



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

Well Name: Betty #2 - Carmen Schmitt, Inc.
API: 15-063-22351-00-00
Location: SW-NE-NE-NE, Section 13-14S-26W
License Number: KCC #6569
Spud Date: March 06, 2019
Surface Coordinates: 500' FNL & 500' FEL,
of Section
Bottom Hole Vertical Wellbore
Coordinates:
Ground Elevation (ft): 2442 Ft. K.B. Elevation (ft): 2447 Ft.
Logged Interval (ft): 3400 Ft. To: 4400 Ft. Total Depth (ft): RTD 440 Ft. LTD 4399 Ft.
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Chemical

Region: Gove County, Kansas
Drilling Completed: March 14, 2019
Results: Prod. Casing Set
Field: Overland

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

Operator

Company: Camen Schmitt, Inc.
Address: PO Box 47
Great Bend, Kansas 67530-0047

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 set production casing on the "Betty #2" for further testing and use in a potential fieldwide waterflood.

Respectfully submitted,
M. Bradford Rine, geologist

Drilling Information

Rig: Murfin Drilling, Rig #8
Pump: National K380 6x14
Drawworks: Ideco H35
Collars: ...' 2-1/4 x 6-1/4
Drillpipe: 4-1/2" 16.6# XH
Toolpusher: Jason Galli

Mud: Mudco (Gary Schmidtberger)
Gas Detector: None
Drill Stem Tests: (Spencer Staab)
Logs: Pioneer (J. Henrickson)
Water: Harvey Lease Irrigation Well (Walker Tank)
Company Representatives:
Office: Carmen Schmitt
Field: Curtis Hitchmann

Daily Drilling Status

Date:	Operations/Depth/Comments
03-06-19	MIRT, RU, Spud @ 0'
03-07-19	Drilling @ 350'
03-08-19	Drilling @ 2300'
03-09-19	Drilling @ 2820'
03-10-19	Trip Out of Hole with plugged bit @ 3447'
03-11-19	Circulating for Samples @ 3895'
03-12-19	Trip in Hole with DST #2 @ 3980'
03-13-19	Drilling @ 4020'
03-14-19	Circulating for Samples @ 4315'
03-15-19	Running Casing @ 4400', Cement, Job complete 12:30 pm

	Results: Oil			(Well A) Oil		(Well B) Oil			
	Carmen Schmitt, Inc.			Carmen Schmitt, Inc.		Carmen Schmitt, Inc.			
	Betty #2			Betty #1		Schwindt #3			
	500' FNL & 500' FEL			330' FSL & 1200' FEL		515' FNL & 600' FWL			
	Sec. 13-14S-26W			Sec. 12-14S-26W		Sec. 18-14S-25W			
	2447	KB		2448	KB	2447	KB	Well A	Well B
Formations	Sample	E-Log	Datum	E-Log	Datum	E-Log	Datum	Comparison(s)	
Anhydrite	1906	1906	541	1899	549	1902	545	-8	-4
B/Anhydrite	1943	1942	505	1937	511	1940	507	-6	-2
Tarkio	3296	3294	-847	3300	-852	3292	-845	5	-2
Heebner Sh.	3684	3683	-1236	3685	-1237	3678	-1231	1	-5
Toronto	3710	3706	-1259	3704	-1256	3698	-1251	-3	-8
Lansing	3723	3722	-1275	3723	-1275	3716	-1269	0	-6
Muncie Creek Sh.	3872	3871	-1424	3872	-1424	3868	-1421	0	-3
Stark Sh.	3951	3952	-1505	3953	-1505	3948	-1501	0	-4
B/Kansas City	4009	4008	-1561	4010	-1562	4004	-1557	1	-4
Marmaton	4054	4054	-1607	4052	-1604	4048	-1601	-3	-6
Altamont	4075	4076	-1629	4074	-1626	4073	-1626	-3	-3
Pawnee	4158	4158	-1711	4156	-1708	4152	-1705	-3	-6
Ft. Scott	4221	4222	-1775	4219	-1771	4216	-1769	-4	-6
Cherokee Sh.	4247	4246	-1799	4243	-1795	4240	-1793	-4	-6
Mississippian	4318	4316	-1869	4314	-1866	4306	-1859	-3	-10
Total Depth	4400	4399	-1952	4478	-2030	4397	-1950	78	-2

Casing Record, Bit Record, Deviation Surveys

CASING:

Conductor: None

Surface: Ran 220' 8-5/8" 23# new casing, set at 218'. (Copeland) Cement with 190 sx Common, 3% CC, 2% gel. Plug down at 9:00 PM, March 06, 2019. Cement did circulate.

Production: Ran 5-1/2", 14# new casing. Set @ 4152 ft. (Swift) Cement with 400 sx SMD and 150 sx EA2, cement did circulate. 30 sx in RH, 20 sx in MH. Plug down at 12:30 pm, March 15, 2019.

BITS:

No.	Size	Make	Model	Depth In	Depth Out	Hours
1	12-1/4	Varel	CH20	0	220	2.50
2	7-7/8	HTC	DP506	220	2684	29.25
3	7-7/8	HTC	GX20C	2684	4400	74.50

DEVIATION SURVEYS:

Deviation:	Depth:	Deviation:	Depth:
0.50*	220'	0.50*	2684'
0.25*	1199'	0.75*	3952'
0.25*	2208'	0.75*	3980'
		0.50*	4400'

PIPE STRAPS:

Difference:	depth:
1.30' Short	2684'

DST #1: 3927-3952 (LKC J)

Times: 15-30-15-Out

Initial Open: Wk Blow, built to 1/2" i.b.

Final Open: No Blow

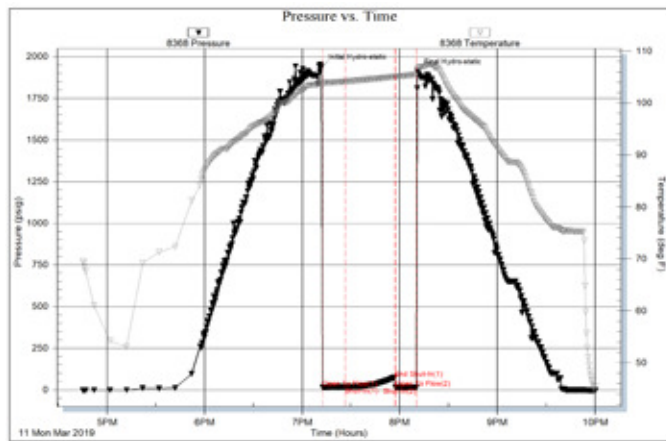
Rec: 2' mud

IHP: 1937 FHP: 1909

IFP: 15-19 FFP: 16-16

ISIP: 73 FSIP: NA

BHT: 105°F



DST #2: 3948-3980 (LKC K)

Times: 15-30-60-90

Initial Open: Wk Blow, built to 3/4" i.b.

Final Open: Wk Blow, built to 5-1/2" i.b.

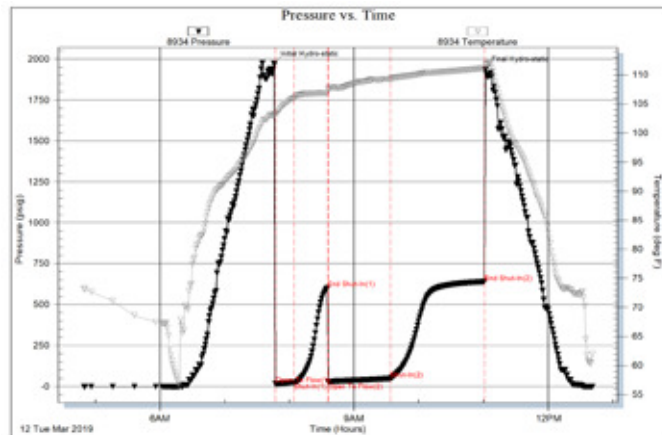
Rec: 65' SOGCM: 10%g 15%o 75%m

IHP: 1971 FHP: 1936

IFP: 15-25 FFP: 25-47

ISIP: 602 FSIP: 638

BHT: 111°F



DST #3: 3987-4010 (LKC L)

Times: 15-30-60-90

Initial Open: Wk Blow, built to 4" i.b.

Final Open: Stg Blow, b.o.b. 35 min

Rec: 80' Total Fluid

60' HMGCO: 20%g 40%o 40%m

20' GCO: 15%g 85%o

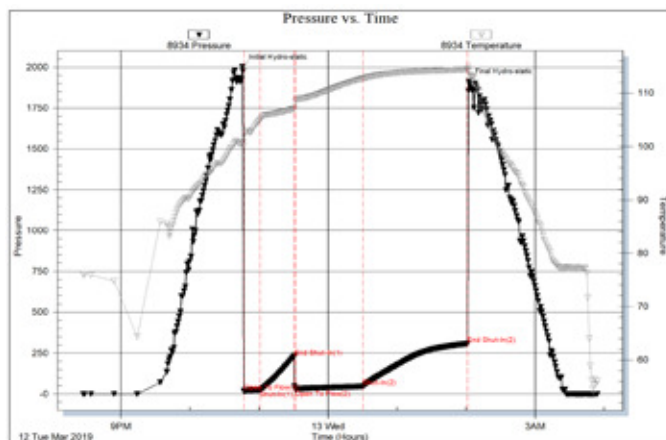
(Oil 37 API Grav)

IHP: 2000 FHP: 1912







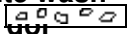



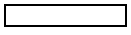
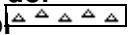







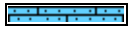
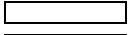





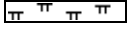

IFP: 16-24 FFP: 27-45

ISIP: 229 FSIP: 306
























































BHT: 114°F



Rock Types

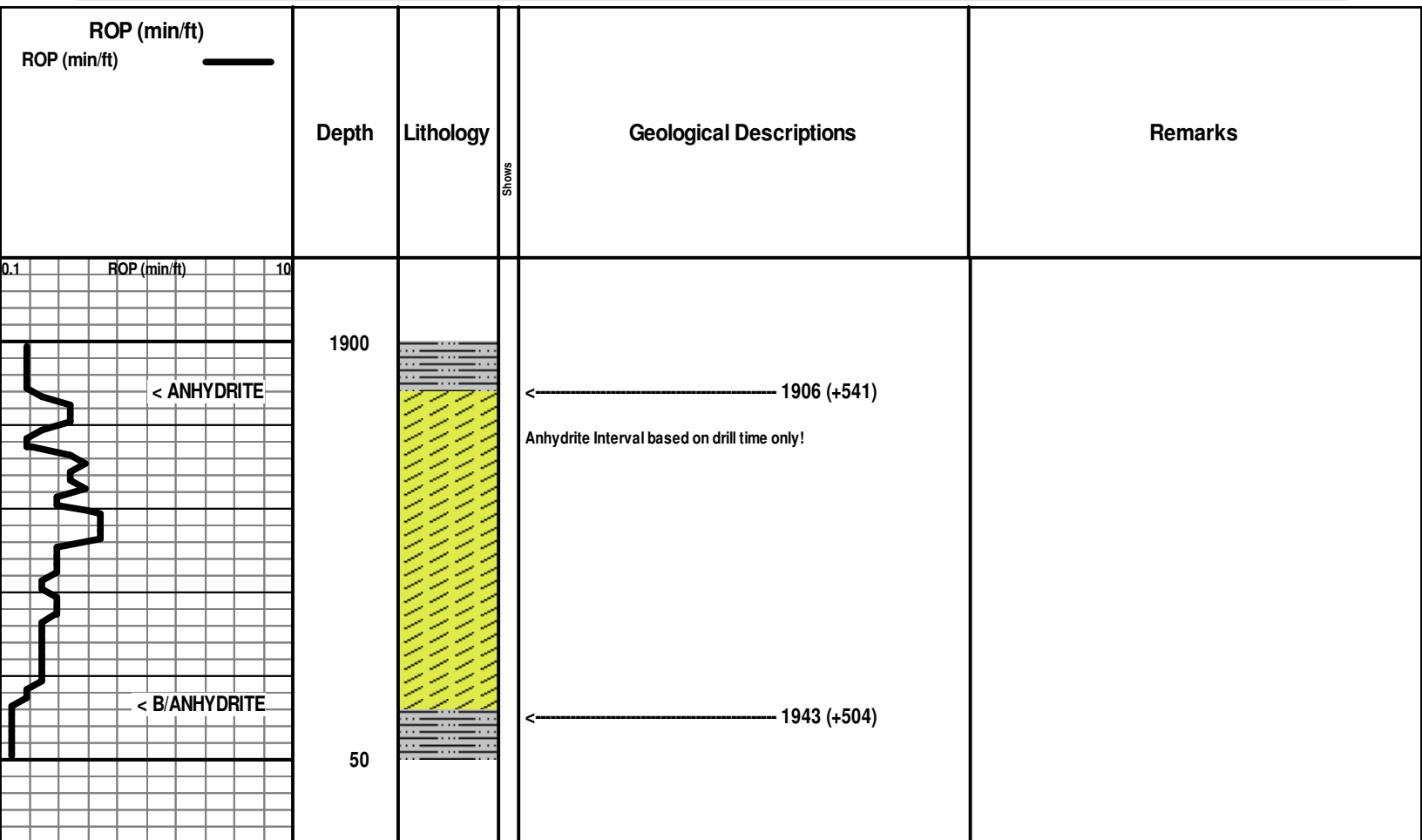
	Congl granite wash		Bent		Dol		Salt		Till
	dol ls limey		Brec		Gyp		Shale		Siltysh
	New symbol		Cht		Igne		Shcol		Shlysiltst
	Dolom ls limey		Clyst		Lmst		Shgy		Sandyls
	New symbol		Black shale		Meta		Siltst		
	Anhy		Congl		Mrlist		Ss		

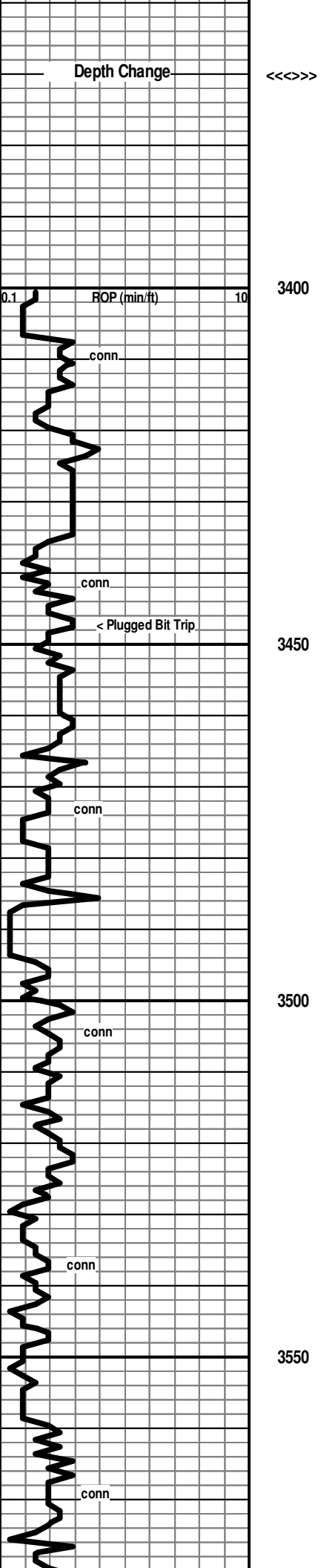
Accessories

MINERAL		Gyp	FOSSIL		Ostra		Siltstrg
	Anhy		Hvymin		Algae		Ssstrg
	Arggrn		Kaol		Amph		
	Arg		Marl		Belm		
	Bent		Minxl		Bioclst	TEXTURE	
	Bit		Nodule		Brach		Boundst
	Brecfrag		Phos		Bryozoa		Chalky
	Calc		Pyr		Cephal		Cryxln
	Carb		Salt		Coral		Earthy
	Chtdk		Sandy		Crin		Finexln
	Chtlt		Silt		Echin		Grainst
	Dol		Sil		Fish		Lithogr
	Feldspar		Sulphur		Foram		Microxln
	Ferrpel		Tuff		Fossil		Mudst
	Ferr				Gastro		Packst
	Glau				Oolite		Wackest
						STRINGER	
							Anhy
							Shale
							Bent
							Coal
							Dol
							Gyp
							Ls
							Mrst

Other Symbols

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





<<<>>

Depth Change

3400

ROP (min/ft)

0.1

10

conn

conn

< Plugged Bit Trip

3450

conn

3500

conn

3550

conn

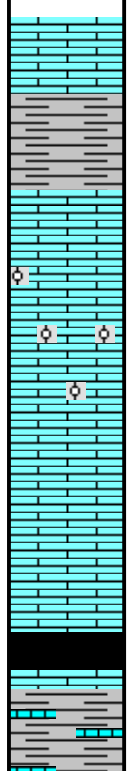
* Displace & Mud Up @ 3300 ft!

* Trip Out of Hole @ 3447 ft, for plugged bit. Bit jets plugged with wood-as per rig: from LCM material.

7:00 AM, March 10, 2019

Mud Check, TOOH/ Plugged Bit @ 3447':

Vis	Wt	WL	PV	YP
61	8.7	6.0	17	26
Chl	Hd	pH	LCM	Solids
5300	Nil	11.5	4	2.6



Sh gy-dk gy

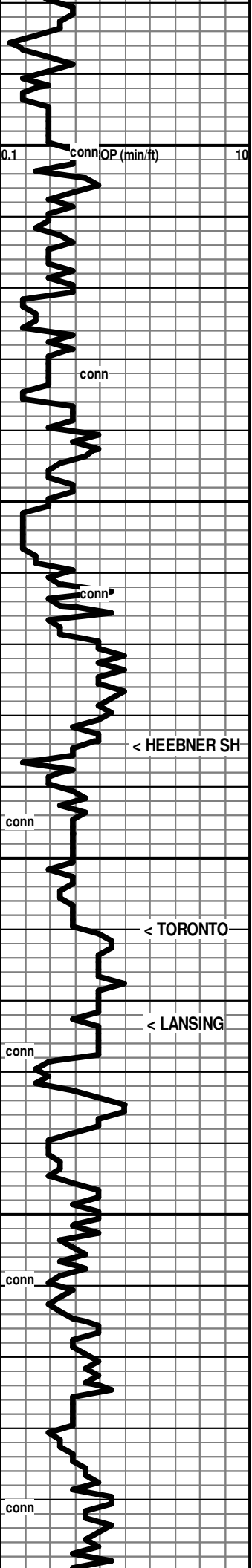
Ls cr-tan,gy pr xln por, foss

Ls cr-tan, fn xln, ool-oom (small)

Ls cr-tan-gy, fn xln, pr to fr xln por, foss

Sh black, carb

Sh gy, limey/calc in pt



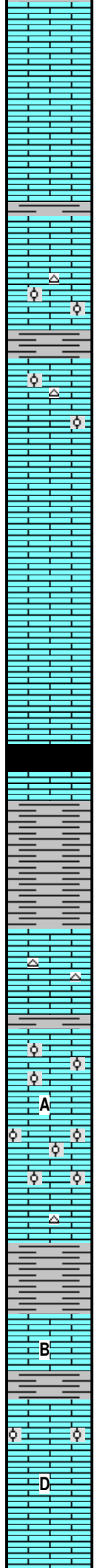
3600

3650

3700

3750

3800



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

Sh gy

Ls cr-tan, fn xln, dns, ool in pt, foss

Sh gy

Ls cr-tan, fn xln, pr xln pr, abund foss and ool, chert: fresh, cr-tan, foss

Ls wh-cr-gy, fn xln, pr-fr xln por, grainy text in pt, some white chalky mushy pcs, abund foss, with scatt interfoss por

Ls cr-tan-gy, fn xln, dns, foss

← 3684 (-1237)

Sh black, carb

Ls cr, fn xln, pr xln por, foss

Sh gy-gmish

← 3710(-1263)

Ls wh-cr, fn xln, subchalky to pr xln por, foss, chert: fresh, cr, foss

Ls wh-cr, vfn-fn xln, dns, sli foss in pt

← 3723 (-1276)

Ls wh-cr, fn sln, some dns, abund packed ool with mix of well cem to scatt interool pores

Ls wh-cr, fn xln, some dns, abund packed ool with mix of well cem to scatt interool pores

Ls wh-cr, fn xln, dns, foss, chert: fresh, cr, foss

Sh gy -gmish

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

Sh gy

Ls wh-cr, vfn-fn xln, dns to pr vis xln por, foss

Ls wh-cr, fn xln, pr xln por to dns, foss, ool in pt

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

0.1 conn OP (min/ft) 10

conn

conn

conn

conn

conn

conn

< HEEBNER SH

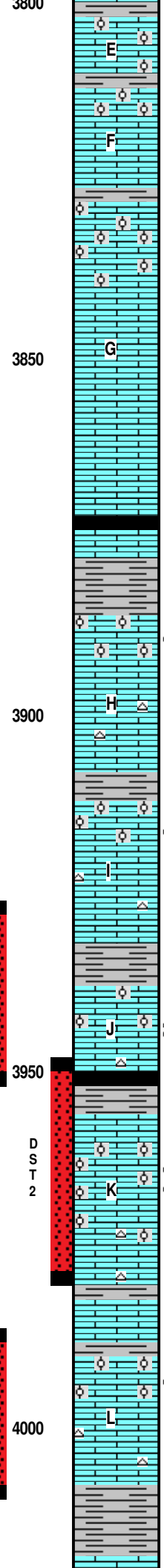
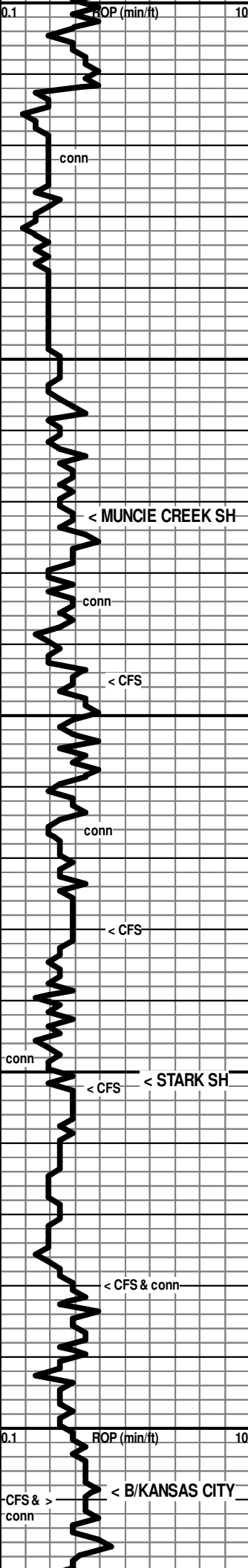
< TORONTO

< LANSING

A

B

D



Sh gy

Ls cr, fn xln, pr xln pr, ool in pt with scatt interool pores

Sh gy

Ls cr, fn xln, pr xln por, scatt pp pores, ool in pt with scatt interool pores

Sh gy

Ls cr, fn xln, pr-fr xln por, ool to abund oom, fr-gd oom por

3850

Ls wh-cr-tan-gy, vfn-fn xln, some soft & chalky, abund dns & firm, foss in pt

3872 (-1425)

Sh black, carb

Ls cr-tan, fn xln, dns, foss

Sh gy-grmish-grn

Ls wh, fn xln, pr xln por, ool with mod am't of interool pores

[Mild Odor, scatt dull fluor, mod am't pcs with sli shows of brn FO & NVL oil, few pcs with Fr show of FO, sli gassy]

3900

Ls wh-cr-tan, fn xln, chalky in pt, dns to pr xln por in pt, foss, chert: fresh, wh, foss, opa

Sh gy-grmish

Ls wh-cr fn xln, chalky in pt, dns to pr xln por in pt, foss in pt, ool in pt-mostly well cem with scatt interool pores

[No Odor, No fluor, Rr spots & sm patches of brn stn with Rr scant trace of FO on brk]

Ls wh-cr, fn xln, chalky in pt, dns in pt, sli foss, chert: fresh, wh-cr, abund microfoss, opa

Sh gy-grm-red

Ls wh-cr-tan, fn xln, mostly dns, some chalky, scatt pp pores & sm vugs, scatt pr xln por, foss to abund foss, ool in pt with scatt interool pores, some chert: fresh, transl

3950

[Fnt Odor, Rr dull fluor, few pcs per tray with dk brn spotty-sm patchy stn, with trace to sli shows of dk brn FO & NVL oil, 2 pcs with mod show of FO]

Ls wh-cr, fn xln, pr vis xln por, abund micro-ool & foss with abund interool pores, pr-fr crush, chert: fresh, wh-cr, subop with depth

3955

[Mod Odor, Abund dull-mod fluor, abund spotty-patchy to even tan-brn Stn, abund sli shows of lt brn-brn FO, v sli gassy in pt, few pcs with mod show FO & NVL oil]

7:00 AM, March 12, 2019

Ls cr-gr, fn xln, dns, some wh chalky pcs, sli foss in pt

Sh gy-grmish

Ls cr, fn xln, pr vix xln por, mod am't of pp pores, abund micro-foss, tiny ool in pt, becoming dns & cherty with depth

4000

[Mild Odor, Mod- am't pcs with mod-brt fluor, with patchy- Rr even lt brn stn, with sli shows of lt brn-brn FO, sli gassy in pt, few pcs with mod show FO]

4009 (-1562)

Sh pl gy-gy-grmish gy, subsilty/mic text in pt

7:00 AM, March 13, 2019

7:00 AM, March 11, 2019

Mud Check, Drlg @ 3912':

Vis	Wt	WL	PV	YP
53	9.2	6.0	16	24
Chl	Hd	pH	LCM	Solids
7000	Tr	10.5	2	6.0

DST #1: 3927-3952 (LKC J)

Times: 15-30-15-Out

Initial Open: Wk Blow, built to 1/2" i.b.

Final Open: No Blow

Rec: 2' mud

IHP: 1937 FHP: 1909

IFP: 15-19 FFP: 16-16

ISIP: 73 FSIP: NA

BHT: 105°F

3951 (-1504)

DST #2: 3948-3980 (LKC K)

Times: 15-30-60-90

Initial Open: Wk Blow, built to 3/4" i.b.

Final Open: Wk Blow, built to 5-1/2" i.b.

Rec: 65' SOGCM: 10%g 15%o 75% m

IHP: 1971 FHP: 1936

IFP: 15-25 FFP: 25-47

ISIP: 602 FSIP: 638

BHT: 111°F

Mud Check, OB/DST2 @ 3980':

Vis	Wt	WL	PV	YP
51	9.2	6.2	12	24
Chl	Hd	pH	LCM	Solids
6200	20	10.5	1	6.1

DST #3: 3987-4010 (LKC L)

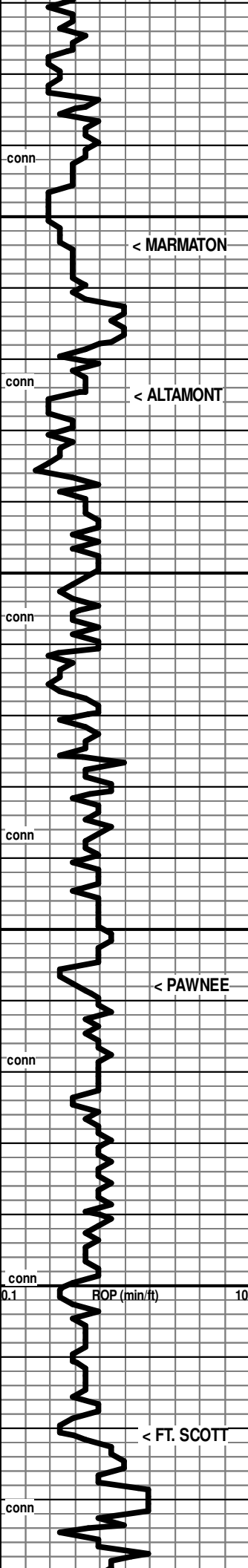
Times: 15-30-60-90

Initial Open: Wk Blow, built to 4" i.b.

Final Open: Stg Blow, b.o.b. 35 min

Rec: 80' Total Fluid

60' HMGCO: 20%g 40%o 40% m



4050

< MARMATON

4100

< ALTAMONT

4150

< PAWNEE

4200

< FT. SCOTT

0.1 ROP (min/ft) 10

Ls wh-cr-gy, fn xln, chalky in pt, sdy in some chalky pcs, dns to pr xln por in pt

abund gy shale in spls

Ls cr, fn xln, dns, cherty

Sh gy-gmish, silty-subsilty in pt

← 4054 (-1607)

Ls wh-cr-gy, fn xln, mostly dns, some chalky & silty, foss & micro-ool in pt mostly well cem with scatt Rr interool pores

[No Odor, 1-2 pcs per tray with dull spotty fluor with patches of dk spotty Stn, Trace of Deadish-NVL dk oil on crush]

Sh gy-gmish

← 4075 (-1628)

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

Sh gy

Ls wh-cr, chalky in pt, dns in pt, Rr foss

Ls wh-cr-tan, fn xln, subsucr with pr xln por in pt, chert: fresh to subgrainy, cr-orange

Ls wh-cr-gy, fn xln, dns in pt, chalky in pt, silty/sdy in pt

Ls wh-cr-gy, fn xln, dns in pt, chalky in pt, silty/sdy in pt, trace of chert: subfresh, pl orange, subtransl

Sh dk gy-black, carb in pt

← 4158 (-1711)

Ls cr-tan-gy, vfn-fn xln, vitreous to subgrainy to xln text

Ls cr-tan-gy, vfn-fn xln, vitreous to subgrainy to xln text, Rr chert

Ls WH-cr-tan-gy, vfn-fn xln, chalky in pt, vitreous to subgrainy to xln text, Rr chert

Sh dk gy-black, mostly carb (washes dk gy)

← 4221 (-1774)

Ls wh-cr-tan, fn xln, chalky in pt, dns in pt, Rr foss

Ls cr-tan, fn xln, mostly dns with scatt pr xln por, Rr foss, chert: fresh, pl gy-tan, subtransl, foss

[Fnt Odor, few pcs per tray with brt fluor, with patchy tan-lt brn stn, few pcs total with trace to very sli show

20' GCO: 15%g 85%o

(Oil 37 API Grav)

IHP: 2000 FHP: 1912

IFP: 16-24 FFP: 27-45

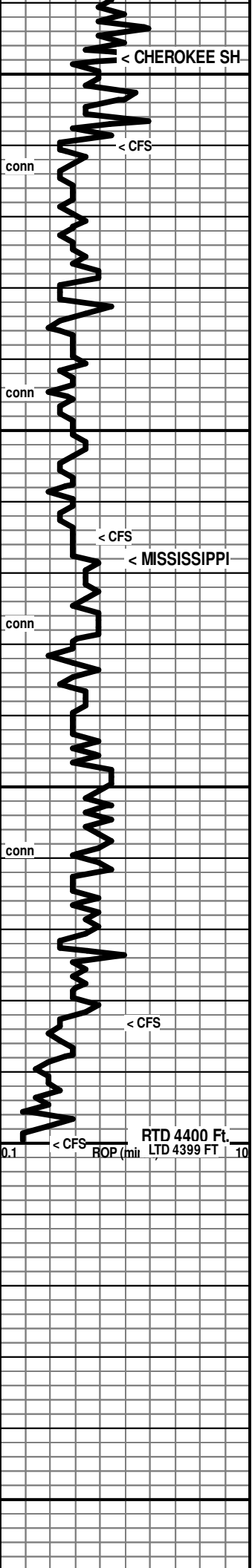
ISIP: 229 FSIP: 306

BHT: 114°F

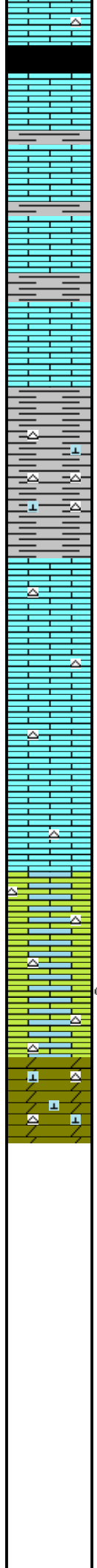
Mud Check, Drlg @ 4119':

Vis	Wt	WL	PV	YP
51	9.2	7.2	18	22
Chl	Hd	pH	LCM	Solids
6700	20	10.0	1	6.1

* Dangerously high winds during the day and night of March 13, 2019!



4250
4300
4350
4400
4450



or it brn sli gassy FO]
 Ls cr-tan,fn xln, dns, foss, cherty as above
 <----- 4247 (-1800)
 Sh black,carb
 Ls wh-cr-tan, fn xln, mostly dns, some chalky, foss
 [No Odor, No fluor, few pcs with spots of black resid/gilson stn, NSFO]
 Ls wh-cr-tan, fn xln, mostly dns, some chalky, foss
 Sh dk gy-black
 Ls wh-cr-tan-gy, vfn-fn xln, mostly dns, some chalky, foss
 Sh gy-dk gy-grmish
 Ls wh-cr-tan-gy, vfn-fn xln, mostly dns, some chalky, foss
 Sh gy-dk gy-pl grn-grn-dk grn, some reddish, subsilty to silty text in pt
 Sh gy-dk gy-pl grn-grn-dk grn-yell, abund reddish, subsilty to silty text in pt, abund ls in spls-mostly dns with Rr scatt vugs, some sm foss, chert: fresh to v sli grainy, glassy-cr-gy-or, transl-opaq, foss, some spic. (washes sli red)
 [No Odor, No fluor, in Rr Ls vugs trace of black dead resid/gilson stn, NSFO]
 <----- 4318 (-1871)
 Ls wh-cr-tan, fn xln, mostly dns, some chalky, some sdy, foss in pt, chert: fresh, transl-subopaq, glassy, cr-tan, spic in pt, ool in pt; Spls 25% cke shales
 Ls wh-cr-tan, fn-md xln, mostly dns, some chalky, some sdy, foss in pt, chert: fresh, transl-subopaq, glassy, cr-tan, spic in pt, ool in pt; Spls 25% cke shales
 Ls Dol Ls/Limey Dol, fn-md xln, pr xln por to dns, subchalky in pt, subblocky text in pt, foss, scatt gm glauc stn, cherty, fresh, cr-gy; abund streaked-patchy brnsh red clay discoloration
 [No Odor, found 1-pc dull spots of fluor, with trace of tan spotty wet stn, NSFO]
 Dol Limey Dol, fn xln, mostly subsucr, some sucr, pr-fr xln por, abund fresh chert, wh-cr-tan-pl orange, spic in pt

7:00 AM, March 14, 2019

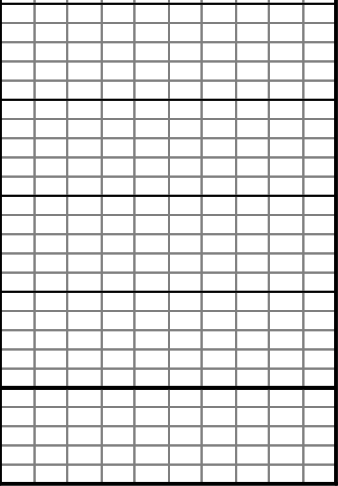
Mud Check, Drig @ 4327':

Vis	Wt	WL	PV	YP
50	9.5	7.2	18	31
Chl	Hd	pH	LCM	Solids
6600	40	10.0	1	8.1

* Add Premix!

RTD 4400 Ft, at 1:30 PM, March 14, 2019!

0.1 < CFS
 RTD 4400 Ft
 ROP(mi) LTD 4399 FT 10



4500