

# JASPAR COMPANY INC.

Scale 1:240 Imperial

Well Name: GARTRELL #1  
Surface Location: NW NW SW SE Sec. 21 - 6S - 20W  
Bottom Location:  
API: 15-163-24295  
License Number: 34903  
Spud Date: 8/7/2015 Time: 12:15 PM  
Region: ROOKS COUNTY KANSAS  
Drilling Completed: 8/13/2015 Time: 5:15 AM  
Surface Coordinates: 1175' FSL & 2570' FEL  
Bottom Hole Coordinates:  
Ground Elevation: 2222.00ft  
K.B. Elevation: 2230.00ft  
Logged Interval: 3000.00ft To: 3701.00ft  
Total Depth: 3701.00ft  
Formation: LANSING - KANSAS CITY; ARBUCKLE  
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

## OPERATOR

Company: JASPAR COMPANY, INC.  
Address: 1681 LIMESTONE ROAD SOUTH  
P.O. BOX 1120  
HAYS, KS 67601  
Contact Geologist: SHANE VEHIGE  
Contact Phone Nbr: (785) 650-4910  
Well Name: GARTRELL #1  
Location: NW NW SW SE Sec. 21 - 6S - 20W  
API: 15-163-24295  
Pool:  
State: KANSAS  
Field: UNNAMED  
Country: USA

## SURFACE CO-ORDINATES

Well Type: Vertical  
Longitude: -99.5554117  
Latitude: 39.5132388  
N/S Co-ord: 1175' FSL  
E/W Co-ord: 2570' FEL

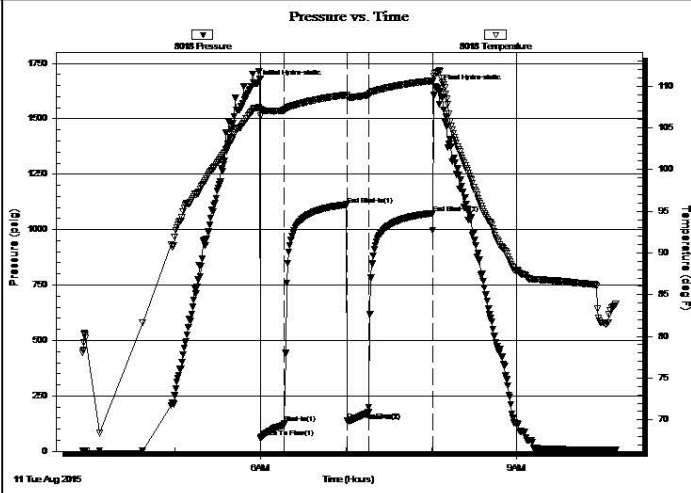
## LOGGED BY



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



TEST COMMENT: 15-IFP-w k to strg in 4min  
 45-ISIP-3"bl bk  
 15-FFP-w k to strg in 3 1/2min  
 45-FSIP-3" bl bk



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1659.30	107.39	Initial Hydro-static
3	62.46	106.43	Open To Flow (1)
20	125.09	107.10	Shut-In(1)
63	1112.93	108.95	End Shut-In(1)
64	139.85	108.68	Open To Flow (2)
79	174.73	108.94	Shut-In(2)
124	1074.37	110.64	End Shut-In(2)
127	1637.58	111.66	Final Hydro-static

Length (ft)	Description	Volume (tbb)
0.00	700' GIP	0.00
124.00	GMO 40%G10%M50%O	0.65
62.00	CO	0.87
105.00	MGO 20%G20%M60%O	1.47

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

Trilobite Testing, Inc

Ref. No: 62652

Printed: 2015.08.11 @ 10:43:55

**DST #2 LKC C - D 3480' - 3525'**

	<b>DRILL STEM TEST REPORT</b>	
	Jaspar Co Inc P O Box 1120 Hays Ks 67601  ATTN: Shane Vehige, Jeff La	<b>21-6s-20w Rooks</b>  <b>Gartrell #1</b> Job Ticket: 62653 <b>DST#: 2</b> Test Start: 2015.08.11 @ 17:40:26

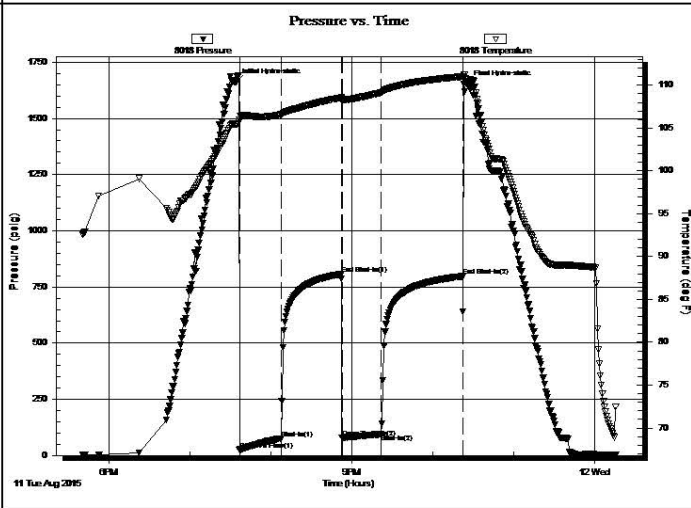
**GENERAL INFORMATION:**

Formation: <b>LKC C-D</b>	Deviated: No Whipstock:      ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 19:36:36	Time Test Ended: 00:15:50	Tester: Ray Schwager
Interval: <b>3480.00 ft (KB) To 3525.00 ft (KB) (TVD)</b>	Hole Diameter: 7.85 inches	Unit No: 70
Total Depth: 3525.00 ft (KB) (TVD)	Hole Condition: Fair	Reference Elevations: 2230.00 ft (KB)
		2222.00 ft (CF)
		KB to GR/CF: 8.00 ft

<b>Serial #: 8018</b>	<b>Inside</b>		
Press@RunDepth: 95.12 psig @ 3489.00 ft (KB)	Capacity: 8000.00 psig		
Start Date: 2015.08.11	End Date: 2015.08.12	Last Calib.: 2015.08.12	
Start Time: 17:40:26	End Time: 00:15:50	Time On Btm: 2015.08.11 @ 19:33:51	
		Time Off Btm: 2015.08.11 @ 22:26:05	

TEST COMMENT: 30-IFP-w k to a fr bl 1/4" to 4 1/2"bl

45-ISIP-no bl  
 30-FFP-no bl 1st 5min, then w k thru-out surface to 2"bl  
 60-FSIP-no bl



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1661.50	105.49	Initial Hydro-static
3	23.35	105.90	Open To Flow (1)
34	74.36	106.57	Shut-In(1)
79	807.22	108.54	End Shut-In(1)
79	79.70	108.30	Open To Flow (2)
108	95.12	109.14	Shut-In(2)
169	797.44	111.00	End Shut-In(2)
173	1655.11	110.69	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
124.00	MW 20%M80%W	0.65
45.00	Mud w /show of oil	0.63

\* Recovery from multiple tests


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

Trilobite Testing, Inc

Ref. No: 62653

Printed: 2015.08.12 @ 08:10:50

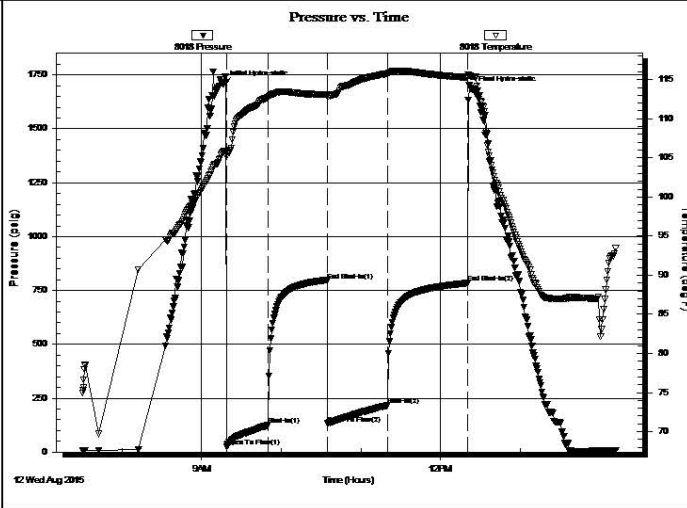
**DST #3 LKC E - F 3524' - 3552'**

 <b>TRILOBITE TESTING, INC</b>	<b>DRILL STEM TEST REPORT</b>	
	Jaspar Co Inc 1681 Limestone Road South PO Box 1120 Hays Ks 67601 ATTN: Shane Vehige, Jeff La	<b>21-6s-20w Rooks</b>  <b>Gartrell #1</b> Job Ticket: 62654 <b>DST#: 3</b> Test Start: 2015.08.12 @ 07:30:30

GENERAL INFORMATION:			
Formation:	<b>LKC E-F</b>		
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened:	09:18:40		Tester: Ray Schwager
Time Test Ended:	14:11:39		Unit No: 70
Interval:	<b>3524.00 ft (KB) To 3552.00 ft (KB) (TVD)</b>		Reference Elevations: 2230.00 ft (KB)
Total Depth:	3552.00 ft (KB) (TVD)		2222.00 ft (CF)
Hole Diameter:	7.85 inches	Hole Condition: Fair	KB to GR/CF: 8.00 ft

Serial #: 8018		Inside		Capacity:	
Press@RunDepth:	217.14 psig @	3530.00 ft (KB)		8000.00	psig
Start Date:	2015.08.12	End Date:	2015.08.12	Last Calib.:	2015.08.12
Start Time:	07:30:30	End Time:	14:11:39	Time On Btm:	2015.08.12 @ 09:16:40
				Time Off Btm:	2015.08.12 @ 12:23:39

TEST COMMENT: 30-IFP-w k to strg in 18min  
 45-ISIP-no bl



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1707.43	105.83	Initial Hydro-static
2	25.98	105.16	Open To Flow (1)
34	124.95	112.73	Shut-In(1)
78	794.58	113.07	End Shut-In(1)
78	132.00	112.84	Open To Flow (2)
124	217.14	115.75	Shut-In(2)
184	784.03	115.28	End Shut-In(2)
187	1683.14	115.37	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
240.00	Water	2.27
120.00	MW w /show of oil	1.68
15.00	SOCMW 2%O40%M48%W	0.21

\* Recovery from multiple tests

**Gas Rates**

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

Trilobite Testing, Inc

Ref. No: 62654

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**DST #4 ARBUCKLE 3680' - 3701'**

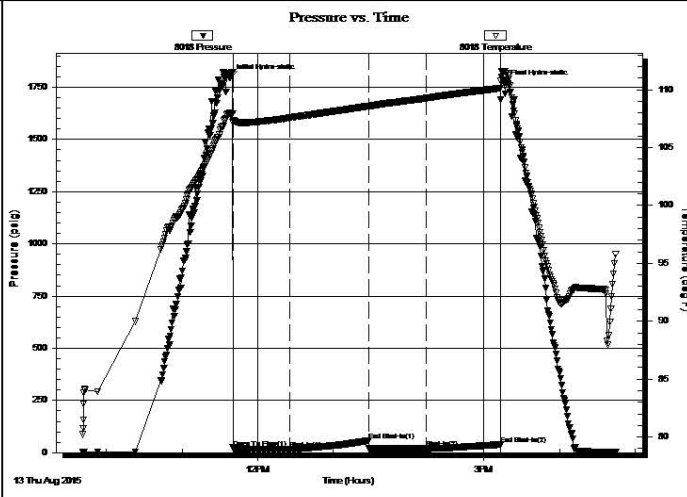
<p><b>TRILOBITE TESTING, INC</b></p>	<b>DRILL STEM TEST REPORT</b>	
	Jaspar Co Inc  1681 Limestone Road South PO Box 1120 Hays Ks 67601 ATTN: Shane Vehige, Jeff La	<p><b>21-6s-20w Rooks</b></p> <p><b>Gartrell #1</b></p> Job Ticket: 62655 <b>DST#: 4</b> Test Start: 2015.08.13 @ 09:41:02

**GENERAL INFORMATION:**

Formation: <b>Arbuckle</b>		Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock:      ft (KB)		Tester: Ray Schwager
Time Tool Opened: 11:40:27		Unit No: 70
Time Test Ended: 16:44:41		
<b>Interval: 3680.00 ft (KB) To 3701.00 ft (KB) (TVD)</b>		Reference Elevations: 2230.00 ft (KB)
Total Depth: 3701.00 ft (KB) (TVD)		2222.00 ft (CF)
Hole Diameter: 7.85 inches Hole Condition: Fair		KB to GR/CF: 8.00 ft

<b>Serial #: 8018</b>	<b>Inside</b>			
Press@RunDepth: 19.90 psig @ 3681.00 ft (KB)		Capacity: 8000.00 psig		
Start Date: 2015.08.13	End Date: 2015.08.13	Last Calib.: 2015.08.13		
Start Time: 09:41:02	End Time: 16:44:41	Time On Btm: 2015.08.13 @ 11:38:27		
		Time Off Btm: 2015.08.13 @ 15:16:11		

TEST COMMENT: 45-IFP-surface bl , died in 28min  
60-ISIP-no bl  
45-FFP-no bl  
60-FSIP-no bl



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1794.01	107.95	Initial Hydro-static
2	23.04	107.14	Open To Flow (1)
48	16.90	107.57	Shut-In(1)
110	58.24	108.58	End Shut-In(1)
110	20.15	108.56	Open To Flow (2)
156	19.90	109.26	Shut-In(2)
215	38.09	110.12	End Shut-In(2)
218	1766.22	111.59	Final Hydro-static

Length (ft)	Description	Volume (bbl)
5.00	HOCM 25%O75%M	0.02
0.00	w / show of clean oil on top of tool	0.00

\* Recovery from multiple tests

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

Trilobite Testing, Inc

Ref. No: 62655

Printed: 2015.08.13 @ 17:50:51

**ROCK TYPES**

Dolprim	Lmst fw7>	Carbon Sh	shale, red
Lmst fw<7	shale, gry	Shblck	Ss

**ACCESSORIES**

<b>MINERAL</b> * Sandy	<b>FOSSIL</b> ◇ Oolite ⊗ Fussiliinid	<b>STRINGER</b> ■ Sandstone ■ red shale	<b>TEXTURE</b> c Chalky
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**OTHER SYMBOLS**

<b>MISC</b> Daily Report Digital Photo Document Folder Link Vertical Log File Horizontal Log File Core Log File Drill Cuttings Rpt	<b>DST</b> DST Int DST alt
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Curve Track #1	ROP (min/ft)	Gamma (API)	Cal (in)	Depth   Intervals	DST	Lithology	Oil Show	Geological Descriptions	Curve Track #3
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1:240 Imperial

Cored Interval  
DST Interval

1:240 Imperial

0 ROP (min/ft) 5  
 0 Gamma (API) 150  
 6 Cal (in) 16

3060

3070

3080

3090

3100

3110

3120

3130

3140

3150

3160

3170

3180

3190

3200

3210

3220

3230

3240

3250

3260

**1' DRILL TIME THROUGH ANHYDRITE FROM 1810' - 1870'**  
**1' DRILL TIME FROM 3100' - RTD**  
**10' WET/DRY SAMPLES FROM 3150' - RTD**

**GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 3100' - RTD**

**8 5/8" SURFACE PIPE SET @ 220' SURVEY 1 dgr.**

**ANHYDRITE TOP 1841' (+389) E-LOG 1840' (+390)**  
**ANHYDRITE BASE 1853' (+377) E-LOG 1854' (+376)**

Lm- Cream Off White, FXLN Fn Grn, heavily fsl mix, some mud supported matrix, chalky & loosely cemented, all w/ poor vis. porosity, vry clean & barren

Sh- Maroon Gray ,gritty & earthy, silty & calcareous, some micaceous Ss, sl shaley

Lm- Cream Tan, FXLN, densely packed fsl fragments, well cemented, XLN porosity, barren, few pcs of fsl gray fresh bedded chert

Lm- Gray Buff, VFXLN, dense, well cemented, high-energy trashy mix w/ densely packed fsl fragments, poor vis. porosity, some chalky in part, some mud supported matrix

Sh- Gray, silty & calcareous

Lm- Gray, Fn Grn, mostly soft mud supported matrix w/ interbedded fusulinids, some w/ XLN matrix, all w/ poor vis. porosity

Ss- Gray Lt Green, Fn Grn, loosely cemented, sub-angular, fairly mature, consolidated & well sorted, micaeous, consistent intergranular porosity, barren

Sh- Gray Maroon, silty & calcareous, argillaceous clumps, gritty & earthy, soft white chalk, Ss- Gray Frosted, Fn Grn, consolidated & well sorted, loosely cemented, consistent intergranular porosity, WK STN, SL SHEEN, NSFO, NO ODR, HALO FLOR. & TR STRM WET CUT

Lm- Gray, FXLN, well cemented, high-energy, sl trashy w/ densely packed fsl fragments, poor vis. porosity

Sh- Maroon Gray, gritty & earthy, few brick red, silty & calcareous

**TOPEKA 3222' (-992) E-LOG 3224' (-994)** Lm- Cream Off White Gray, VF-FXLN, dense, well cemented, sl fsl, mostly tight w/ poor vis. porosity

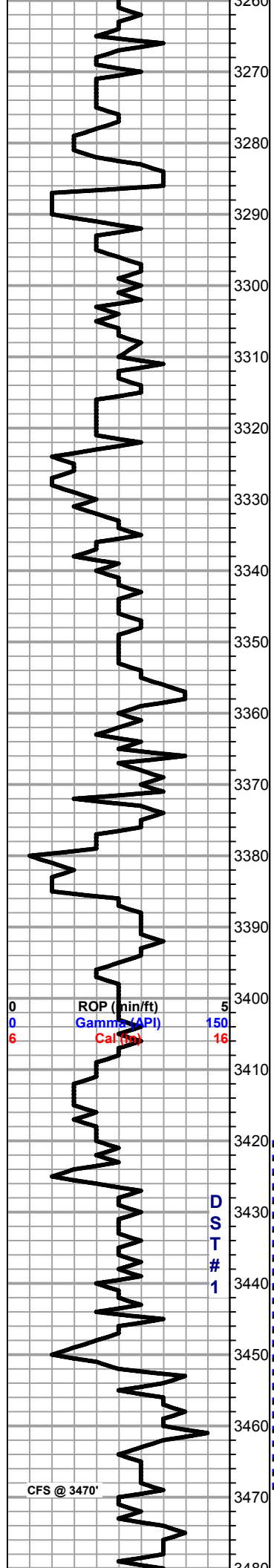
Lm- Gray, FXLN Fn Grn, dense trashy mix, heavily fsl w/ fusulinids & crinoids, some fragments, some chalky in part & loosely cemented, poor vis. porosity

Lm- Cream Buff, VF-FXLN, dense, well cemented & tight w/ min. vis. porosity

Lm- Cream Off White. Fn Grn. chalky mud supported matrix. looselv cemented &

 -SEVERY.j...

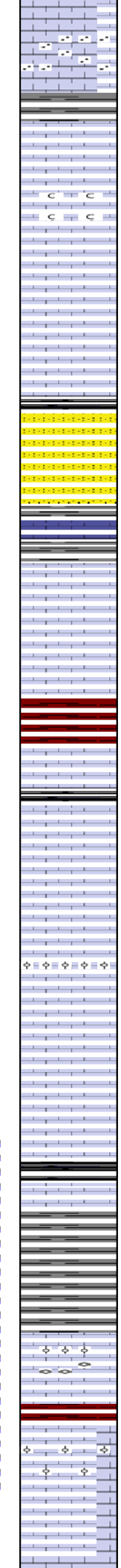




0 ROP (min/ft) 5  
 0 Gamma (API) 150  
 6 Cal (ppm) 16

D  
 S  
 T  
 #  
 1

CFS @ 3470'



Lm- Cream Tan, VF-FXLN, massive, mod. well dev. w/ mostly consistent inter oolite/fsl ppt porosity, SAT STN, TR FO, FR OILY SHEEN, GD ODR

Lm- Lt Gray, Vf Grn, mod. cemented consolidated arenaceous Ls w/ consistent intergranular porosity, barren

Lm- Cream, VFXLN, massive, dense, well cemented, poorly dev. oolitic Ls w/ sctrd clear replacement cementation & reXLN, poor vis. porosity, some loosely cemented & crumbly, much soft white chalk

Lm- Cream Off White, VFXLN Vf Gn, densely packed oolitic biomicrite, cryptoXLN w/o vis. porosity, porcelain like, some chalky mud supported matrix w/o vis. porosity

Sh- Black Maroon, fissile & carbonaceous, gritty & earthy

Ss- Frosted/Lt Gray, Fn Grn, consolidated & well sorted, sub-rounded & mature, consistent intergranular porosity, barren, some argillaceous maroon clay

Lm- Tan, VF-FXLN, mix of cryptoXLN cherty Ls & densely packed oolitic Ls, poorly dev. w/ micro XLN & XLN porosity, some clear replacement cementation, all barren

Lm- A/A w/ sl influx of cherty Ls & fresh bedded fsl chert

Sh- Maroon Gray Lm Green, argillaceous clumps, silty & soft

Lm- Cream Off White, FXLN, fsl, well cemented, sctrd XLN porosity, barren

Sh- Black Lm Green, fissile & carbonaceous, argillaceous clumps

Lm- White Off White, FXLN, massive, mod. well dev. w/ sctrd to mostly consistent fn ppt porosity, few w/ sctrd reXLN, LT BRWN STN, TR FO, GD ODR, SL SULPHURIC, many w/ barren porosity

Lm- Cream Tan, FXLN, massive, semi high-energy fsl mix, poor vis. to sctrd XLN porosity, some sl chalky in part, barren

Lm- Cream Off White, FXLN, fsl & sl oolitic, sctrd dev. w/ XLN to sctrd vry fn ppt inter oolite porosity, LT SCTRD STN, TR FO, GD SULPHURIC ODR, much soft white chalk carrying stn also

Lm- Cream Tan, FXLN, sl fsl, some sctrd reXLN, semi-grainy & gritty, well to loosely cemented & crumbly, poor vis. to sctrd-dense XLN porosity, some soft white chalk & chalky mud supported matrix, barren

**HEEBNER 3424' (-1194) E-LOG 3423' (-1193)** Sh- Black Drk Gray, fissile & carbonaceous, silty & soft

Sh- Lt & Drk Gray Maroon, silty & calcareous, some argillaceous clumps, gritty & earthy

**TORONTO 3447' (-1217) E-LOG 3448' (-1218)** Lm- Off White Cream, F-Med XLN, fsl w/ fusulinids & oolites, well dev. w/ mostly consistent inter oolite/fsl ppt porosity, SAT STN, TR FO, FR OILY SHEEN, GD ODR

Lm- Cream Tan, VF-FXLN, fsl A/A, less dev. w/ sctrd XLN to fn ppt inter fsl porosity, less stn A/A, NOSFO, WK ODR

**LKC 3460' (-1230) E-LOG 3461' (-1231)** Lm- Off White, F-Med XLN, mod. well dev. oolitic w/ sctrd ppt inter oolite porosity, SCTRD LT STN, TR FO, FR OILY SHEEN, GD ODR

Lm- Cream Off White, FXLN, sctrd dev. from XLN to vry fn ppt inter fsl porosity, LT SCTRD STN, OILY SHEEN, NSFO, GD ODR

Lm- White Off White, VF-FXLN, dense, well cemented, poorly dev. some chalky in

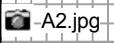


SHORT TRIP  
 SURVEY 3/4 dgr.  
 STRAP -0.26'

DST #1  
 TORONTO- LKC A  
 3420' - 3470'  
 15-45-15-45

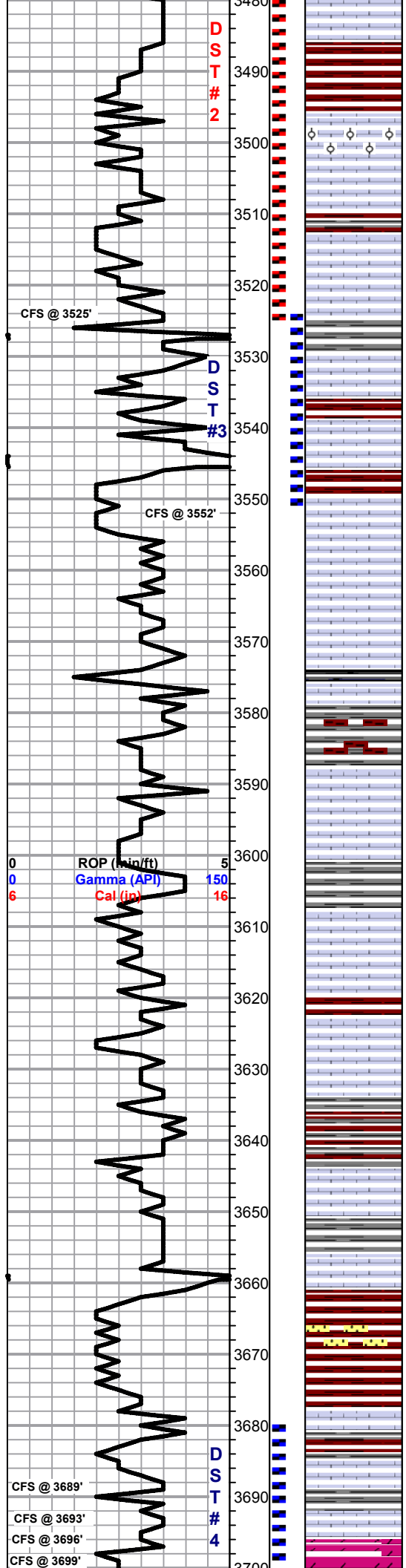
291' TOTAL FLUID  
 700' GIP  
 124' GMO  
 (40G,50O, 10M)  
 62' CLN OIL  
 105' MGO  
 (20G,60O,20M)

IFP: 62-125#  
 FFP: 139-174#  
 SIP: 1112-1074#



DST #2 LKC C - D  
 3480' - 3525'





part, several pcs of fresh bedded vitreous chert

Sh- Maroon, gritty & earthy

Lm- Cream Tan, VF-Med XLN, mod to well dev. oolitic mix, some mod. dev. off white w/ sctrd XLN & vry fn ppt inter oolite porosity w/ LT SCTRD STN, TR FO, FR OILY SHEEN, & tan VFXLN, vry well cemented, sctrd to dense vry fn ppt inter oolite porosity, SCTRD DRK STN, TR FO, WK-FR OILY SHEEN, ALL W/ FR ODR

Lm- Off White Cream, VF-FXLN, dense, sl fsl, poorly dev. & mostly tight, some soft white chalk, sctrd XLN porosity, barren, micro pyrite inclusions

Lm- Cream Off White, F-Med XLN, mix of poorly dev. & sl fsl w/ sctrd XLN porosity, several pcs of fresh bedded sl fsl lt gray chert, & well dev. oolitic Ls w/ mostly consistent ppt inter oolite porosity, SCTRD DRK STN, TR FO, WK OILY SHEEN, GD ODR

Lm- Off White White, mix of loosely cemented, sl unconsolidated w/ small sediment inclusions w/ dense XLN porosity, barren, & FXLN, mod. dev. oolitic w/ sctrd fn ppt to ppt inter oolite porosity, LT SCTRD STN, TR FO & GSSY BUBBLES IN 2-3 PCS, GD OILY SHEEN, GD ODR, some w/ inter porosity reXLN

Lm- Buff, FXLN, dense, well cemented, sub-sucrosic sl dolomitic Ls w/ consistent vry fn ppt & XLN porosity, throughout, DRK SUB- SAT STN, SFO, STRONG ODR, GD OILY SHEEN

Lm- Cream Off White, VF-FXLN, dense, well cemented, mostly tight w/ sctrd micro XLN & XLN porosity, vry clean & barren

Lm- Buff, VFXLN, tight cherty Ls w/ sctrd XLN porosity & reXLN & soft white chalk

Sh- Black Maroon, fissile & carbonaceous, dense & semi-waxy

Sh- Gray Maroon, silty & calcareous, argillaceous clumps, gritty & earthy

Lm- Off White Cream, VFXLN, dense, well cemented, mostly tight & poorly dev. w/ poor vis. to micro XLN porosity, barren

Lm- Cream Off White, FXLN, fsl & sl oolitic, sctrd fn ppt & XLN porosity, LT SCTRD STN, SL FLAKEY, NSFO, WK ODR, several pcs of vitreous fresh bedded chert

Sh- Gray Maroon, silty & calcareous, semi-gummy wash, gritty & earthy

Lm- Cream Off White, FXLN Vf Grn, fsl & oolitic, mod. dev. w/ sctrd XLN & fn ppt inter oolite porosity, some sctrd reXLN w/in porosity, LT SCTRD STN, SEMI-FLAKEY, NSFO, FR ODR, grading into tight & chalk mud supported matrix carrying STN A/A

Lm- Tan Cream, FXLN, fsl & sl oolitic, some fusulinids, sctrd XLN & fn ppt inter fsl porosity, interporosity reXLN, SCTRD LT STN, NSFO, FR-MOD ODR, much barren porosity & lesser developed in lower part of bench

Lm- Cream Off White, VFXLN, dense, well cemented, mostly tight w/ poor vis. porosity, some soft white chalk, vry clean & barren, 2 PCS OF OOMOLDIC & FSL W/ FUSULINIDS W/ SCTRD TO SAT STN, NSFO, WK ODR??

Lm- Off White Cream, VF-FXLN, dense, mostly tight w/ por vis. porosity, soft white chalk, 2-4 PCS W/ RARE SCTRD VRY FN INTER OOLITE PPT POROSITY, WK SCTRD STN, NSFO, TR ODR

Lm- White Cream, VF-FXLN, sl fsl, most poorly dev. w/ sctrd micro XLN & XLN porosity, chalky in part

**BKC 3662' (-1432) E-LOG 3661' (-1431)** Sh- Maroon Gray, gritty & earthy, gummy sandy wash & shaley/calcareous Ss, loosely cemented & vry friable, consolidated & well sorted

Lm- Mint Green, VFXLN, dense, well cemented, tight w/ poor vis. porosity

Lm- Tan, VFXLN, massive, fsl & oolitic, poorly dev. w/ min, vis porosity, barren

Sh- Gray Marron, waxy & dense

○ **3693'**- Lm- Off White, VF-FXLN, dense, well cemented, mostly tight w/ sub-rounded qtz. inclusions, poor vis. porosity, SCTRD DRK STN, NSFO, NO ODR

● **3696'**- Dol- Cream Off White, VF-Med XLN, mix from sub-sucrosic w/ consistent XLN

30-45-30-60  
169' TOTAL FLUID  
45' MUD w/ OIL  
SHOW  
124' MW  
(80%W, 20%M)  
IFP: 23-74#  
FFP: 79-95#  
SIP: 807-797#

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E.jpg

F.jpg

DST #3 LKC E-F  
3524' - 3552'  
30-45-45-60  
383' TOTAL FLUID  
15' SOCMW  
(2%O, 48%M,  
40%M)  
120' MW w/ OIL  
SHOW  
248' WATER

IFP: 25-124#  
FFP: 132-217#  
SIP: 794-784#

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I.jpg

J.jpg

J'.jpg

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SHORT TRIP  
CTCH

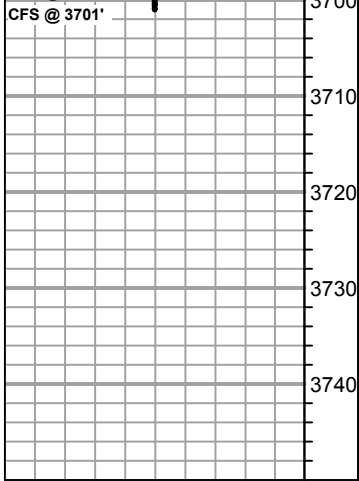
DST #4  
ARBUCKLE  
3680' - 3701'  
45-60-45-60

5' HOCM (25%O)

IFP: 23-17#  
FFP: 20-19#  
SIP: 58-38#

3693.jpg

ARBUCK...



porosity to tight w/ micro XLN porosity, all well cemented, few w/ vis. rhombs, all barren  
**ARBUCKLE 3697' (-1467)** Dol- Off White Cream, FXLN, subsucrosic, mod. dev. w/ consistent XLN porosity, SAT DRK STN, TR FO, FR ODR  
**3701'**- Dol- Off White, FXLN, mod. well dev. w/ consistent XLN & sctrd ppt porosity, several w/ rounded fr grn qtz. inclusions, SAT DRK STN, SCTRD BLEEDING OIL, HVY OILY SHEEN, GD ODR

ARBBUC...  
AFTER DST #4  
TIH, CTCH  
SURVEY 1/2"  
TOH FOR LOG

**RTD 3701' (-1471) LTD 3696' (-1466) @ 05:15 8/13/2015**

SEVERY.jpg

A012 1280x1024 2015/08/10 09:44:07 Unit: mm Magnification: 116.2 x 1







0.2 mm

OREAD X.35



0.2 mm

PI ATTSMOUTH X 30





TORONTO X 25





0.5 mm

IKC A X 25





0.5 mm

IKC A X 25



0.5 mm

IKC C X 25





0.5 mm

IKC D X 25



0.5 mm

IKC F X 25





0.5 mm

IKC F X 25



0.5 mm

IKC H X 25





0.5 mm

IKC I X 25



0.5 mm





0.5 mm

IKC.J' X 30



0.5 mm

IKC K X 30







ARBUCKLE X 25





0.5 mm

ARBUCKLE X 20