



Scale 1:240 Imperial

Well Name: DAVIS - WIENS UNIT #1
Surface Location: NW NW NE SE Sec. 4 - 7S - 20W
Bottom Location:
API: 15-163-24310
License Number: 34903
Spud Date: 11/23/2015 Time: 1:00 PM
Region: ROOKS COUNTY KANSAS
Drilling Completed: 11/27/2015 Time: 2:54 AM
Surface Coordinates: 2555' FSL & 1300' FEL
Bottom Hole Coordinates:
Ground Elevation: 2135.00ft
K.B. Elevation: 2140.00ft
Logged Interval: 3050.00ft To: 3600.00ft
Total Depth: 3598.00ft
Formation: LANSING - KANSAS CITY; ARBUCKLE
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

OPERATOR

Company: JASPAR COMPANY
Address: 1681 LIMESTONE ROAD SOUTH
HAYS, KS 67601
Contact Geologist: SHANE VEHIGE
Contact Phone Nbr: (785) 623-6982
Well Name: DAVIS - WIENS UNIT #1
Location: NW NW NE SE Sec. 4 - 7S - 20W
API: 15-163-24310
Pool: State: KANSAS Field: PROBASCO
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.5511701
Latitude: 39.4735653
N/S Co-ord: 2555' FSL
E/W Co-ord: 1300' FEL

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 #: 10
 Rig Type: MUD ROTARY
 Spud Date: 11/23/2015
 TD Date: 11/27/2015
 Rig Release: 11/27/2015
 Time: 1:00 PM
 Time: 2:54 AM
 Time: 10:30 PM

ELEVATIONS

K.B. Elevation: 2140.00ft
 K.B. to Ground: 5.00ft
 Ground Elevation: 2135.00ft

NOTES

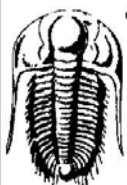
DUE TO ECONOMICAL RECOVERY ON DRILL STEM TEST #1 5 1/2" PRODUCTION CASING WAS CEMENTED TO FURTHER EVALUATE ZONES OF INTEREST.

RESPECTFULLY SUBMITTED,
 JEFF LAWLER

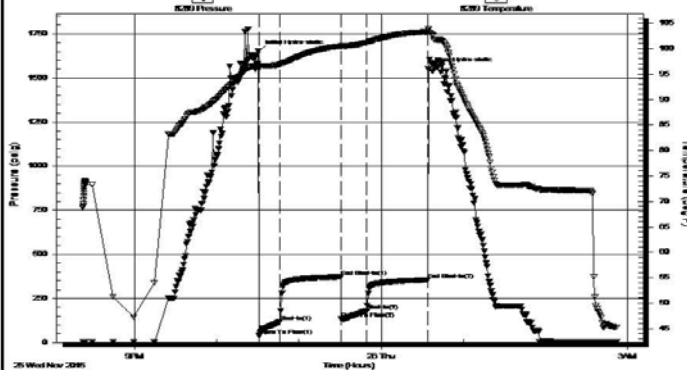
WELL COMPARISON SHEET

FORMATION	DAVIS - WIENS UNIT #1				WIENS #1				WIENS A #1				P&A 1-1985				P&A 1-2015			
	SE SE SE 4-7-20		E2 SW SW SE 4-7-20		SW NESW 4-7-20		NW SW NW 3-7-20		DAVID J SCHNEIDER #1		WALLER #6		DIAMOND SHAMROCK EXPL. CO.		H&C OIL OPERATING & FSL ASS.					
	KB	2140	GL	2135	KB	2108	LOG	SMPL.	KB	2198	LOG	SMPL.	KB	2208	LOG	SMPL.	KB	2178	LOG	SMPL.
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	1713	427	1714	426	1677	431	- 4	- 5	1768	430	- 3	- 4	1807	401	+ 26	+ 25	1750	428	- 1	- 2
BASE	1745	395	1746	394	1710	398	- 3	- 4	1798	400	- 5	- 6					1786	392	+ 3	+ 2
TOPEKA	3115	-975	3119	-979	3078	-970	- 5	- 9	3178	-980	+ 5	+ 1	3193	-985	+ 10	+ 6	3162	-984	+ 9	+ 5
HEERNER SHALE	3319	-1179	3319	-1179	3286	-1178	- 1	- 1	3377	-1179	+ 0	+ 0	3395	-1187	+ 8	+ 8	3370	-1192	+ 13	+ 13
TORONTO	3342	-1202	3341	-1201	3307	-1199	- 3	- 2	3399	-1201	- 1	+ 0					3393	-1215	+ 13	+ 14
LKC	3356	-1216	3358	-1218	3322	-1214	- 2	- 4	3415	-1217	+ 1	- 1	3428	-1220	+ 4	+ 2	3408	-1230	+ 14	+ 12
BKC	3555	-1415	3558	-1418	3521	-1413	- 2	- 5	3618	-1420	+ 5	+ 2	3623	-1415	+ 0	- 3	3611	-1433	+ 18	+ 15
WEATHERED ARBUCKLE					3564	-1456														
ARBUCKLE	3590	-1450	3594	-1454	3615	-1507	+ 57	+ 53	3685	-1487	+ 37	+ 33	3666	-1458	+ 8	+ 4				
GRANITE WASH																	3702	-1524		
TOTAL DEPTH	3598	-1458	3601	-1461	3658	-1550	+ 92	+ 89	3718	-1520	+ 62	+ 59	3775	-1567	+ 109	+ 106	3704	-1526	+ 68	+ 65

DST #1 TORONTO - LKC A 3318' - 3366'

 <p>TRILOBITE TESTING, INC.</p>	<p>DRILL STEM TEST REPORT</p>	
	<p>Jaspar Co 1681 Limestone Rd South P. O. Box 1120 Hays KS 67601 ATTN: Jeff Lawler</p>	<p>4 7s 20w Rooks Davis-Wiens Unit 1 Job Ticket: 61675 DST#: 1 Test Start: 2015.11.25 @ 20:22:00</p>
<p>GENERAL INFORMATION:</p>		
<p>Formation: Toronto & LKC " A " Deviated: No Whipstock: ft (KB) Time Tool Opened: 22:30:45 Time Test Ended: 02:52:00</p>	<p>Test Type: Conventional Bottom Hole (Initial) Tester: Jim Svaty Unit No: 76</p>	
<p>Interval: 3318.00 ft (KB) To 3366.00 ft (KB) (TVD) Total Depth: 3366.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair</p>	<p>Reference Elevations: 2144.00 ft (KB) 2139.00 ft (CF) KB to GR/CF: 5.00 ft</p>	
<p>Serial #: 8289 Outside Press@RunDepth: 178.53 psig @ 3331.00 ft (KB) Start Date: 2015.11.25 End Date: 2015.11.26 Start Time: 20:22:02 End Time: 02:52:00</p>	<p>Capacity: 8000.00 psig Last Calib.: 2015.11.26 Time On Btm: 2015.11.25 @ 22:30:30 Time Off Btm: 2015.11.26 @ 00:34:30</p>	
<p>TEST COMMENT: 15-IF- BOB in 3min. 45-ISI- Surface Blow Building to 1 1/4in. Died Back in 22min. 15-FF- BOB in 8 1/2min. 45-FSI Surface Blow Building to 1in. Died Back in 14min.</p>		

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1651.11	97.03	Initial Hydro-static
1	37.15	96.07	Open To Flow (1)
16	119.61	96.90	Shut-In(1)
61	371.64	100.50	End Shut-In(1)
61	135.64	100.39	Open To Flow (2)
79	178.53	101.20	Shut-In(2)
124	354.93	103.28	End Shut-In(2)
124	1552.76	103.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	OCM 45%o 55% m	1.02
280.00	CO 100%	3.93
0.00	125 GIP	0.00

Gas Rates

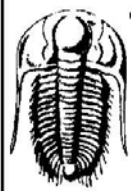
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc

Ref. No: 61675

Printed: 2015.11.26 @ 08:48:26

DST #2 LKC E - G 3420' - 3454'



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 1681 Limestone Rd South
 P. O. Box 1120
 Hays KS 67601
 ATTN: Jeff Lawler

4 7s 20w Rooks
Davis-Wiens Unit 1
 Job Ticket: 64751 **DST#: 2**
 Test Start: 2015.11.26 @ 11:24:00

GENERAL INFORMATION:

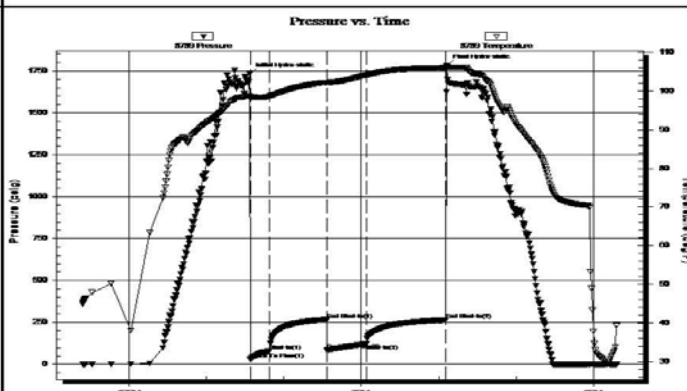
Formation: **LKC " EF & G "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:33:45
 Time Test Ended: 18:18:00
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jim Svaty
 Unit No: 76
 Interval: **3420.00 ft (KB) To 3454.00 ft (KB) (TVD)**
 Total Depth: 3454.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Reference Elevations: 2144.00 ft (KB)
 2139.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8789

Inside

Press@RunDepth: 120.93 psig @ 3432.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.11.26 End Date: 2015.11.26 Last Calib.: 2015.11.26
 Start Time: 11:24:02 End Time: 18:18:00 Time On Btm: 2015.11.26 @ 13:33:30
 Time Off Btm: 2015.11.26 @ 16:06:15

TEST COMMENT: 15-IF- BOB in 15min.
 45-ISI- No Blow
 30-FF- Surface Blow Building to 2in. In 10min. Died Back in 18min.
 60-FSI- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1733.29	98.78	Initial Hydro-static
1	28.28	97.87	Open To Flow (1)
16	80.08	98.61	Shut-In(1)
60	267.75	102.17	End Shut-In(1)
60	85.40	102.08	Open To Flow (2)
91	120.93	104.04	Shut-In(2)
152	265.00	106.00	End Shut-In(2)
153	1782.84	106.41	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbt)
212.00	Oil Speck MCW 15% m 85% w	1.89
15.00	OO	0.21

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

* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 64751

Printed: 2015.11.26 @ 21:18:52

ROCK TYPES

Cht	Lmst fw7> shale, gry	Carbon Sh	shale, red	Ss
Dolprim	shale, gry	Shblk	Arg/Shale	

ACCESSORIES

MINERAL

* Sandy

FOSSIL

◇ Oolite

STRINGER

^^^ Chert
 Sandstone
 red shale

OTHER SYMBOLS

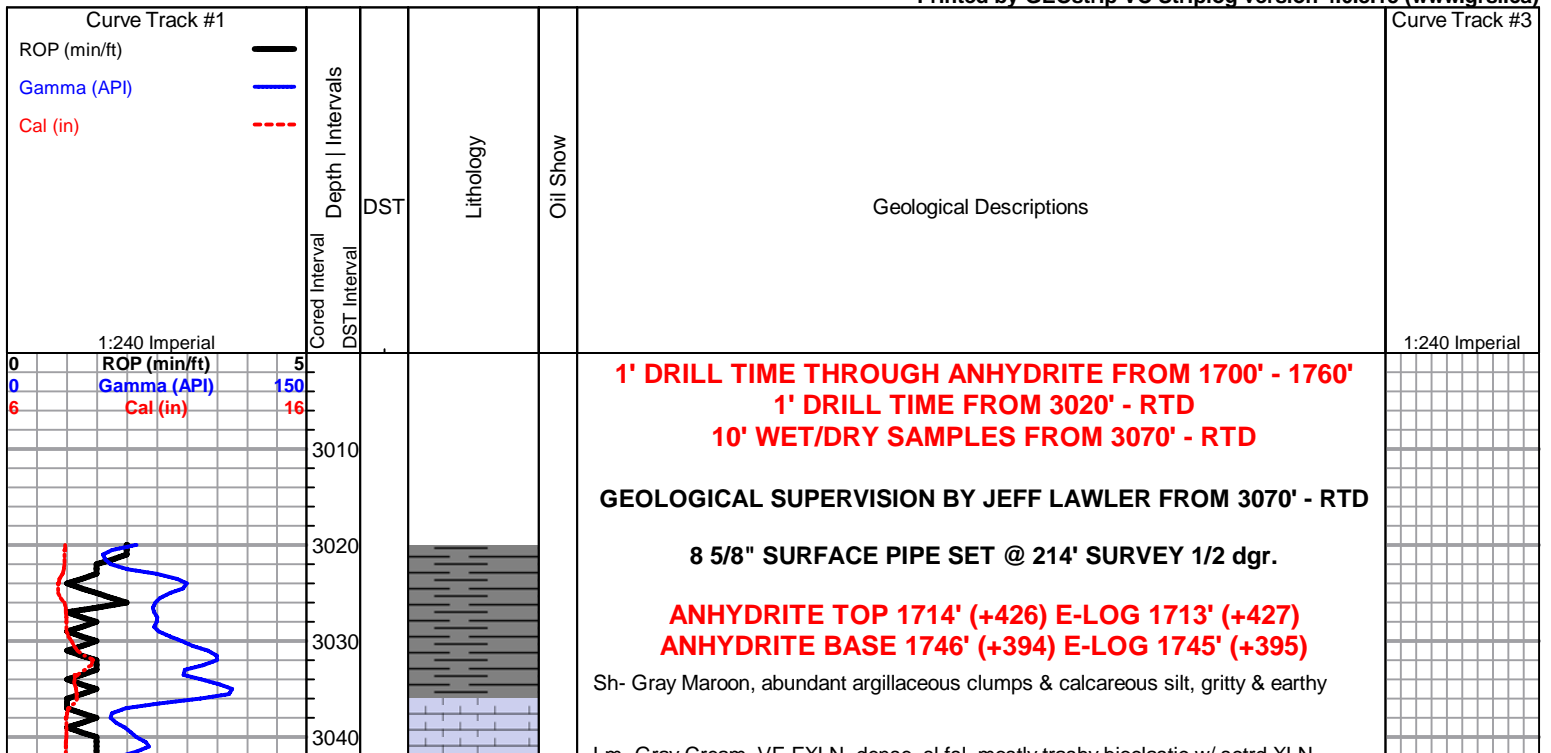
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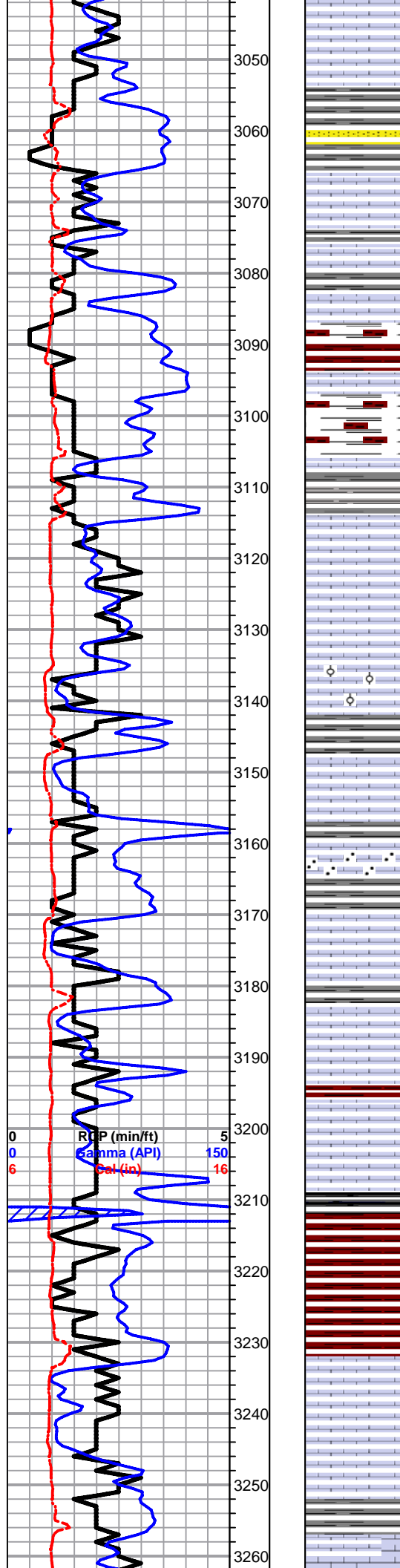
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- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

DST

- DST Int
- DST alt

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Lm- Gray Cream, VF-FXLN, dense, sl fsl, mostly trashy bioclastic w/ sctrd XLN porosity to poor vis. porosity, many loose crinoids, several pcs. of loosely cemented arenaceous Ls

Sh- Gray White, abundant soft calcareous shale & white chalk
 Ss- Lt Gray, sl unconsolidated & well sorted, loosely cemented, micaceous, barren

Lm- Cream, Vf grn, dense & vry well cemented, no vis. porosity, few w/ sctrd clear replacement cementation, vry clean

Lm- Gray Off White, FXLN, massive, unconsolidated trashy bioclastic w/ fsl fragments, few sl arenaceous, poor vis. porosity

Lm- Pepper spkld, mostly well cemented arenaceous Ls w/ poor vis. porosity, much argillaceous gray clumps & sandy shale

Lm- A/A w/ cream oolitic Ls w/ sctrd XLN porosity, vry clean & barren, several pcs of trashy bioclastics w/ fsl fragments, abundant argillaceous maroon clumps

Lm- Gray Buff Cream, VFXLN, dense, well cemented, few sl fsl, poorly dev. & tight w/ min. vis. porosity

Sh- Drk & Lt Gray, gummy argillaceous clumps & sandy shale

TOPEKA 3119' (-979) 3-LOG 3115' (-975) Lm- Off White, VFXLN, dense, well cemented, gritty sl dolomitic Ls w/ dense micro XLN porosity, some sl chalky in part, vry clean, 2 PCS W/ DRK QUESTIONABLE EDGE STN, THICK & TARRY, NO ODR, NSFO

TOPEKA....

Lm- Cream Off White, VF-FXLN, dense well cemented mix, several pcs of tight cherty Ls w/o vis. porosity & poorly dev. oolitic Ls. w/ sctrd XLN & clear reXLN secondary porosity, barren, much soft white chalk

Lm- Buff Gray, F-MED XLN, trashy bioclastic w/ fsl fragments, sctrd XLN porosity, few sl chalky in part, gummy gray clumps & sandy shale/shaley Ss & black silty shale

Lm- Lt Gray Cream, Fn Grn, loosely to well cemented arenaceous Ls w/ mostly consistent intergranular porosity, barren

Lm- Cream Off White, FXLN, densely packed oolitic Ls w/ dense XLN porosity, some clear replacement cementation, vry clean & barren, much soft white chalk

Lm- Buff Cream Gray, VF-FXLN, dense well cemented mix of sl fsl to fsl w/ min. vis. to sctrd XLN porosity, some soft white chalk, few chalky in part & loosely cemented, all barren

Lm- Cream Off White, Fn Grn, loosely cemented & crumbly, chalky, sl fsl, poor vis. porosity

Lm- Lt Gray Buff, VF-FXLN, dense, well cemented, fsl w/ sctrd to dense XLN porosity, few sl chalky in part, barren

Sh- Black Gray, fissile & carbonaceous, abundant argillaceous wash

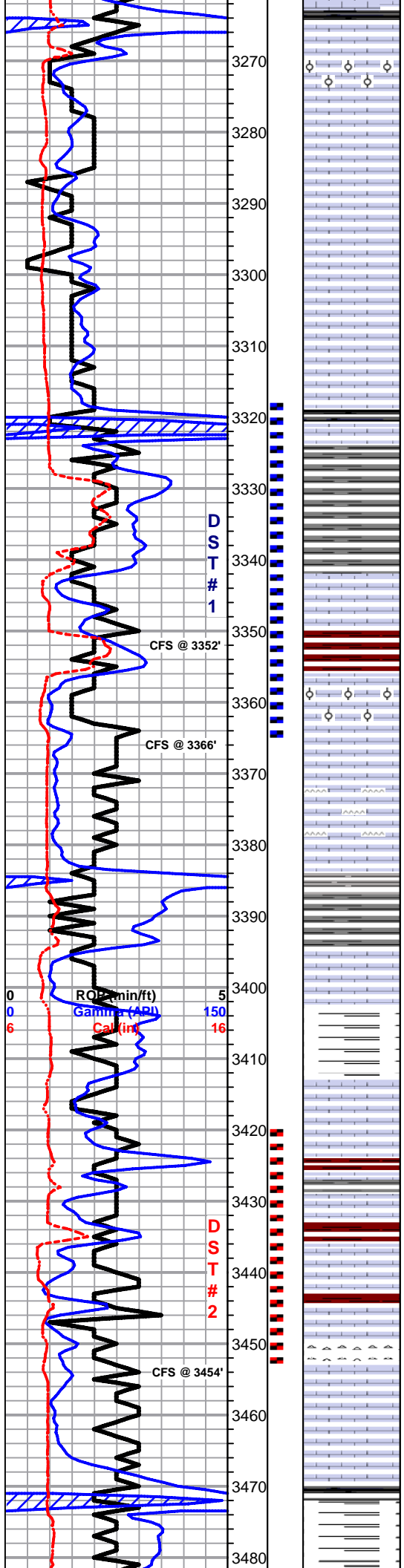
Sh- Gray Maroon, sandy argillaceous washy, sl shaley Ss

Lm- Cream Off White, VF-FXLN, fsl, dense, loosely to well cemented, few sl chalky in part, poor porosity, vry clean & barren

Lm- Cream Off White, VF-FXLN, densely packed small oolitic Ls, some w/ sctrd clear replacement cementation, XLN porosity, vry clean & barren, few pcs sl chalky & crumbly

Sh- Gray, gummy argillaceous clumps

Lm- Gray Lt Green, Vf-Fn Grn, loosely cemented, mostly mud supported matrix w/ fusulinids. some XLN matrix. also crumbly w/ poor porosity



Lm- Cream Off White, FXLN, mod. dev. oolitic w/ sctrd ppt & XLN inter oolite porosity, SCTRD TO SUB-SAT DRK STN, HVY SHEEN, FR ODR., SFO



Lm- Cream Off White, VFXLN Fn Grn, dense tight mix, some XLN matrix some mud supported matrix, all w/ poor vis. porosity, much soft white chalk

Lm- Cream, VFXLN, dense, well cemented dolomitic Ls w/ dense micro XLN porosity throughout, much soft white chalk, vry clean & barren

Lm- Lt Gray, FXLN, fsl, poorly dev. w/ sctrd XLN porosity, much soft white chalk

Lm- Cream Buff, VF-FXLN Vf Grn, dense tight mix, mostly mottled & poorly dev., some chalky mud supported matrix, fsl, all w/ poor vis. porosity, much soft white chalk

HEEBNER 3319' (-1179) E-LOG 3319' (-1179) Sh- Black Gray, fissile & carbonaceous, gummy argillaceous clumps

Sh- Drk & Lt Gray Maroon, dense & arenaceous, argillaceous wash, gritty & earthy

TORONTO 3341' (-1201) E-LOG 3342' (-1202) Lm- Cream Off White, F-MED XLN, fsl & oolitic, mod. well dev. w/ sctrd XLN & ppt inter fsl porosity, some sctrd reXLN w/in porosity, LT SCTRD STN, TR FO UPON CRUSH, WK ODR

LKC 3358' (-1218) E-LOG 3356' (-1216) Lm- Off White, FXLN, densely packed mod. dev. oolitic Ls, sctrd ppt inter oolite & XLN porosity, LT SCTRD STN, TR FO UPON CRUSH, FR ODR, much soft white chalk

Lm/Chert- White Off White, tight dense mix, all w/ min. vis. porosity, vry clean & barren, many pcs of soft white chalk/mud supported matrix

Sh- Black Gray Maroon, fissile & waxy, argillaceous clumps, dense & semi-waxy

Lm- Off White, F-MED XLN, well dev. oolitic Ls w/ mostly consistent ppt inter oolite porosity, some lesser dev. w/ sctrd ppt oolite porosity to sctrd XLN porosity, MOST W/ LT SCTRD TO SUB-SAT STN, HVY SHEEN, NSFO, FR ODR, POSSIBLY WET??

Sh- Maroon Gray, abundant argillaceous clumps, gritty & earthy

Lm- Cream Tan Buff, mix of sl fsl w/ fusulinids, sctrd dev. w/ XLN & sctrd ppt inter fsl porosity, some lesser dev. & sl tight w/ only sctrd XLN porosity, & few pcs. well dev. loosely cemented & semi-crumbly w/ dense consistent vry fn ppt porosity, ALL W/ SCTRD LT-DRK STN, SOME W/ FLAKEY STN, LT-MOD SHEEN, NSFO, WK-FR ODR

Lm- Tan Off White, VFXLN Vf Grn, dense tight mix, well cemented, sl fsl w/ poor sctrd XLN porosity, some soft mud supported matrix & chalk, all barren

Lm- Off White Cream, fsl, mod. dev. w/ semi-sctrd to dense fn ppt inter fsl porosity, sctrd reXLN w/in porosity, LT SCTRD STN, NSFO, FR ODR, much soft white chalk

3454' 20" - Cream Tan White Salmon, mix of gritty dolomitic chert w/ dense micro XLN porosity & fresh bedded vitreous chert
40" - Chert- A/A w/ sl incr. in tan dolomite/dolomitic chert
60" - A/A, little sample quantity

Lm- Buff Lt Gray, VFXLN, dense well cemented, mostly tight w/ min. vis. porosity, some soft white chalk

Sh- Black Gray, fissile & carbonaceous, argillaceous clumps

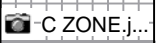
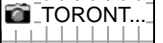
Sh- abundant argillaceous clumps & wash

SHORT TRIP STRAP +0.72' SURVEY 3/4 dgr.

DST #1 TORONTO-LKC A 3318' - 3366' 15-45-15-45

430' TOTAL FLUID 125' GIP 150' OCM (45%O) 280' CLEAN OIL 33 GRAVITY

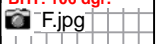
IFP: 37-119# FFP: 135-178# SIP: 371-354# BHT: 104 dgr.

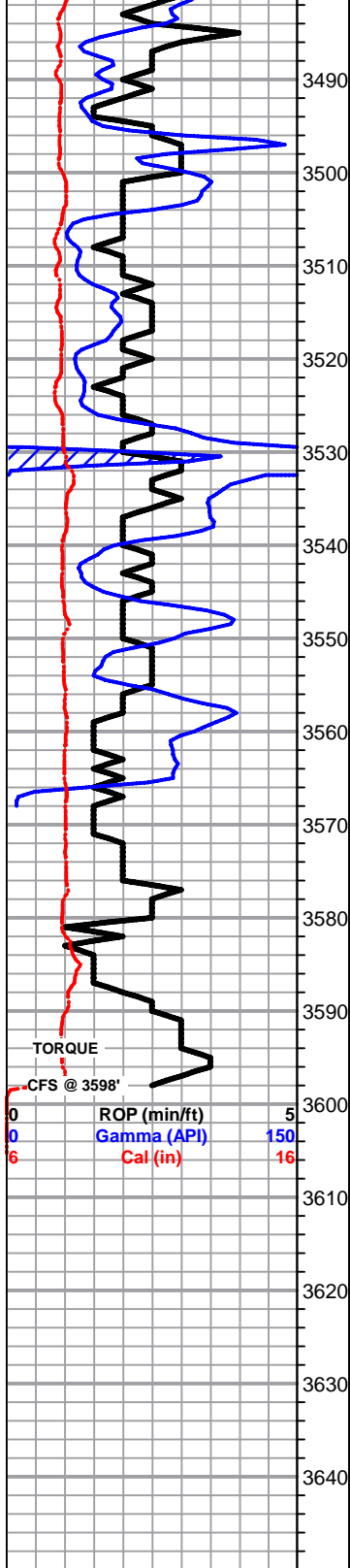


DST #2 LKC E - G 3420' - 3454' 15-45-30-60

227' TOTAL FLUID 15' CLEAN OIL 212' OSPMCW (85%W, 15%M)

IFP: 28-80# FFP: 85-120# SIP: 267-265# BHT: 106 dgr.





Lm- Cream Off White Tan, VF-FXLN, mix of tight well cemented w/ min. vis. porosity, fsl fsl w/ sctrd ppt & XLN inter fsl porosity, LT SCTRDR STN, LT SHEEN (POSSIBLY WET), NSFO, FNT ODR, & several of soft white chalk



Sh- Maroon Gray, gritty & earthy, argillaceous clumps

Lm- Cream Off White Buff, VF-FXLN, mix of sl fsl w/ sctrd XLN & ppt inter fsl porosity, sl oolitic, LT SCTRDR STN, NSFO, NO ODR, mostly tight & poorly dev. w/ min. vis. to sctrd XLN porosity, barren



Lm- Cream Off White Tan, VF-FXLN, mix of mod. dev. fsl & oolitic w/ sctrd to dense ppt inter fsl/oolite & XLN porosity, SCTRDR TO SAT DRK STN, TR FO, FR ODR, HVY SHEEN, mostly tight w/ poor vis porosity



Sh- Black Gray Green Maroon, fissile & carbonaceous, gritty & earthy, dense & waxy

Lm- Off White, Vf Grn VF-FXLN, dense, mostly tight w/ poor vis. porosity, several pcs of loosely cemented & crumbly, soft white chalk, vry clean & barren

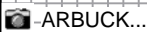
Lm- Cream Yellow Off White, VF-FXLN, densely packed sl unconsolidated oolitic Ls w/ sctrd micro XLN porosity, barren

BKC 3558' (-1418) E-LOG 3555' (-1415) Sh- Maroon Gray, gritty & earthy, gummy argillaceous clumps

Sh/Ss- abundant argillaceous maroon clumps & waxy gray slivers, maroon sl shaley Ss, mod. cementation, consolidated & well sorted fn grn, consistent intergranular porosity, barren

Lm- Cream Off White, VF-FXLN, sl fsl, poorly dev. w/ sctrd XLN porosity, few pcs w/ lt glauconite spkng

ARBUCKLE 3594' (-1454) E-LOG 3590' (-1450) Dol/Lm- Cream Off White, mix of VF-FXLN well cemented sl dolomitic Lm w/ sctrd micro XLN porosity & sub-rounded clear qtz. inclusions, barren, Cream Off White mod. to well dev. sub-sucrosic dolomite w/ rare to dense ppt interXLN porosity, DRK STN, FR-GD SFO, GD SULPHURIC ODR



SHORT TRIP
CTCH
SURVEY 1 dgr.
TOH FOR LOG

RTD 3598' (-1458) LTD 3600' (-1460) @ 02:54 11/27/2015



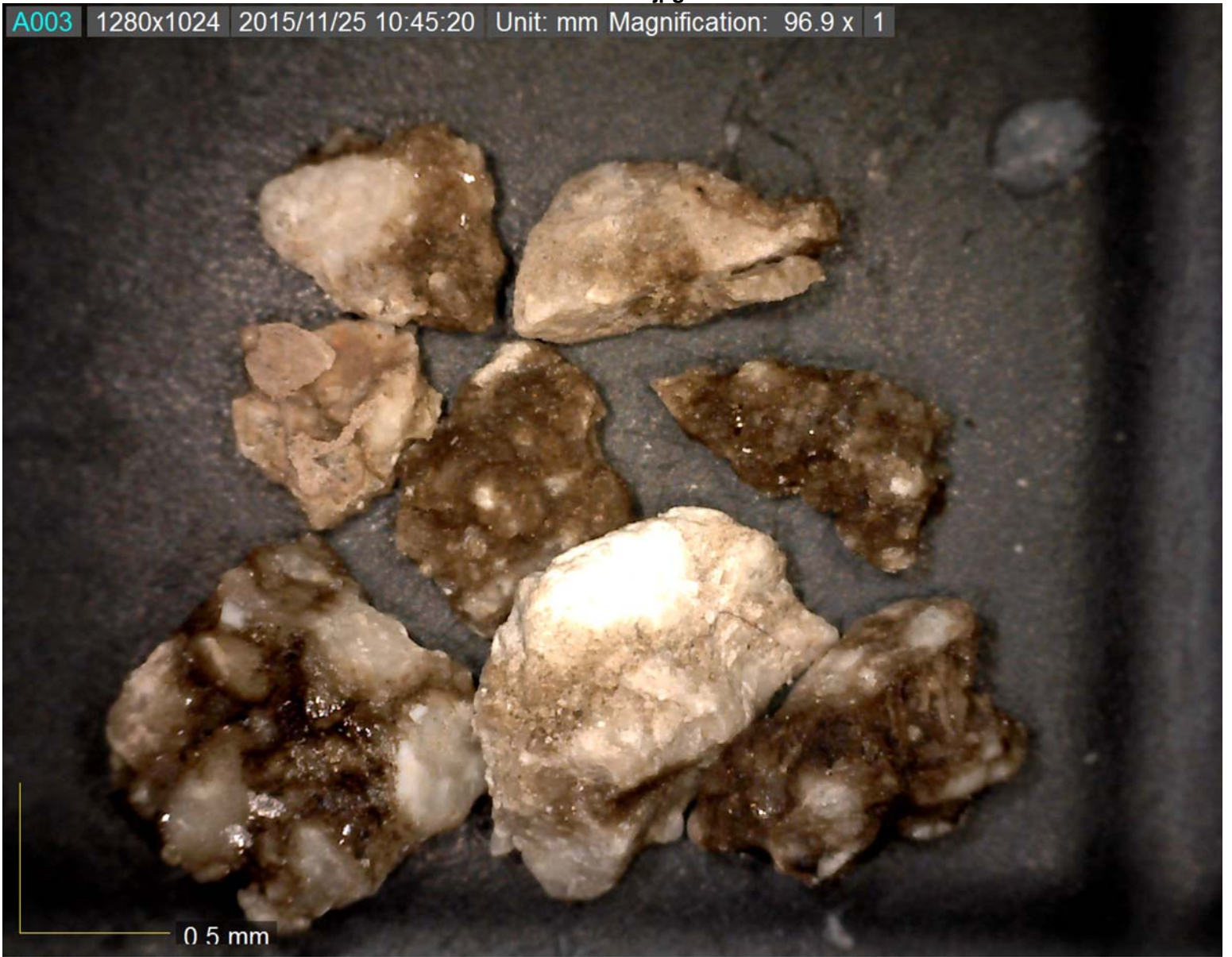
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TOPEKA X 30



0.5 mm

OREAD x 25

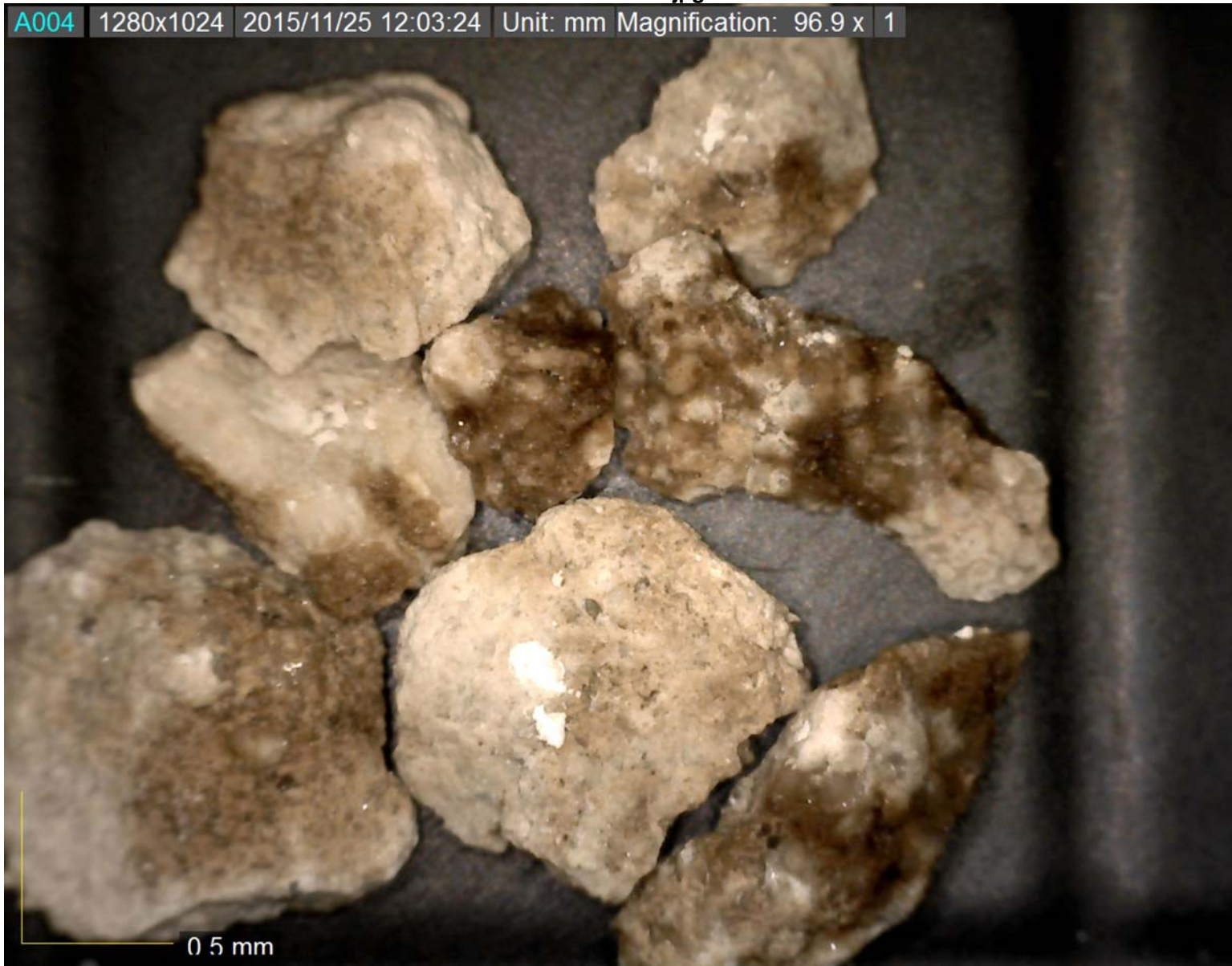


0.5 mm

TORONTO X 25

A ZONE X 20.jpg

A004 1280x1024 2015/11/25 12:03:24 Unit: mm Magnification: 96.9 x 1



IKC A X20

C ZONE.jpg

A005 1280x1024 2015/11/26 07:51:45 Unit: mm Magnification: 77.5 x 1



C zone x 20



D ZONE X 20



0.5 mm

F ZONE X 20



0.5 mm

H ZONE X 20

i.jpg

A009 1280x1024 2015/11/27 01:15:56 Unit: mm Magnification: 77.5 x 1



0.5 mm

I ZONE X 20



0.5 mm



0.5 mm

ARBUCKLE X 20