



Scale 1:240 Imperial

Well Name: LARRY #1  
Surface Location: W2 SE SE SW 20-9-19  
Bottom Location:  
API: 15-163-24347  
License Number: 34903  
Spud Date: 11/10/2017 Time: 12:00 PM  
Region: ROOKS COUNTY KANSAS  
Drilling Completed: 11/18/2017 Time: 6:16 PM  
Surface Coordinates: 330' FSL & 2290' FWL  
Bottom Hole Coordinates:  
Ground Elevation: 2141.00ft  
K.B. Elevation: 2146.00ft  
Logged Interval: 2900.00ft To: 3599.00ft  
Total Depth: 3595.00ft  
Formation: LANSING - KANSAS CITY; ARBUCKLE  
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

#### OPERATOR

Company: JASPAR CO.  
Address: P.O. BOX 1120  
HAYS, KS 67601  
  
Contact Geologist: SHANE VEHIGE  
Contact Phone Nbr: (785) 623-6982  
Well Name: LARRY #1  
Location: W2 SE SE SW 20-9-19  
API: 15-163-24347  
Pool:  
State: KANSAS  
Field: UNNAMED  
Country: USA

#### SURFACE CO-ORDINATES

Well Type: Vertical  
Longitude: -99.4665087  
Latitude: 39.2495970  
N/S Co-ord: 330' FSL  
E/W Co-ord: 2290' FWL

#### LOGGED BY



Company: BIG CREEK CONSULTING, INC.  
Address: 1909 MAPLE  
ELLIS, KS 67637

Phone Nbr: (785) 259-3737  
 Logged By: GEOLOGIST

Name: JEFF LAWLER

**CONTRACTOR**

Contractor: WW DRILLING, LLC  
 Rig #: 4  
 Rig Type: MUD ROTARY  
 Spud Date: 11/10/2017  
 TD Date: 11/18/2017  
 Rig Release: 11/20/2017  
 Time: 12:00 PM  
 Time: 6:16 PM  
 Time: 1:00 AM

**ELEVATIONS**

K.B. Elevation: 2146.00ft  
 K.B. to Ground: 5.00ft  
 Ground Elevation: 2141.00ft

**NOTES**


DUE TO ECONOMICAL RECOVERY ON DRILL STEM TESTS THE DECISION WAS MADE TO RUN 5 1/2" PRODUCTION CASING AND FURTHER EVALUATE ZONES OF INTEREST.

RESPECTFULLY SUBMITTED,  
 JEFF LAWLER

**WELL COMPARISON SHEET**

FORMATION	LARRY #1				SW SW SE 20-9-19				SW SE SW 20-9-19				NW NESW 29-9-19				SE NW SE 19-9-16			
	2146		2141		2175		2137		2141		2144		2144		2144		2144			
	KB	GL	GL	GL	KB	GL	GL	GL	KB	GL	GL	GL	KB	GL	GL	GL	KB	GL	GL	GL
	LOG TOPS	SAMPLE TOPS	LOG	LOG	SMPL.	COMP. CARD	LOG	SMPL.	LOGS	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	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.
ANHYDRITE TOP	1546	600	1550	596	1568	607	- 7	- 11	1536	601	- 1	- 5	1540	601	- 1	- 5				
BASE	1585	561	1587	559									1581	560	+ 1	- 1				
TOPEKA	3094	-948	3093	-947	3121	-946	- 2	- 1					3093	-952	+ 4	+ 5	3094	-950	+ 2	+ 3
HEEBNER SHALE	3296	-1150	3294	-1148	3327	-1152	+ 2	+ 4	3293	-1156	+ 6	+ 8	3298	-1157	+ 7	+ 9	3301	-1157	+ 7	+ 9
TORONTO	3320	-1174	3315	-1169	3348	-1173	- 1	+ 4					3319	-1178	+ 4	+ 9	3324	-1180	+ 6	+ 11
LKC	3341	-1195	3336	-1190	3368	-1193	- 2	+ 3	3323	-1186	- 9	- 4	3339	-1198	+ 3	+ 8	3342	-1198	+ 3	+ 8
BKC	3557	-1411	3554	-1408	3586	-1411	+ 0	+ 3					3559	-1418	+ 7	+ 10	3561	-1417	+ 6	+ 9
CONGLOMERATE													3584	-1443			3571	-1427		
ARBUCKLE	3582	-1436	3581	-1435	3611	-1436	+ 0	+ 1	3580	-1443	+ 7	+ 8	3586	-1445	+ 9	+ 10	3589	-1445	+ 9	+ 10
TOTAL DEPTH	3599	-1453	3595	-1449	3690	-1515	+ 62	+ 66	3663	-1526	+ 73	+ 77	3624	-1483	+ 30	+ 34	3591	-1447	- 6	- 2

**DST #1 TORONTO - LKC A 3290' - 3350'**



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Jaspar Co  
 PO BOX 1120  
 Hays KS 67601  
 ATTN: Jeff Lawler

**20-9s-19w Rooks KS**

**Larry #1**  
 Job Ticket: 63180  
 Test Start: 2017.11.15 @ 03:26:00

**DST#: 1**

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**GENERAL INFORMATION:**

Formation: **Toronto-LKC 'A'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:09:00  
 Time Test Ended: 11:58:30

Interval: **3290.00 ft (KB) To 3350.00 ft (KB) (TVD)**  
 Total Depth: 3350.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 2146.00 ft (KB)  
 2141.00 ft (CF)  
 KB to GR/CF: 5.00 ft

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**Serial #: 8934 Outside**

Press@RunDepth: 132.36 psig @ 3291.00 ft (KB)  
 Start Date: 2017.11.15 End Date: 2017.11.15  
 Start Time: 03:26:15 End Time: 11:58:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2017.11.15  
 Time On Btm: 2017.11.15 @ 07:08:45  
 Time Off Btm: 2017.11.15 @ 10:09:30

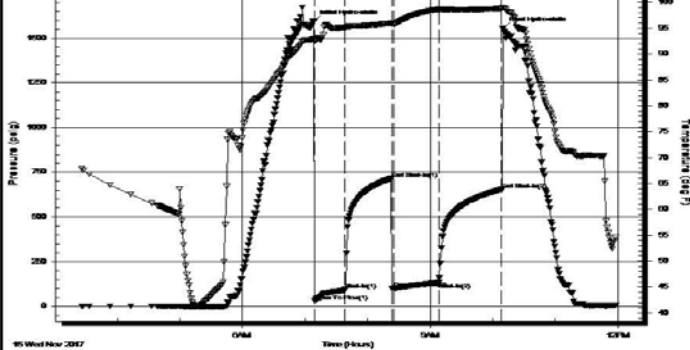
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**TEST COMMENT:** 30-IF-Fair Blow ; BOB in 20 mins  
 45-ISI-No Return  
 45-FF-Fair Blow ; Built to 9&1/2"  
 60-FSI-Weak Blow ; Died 20 mins in

Pressure vs. Time

**PRESSURE SUMMARY**

Time	Pressure	Temp	Annotation
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(Min.)	(psig)	(deg F)	
0	1596.19	92.93	Initial Hydro-static
1	28.31	92.39	Open To Flow (1)
30	89.67	95.14	Shut-In(1)
75	714.90	95.93	End Shut-In(1)
76	99.29	95.76	Open To Flow (2)
120	132.36	98.65	Shut-In(2)
180	653.70	98.81	End Shut-In(2)
181	1554.55	99.04	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
120.00	MWV 30% M 70% WV	0.59
60.00	WCM 5% W 95% M	0.84
75.00	OCM 7% O 93% M	1.05
15.00	MCO 5% M 95% O	0.21

### Gas Rates

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

Trilobite Testing, Inc

Ref. No: 63180

Printed: 2017.11.15 @ 13:22:25

## DST #2 LKC C - D 3354' - 3414'



**TRILOBITE TESTING, INC.**

### DRILL STEM TEST REPORT

Jaspar Co  
 PO BOX 1120  
 Hays KS 67601  
 ATTN: Jeff Lawler

**20-9s-19w Rooks KS**  
**Larry #1**  
 Job Ticket: 63181 **DST#: 2**  
 Test Start: 2017.11.15 @ 20:22:00

#### GENERAL INFORMATION:

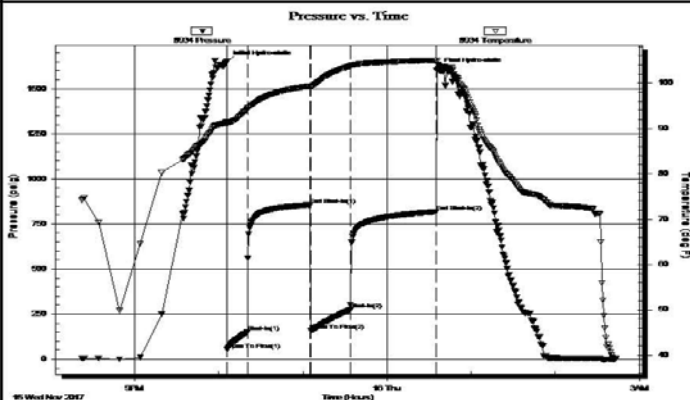
Formation: **LKC 'C-D'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:05:45  
 Time Test Ended: 02:43:30  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Interval: **3354.00 ft (KB) To 3414.00 ft (KB) (TVD)**  
 Total Depth: 3414.00 ft (KB) (TVD)  
 Reference Elevations: 2146.00 ft (KB)  
 2141.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 5.00 ft

#### Serial #: 8934

#### Inside

Press@RunDepth: 273.64 psig @ 3355.00 ft (KB)  
 Start Date: 2017.11.15 End Date: 2017.11.16  
 Start Time: 20:22:15 End Time: 02:43:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2017.11.16  
 Time On Btm: 2017.11.15 @ 22:05:30  
 Time Off Btm: 2017.11.16 @ 00:36:30

**TEST COMMENT:** 15-IF-Strong Blow ; BOB in 5 mins  
 45-ISI-Weak Surface Blow @ 7 mins; died after 8 mins  
 30-FF-Strong Blow ; BOB in 6 mins  
 60-FS-No Return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1650.16	91.45	Initial Hydro-static
1	53.93	90.96	Open To Flow (1)
15	151.57	94.23	Shut-In(1)
60	854.61	99.34	End Shut-In(1)
61	157.84	99.23	Open To Flow (2)
89	273.64	103.74	Shut-In(2)
150	816.19	105.03	End Shut-In(2)
151	1608.41	103.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
525.00	MWV 30% M 70%WV	6.27
10.00	MWV 50% M 50%WV	0.14

\* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 63181

Gas Rates

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

Printed: 2017.11.16 @ 08:49:26

DST #3 LKC E - F 3414' - 3430'



**TRILOBITE TESTING, INC.**

DRILL STEM TEST REPORT

Jaspar Co  
 PO BOX 1120  
 Hays KS 67601  
 ATTN: Jeff Lawler

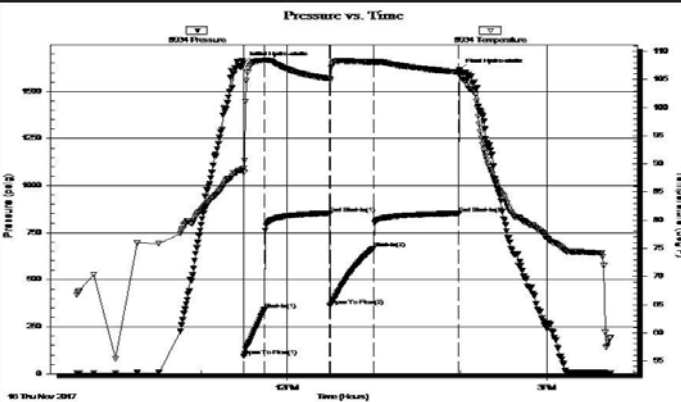
**20-9s-19w Rooks KS**  
**Larry #1**  
 Job Ticket: 63182      **DST#: 3**  
 Test Start: 2017.11.16 @ 09:34:00

GENERAL INFORMATION:

Formation: **LKC 'E-F**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:30:00  
 Time Test Ended: 15:44:15  
 Interval: **3414.00 ft (KB) To 3430.00 ft (KB) (TVD)**  
 Total Depth: 3430.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 2146.00 ft (KB)  
 2141.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8934      Outside**  
 Press@RunDepth: 666.71 psig @ 3417.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2017.11.16      End Date: 2017.11.16      Last Calib.: 2017.11.16  
 Start Time: 09:34:15      End Time: 15:44:15      Time On Btm: 2017.11.16 @ 11:29:45  
 Time Off Btm: 2017.11.16 @ 13:59:15

TEST COMMENT: 15-IF-Strong Blow ; BOB in 2 mins  
 45-ISI-Weak Blow ; Built to 1&1/4"  
 30-FF-Strong Blow ; BOB in 1&1/2 mins  
 60-FSI-Weak Surface Blow @ 12 mins ; Died after 5 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1652.21	89.14	Initial Hydro-static
1	93.45	88.48	Open To Flow (1)
15	341.04	108.38	Shut-In(1)
60	852.87	105.09	End Shut-In(1)
60	362.28	104.80	Open To Flow (2)
90	666.71	108.11	Shut-In(2)
149	851.78	106.29	End Shut-In(2)
150	1614.40	106.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1100.00	Water 100%WV	14.34
300.00	MCW 5% M 95%WV	4.21

\* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 63182

Gas Rates

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

Printed: 2017.11.16 @ 17:00:22

**DST #4 LKC H - I 3458' - 3509'**



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Jaspar Co  
 PO BOX 1120  
 Hays KS 67601  
 ATTN: Jeff Lawler

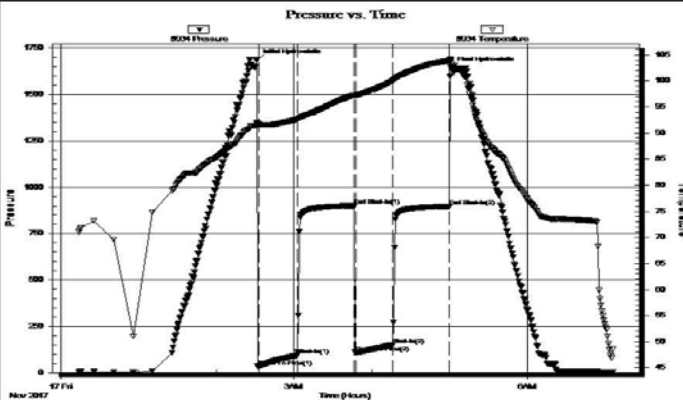
**20-9s-19w Rooks KS**  
**Larry #1**  
 Job Ticket: 63183      **DST#: 4**  
 Test Start: 2017.11.17 @ 00:14:00

**GENERAL INFORMATION:**

Formation: **LKC 'H-I'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:32:45  
 Time Test Ended: 07:06:15  
 Interval: **3458.00 ft (KB) To 3509.00 ft (KB) (TVD)**  
 Total Depth: 3509.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 2146.00 ft (KB)  
 2141.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8934      Inside**  
 Press@RunDepth: 150.97 psig @ 3463.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2017.11.17      End Date: 2017.11.17      Last Calib.: 2017.11.17  
 Start Time: 00:14:15      End Time: 07:06:15      Time On Btm: 2017.11.17 @ 02:31:30  
 Time Off Btm: 2017.11.17 @ 05:01:00

**TEST COMMENT:** 30-IF-Fair Blow ; BOB in 17 mins  
 45-ISI-Weak Blow ; Built to 1/2"; Died back to 1/4"  
 30-FF-Fair Blow ; BOB in 16 mins  
 45-FSI-Weak Blow ; Built to 1"; Died back to 1/4"



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1685.75	91.94	Initial Hydro-static
2	34.42	91.66	Open To Flow (1)
31	94.51	92.64	Shut-In(1)
75	900.65	97.28	End Shut-In(1)
76	109.57	97.19	Open To Flow (2)
105	150.97	100.01	Shut-In(2)
149	896.32	103.88	End Shut-In(2)
150	1643.87	104.11	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
60.00	OCVM 2%O 28%W 70%M	0.30
120.00	OCMV 1%O 10%M 89%W	1.14
60.00	OCVM 3%O 27%W 70%M	0.84
10.00	OCM 5%O 95%M	0.14
30.00	MCOG 5%M 10%G 85%O	0.42

\* Recovery from multiple tests

**Gas Rates**

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

Trilobite Testing, Inc

Ref. No: 63183

Printed: 2017.11.18 @ 11:35:51

**ROCK TYPES**

Dolprim     
  shale, gry     
  shale, red  
 Lmst fw7>     
  Carbon Sh

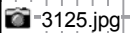
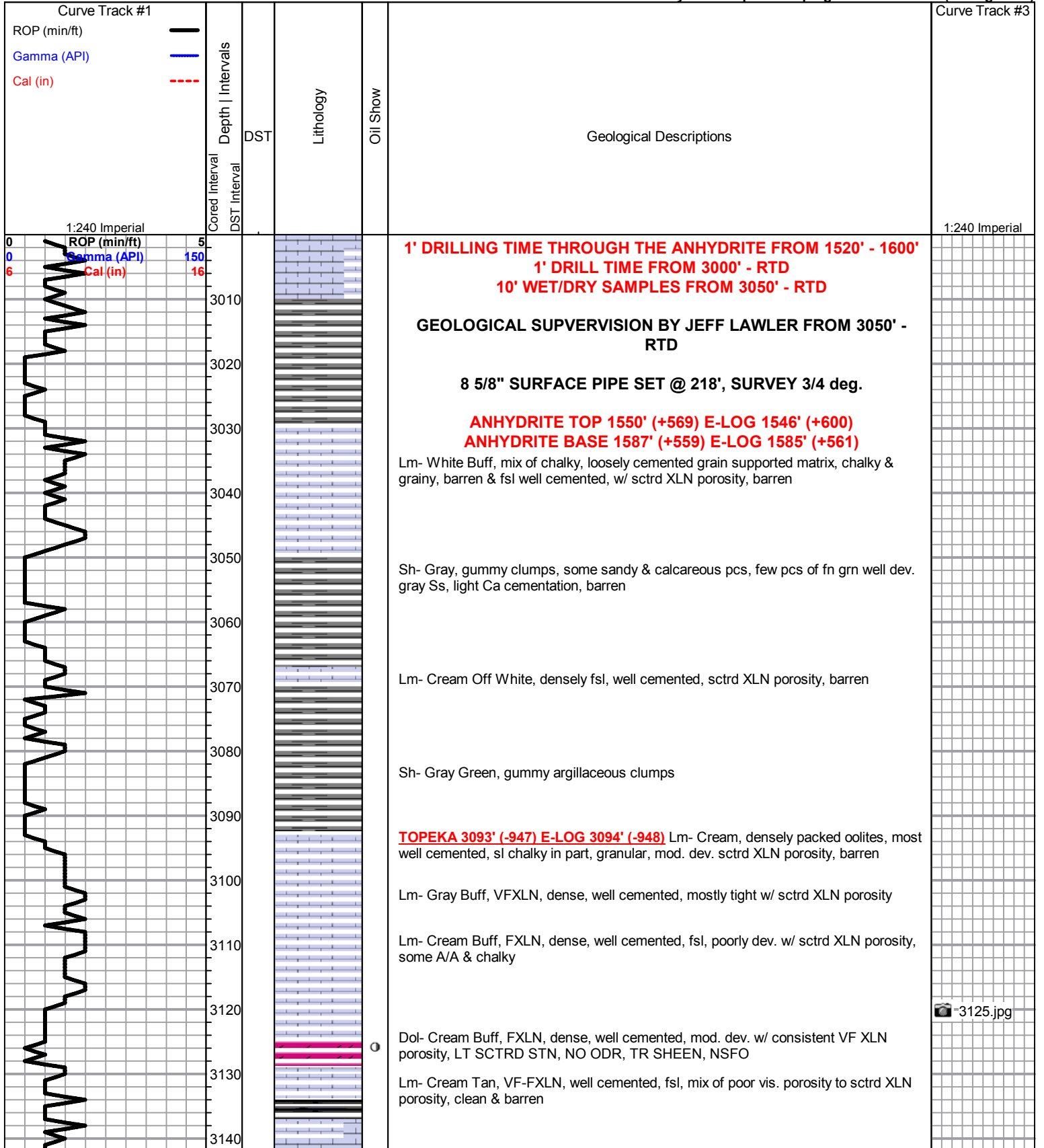
**ACCESSORIES**

**FOSSIL**  
 ⚡ Oomoldic

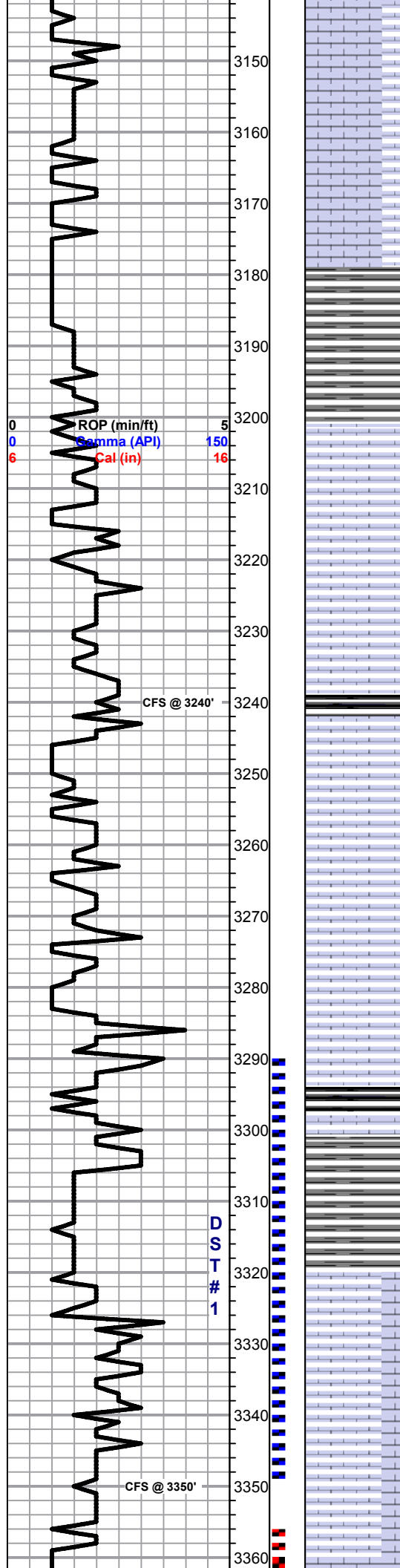
**OTHER SYMBOLS**

- MISC**
- Daily Report
  - Digital Photo
  - Document
  - Folder
  - Link
  - Vertical Log File
  - Horizontal Log File
  - Core Log File
  - Drill Cuttings Rpt

- DST**
- DST Int
  - DST alt







Lm- Cream Off White, FXLN, semi-granular, fsl & oolitic, mod. well dev., some sl chalky in part, sctrd XLN & vry fn ppt inter oolite porosity, barren

Lm/Chert- Cream Translucent, fresh bedded fsl chert w/o vis. porosity

Lm- Cream White, abundant soft white chalk, grainy arenaceous Ls, loosely cemented & crumbly, barren

Lm- A/A

Lm- Cream Off White, FXLN, dense, well cemented, sl fsl, sctrd XLN porosity, some chalky in part, barren

Lm- Cream, VFXLN, dense, vry well cemented, tight w/ min. vis. porosity, vry clean & barren

Lm- Tan Buff, FXLN, loosely cemented, densely fsl w/ crinoids, sctrd XLN porosity, barren

Sh- Black Gray Brown Maroon Green, carbonaceous, argillaceous clumps, gritty & earthy

Lm- Cream Off White, FXLN, fsl, dense, mostly well cemented, sctrd XLN porosity, barren, 1 pc. loosely cemented w/ consistent fn ppt porosity, SCTRDRK STN, NO ODR, TR FO

Lm- Cream Buff, VF-FXLN, dense, well cemented, sl fsl, sctrd XLN & fn ppt porosity, DRK STN, TR FO, GD ODR

Lm- Cream Buff, VF-FXLN, dense, well cemented, sl dolomitic Ls, tight w/ micro XLN porosity, barren

Lm- Cream Off White, VFXLN, dense, fsl cherty Ls w/ poor vis. porosity, some dolomitic chert, barren

Lm- Cream Off White, FXLN, mix of well cemented & loosely cemented, heavily mottled, sctrd XLN porosity, some sl fsl, barren, some soft white chalk

**HEEBNER 3294' (-1148) E-LOG 3296' (-1150)** Sh- Black, carbonaceous & fissile

Sh- Gray Maroon, gummy clumps & wash, gritty & earthy

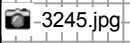
**TORONTO 3315' (-1169) E-LOG 3320' (-1174)** Lm- Cream, mix of VFXLN mudstone w/ poor vis. porosity, sctrd secondary reXLN inclusions, sctrd vry fn ppt porosity, SCTRDRK STN, TR FO, NODR, & loosely cemented & densely fsl w/ sctrd ppt & XLN porosity, barren

Sh- Green Maroon, gummy wash

**LKC 3336' (-1190) E-LOG 3341' (-1195)** Lm- Off White, FXLN, fsl & oolitic, mod. well dev. w/ sctrd ppt interoolite porosity, some sctrd reXLN w/in porosity, SCTRDRK STN, NSFO, FR ODR

**\*\*ODOR CARRIED OVER FROM DST #1\*\***

Chert/Lm- White Cream, mix of fsl fresh bedded & gritty dolomitic chert, all barren, some soft white chalk



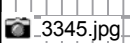
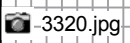
SHORT TRIP STRAP +0.36' SURVEY 3/4 deg.

DST #1 TORONTO - LKC A 30-45-45-60

280' TOTAL FLUID  
 120' MW (70%W, 30%M)  
 60' WCM (5%W, 95%M)  
 75' OCM (7%O, 93%M)  
 15'MCO (95%O, 5%M)

Gr: 35 API  
 CHLOR: 56K

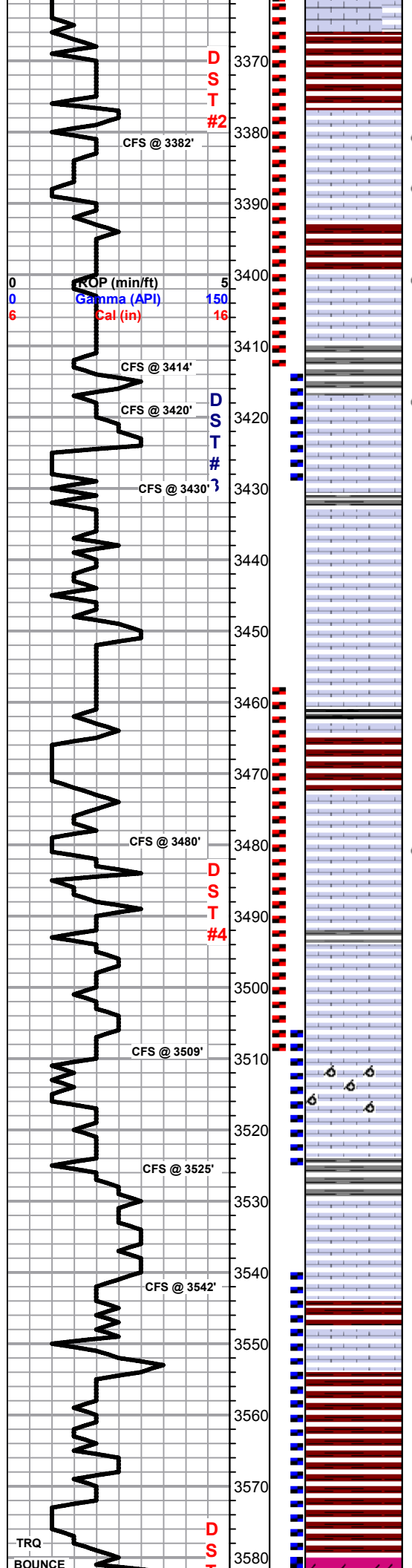
IFP: 28-89#  
 FFP: 99-132#  
 SIP: 714-653#  
 BHT: 99



DST #2 LKC C - D 3354' - 3414' 15-45-30-60

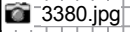
535' TOTAL FLUID  
 525' MW (70%W)  
 10' MW (50%W)

IFP: 53-151#  
FFP: 157-273#  
SIP: 854-816#  
CLHOR: 70K

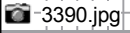


Sh- Maroon Green Gray, gritty & earthy, some gummy wash

Lm- Cream Buff, VF-FXLN, mix of dense, well cemented w/ sctrd dev. & fn ppt to ppt porosity, sctrd secondary reXLN w/in porosity, LT SCTRD STN, GSY FRO UPON CRUSH, GD ODR (some recirc. from dumped DST #1)



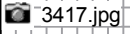
Lm- Off White, FXLN, fsl & oolitic, mod. well dev., some oolite clusters, all w/ sctrd fn ppt to ppt porosity, LT SCTRD STN, TR FO UPON CRUSH, FR ODR (NOTE ABOVE)



Lm- Cream Off White, VF-FXLN, dense, well cemented, poorly dev. w/ sctrd micro XLN porosity, SCTRD LT STN, NSFO, FR ODR (NOTE ABOVE)



Lm- Cream, VF-FXLN, well cemented, sctrd to rare ppt porosity, SCTRD DRK STN, SL TR FO, SL INFLUX IN ODR



DST #3  
LKC E - F  
3414' - 3430'  
15-45-30-60

Lm- White, abundant amount of soft white chalk, VF-FXLN, dense, well cemented, mostly tight w/ poor vis. porosity, vry clean & barren

1400' TOTAL FLUID  
1100' WATER 100%

300' MCW (95%W, 5%M)

Lm/Chert- mix of Off White Cream, VF-FXLN clean & barren Ls w/ XLN porosity & FXLN dolomitic Ls w/ consistent fnXLN porosity, barren, soft white chalk & loosely cemented chalky Ls, barren, bone white & milky tan fresh bedded sl fsl chert, cryptoXLN

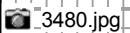
IFP: 93-341#  
FFP: 362-666#  
SIP: 852-851#  
BHT: 106 deg.  
CHLOR: 94K  
Rw: .999 @ 60deg

Lm- Cream Buff, VF-FXLN, dense, well cemented, mostly tight w/ sctrd XLN porosity, barren

Sh- Black Maroon Gray Green, fissile & carbonaceous, gritty & earthy, slick slivers

Lm- Cream Buff, FXLN, dense, well cemented, mostly tight w/ sctrd XLN porosity, vry clean & barren

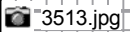
Lm- Cream Off White, F-MED XLN, mod. well dev. fsl w/ sctrd XLN & ppt porosity, DRK SUB-SAT TO SAT STN, SL TR FO, FR ODR



Sh- dense semi-waxy slivers, gritty & earthy, sl calcareous

Lm- Cream Tan, VFXLN, dense, well cemented, tight w/ min. vis. porosity, clean & barren

Lm- Tan Cream, FXLLN, mod. well dev. oomoldic, mostly consistent vuggy porosity, DRK SUB-STN, NOSFO, GD ODR



DST #4  
LKC H - I  
3458' - 3509'  
30-45-30-45

Lm- Gray Buff, FXLN, fsl, poorly dev. well cemented, sctrd XLN porosity, sl trashy, barren

Lm- Cream Off White, VF-FXLN, mix of tight well cemented w/ no - poor vis. porosity & sl fsl, poorly dev. w/ sctrd XLN porosity, all vry clean & barren

280' TOTAL FLUID  
60' OCWM (2%O, 28%W, 70%M)

120' OCWM (1%O, 89%W, 10%M)

60' OCWM (3%O, 27%W, 70%M)

10' OCM (5%O, 95%M)

30' MGGO (10%G, 85%O, 5%M)

Gr: 36 deg

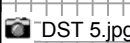
Sh- Gray Maroon Black, silty & soft, sl pebbly, gritty & earthy, fissile & carbonaceous

Lm- Cream Off White, fsl & oolitic mix, some well cemented & tight w/ min. vis. porosity, some loosely cemented & sl chalky in part, all barren

**BKC 3554' (-1408) E-LOG 3557' (-1411)** Sh- Maroon Green, mix of arenaceous sandy shale/shaley Ss & argillaceous wash

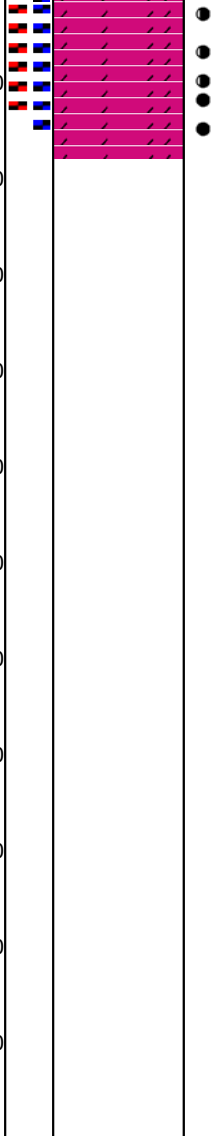
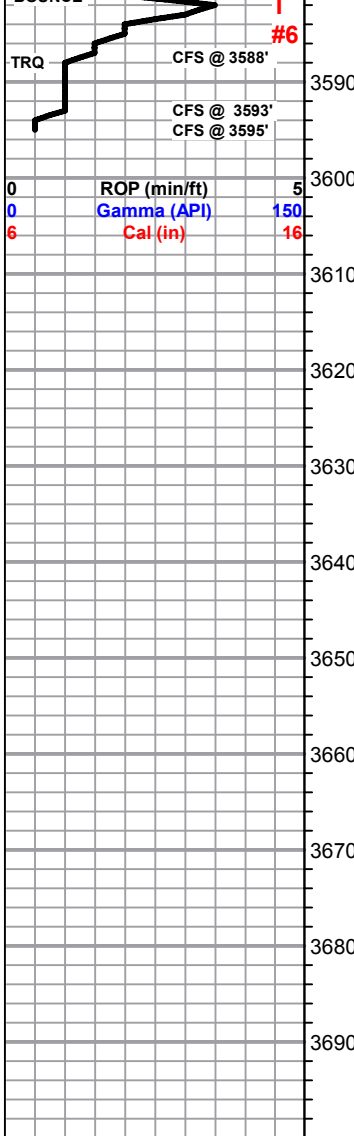
IFP: 34-94#  
FFP: 109-150#  
SIP: 900-896#  
BHT: 106 deg.  
CHLOR: 74K

Sh- A/A w/ influx of calcaerous green shale & argillaceous wash



**ARBUCKLE 3581' (-1435) E-LOG 3582' (-1436)**





**ARBUCKLE 3587 (-1499) E-LOG 3592 (-1499)**

**3588'-40"** Dolomite- Cream, VF-FXLN, sctrd dev. well cemented, most w/ micro XLN porosity, few w/ sctrd fn ppt porosity, most w/ DRK SCTRDR STN, HVY SHEEN, TR FO, FR ODR

**60"** Dolo- Cream Tan, F-Med XLN, sl more dev., few pcs w/ mostly consistent ppt inter XLN porosity, SCTRDR DRK STN, GD SHEEN, FR SFO, GD ODR

**3593' 20"** Dol- Cream Off White, F-Med XLN, mod. well dev. w/ mostly consistent ppt interXLN porosity, DRK STN, FR SFO, GD ODR, some w/ vis. rhombic matrix

**40"** Dolo- White Cream, Med XLN, good consistent ppt interXLN porosity, vis. rhombic matrix, DRK STN, GD SFO, GD ODR

**60"** A/A

**3595' 40"** Dolo- Cream, FXLN, vry well dev. w/ consistent fn ppt porosity throughout, SAT BLK STN, BLEEDING FO, GD ODR

**60"** Dolo- Cream, FXLN, A/A

**RTD 3595' (-1449) LTD @ 18:16 11/18/2017**

DST 7.jpg

3588-60.jpg

3593-20.jpg

3593-60.jpg

3595.jpg

DST #5  
LKC J  
3507' - 3525'  
45-45-45-45

62' TOTAL FLUID  
57' HOCM  
(40% O, 60% M)  
5' CLEAN OIL  
Gr: 35 deg.

IFP: 36-29#  
FFP: 44-40#  
SIP: 864-763#  
HYD: 1729-1653#  
BHT: 97 deg.

DST #6  
ARBUCKLE  
3582' - 3593'  
TOOL SLID 8' TO  
BOTTOM &  
PLUGGED 2 min  
INTO 1st OPEN

5' MUD W/ SCUM  
OIL

DST #7  
ARBUCKLE  
3540' - 3595'  
30-60-45-90

220' TOTAL FLUID  
190' HMCO  
(60% O, 40% M)  
30' MCO  
(80% O, 20% M)

Gr: 25 deg.

IFP: 41-76#  
FFP: 82-100#  
SIP: 1022-1008#  
HYD: 1722-1681#  
BHT: 98 deg.



0.2 mm

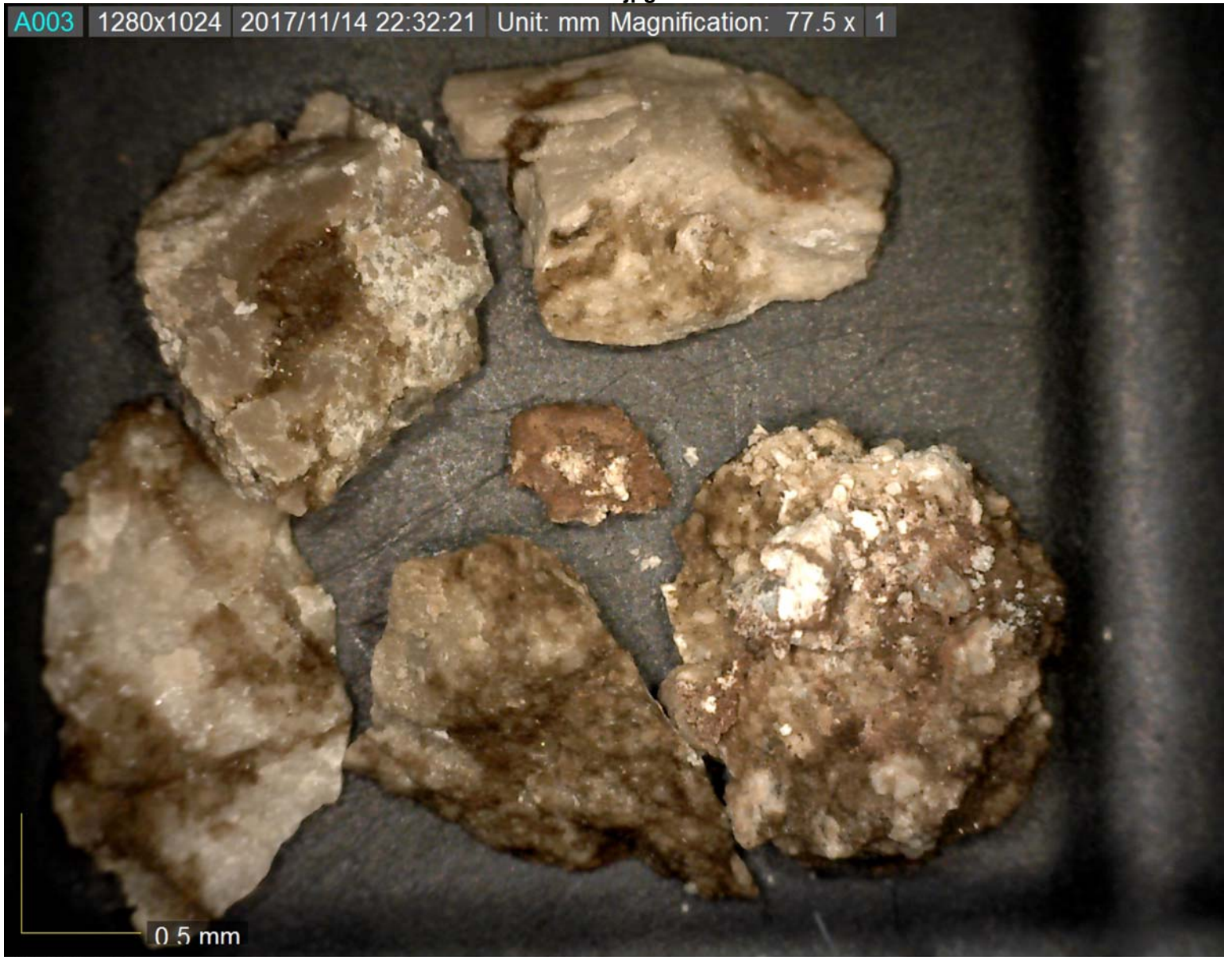
3125' X 30



0.5 mm

3245' x 25





3320' X 20







0.5 mm

3370' x 20





0.5 mm

3380' X 25







0.5 mm

3417' X 20



0.5 mm


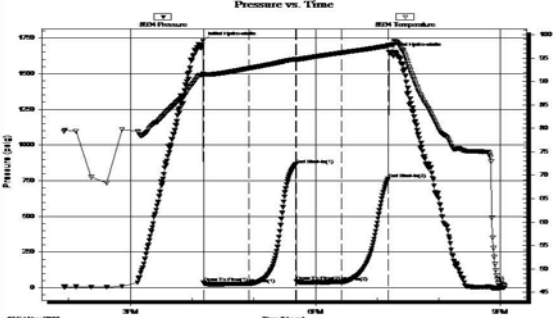
3480' x 20





0.5 mm

3513' X 20

 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>																																										
	Jaspar Co PO BOX 1120 Hays KS 67601 ATTN: Jeff Lawler	20-9s-19w Rooks KS Larry #1 Job Ticket: 63184 <b>DST#: 5</b> Test Start: 2017.11.17 @ 13:55:15																																									
<b>GENERAL INFORMATION:</b> Formation: <b>LKC 'J'</b> Deviated: No Whipstock      ft (KB) Time Tool Opened: 16:11:00 Time Test Ended: 21:04:00 Test Type: Conventional Bottom Hole (Reset) Tester: Spencer J. Staab Unit No: 84 Reference Elevations: 2146.00 ft (KB) 2141.00 ft (CF) KB to GR/CF: 5.00 ft Interval: <b>3507.00 ft (KB) To 3525.00 ft (KB) (TVD)</b> Total Depth: 3525.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair																																											
<b>Serial #: 8934      Outside</b> Press@RunDepth: 40.63 psig @ 3512.00 ft (KB)      Capacity: 8000.00 psig Start Date: 2017.11.17      End Date: 2017.11.17      Last Calib.: 2017.11.17 Start Time: 13:55:15      End Time: 21:04:00      Time On Btm: 2017.11.17 @ 16:10:45 Time Off Btm: 2017.11.17 @ 19:11:15																																											
<b>TEST COMMENT:</b> 45-IF-Weak Blow ; Built to 1&3/4" 45-ISI-No Return 45-FF-Weak Blow ; Built to 1&3/4" 45-FSI-No Return																																											
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3588-40.jpg



3588-60.jpg





3593-20.jpg

A013 1280x1024 2017/11/18 06:31:46 Unit: mm Magnification: 116.2 x 1



3593' 20"

3593-60.jpg

A014 1280x1024 2017/11/18 07:09:57 Unit: mm Magnification: 116.2 x 1



3593' 60"





