



Scale 1:240 Imperial

Well Name: Axman Farms #1-18
Surface Location: 1953' FSL_921' FWL
Bottom Location:
API: 15-009-26132-00-00
License Number: 31548
Spud Date: 12/8/2015 Time: 4:00 PM
Region: Barton County
Drilling Completed: 12/15/2015 Time: 10:00 AM
Surface Coordinates:
Bottom Hole Coordinates:
Ground Elevation: 1884.00ft
K.B. Elevation: 1892.00ft
Logged Interval: 2800.00ft To: 3500.00ft
Total Depth: 3500.00ft
Formation: Lansing Kansas-City
Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Tyluka Operations, LLC
Address: P.O. Box 1213
Hays, KS 67601

Contact Geologist: Jeff Zoller
Contact Phone Nbr: 620-786-0807
Well Name: Axman Farms #1-18
Location: 1953' FSL_921' FWL
API: 15-009-26132-00-00
Pool: State: KS Field: Axman
Country: USA

LOGGED BY

Company:
Address: 621 17th St., Suite 1155
Denver, CO 80293

Phone Nbr: 203-671-6034
Logged By: Geologist Name: Jeremy Schwartz

NOTES

The Tyluka Operations, LLC Axman Farms #1-18 was drilled to a total depth of 3500', bottoming in the Arbuckle.

Four DST's were conducted throughout the Toronto and Lansing Kansas City zones. The DST reports can be found at the bottom of this log.

Due to the DST results, sample shows, gas kicks, and log analysis it was determined by all consenting parties to set 5 1/2" production casing and further test the well through perforations and stimulation. The dry samples were saved and will be available for further review at the Kansas Geological Society Well Sample Library, located in Wichita, KS.

****NOTE: The log tops were 5-6' high to the sample tops/drill time so the Gamma and Caliper were adjusted/moved 5' lower to match the drill time on the GeoLog and the DST intervals on the E-logs should also be adjusted accordingly****

Respectfully Submitted,
Jeremy Schwartz
Geologist

CONTRACTOR

Contractor: Discovery Drilling
Rig #: 2
Rig Type: mud rotary
Spud Date: 12/8/2015 Time: 4:00 PM

Spud Date: 12/8/2015
 TD Date: 12/15/2015
 Rig Release:

Time: 4:00 PM
 Time: 10:00 AM









ELEVATIONS

K.B. Elevation: 1892.00ft Ground Elevation: 1884.00ft
 K.B. to Ground: 8.00ft

DATE	DEPTH	ACTIVITY
Saturday, December 12, 2015	3050'	Geologist Jeremy Schwartz on location at 0830hrs, ~3060' Drlg ahead through Heebner, Toronto, CFS @ 3105', Short Trip, CTCH 1hr, Drop Survey, Strap Out for DST #1 in the
	3105'	Toronto, Successful Test, Resume Drlg ahead through Lansing, CFS @ 3180',
Sunday, December 13, 2015	3180'	Conduct DST #2 in the Lansing "A-B", Successful Test, Resume Drlg ahead through Lansing, CFS @ 3220', Location Very Wet and Muddy/Water Running into pits and bringing down Mud Vis., Run premix to get Vis. Up before DST,
	3220'	Conduct DST #3 in the Lansing "D-F",
Monday, December 14, 2015	3235'	Successful Test, Resume Drlg ahead through Lansing, CFS @ 3235', Resume Drlg,
	3289'	CFS @ 3289', Resume Drlg, CFS @ 3308', Resume Drlg, CFS @ 3365', CTCH 1hr,
	3365'	Conduct DST #4 in the Lansing "H-K", Successful Test,
Tuesday, December 15, 2015	3395'	Resume Drlg ahead, CFS @ 3395', Resume Drlg, CFS @ 3427', Resume Drlg ahead to
	3500'	TD @ 3500', TD reached @ 1000hrs, CTCH 1hr, OOH for logs, Conduct Logging Operations, Logging Operations Complete @ 1630hrs
		Geologist Jeremy Schwartz off Location @ 1645hrs

FORMATION	OIL - P&A															
	MAI OIL OPERATIONS								THREE G OIL, CO				KOCH "A" 1			
	AXMAN-YARMER UNIT #1								M AXMAN #1				COLUMBIA DRILLING			
	AXMAN FARMS #1-18								NE SW SW NW 18-175-14W				N/2 SW SW SW 18-175-14W			
	1892		1892		1922		1922		1916		1916		1898		1898	
	KB	LOG TOPS	1892	SAMPLE TOPS	KB	COMP. CARD	LOG	SAMPL.	KB	COMP. CARD	LOG	SAMPL.	KB	COMP. CARD	LOG	SAMPL.
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	884	1008	888	1004	916	1006	+ 2	- 2	920	996	+ 12	+ 8	900	998	+ 10	+ 6
BASE	914	978	918	974	948	974	+ 4	+ 0	950	966	+ 12	+ 8	930	968	+ 10	+ 6
TARKIO	2562	-670	2568	-676	2600	-678	+ 8	+ 2								
BERN	2625	-733	2631	-739	2662	-740	+ 7	+ 1								
ELOMONT	2764	-872	2769	-877	2799	-877	+ 5	+ 0								
HOWARD	2834	-942	2839	-947	2869	-947	+ 5	+ 0								
TOPEKA	2854	-962	2858	-966	2890	-968	+ 6	+ 2	2896	-980	+ 18	+ 14	2870	-972	+ 10	+ 6
HEEBNER SHALE	3066	-1174	3070	-1178	3100	-1178	+ 4	+ 0	3107	-1191	+ 17	+ 13	3082	-1184	+ 10	+ 6
TORONTO	3081	-1189	3085	-1193	3115	-1193	+ 4	+ 0	3122	-1206	+ 17	+ 13	3096	-1198	+ 9	+ 5
DOUGLAS SHALE	3095	-1203	3098	-1206	3128	-1206	+ 3	+ 0	3138	-1222	+ 19	+ 16	3113	-1215	+ 12	+ 9
BROWN LIME	3128	-1236	3132	-1240	3160	-1238	+ 2	- 2	3168	-1252	+ 16	+ 12	3140	-1242	+ 6	+ 2
LKC	3144	-1252	3151	-1259	3179	-1257	+ 5	- 2	3186	-1270	+ 18	+ 11	3158	-1260	+ 8	+ 1
LKC G	3222	-1330	3227	-1335	3254	-1332	+ 2	- 3	3264	-1348	+ 18	+ 13	3238	-1340	+ 10	+ 5
MUNCIE CREEK	3269	-1377	3273	-1381	3298	-1376	- 1	- 5	3312	-1396	+ 19	+ 15	3282	-1384	+ 7	+ 3
LKCH	3276	-1384	3280	-1388	3305	-1383	- 1	- 5	3319	-1403	+ 19	+ 15	3291	-1393	+ 9	+ 5
JSHALE	3302	-1410	3307	-1415	3333	-1411	+ 1	- 4	3347	-1431	+ 21	+ 16	3318	-1420	+ 10	+ 5
BKC	3356	-1464	3361	-1469	3386	-1464	+ 0	- 5	3398	-1482	+ 18	+ 13	3372	-1474	+ 10	+ 5
CONGLOMERATE	3376	-1484	3380	-1488					3408	-1492	+ 8	+ 4	3380	-1482	- 2	- 6
ARBUCKLE	3448	-1556	3452	-1560	3397	-1475	- 81	- 85					3398	-1500	- 56	- 60
RTD			3500	-1608	3474	-1552		- 56	3445	-1529		- 79	3413	-1515		- 93
LTD	3498	-1606														




ROCK TYPES





 Congl	 Lmst fw<7	 Shgy	 Carbon Sh
 Dolprim	 shale, grn	 shale, gry	 shale, red

ACCESSORIES

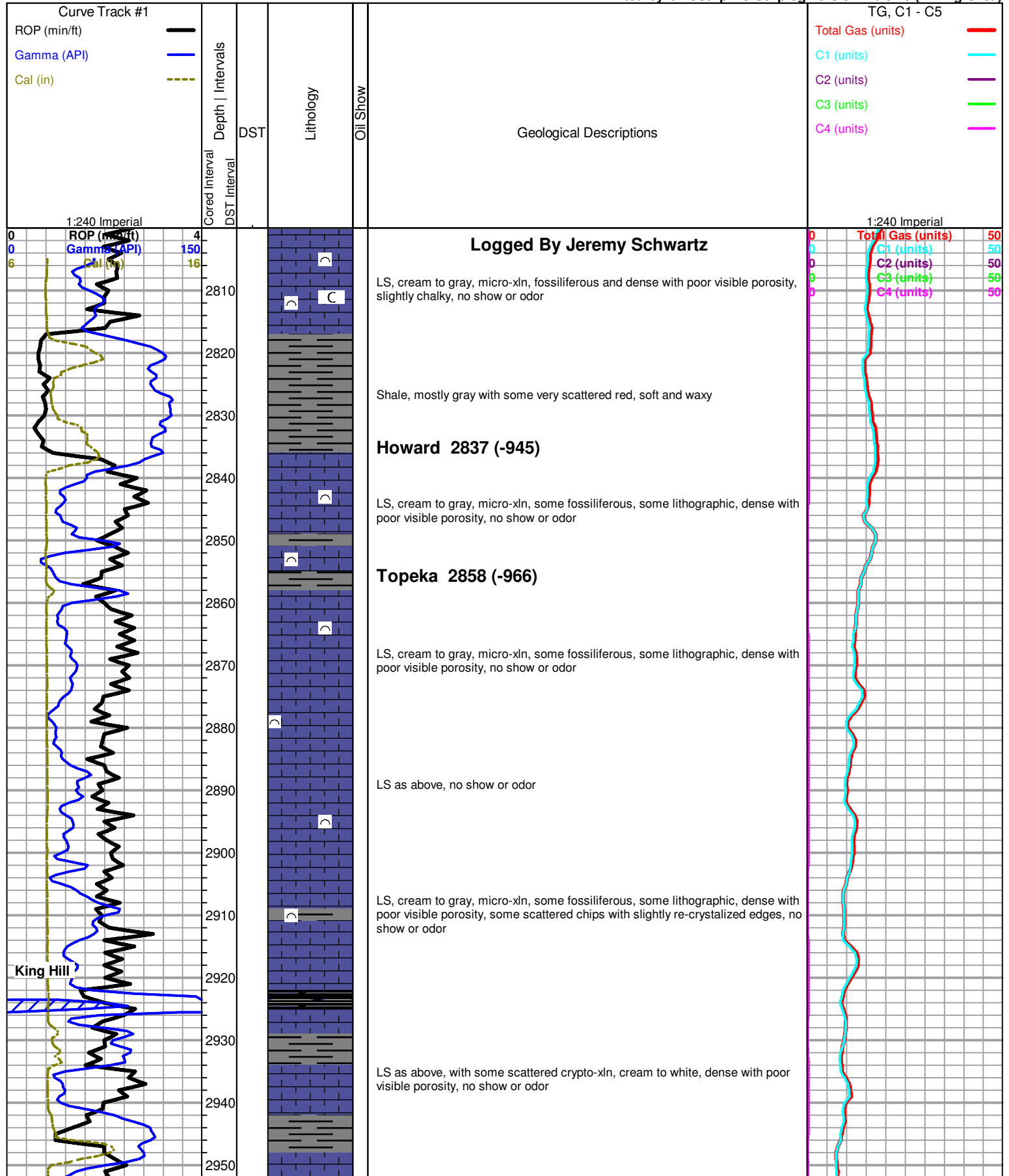
MINERAL	FOSSIL	STRINGER	TEXTURE
△ Chert White	∩ Bioclastic or Fragmental	~~~~ Chert	C Chalky
P Pyrite	F Fossils < 20%	▬ Limestone	
	○ Oolites	••• Sandstone	
	⊕ Oomoldic		

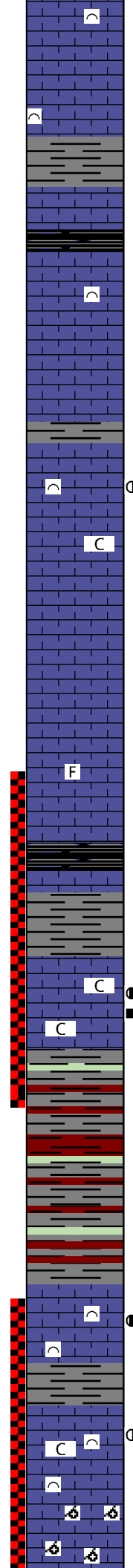
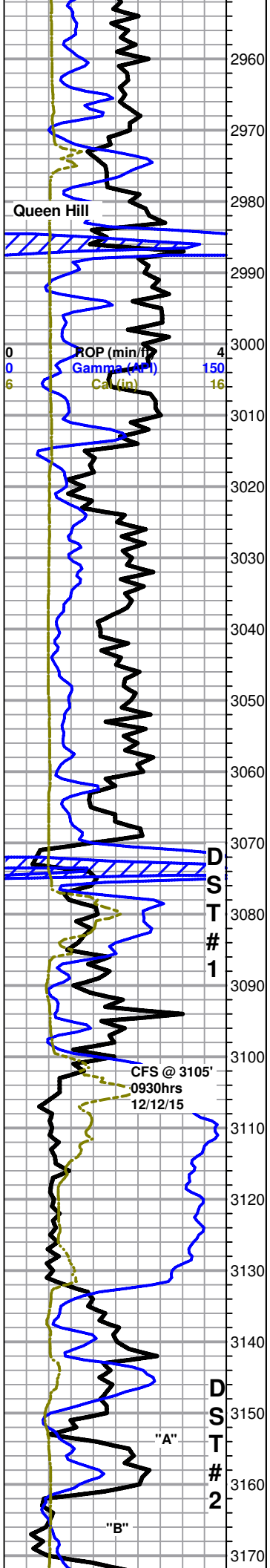
OTHER SYMBOLS

MISC	Oil Show	DST
 Daily Report	● Good Show	■ DST Int
 Digital Photo	● Fair Show	■ DST alt
 Document	● Poor show	
	○ Spotted or Trace	
	○ Questionable Stn	
	D Dead Oil Stn	

-  Folder
-  Link
-  Vertical Log File
-  Horizontal Log File
-  Core Log File
-  Drill Cuttings Rpt

■ Fluorescence
* Gas





LS, cream to gray with some very scattered brown, micro-xln with some very scattered crypto-xln, some fossiliferous, some lithographic, overall dense with poor visible porosity, no show or odor

LS as above, slightly chalky, no show or odor

LS, cream with some scattered gray, micro-xln, some fossiliferous, some lithographic, dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered soft and chalky in part, also with some very scattered (<10% of tray) with some scattered poor to fair visible pinpoint porosity and brown to black stain in porosity only, upon break SSFO, chips are also slightly chalky in part, no fluor., poor fleeting odor

LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, cream with some very scattered gray, micro-xln, mostly lithographic, some scattered slightly fossiliferous, also with some soft and chalky in part, slightly chalky, no show or odor

Heebner 3070 (-1178)
Shale, black carbonaceous
AXMAN FARMS DST 1.jpg

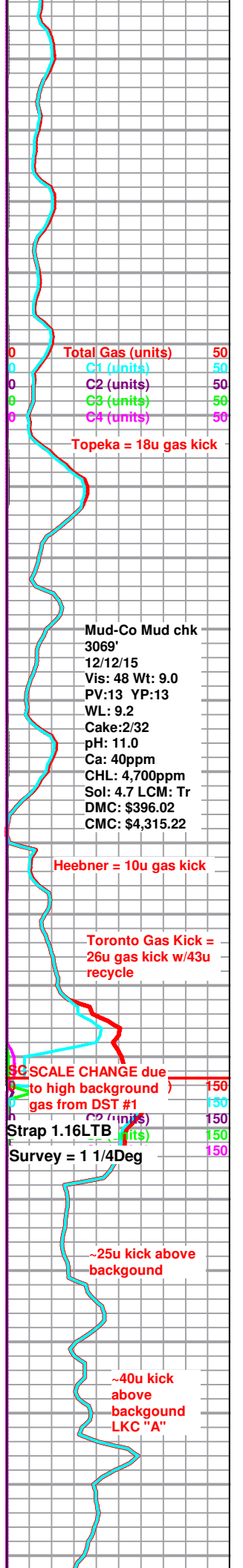
Toronto 3085 (-1193)
LS, cream, micro-crypto xln, mostly lithographic and dense with poor visible porosity, some very scattered chips with some scattered poor to fair pinpoint porosity and light golden brown scattered stain, few small chips with fair pinpoint to slightly vuggy edges and mostly saturated brown to black stain, SSFO upon break, with some scattered dull yellow fluor., chalky, fair fleeting odor
3105' 30" LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some scattered (~25%) with some scattered fair visible pinpoint porosity to slightly vuggy edges and scattered to mostly saturated light golden brown stain, even yellow fluor., instant cut with lighter fluid, chalky, fair odor
3105' 60" Mostly same as above with shows appearing to be slightly droppong out, some scattered fluor., NSFO, fair odor

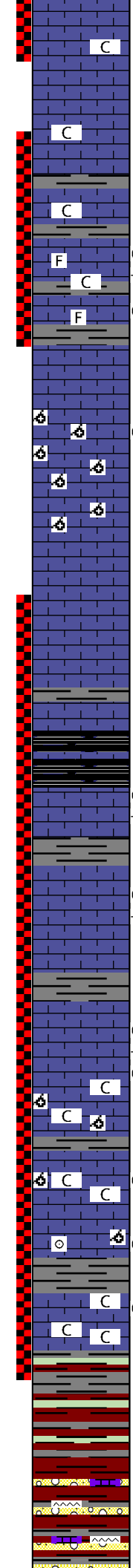
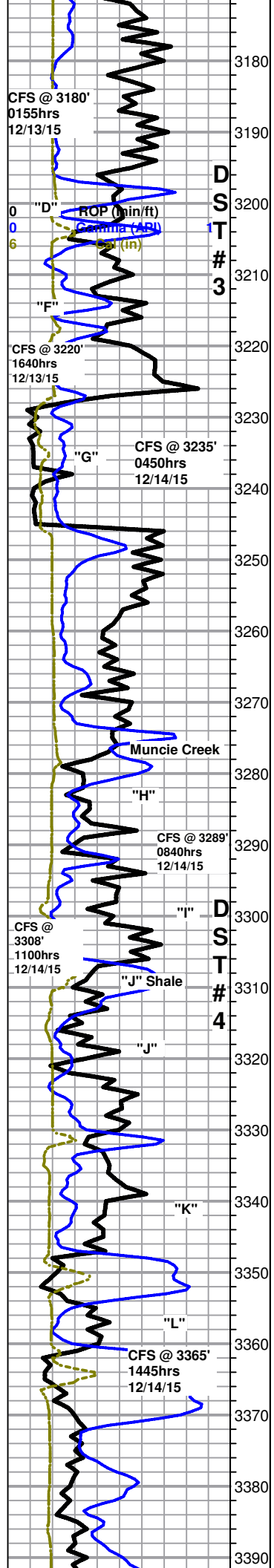
Douglas Shale 3098 (-1206)
Shale, gray and red with trace green, mostly soft and waxy

Brown Lime 3132 (-1240)
LS, cream, micro-crypto xln, some fossiliferous, some lithographic, mostly dense with poor visible porosity, some oolitic, some with scattered pinpoint to slightly vuggy porosity and brown to black stain mostly confined to porosity, few chips with SSFO pooling up near vugs under lamp, too dense to break, few chips also become mostly saturated when left under lamp, some very scattered, very dull fluor., poor odor
AXMAN FARMS DST 2.jpg

Lansing 3151 (-1259)
LS, cream with some scattered white, micro-xln, mostly fossiliferous and dense with poor visible porosity, some oolitic, some with scattered light brown inter-oolite stain, upon break some chips with FSFO (opaque droplets), some very scattered very dull fluor., slightly chalky, poor to fair fleeting odor

LS, mostly same as above, with influx sub-oomoldic to oomoldic, barren with poor visible oomold porosity, oolitic with shows very scattered (<10%), no fluor, NSFO, poor fleeting odor
3180' 30" LS, cream, micro-xln, sub-oomoldic to oomoldic, most re-crystallized, dense with poor visible oomold porosity, NSFO, no fluor., no odor





3180' 60" LS as above, with influx cream, micro-crypto xln, lithographic and dense with poor visible porosity, slightly chalky, no show or odor

LS, cream, micro-xln, lithographic and dense with poor visible porosity, with some soft and chalky in part, no show or odor

LS as above, no show, fluor., or odor

AXMAN FARMS DST 3.jpg

3220' 30" Ls cream, micro-xln, lithographic and dense with poor visible porosity, some scattered (~25%) fossiliferous with poor to fair inter-fossil scattered brown stain, some lithographic with some scattered poor to fair visible pinpoint porosity and scattered brown stain that increases to mostly saturated to saturated when left under lamp, some slightly chalky in part and fairly friable, upon break some chips have fair show gas bubbles and slight to fair show free oil (opaque with few brown droplets), also found few small chips with slight to fair vuggy porosity and mostly saturated to saturated brown stain, instant streaming cut with bright white fluor., poor odor

3220' 60" Mostly same as above, fair odor

3235' 30" LS, cream to white, micro-xln, mostly lithographic and dense with poor visible porosity, with some sub-oomoldic to oomoldic with poor to fair visible oomold porosity, some barren, some with scattered to very scattered light golden brown stain in and around porosity, VSSFO upon break in few chips, fairly chalky, no fluor., poor fleeting odor

3235' 60" LS, cream, micro-xln, oomoldic and re-crystalized, mostly poor visible oomold porosity, some scattered fair porosity, some barren, some scattered (~20%) with scattered to very scattered light golden brown to brown stain, upon break some chips have slight to fair show free oil, SSFO in tray, fairly chalky, no fluor., fair to good odor

LS, cream, micro-xln, lithographic and dense with poor visible porosity, with some scattered sub-oomoldic to oomoldic, barren, NSFO, no odor

LS, cream with some very scattered light gray, micro-xln, lithographic and dense with poor visible porosity, with some very scattered sub-oolitic to sub-oomoldic, dense with poor visible porosity, no show or odor

LS as above, no show or odor

AXMAN FARMS DST 4.jpg

3289' 30" LS, cream to gray with some brown, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered brown with very scattered pinpoint porosity mostly on edges and one to two small vugs with scattered brown stain around porosity and partly in matrix as well, few small chips mostly saturated, with VSSFO upon break in some chips and fair show gas bubbles in tray and upon break in most chips, no fluor., poor odor

3289' 60" Mostly same as above, with slight increase in shows, slight to fair show free oil upon break and when agitated in few chips, VSSFO in tray,

3308' 30" LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some very scattered (~10%) brown, lithographic and dense with poor visible porosity, some very scattered poor pinpoint porosity and light golden brown to brown stain mostly confined to porosity only, upon break some chips have SSFO and fair show gas bubbles with some poor to fair visible inter-xln pinpoint porosity and stain, no fluor., poor fleeting odor

3308' 60" LS, cream with some very scattered light gray, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered soft and chalky in part, with some very scattered small chips cream, some with re-crystalized edges, some scattered poor pinpoint porosity with very scattered to scattered light golden brown stain mostly confined to porosity, VSSFO upon break only in a few chips, most chips with fair show gas bubbles upon break, no fluor., poor odor

~3320' LS, cream to white, some lithographic and dense with poor visible porosity, some soft and chalky in part, some with few small vugs to slightly vuggy porosity with light golden brown to brown stain in porosity and partly in matrix in some, few mostly saturated, dense, upon break some chips have slight to fair show free oil and some with slight show gas bubbles, some chips also show fair to good visible inter-xln pinpoint porosity with mostly saturated inter-xln stain, some very scattered dull fluor., fair to good show free oil in tray, fairly chalky, fair odor

~3330' LS, cream, micro-xln, some lithographic and dense with poor visible porosity, some sub-oomoldic to oomoldic with poor to fair visible oomold porosity and scattered brown stain, few too dense to break but bleed oil to surface when agitated, some chips also slightly vuggy, few scattered small chips with fair vuggy porosity and saturated brown stain, some scattered dull yellow fluor., SSFO in tray, fairly chalky, fair odor

~3340' LS, cream to white, micro-xln, lithographic and dense with poor visible porosity, with some small chips sub-oolitic to oolitic with fair light golden brown inter-oolite stain, some small chips also oomoldic with fair oomold porosity and scattered to mostly saturated light golden brown to brown stain, VSSFO in tray, some scattered dull yellow fluor., fair odor

3365' 30" LS, cream, micro-xln, some lithographic, some soft and chalky in part, with some very scattered small chips sub-oolitic to sub-oomoldic with scattered poor brown to black stain in oomolds only, VSSFO in tray, some very scattered very dull fluor., fairly chalky, poor odor

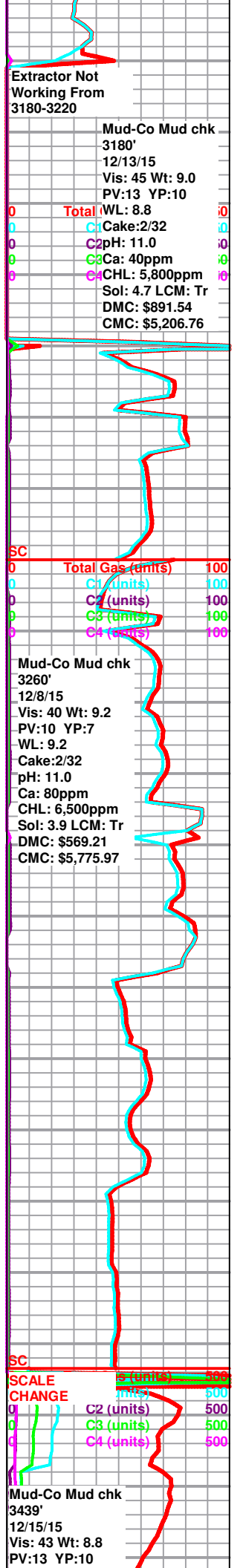
BKC 3361 (-1469)

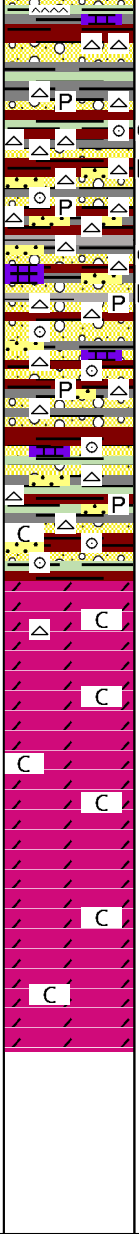
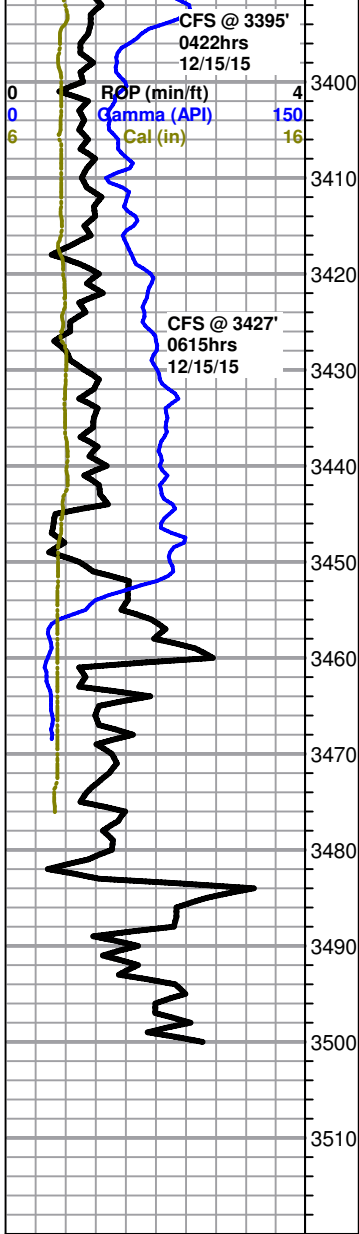
3365' 60" LS, cream to white, micro-xln, lithographic and dense with poor visible porosity, some soft and chalky in part, some very scattered sub-oomoldic with poor brown to black stain in oomolds, with some red and gray shale with trace green, NSFO, chalky, no odor

~3370' Shale, mostly red with some gray and trace green

Mostly red and gray shale with trace green, with some scattered cream to white with some salt and pepper LS, also with influx orange to red chert with some tan, red wash, no show or odor

3395' 30" Conglomerate as above, with sme scattered pyrite, no show or odor





3395' 60" Conglomerate as above, with influx white to tan chert with some opaque, few pieces oolitic, red wash, no show or odor

3410' 0" Conglomerate as above, with abundant white chert with some scattered tan mostly fresh and sharp, some with wet black to black gilsonitic stain, some very scattered oolitic, no show or odor

3427' 30" Conglomerate with abundant white chert as above, also with some scattered SS clusters. clear to black (micaceous?), with some scattered white chert inclusions, pyritic, vf-f, sub-rounded to rounded, very friable, fairly well sorted, upon break slight increase in odor, with abundant vf-f clear sub-rounded to rounded quartz grains in bottom of tray, with some scattered pyrite, NSFO, no fluor., poor odor

3427' 60" Mostly same as above, with abundant SS grains in bottom of tray, NSFO,

Conglomerate as above with abundant white chert, some scattered oolitic, SS clusters appear to be dropping out but still abundant loose sub-rounded to rounded f-med xln clear grains in bottom of tray, very chalky, no show or odor

Conglomerate as above, slightly chalky, no show or odor

Arbuckle 3452 (-1560)

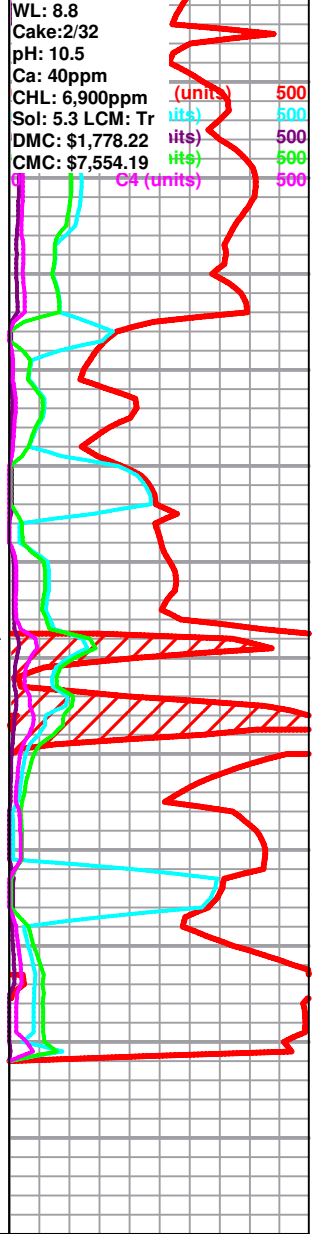
Conglomerate with some very scattered dolomite, white, micro-xln, sub-rhombic and dense with poor visible porosity, barren, some scattered chips fairly friable, slightly chalky, no odor

Influx dolomite, white, micro-xln, sub-rhombic and fairly dense with poor visible porosity, some chips fairly friable, few very scattered chips with some slight inter-xln porosity, barren, fairly chalky, no odor

Dolomite, white, micro-xln, mostly sub-rhombic with poor visible porosity, some dense, some fairly friable with some very scattered slight porosity, some sandy, few chips pyritic, no show or odor

Dolomite as above, with some very scattered oolitic, with few clusters dolomitic sand? clear, med-grained, sub-rounded to rounded, very well cemented and dense, slightly chalky, no show or odor,

Dolomite, sandy dolomite, and trace dolomitic sand as above, few very scattered chips with some scattered rhombic, poor visible porosity, slightly chalky, no show or odor



Rotary TD 3500' @ 1000hrs 12/15/15
Casedhole Solutions Logging TD @ 3498'
Complete Logging Operations @ 1630hrs 12/15/15
Geologist Jeremy Schwartz off location @ 1645hrs 12/15/15



DRILL STEM TEST REPORT

TALUKA OERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01207

DST#: 1

ATTN: JERAMY SCHWARTZ

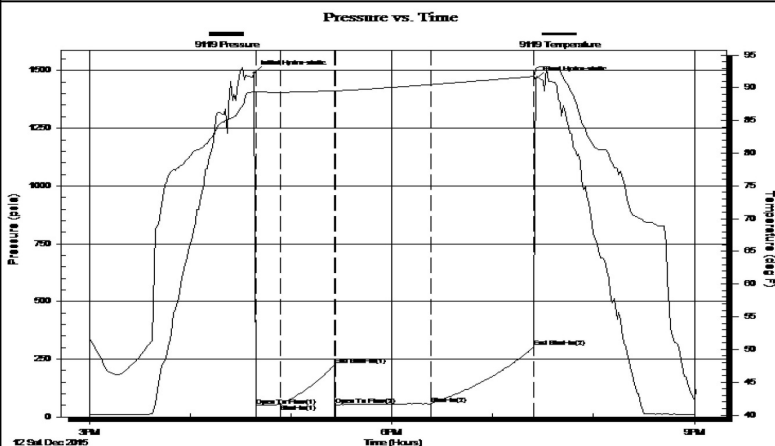
Test Start: 2015.12.12 @ 15:00:00

GENERAL INFORMATION:

Formation: **TORONTO**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:39:00
 Time Test Ended: 21:02:00
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Interval: **3060.00 ft (KB) To 3105.00 ft (KB) (TVD)**
 Total Depth: 3105.00 ft (KB) (TVD)
 Reference Elevations: 1892.00 ft (KB)
 1884.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 304.09 psia @ 3100.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.12.12 End Date: 2015.12.12 Last Calib.: 2015.12.12
 Start Time: 15:00:00 End Time: 21:01:30 Time On Btm: 2015.12.12 @ 16:38:00
 Time Off Btm: 2015.12.12 @ 19:25:30

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK SURFACE BLOW FOR 7 MINUTES AND DIED
 1ST SHUT-IN 30 MINUTES NO BLOW BACK
 2ND OPENING 60 MINUTES WEAK BUILDING BLOW BUILT TO 6 1/2 INCHES
 2ND SHUT-IN 60 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1490.36	89.38	Initial Hydro-static
1	47.98	89.25	Open To Flow (1)
16	54.75	89.32	Shut-In(1)
48	225.09	89.60	End Shut-In(1)
49	51.16	89.56	Open To Flow (2)
105	57.26	90.50	Shut-In(2)
167	304.09	91.75	End Shut-In(2)
168	1465.51	92.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SLIGHTLUY OIL CUT MUD 4 OIL 96 MUD	0.00
0.00	THERE WAS A GOOD SHOW OF FREE G.O.OY OIL	
0.00	BETWEEN THE TOOLS	0.00

Gas Rates

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

DRILL STEM TEST REPORT



TYLUKA OERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01208 DST#: 2

ATTN: JERAMY SCHWARTZ

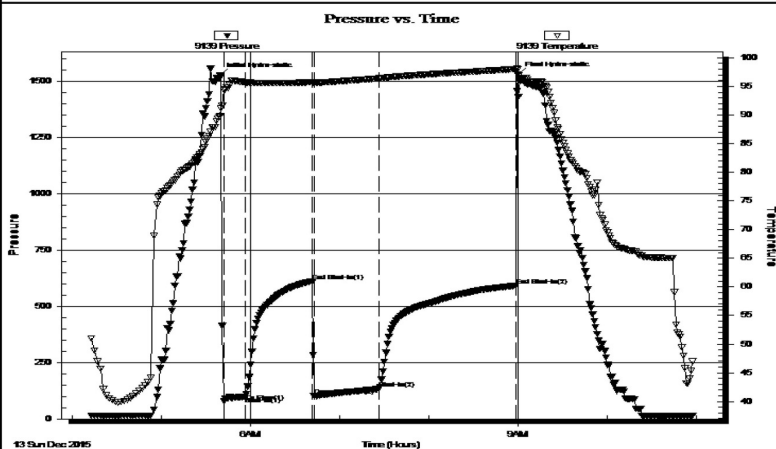
Test Start: 2015.12.13 @ 04:12:00

GENERAL INFORMATION:

Formation: **KANSAS CITY 'A 7 B'**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 06:27:00 Tester: GENE BUDIG
 Time Test Ended: 11:27:00 Unit No: 1 45
 Interval: **3134.00 ft (KB) To 3180.00 ft (KB) (TVD)** Reference Elevations: 1892.00 ft (KB)
 Total Depth: 3180.00 ft (KB) (TVD) 1884.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 8.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 591.03 psia @ 3175.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.12.13 End Date: 2015.12.13 Last Calib.: 2015.12.13
 Start Time: 04:12:00 End Time: 10:57:00 Time On Btm: 2015.12.13 @ 05:39:30
 Time Off Btm: 2015.12.13 @ 08:59:30

TEST COMMENT: 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 5 MINUTES
 1ST SHUT-IN 45 MINUTES FAIR BLOW BACK
 2ND OPENING 45 MINUTES FAIR BLKOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 6 MINUTES
 2ND SHUT-IN 90 MINUTES FAIR BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1524.57	89.85	Initial Hydro-static
3	77.78	94.36	Open To Flow (1)
17	99.26	95.69	Shut-In(1)
62	611.40	95.74	End Shut-In(1)
63	102.18	95.63	Open To Flow (2)
107	133.22	96.41	Shut-In(2)
199	591.03	98.02	End Shut-In(2)
200	1531.18	98.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MUDDY OIL 5 GAS 60 OIL 35 MUD	0.48
60.00	MUDDY OIL 10 GAS 45 OIL 45 MUD	0.48
0.00	1200 FEET OF GAS IN THE PIPE	0.00

Gas Rates

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

DRILL STEM TEST REPORT



TYLUKA OERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01209

DST#: 3

ATTN: JERAMY SCHWARTZ

Test Start: 2015.12.13 @ 08:50:00

GENERAL INFORMATION:

Formation: **LANSING D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 01:21:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: 3190.00 ft (KB) To 3220.00 ft (KB) (TVD)

Reference Elevations: 1892.00 ft (KB)

Total Depth: 3220.00 ft (KB) (TVD)

1884.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 9139

Outside

Press@RunDepth: 674.33 psia @ 3215.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2015.12.13

End Date: 2015.12.14

Last Calib.: 2015.12.14

Start Time: 20:50:00

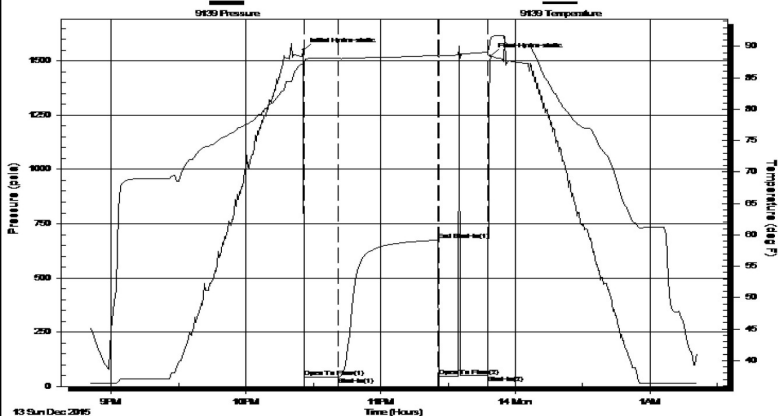
End Time: 01:21:00

Time On Btm: 2015.12.13 @ 22:25:30

Time Off Btm: 2015.12.13 @ 23:49:00

TEST COMMENT: 1ST OPENING 15 MINUTES WEAK BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 45 MINUTES NO BLOW BACK
2ND OPENING 20 MINUTES NO BLOW FLUSHED TOOL GOOD SURGE NO HELP CAME OUT OF THE HOLE NO FINAL SHUT-IN TAKEN

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1549.42	87.22	Initial Hydro-static
1	42.74	87.58	Open To Flow (1)
16	45.07	88.06	Shut-In(1)
60	674.33	88.60	End Shut-In(1)
61	48.52	88.22	Open To Flow (2)
82	51.58	89.07	Shut-In(2)
84	1523.19	91.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	DRILLING MUD	0.08

Gas Rates

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

DRILL STEM TEST REPORT



TYLUKA OERATIONS LLC

18-17S-14W

P.O. BOX 1213
HAYS, KANSAS 67601

AXMAN FARMS 1-18

Job Ticket: 01210 **DST#: 4**

ATTN: JERAMY SCHWARTZ

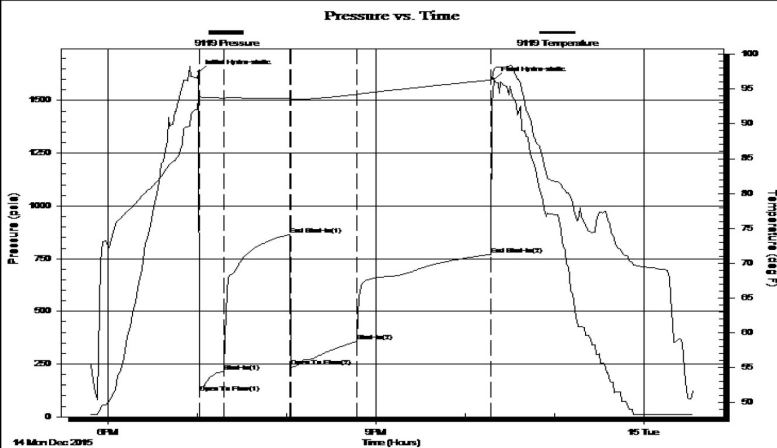
Test Start: 2015.12.14 @ 05:48:00

GENERAL INFORMATION:

Formation: **KANSAS CITY H-K**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 07:02:00 Tester: GENE BUDIG
 Time Test Ended: 12:33:00 Unit No: 1
 Interval: **3255.00 ft (KB) To 3265.00 ft (KB) (TVD)** Reference Elevations: 1892.00 ft (KB)
 Total Depth: 3365.00 ft (KB) (TVD) 1884.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 9119 **Inside**
 Press@RunDepth: 770.33 psia @ 3359.96 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.12.14 End Date: 2015.12.15 Last Calib.: 2015.12.15
 Start Time: 17:48:00 End Time: 00:33:00 Time On Btm: 2015.12.14 @ 19:01:00
 Time Off Btm: 2015.12.14 @ 22:19:00

TEST COMMENT: 1ST OPENING 15 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALOON BUCKET IN 3 MINUTES
 1ST SHUT-IN 45 MINUTES GOOD BLOW BACK
 2ND FLOW 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 4 MINUTES
 2ND SHUT-IN 90 MINUTES GOOD BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1633.77	93.81	Initial Hydro-static
1	114.12	93.80	Open To Flow (1)
17	214.92	93.67	Shut-In(1)
62	865.61	93.65	End Shut-In(1)
62	237.93	93.48	Open To Flow (2)
106	355.40	94.21	Shut-In(2)
196	770.33	96.29	End Shut-In(2)
198	1601.44	97.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
720.00	SLIGHTLY MUD CUT GASSY OIL	8.21
0.00	20 GAS 70 OIL 10 MUD	0.00
0.00	2100 GAS IN THE PIPE	0.00
0.00	GRAVITY 43 CORRECTED	0.00

Gas Rates

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