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:		Field:	UNNAMED
State:	KANSAS	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

Phone Nbr: (785) 259-3737
Logged By: GEOLGIST Name: JEFF LAWLER

CONTRACTOR

Contractor: WW DRILLING, LLC
Rig #: 12
Rig Type: MUD ROTARY
Spud Date: 8/7/2015 Time: 12:15 PM
TD Date: 8/13/2015 Time: 5:15 AM
Rig Release: 8/14/2015 Time: 12:00 PM

ELEVATIONS

K.B. Elevation: 2230.00ft Ground Elevation: 2222.00ft
K.B. to Ground: 8.00ft

NOTES

DUE TO ECONOMICAL RECOVERY ON DST #1 DECISION WAS MADE TO SET 5 1/2" PRODUCTION CASING AND FURTHER EVALUATE ZONES OF INTEREST WITH PERFORATION.

RESPECTFULLY SUBMITTED,
JEFF LAWLER

WELL COMPARISON SHEET

	GARTRELL #1				• JASPAR COMPANY, INC. D&R UNIT #1 SE SW SE NE 21-6-20						¤ BAIRD OIL CO. SAMMONS #1 NE NW SE 21-6-20						• RITCHIE EXPLORATION, INC. NANETTE #2 OWWO SE NW NW 28-6-20						¤ A. SCOTT RITCHIE WYRILL FARMS #1 NE NE NE 29-6-20					
	KB	2230	GL	2222	KB	2172					KB	2191					KB	2223					KB	2230				
	LOG TOPS		SAMPLE TOPS		LOG		LOG CORR.		SMPL. CORR.		COMP. CARD		LOG CORR.		SMPL. CORR.		COMP. CARD		LOG CORR.		SMPL. CORR.		COMP. CARD		LOG CORR.		SMPL. CORR.	
FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM					DEPTH	DATUM					DEPTH	DATUM					DEPTH	DATUM				
ANHYDRITE TOP	1840	390	1841	389	1770	402	-	12	-	13	1794	397	-	7	-	8	1813	410	-	20	-	21	1828	402	-	12	-	13
BASE	1854	376	1853	377	1803	369	+	7	+	8	1819	372	+	4	+	5	1846	377	-	1	+	0	1856	374	+	2	+	3
TOPEKA	3224	-994	3222	-992	3164	-992	-	2	+	0	3185	-994	+	0	+	2	3213	-990	-	4	-	2	3224	-994	+	0	+	2
HEEBNER SHALE	3423	-1193	3424	-1194	3363	-1191	-	2	-	3	3385	-1194	+	1	+	0	3414	-1191	-	2	-	3	3426	-1196	+	3	+	2
TORONTO	3448	-1218	3447	-1217	3386	-1214	-	4	-	3	3410	-1219	+	1	+	2	3438	-1215	-	3	-	2	3450	-1220	+	2	+	3
LKC	3461	-1231	3460	-1230	3401	-1229	-	2	-	1	3425	-1234	+	3	+	4	3451	-1228	-	3	-	2	3465	-1235	+	4	+	5
BKC	3661	-1431	3662	-1432	3599	-1427	-	4	-	5	3620	-1429	-	2	-	3	3643	-1420	-	11	-	12	3658	-1428	-	3	-	4
GORHAM SAND					3630	-1458					3664	-1473											3694	-1464				
ARBUCKLE			3697	-1467	3638	-1466			-	1	3683	-1492			+	25	3695	-1472			+	5	3705	-1475			+	8
TOTAL DEPTH	3696	-1466	3701	-1471	3698	-1526	+	60	+	55	3691	-1500	+	34	+	29							3785	-1555	+	89	+	84

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar Co Inc

P O Box 1120
Hays Ks 67601

ATTN: Shane Vehige,Jeff La

21-6s-20w Rooks

Gartrell #1

Job Ticket: 62652 **DST#: 1**

Test Start: 2015.08.11 @ 03:55:11

GENERAL INFORMATION:

Formation: **Toronto-LKC A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:00:06
Time Test Ended: 10:09:20

Test Type: Conventional Bottom Hole (Initial)
Tester: Ray Schw ager
Unit No: 70

Interval: 3420.00 ft (KB) To 3470.00 ft (KB) (TVD)
Total Depth: 3470.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

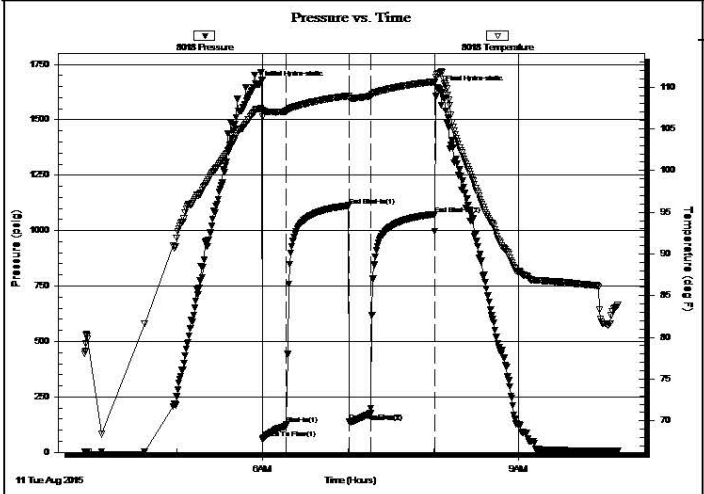
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8018 **Inside**

Press@RunDepth: 174.73 psig @ 3434.00 ft (KB)
Start Date: 2015.08.11 End Date: 2015.08.11
Start Time: 03:55:11 End Time: 10:09:20

Capacity: 8000.00 psig
Last Calib.: 2015.08.11
Time On Btm: 2015.08.11 @ 05:57:36
Time Off Btm: 2015.08.11 @ 08:04:06

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



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
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

Gas Rates

	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'

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar Co Inc

P O Box 1120
Hays Ks 67601

ATTN: Shane Vehige,Jeff La

21-6s-20w Rooks

Gartrell #1

Job Ticket: 62653 **DST#: 2**

Test Start: 2015.08.11 @ 17:40:26

GENERAL INFORMATION:

Formation: **LKC C-D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:36:36
Time Test Ended: 00:15:50

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schw ager
Unit No: 70

Interval: 3480.00 ft (KB) To 3525.00 ft (KB) (TVD)
Total Depth: 3525.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

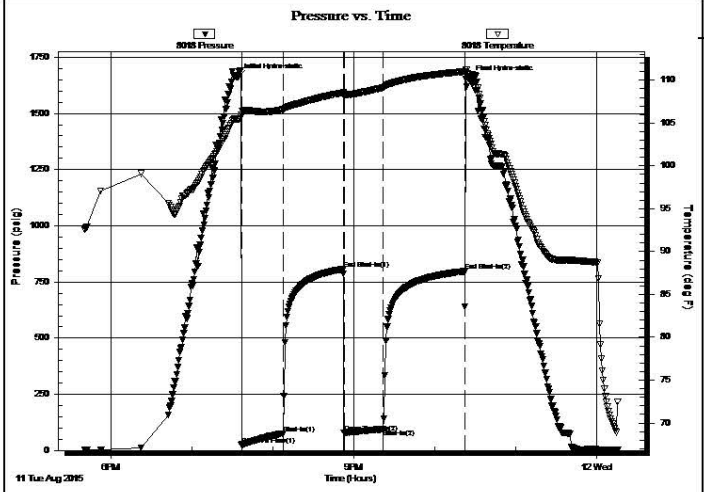
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8018 **Inside**
Press@RunDepth: 95.12 psig @ 3489.00 ft (KB)
Start Date: 2015.08.11 End Date: 2015.08.12
Start Time: 17:40:26 End Time: 00:15:50

Capacity: 8000.00 psig
Last Calib.: 2015.08.12
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)

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co Inc

1681 Limestone Road South
PO Box 1120
Hays Ks 67601
ATTN: Shane Vehige,Jeff La

21-6s-20w Rooks

Gartrell #1

Job Ticket: 62654 **DST#: 3**

Test Start: 2015.08.12 @ 07:30:30

GENERAL INFORMATION:

Formation: **LKC E-F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:18:40
Time Test Ended: 14:11:39

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schw ager
Unit No: 70

Interval: 3524.00 ft (KB) To 3552.00 ft (KB) (TVD)
Total Depth: 3552.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

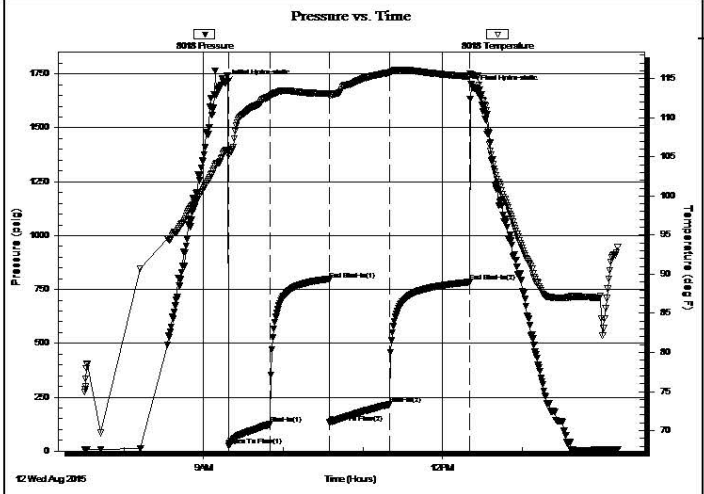
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8018 **Inside**
Press@RunDepth: 217.14 psig @ 3530.00 ft (KB)
Start Date: 2015.08.12 End Date: 2015.08.12
Start Time: 07:30:30 End Time: 14:11:39

Capacity: 8000.00 psig
Last Calib.: 2015.08.12
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

30-FFP-w k to strg in 25 min
45-FSIP-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 Printed: 2015.08.12 @ 14:37:50

DST #4 ARBUCKLE 3680' - 3701'

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar Co Inc

1681 Limestone Road South
PO Box 1120
Hays Ks 67601
ATTN: Shane Vehige,Jeff La

21-6s-20w Rooks

Gartrell #1

Job Ticket: 62655 **DST#: 4**

Test Start: 2015.08.13 @ 09:41:02

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:40:27
Time Test Ended: 16:44:41

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schw ager
Unit No: 70

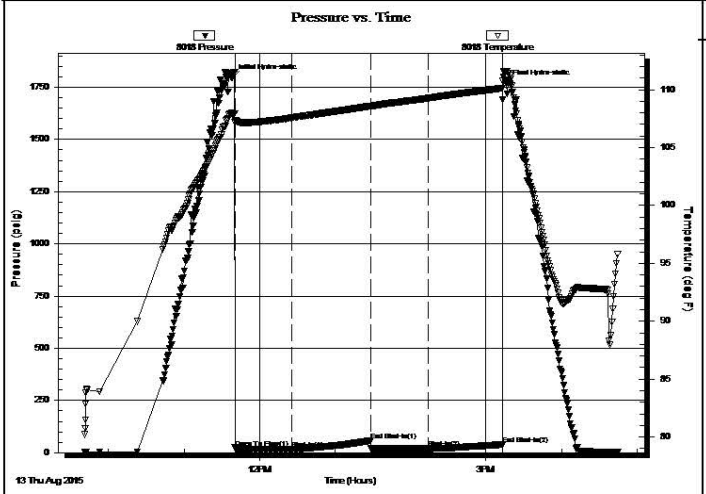
Interval: 3680.00 ft (KB) To 3701.00 ft (KB) (TVD)
Total Depth: 3701.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8018 **Inside**
Press@RunDepth: 19.90 psig @ 3681.00 ft (KB)
Start Date: 2015.08.13 End Date: 2015.08.13
Start Time: 09:41:02 End Time: 16:44:41

Capacity: 8000.00 psig
Last Calib.: 2015.08.13
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



PRESSURE SUMMARY

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

Recovery

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

Gas Rates

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

ACCESSORIES

MINERAL
Sandy

FOSSIL
Oolite
Fussilinid

STRINGER
Sandstone
red shale

TEXTURE
Chalky

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

Curve Track #1
ROP (min/ft)
Gamma (API)
Cal (in)

Depth | Intervals
DST
Lithology
Oil Show
Geological Descriptions
Curve Track #3

1:240 Imperial

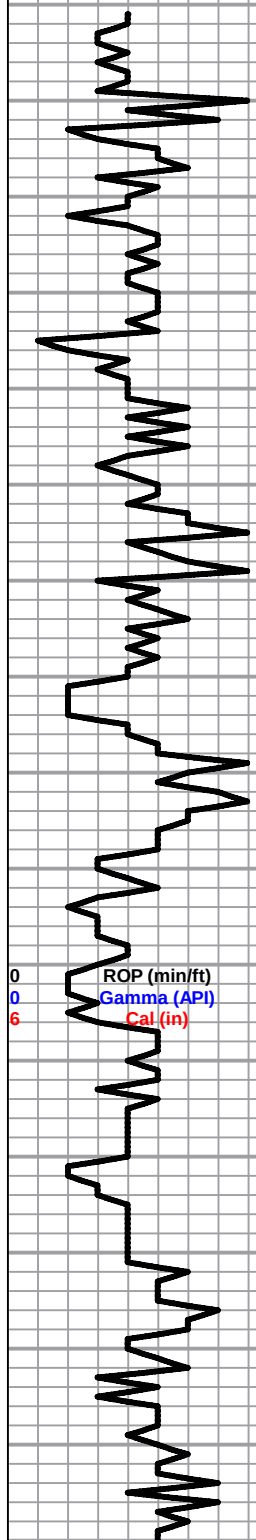
Cored Interval

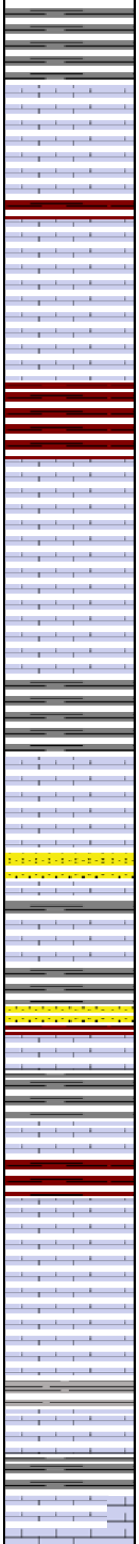
DST Interval

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, loosely cemented &

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

crumbly, some grainy XLN matrix w/ poor vis. porosity

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, consoildated & 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 & carbonaecous, 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

OREAD.jpg

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

PLATTS.jpg

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

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

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)

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

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

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

TORONT...

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

A.jpg

A2.jpg

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

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

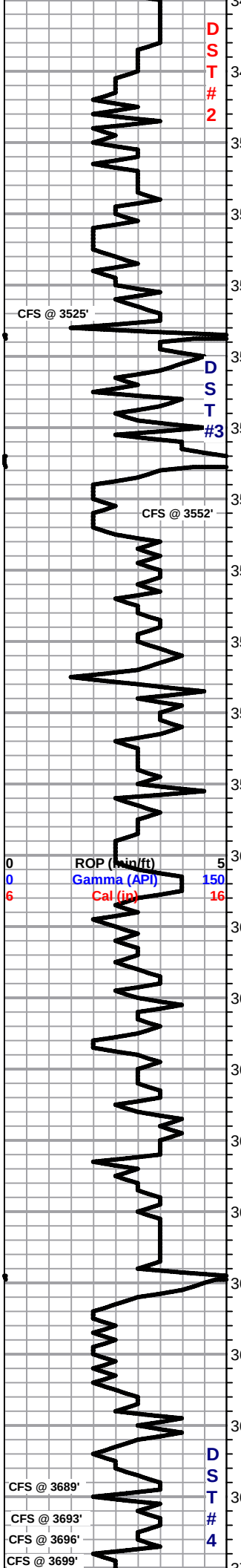
Lm- White Off White, VF-FXLN, dense, well cemented, poorly dev., some chalky in

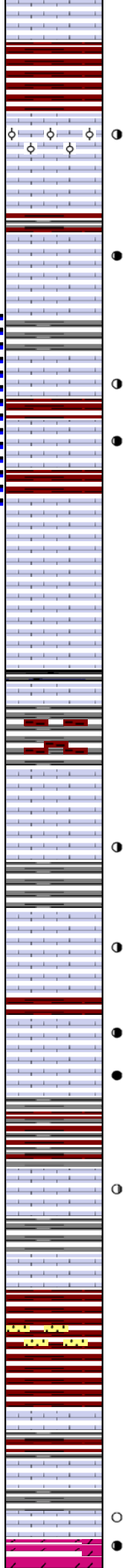
0 ROP (min/ft) 5
0 Gamma (API) 150
6 Cal (in) 16

DST #1

CFS @ 3470'

3260
3270
3280
3290
3300
3310
3320
3330
3340
3350
3360
3370
3380
3390
3400
3410
3420
3430
3440
3450
3460
3470
3480





part, several pcs of fresh bedded vitreous chert

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#

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

C.jpg

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

D.jpg

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

E.jpg

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

F.jpg

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

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

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

H.jpg

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

I.jpg

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

J.jpg

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??

J'.jpg

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

K.jpg

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, consoildated & well sorted

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#

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

3693.jpg

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

ARBUCK...

CFS @ 3701'

3700

3710

3720

3730

3740

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

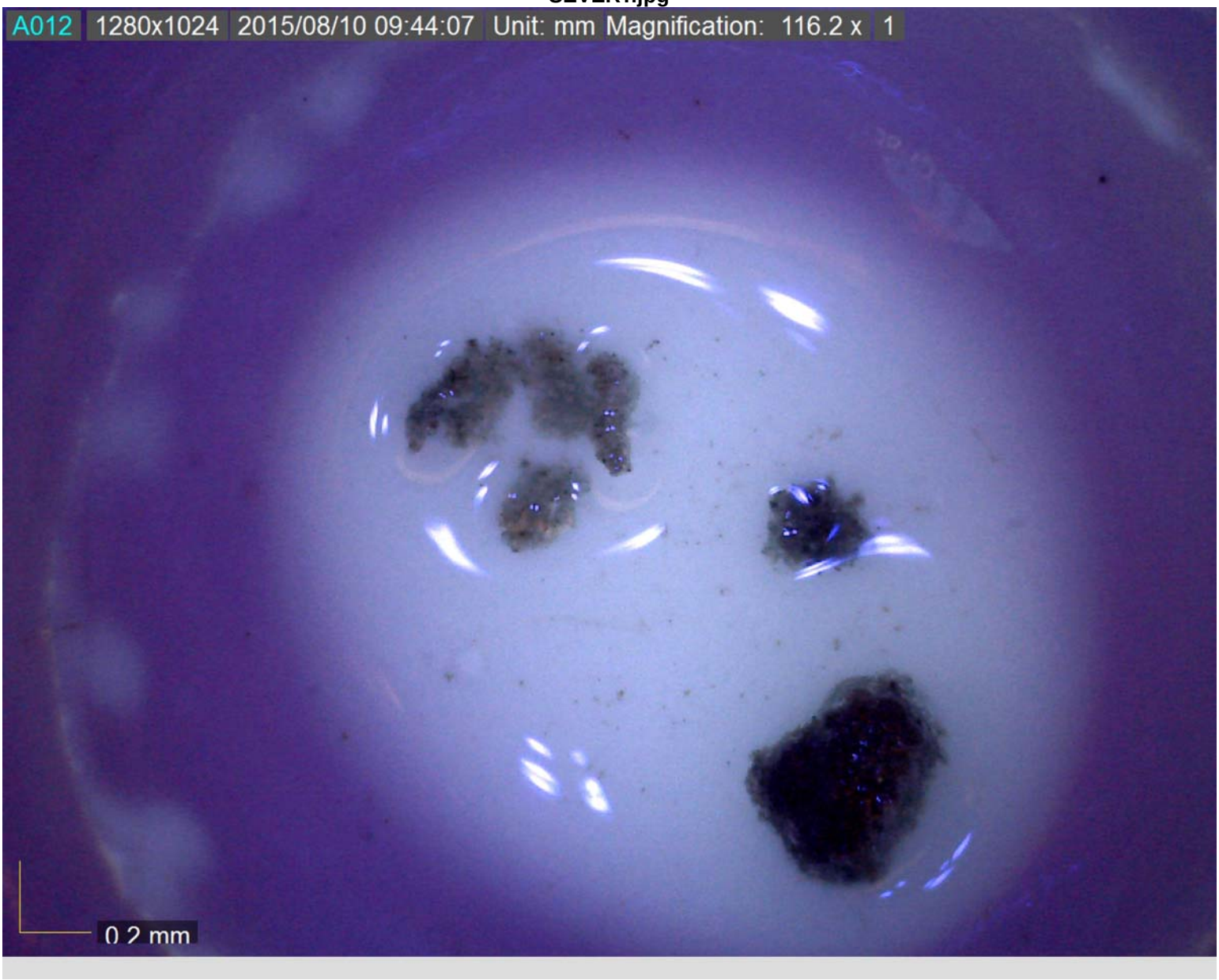
3701'- Dol- Off White, FXLN, mod. well dev. w/ consistent XLN & sctrd ppt porosity, several w/ rounded fn grn qtz. inclusions, SAT DRK STN, SCTRD BLEEDING OIL, HVY OILY SHEEN, GD ODR

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

ARBBUC...

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

SEVERY.jpg



OREAD.jpg

OREAD X 35

PLATTS.jpg

PLATTSMOUTH X 30

TORONTO.jpg

TORONTO X 25

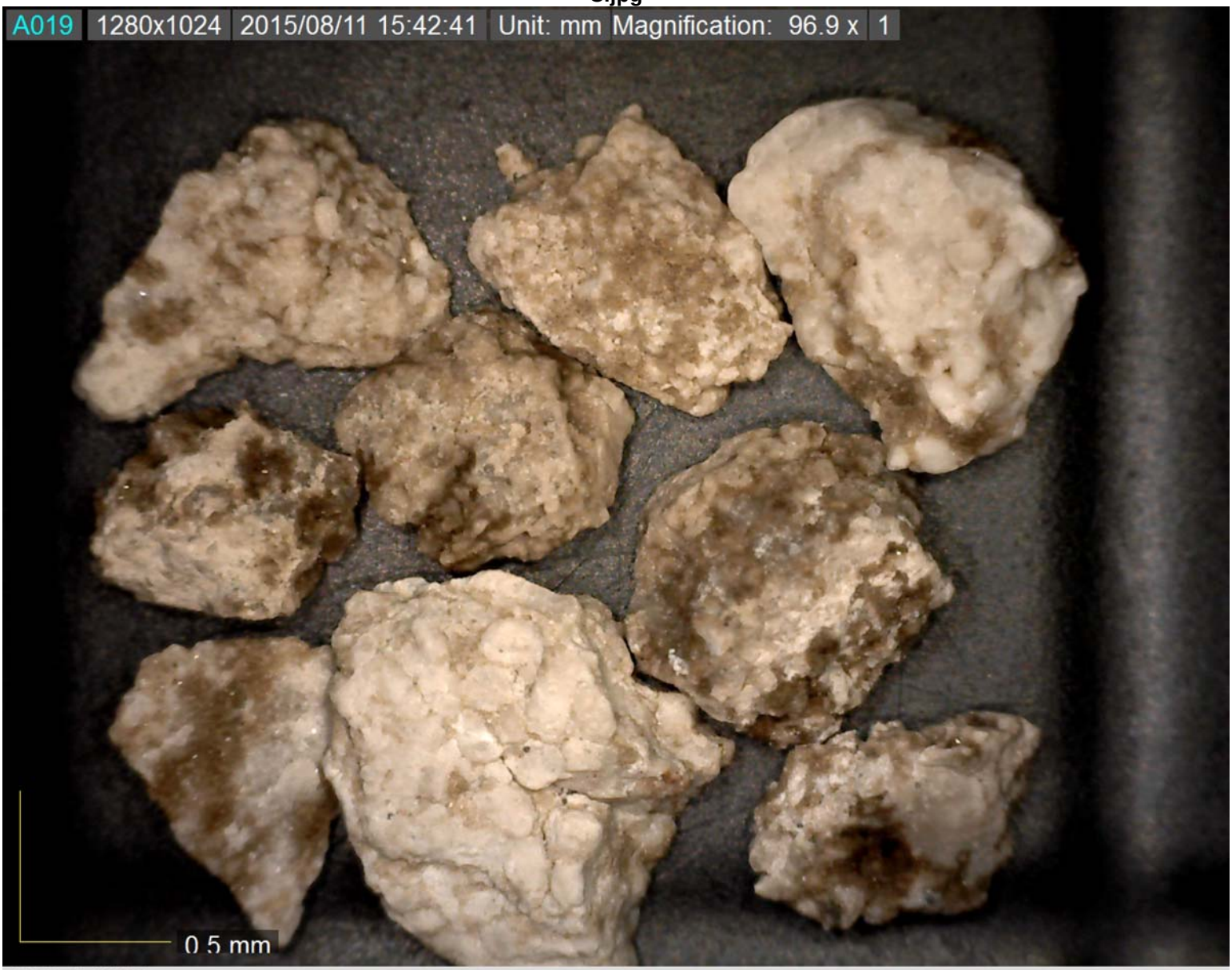
A.jpg

LKC A X 25

A2.jpg

LKC A X 25

C.jpg



LKC C X 25

D.jpg

LKC D X 25

E.jpg

LKC E X 25

F.jpg

LKC F X 25

H.jpg

LKC H X 25

I.jpg

LKC LX 25

J.jpg

LKC J X 25

J'.jpg

LKC J' X 30

K.jpg

LKC K X 30

3693.jpg

3693' x35

ARBUCKLE.jpg

ARBUCKLE X 25

ARBBUCKLE 2.jpg

ARBUCKLE X 20