F

[Mild Odor, Mod am't pcs with brt fluor, Moderate low % pcs with trace to sli shows of lt brn gassy with patchy-even lt brn strn]

[Fnt Odor, Scatt brt fluor, low % pcs with trace to shows of lt brn gassy FO with spotty-patchy strn]

Show Description →

Show Description →



4541 (-1847)
 Sh black, carb

Ls wh-cr-tan-gy, vfn-fn xln, some chalky, mostly dns, foss in pt

Ls cr-tan-gy, vfn-fn xln, mostly dns, foss in pt

Sh black carb

Ls cr-tan-gy, vfn-fn xln, dns...mixed with shales gy-black, carb in pt

Sh black, carb

Ls wh-cr-tan, vfn-fn xln, some chalky, mostly dns, foss in pt

Sh red-gy-grn, pyritic in pt, silty in pt, some loose pyrite pcs

< 4589-4600: Few pcs per tray of Sd glassy-wh, vfn grn (100u +/-), mostly subrd with some quartzitic ang grns, gd sort, small clusters sharp to rd'd, pr-gd fri; abund Ls and shales in spls, tr of fresh chert, loose pyrite pcs

[No odor, No fluor, NSO]

<4600-4610: Incr'd % sd clusters in tray: Sd glassy-wh, fn grn (225u +/-), sd grns sli more coarse than above, mostly subrd with some quartzitic ang-subang grns, fr-gd sort, small clusters sharp to rd'd, pr-gd fri; abund Ls and increased shales in spls, tr of fresh chert, abund loose pyrite pcs

[No odor, No fluor, NSO]

4630' spl: 33% Sd glassy-white, fn grn (175u-225u), gd sort, sharp to rd'd clusters, pr-gd fri; 33% Shales: mostly pl grn-grn & gy-dl gy, silty to sdy in pt; 33% Ls: cr-tan, fn xln, dns with scatt subchalky edges, trace of fresh chert

4640' spl: 50% Sd as above; 30% shales as above; 20% Ls as above

4647' spl: 50% Sd as above; 30% shales as above; 20% Ls and chert: fresh, cr-gy, subtransl-opaq, spiculitic in pt

4647' cfs: 40% Sd; 30% shales with yell shale; 30% Ls and chert, Ls wh-cr-tan, vfn to fn xln, dns, some blocky text with pr xln por, foss, some wh chalky, some dolom, chert: fresh to v sli grainy, transl-subtr-opaq, wh-gy, spic in pt

[No odor, No fluor, NSO]

4660' spl: 10% Sd as above; 50% Ls Ls and chert, Ls wh-cr-tan, vfn to fn xln, dns, some blocky text with pr xln por, foss, some wh chalky, some dolom, some ool; 40% Shales from CKE

4670' spl: was much like above with incr in wh pastey-mushy chalky Ls

4680' spl: Abund cr-gy dolom & dolom ls & limmey dol. vnf-fn grn, silty to subsucrosic to sucr text, pr vis xln por, cherty; still have abund Ls and shale in spls

[No odor, No fluor, NSO]

4690' spl: Abund cr-gy dolom & dolom ls & limmey dol. vnf-fn grn, silty to subsucrosic to sucr text, pr vis xln por, cherty; still have abund Ls and shale in spls

4700' spls: Dol, cr-tan-pl gy, fn xln, pr-fr xln por, scatt to abund pp pores & vugs, subsucr-sucr, chert: fresh, wh-pl gy, subtransl, foss, some spiculitic

[No odor, No fluor, NSO]

7:00 AM, February 16, 2019

DST #2: 4591-4633 (CKE Sd)
 *Straddle Test after logs!
 Initial Open: Wk Blow, built to 2" i.b.
 Final Open: Stg Blow, b.o.b. 45 min
 Rec: 160' WCM with oil spots
 (Chlorides of Water 28000 ppm)
 IHP: 2359 FHP: 2351
 IFP: 21-27 FFP: 30-94
 ISIP: 1263 FSIP: 1210
 BHT: 126°F

7:00 AM, February 17, 2019

< 4600 (-1906)

* Due to very rough drilling, rig varied WCM and RPM!

Mud Check, CFS @ 4610':
 Vis Wt WL LCM PV YP
 75 9.5 9.6 2 19 25
 Chl Hd pH Solids
 7100 120 9.6 8.1

Will add Premix after bit
 *Pulled bit, one jet plug all cones were missing of their buttons!

< 4647 (-1953)

7:00 AM, February 18, 2019

Mud Check, CTCH/RTD @ 4700':
 Vis Wt WL LCM PV YP
 62 9.4 8.8 1 19 19
 Chl Hd pH Solids
 5300 40 9.5 7.5

RTD 4700 Ft. Reached at, 7:30 AM, February 18, 2019!