



JASPAR COMPANY INC.

Scale 1:240 Imperial

Well Name: CASEMON UNIT #1
Surface Location: SW NW SW SW Sec. 21-9S-19W
Bottom Location:
API: 15-163-24397-00-00
License Number: 34903
Spud Date: 8/10/2019 Time: 8:00 AM
Region: ROOKS COUNTY
Drilling Completed: 8/17/2019 Time: 4:15 PM
Surface Coordinates: 935' FSL & 85' FWL
Bottom Hole Coordinates:
Ground Elevation: 2128.00ft
K.B. Elevation: 2133.00ft
Logged Interval: 3950.00ft To: 3650.00ft
Total Depth: 3650.00ft
Formation: LANSING- KANSAS CITY; ARBUCKLE
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

OPERATOR

Company: JASPER CO. INC.
Address: P.O. BOX 1120

Contact Geologist: SHANE VEHIGE
Contact Phone Nbr: (785) 623-6982
Well Name: CASEMON UNIT #1
Location: SW NW SW SW Sec. 21-9S-19W
API: 15-163-24397-00-00
Pool:
State: KANSAS
Field: UNKNOWN
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: 39.251511
Latitude: -99.456274
N/S Co-ord: 935' FSL
E/W Co-ord: 85' 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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

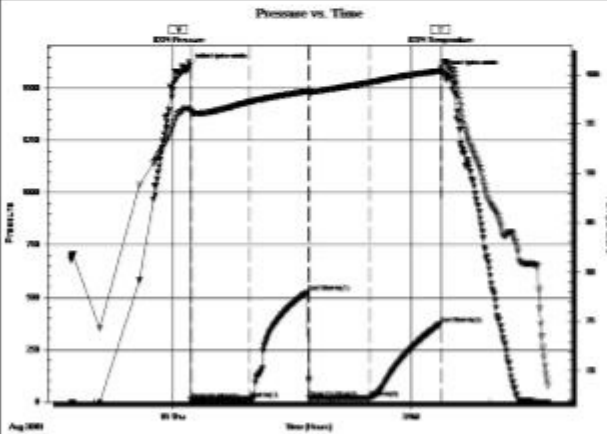
21-9s-19w Rooks,KS
Casemon Unit #1
 Job Ticket: 65981 DST#: 2
 Test Start: 2019.08.14 @ 22:43:00

GENERAL INFORMATION:

Formation: LKC 'C - D'
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 00:13:47 Tester: Spencer Staab
 Time Test Ended: 04:44:02 Unit No: 84
 Interval: 3349.00 ft (KB) To 3389.00 ft (KB) (TVD) Reference Elevations: 2133.00 ft (KB)
 Total Depth: 3389.00 ft (KB) (TVD) 2127.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 6.00 ft

Serial #: 8374 Inside
 Press@RunDepth: 19.88 psig @ 3350.00 ft (KB) Capacity: psig
 Start Date: 2019.08.14 End Date: 2019.08.15 Last Calib.: 2019.08.15
 Start Time: 22:43:01 End Time: 04:44:02 Time On Btm: 2019.08.15 @ 00:12:47
 Time Off Btm: 2019.08.15 @ 03:23:17

TEST COMMENT: 45-IF-Weak; Built to 1"
 45-ISI-No Return
 45-FF-No Blow
 45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1610.46	96.45	Initial Hydro-static
1	11.96	96.15	Open To Flow (1)
48	15.89	97.24	Shut-In(1)
90	524.86	98.29	End Shut-In(1)
91	18.19	98.24	Open To Flow (2)
137	19.88	99.20	Shut-In(2)
190	374.94	100.41	End Shut-In(2)
191	1579.08	100.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bb)
15.00	OSM 100%M	0.22

* Recovery from multiple tests

Gas Rates

Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)

DST #3 (LKC J-L)



TRILOBITE TESTING, INC.

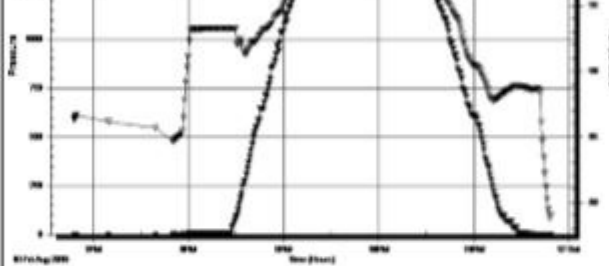
DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
 Job Ticket: 65982 DST#: 3
 Test Start: 2019.08.16 @ 02:55:00

GENERAL INFORMATION:

Formation: LKC 'J - L'
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 04:17:32 Tester: Spencer Staab
 Time Test Ended: 09:02:02 Unit No: 84
 Interval: 3489.00 ft (KB) To 3538.00 ft (KB) (TVD) Reference Elevations: 2133.00 ft (KB)
 Total Depth: 3538.00 ft (KB) (TVD) 2127.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 6.00 ft



Recovery

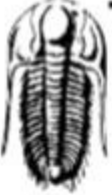
Length (ft)	Description	Volume (bb)
220.00	Mud	3.22

* Recovery from multiple tests

Gas Rates

Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)

DST #5 (ARBUCKLE)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

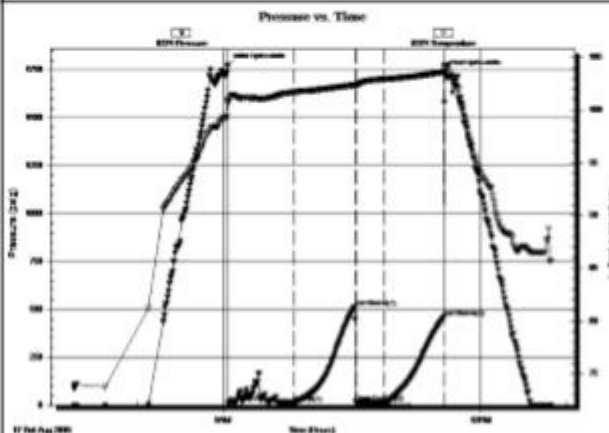
<p>Jaspar Co</p> <p>PO Box 1120 Hays KS 67601</p> <p>ATTN: Cameron Brin</p>	<p>21-9s-19w Rooks,KS</p> <p>Casemon Unit #1</p> <p>Job Ticket: 65984 DST#: 5</p> <p>Test Start: 2019.08.17 @ 07:16:00</p>
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GENERAL INFORMATION:

Formation: Arbuckle		Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)		Tester: Spencer Staab
Time Tool Opened: 09:03:32		Unit No: 84
Time Test Ended: 12:49:02		
Interval: 3597.00 ft (KB) To 3608.00 ft (KB) (TVD)		Reference Elevations: 2133.00 ft (KB)
Total Depth: 3608.00 ft (KB) (TVD)		2127.00 ft (CF)
Hole Diameter: 7.88 inchesHole Condition: Fair		KB to GR/CF: 6.00 ft

Serial #: 8374 Inside	Capacity:		psig
Press@RunDepth: 15.26 psig @ 3598.00 ft (KB)	Last Calib.:	2019.08.17	
Start Date: 2019.08.17 End Date: 2019.08.17	Time On Btm:	2019.08.17 @ 09:03:17	
Start Time: 07:16:01 End Time: 12:49:02	Time Off Btm:	2019.08.17 @ 11:34:47	

TEST COMMENT: 45-IF-Weak; Built to 1/4"; Died back to Surface
 45-ISI-No Return
 15-FF-No Blow
 45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.59	100.94	Initial Hydro-static
1	13.16	100.64	Open To Flow (1)
47	14.01	101.69	Shut-in(1)
89	511.94	102.36	End Shut-in(1)
90	15.19	102.37	Open To Flow (2)
109	15.26	102.95	Shut-in(2)
151	459.77	103.62	End Shut-in(2)
152	1739.21	104.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bb)
10.00	Mud 100%M	0.15

Gas Rates

Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests

STRUCTURAL COMPARISON SHEET

FORMATION	JASPAR COMPANY, INC.										P&A 12-04				JASPAR COMPANY, INC.				STRATA DRILLING								
	CASEMORN UNIT #1					LIZA #1					MAI OIL OPERATIONS				LARRY #1				HINKHOUSE #1								
	SE SW NE NW 20-9-19					2188					E2 SW 21-9-19				W2 SE SE SW 20-9-19				SE SE SE 20-9-19								
	KB	2133	GL	2128	KB	2188	KB	2138	KB	2146	KB	2155	KB	2155	KB	2155	KB	2155	KB	2155							
LOG TOPS		SAMPLE TOPS		LOG		SMPL.		COMP. CARD		LOG		SMPL.		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.			
DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	1522	611	1530	605	1583	605	+ 6 - 2	1521	617	- 6 - 14		1546	600	+ 11 + 3	1545	610	+ 1 - 7										
BASE	1559	574	1565	568	1620	568	+ 6 + 0	1560	578	- 4 - 10		1585	561	+ 13 + 7													
TOPSKA	3077	-944	3079	-946	3159	-951	+ 7 + 5	3085	-947	+ 3 + 1		3094	-948	+ 4 + 2													
HEBNER SHALE	3280	-1167	3282	-1149	3343	-1155	+ 8 + 6	3288	-1150	+ 3 + 1		3296	-1150	+ 3 + 1	3309	-1154	+ 7 + 5										
TORONTO	3301	-1168	3308	-1175	3362	-1174	+ 8 - 1	3314	-1176	+ 8 + 1		3320	-1174	+ 6 - 1	3328	-1173	+ 5 - 2										
LRC	3320	-1187	3326	-1193	3383	-1193	+ 8 + 2	3330	-1192	+ 5 - 1		3341	-1195	+ 8 + 2	3349	-1194	+ 7 + 1										
BKC	3536	-1403	3538	-1405	3598	-1410	+ 7 + 5	3551	-1413	+ 10 + 8		3557	-1411	+ 8 + 6													
CONGLOMERATE																											
ARBuckle	3573	-1440	3575	-1442	3631	-1443	+ 3 + 1	3570	-1432	- 8 - 10		3582	-1436	- 4 - 6	3614	-1459	+ 19 + 17										
TOTAL DEPTH	3648	-1515	3650	-1517	3701	-1513	- 2 - 4	3640	-1502	- 13 - 15		3599	-1453	- 62 - 64	3640	-1485	- 30 - 32										

ROCK TYPES

	Chtcong		Dolsec		shale, grn		Carbon Sh
	Dolprim		Lmst fw7>		shale, gry		shale, red

ACCESSORIES

MINERAL

- ▲ Chert, dark
- ∟ Dolomitic
- P Pyrite
- Sandy
- △ Chert White
- ∕ Euhed rhombs of dol or l

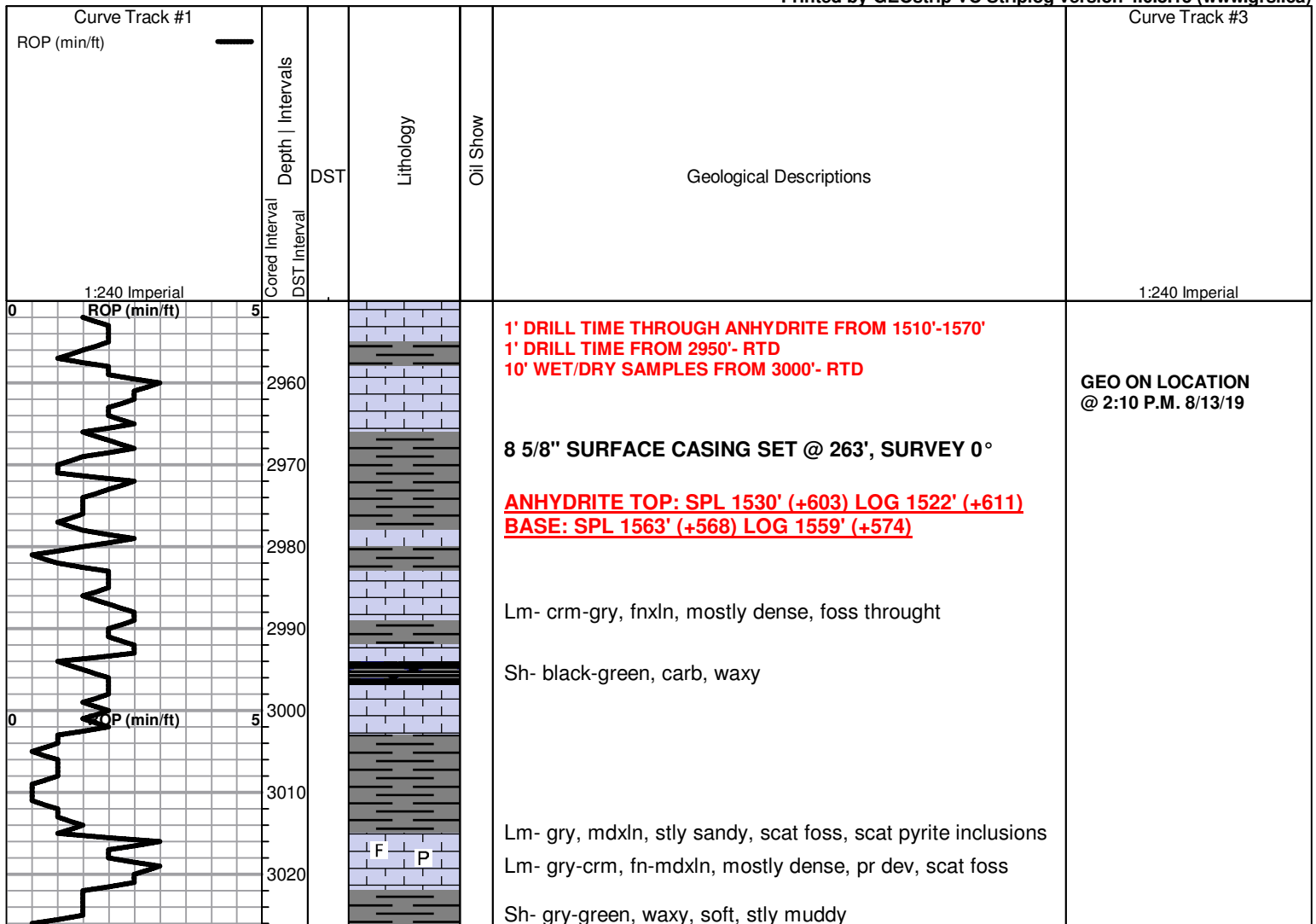
FOSSIL

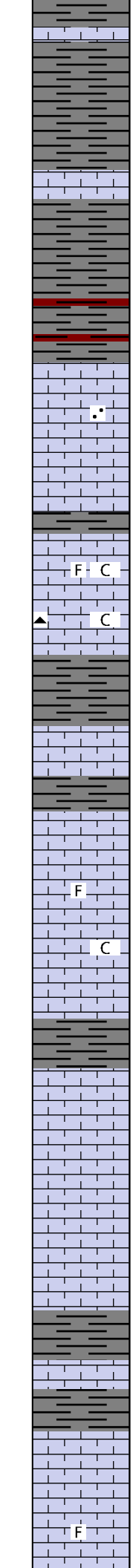
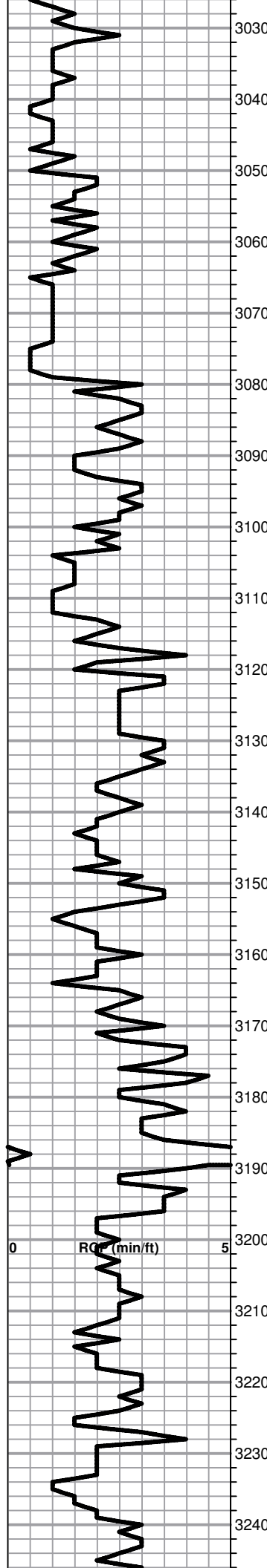
- F Fossils < 20%
- Oolite
- ⊕ Oomoldic

TEXTURE

- C Chalky

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Sh- gry- green, mostly round, earthy, few scat consolidated ss clusters

Lm- gry-crm, fnxln, mostly brittle, scat foss, scat pyrite

Sh- red-gry, muddy, fairly dense

Topeka: SPL 3079' (-946) 3077' (-944)

Lm- crm-gray, fnxln, fairly dense, fr dev, v. few consolidated ss clusters

Lm- crm- gry, fn-mdxln, few scat chips w/ pr ppt. por, foss, NSO

Lm- crm- drk gry, fnxln, dense, stly chalky, scat foss

Lm- crm-gry, fnxln, barren, chalky, few scat chips of lt brn chert, no vis por

Lm- crm- gry, fnxln, mostly pr dev., stly chalky, v. few scat chips w/ pr-fr inxln por, fr lt brn stn, slit sheen FO upon crush, no odor

Sh- gry-blk, carb, soft

Lm- crm-gry, fnxln, stly cherty, bedded, foss, no vis por

Lm- crm- fnxln, foss throughout, v. few chips w/ pr inxln por, 1 chip w/ pr lt brn stn, slit SFO upon crush, no odor

Lm- crm- fn-mdxln, foss throughout, v. chalky, stly sandy in prt, no vis por, no SO

Lm- A/A, scat chert, scat v. pr inxln por, no SO

Lm- crm- fnxln, mostly dense, stly sandy, no vis por, no SO

Lm- crm- vfn-fnxln, stly chalky, soft

Lm- wt- crm- cherty, chalky in prt, barren

Lm- wt- crm, cherty, barrern, clean, foss in prt

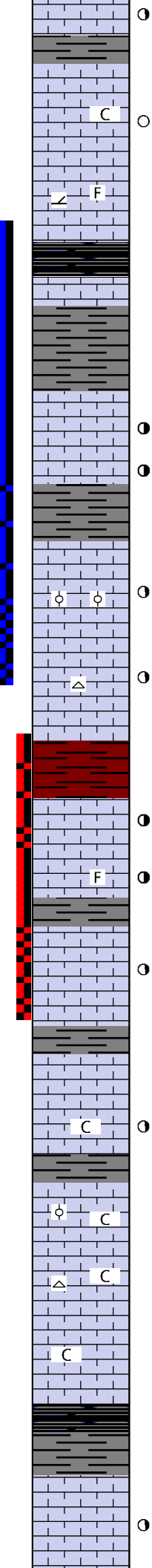
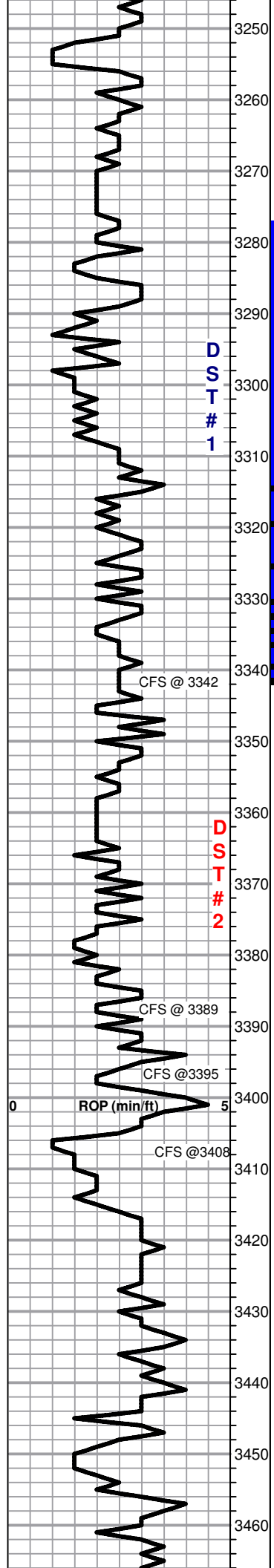
Lm- crm- vfn-fnxln, mostly tight, 6-10 chips w/ pr-fr inxln por, pr lt brn stn, SFO upon crush, fr-gd gassy odor

Lm- crm- fnxln, mostly tight, foss, v. few chips w/ pr-fr inxln- infoss por, pr-fr brn stn, slit SFO, fr-gd odor

Wt 8.3
Vis 63

Wt 8.3
Vis 60

Wt 8.4
Vis 50



Lm- crm- fnxln, fairly tight, scat pr-fr inxln por, pr-fr brn stn, few pcs SFO upon crush, few scat vuggs, fr odor

Lm- crm- fnxln, fairly chalky, scat pr inxln por, 2-3 chips w/ pr inxln por, lt brn stn, stl SFO upon crush, pr- fr odor

Lm- crm- fnxln, dense, stly dolomitic, foss, pyrite

Heebner: SPL 3282' (-1149) 3280' (-1147)
Sh- blk, carb

Sh- various colors, mostly soft, waxy, some dense, blocky

Toronto: SPL 3308' (-1175) 3301' (-1168)
Lm- crm- fnxln, fairly tight, scat pr-fr inxln por, fr v. lt brn stn, slt FO sheen, fr odor

Lm- crm- fnxln, slightly tight, slightly chalky, scat fr-gd inxln por, fr lt brn stn, slt sheen FO, fr odor

LKC: SPL 3326 (-1193) 3320' (-1187)

Lm- crm- vfn-fnxln, oolitic, mostly well consolidated, few pcs w/ pr-fr inoolitic por, pr brn stn, slt SFO, pr-fr odor

Lm- A/A, tight, cherty, few pcs w/ pr inxln- inoolitic ppt por, brn stn in por, slt SFO upon crush, pr-fr odor,

Lm- wt-crm, dense, barren, stly cherty, scat pr vuggy por

Sh- red- gry, muddy, waxy, soft

Lm- crm- vfn-fnxln, fairly tight, scat fr inxln por w/ few scat vugs, fr lt brn stn, trace FO, Gd odor

Lm- crm-fnxln, scat foss, scat fr inxln por w/ few scat inoolitic ppt por, fr lt brn stn, fr SFO fr odor

Lm- crm- fnxln, few scat chips w/ pr inxln por, fr drk brn stn, pr-fr odor

Lm- off wt, tight, few chips w/ v. pr inxln por, pr lt brn stn, NSFO, no odor

Lm- crm- fnxln, stly chalky, mostly tight, scat pr inxln w/ a few fr inxln por, pr-fr brn- blk stn, few chips w/ pr-fr SFO and gas bubbles when heated, no odor

Lm- crm- fnxln, foss, well cemented oolites, v chalky, scat wt/orange chert

Lm- crm-fnxln, scat foss, chalky, dull wt/orange angular chert

Lm- crm- fnxln, chalky, scat foss, scat pr inxln por, chert throughout

Sh- blk carb

Sh- gry, earthy waxy

Lm- crm- brn, fnxln, foss, fairly tight, few scat chips w/ pr inxln mixed w/ v few fr inxln por, pr- fr brn stn, 3-4 chips had FO bubbles from pores, pr odor

SHORT TRIP
SURVEY 1/2°
STRAP +0.36

**TOOL SLID -12' TO
BOTTOM**

DST #1 (TOR-LKC A)
3277'-3342'
30-45-45-60

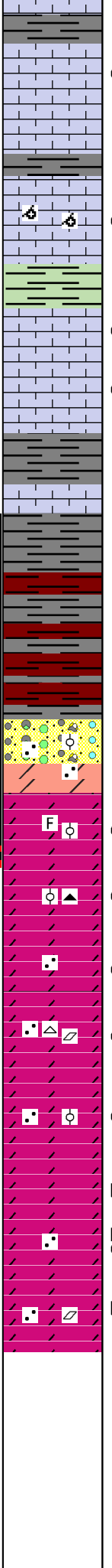
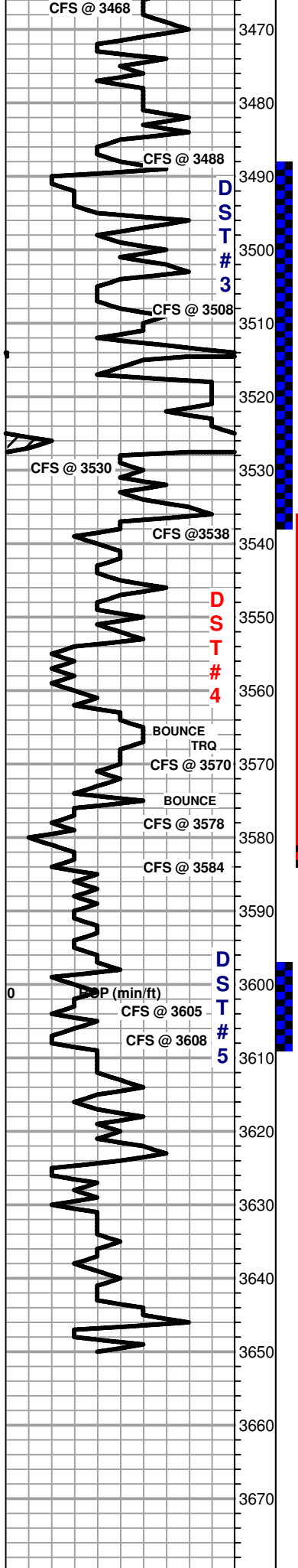
290' TF
64' GSOCM
(20%G,10%O,70%M)
63' GOCM
(20%G,20%O,60%M)
63' GMO
(20%G,40%M,40%O)
100' GO
(30%G,70%O)
535' GIP

IFP: 51-91#
FFP: 94-143#
SIP: 789-787#
BHT: 101°

DST #2 (LKC C-D)
3349'-3389'
45-45-45-45

15' OSM
(100%M)

IFP: 11-15#
FFP: 18-19#
SIP: 524-374#
BHT: 100°



Lm- crm- fnxln, stly chalky in prt, scar pr-fr inxln- ppt por w/ few scat vugs, pr-fr brn-blk stn, tr FO, fr odor, fairly tight, 2-3 chips w/ fr- gd dev

Lm- crm- fnxln, stly chalky, foss through, clean, barren, pr dev

Lm- crm-tan- fnxln, oomoldic, fr- gd oomoldic por through most of spl, scat pr-fr inxln por, scat brn stn, few pcs w/ SFO upon crush, fr-gd odor

Sh- green-gray-red, soft, earthy, clumpy

Lm- crm- fnxln, stly chalky, scat pr- fr inxln por, few scat vugs, pr-fr brn stn, slt FO sheen, slt odor

Lm- crm- vfn-fnxln, scar pr-fr inxln por, pr-fr lt brn stn, slt SFO upon crush in few pcs, pr dev w/ few scat chips w/ fr, pr-fr odor

Lm- crm-gry/brn, fnxln, foss, stly chalky, fairly well consolidated, few scat chips w/ pr inxln por, 2-3 w/ pr brn stn, NSFO, pr odor

BKC: SPL 3538 (-1405) LOG 3536' (-1403)

Sh- gry, trashy, sandy

Sh- red, muddy, sandy

Chert- dolo/Lm, crm fnxln, foss, oolitic, few scat v. pr in oolitic por, tight, 2-3 chips w/ pr brn stn, 1 w/ FO droplets, no odor, few scat sand clusters, well cemented, well rounded, well sorted, fairly pr dev

ARBUCKLE: SPL 3575 (-1442) LOG 3573' (-1440)

Dolo- crm- wt, foss, oolitic, scat mostly pr inoolitic por w/ a few chips fr-gd, few chips w/ fr brn stn, semi saturated, FO droplets oozing from pores, pr odor

Dolo- crm- vfn-fnxln, abundant in orange chert, oolitic, v. few chips w/ pr-fr inxln-inoolitic por, v few chips w/ fr brn stn, pr-fr sat, fr SFO droplets upon crush and in pores, pr odor, trashy

Dolo A/A, few scat sltly sucrosic/ sandy, fr brn stn, w/ 3-4 chips gd blk stn, slt sheen FO in cup, 3-4 chips fr-gd SFO, fr sat, pr odor

Dolo- crm- fnxln- mdgrn, sandy, stly rhombic in prt, well cemented, fairly tight, scat fr inxln-ingranular por, scar fr blk stn, scat fr-gd sat, sheen & droplets FO in cup and in pores, slt odor, chert wt-orange

Dolo- crm- fnxln-mdgrn, sandy, sucrosic, oolitic, well cemented,, tight, scat pr-fr inxln-ingrn/oolitic por, scat frn brn stn, fr sat, fr-gd FO sheen, pr-no odor

D Dolo- crm-lt pnk, fnxln, scat sucrosic, scat pr inxln por, dead oil

D Dolo- crm-wt, fnxln w/ few chips fn-mdgrn, sandy, scat pr- fr inxln-ingrn por, 3-4 chips pr brn stn, fr FO sheen in cup, pr odor, scat dead oil

D Dolo- crm-wt, mdgrn, sandy, scat rhombic, pr-fr inxln por, dead oil

RTD: 3650' (-1517) LTD: 3648' (-1515)

SURVEY 1°

DST #3 (LKC J-L)
3489'-3538'
30-45-45-60

325' TF
200' MW
40%M, 60%W
125' WCM
15%W, 85%M

IFP: 15-82#
FFP: 84-162#
SIP: 841-800#
BHT: 105°
CHLOR: 33K

Wt 8.8
Vis 46
LCM 4#

DST #4
ARBUCKLE
3506'-3584'
MISRUN

Wt 8.8
Vis 58
LCM 4#

DST #5
ARBUCKLE
3597'- 3608'

10' MUD

IFP 13-14#
FFP 15-15#
SIP 511-459#

Wt 8.8
Vis 50

GEO OFF LOCATION
@ 10:30 8/17/19