



Musgrove

PETROLEUM CORPORATION
Clairton, Kansas

NOTES

Company: K&N Petroleum.

Lease: K & K Unit # 1

Field: Rick

Location: NE-NE-NE-SW

Sec:7 Twsp:19S Rge:10W

County:Rice State:Kansas

KB:1773' GL:1786'

API #: 15-159-22767-00-00

Contractor: Southwind Drilling (Rig # 1)

Spud: 02/19/2014 Comp: 02/24/2014

RTD: 3391' LTD: None

Mud Up: 2500' Type Mud: Chemical

Samples Saved From: 2600' to RTD
Drilling Time Kept From: 2600' to RTD
Samples Examined From: 2600' to RTD
Geological Supervision from: 2600' to RTD
Geologist on Well: Wyatt Urban

Surface Casing: 8 5/8@380'

Electronic Surveys: None

K&N Petroleum, Inc. well comparison sheet

Formation	DRILLING WELL K&N Petroleum- K & K Unit NE-NE-NE-SW 7-19S-10W 1786 KB				COMPARISON WELL Petroleum Operation-#1Musenberg SE-NW-SE 7-19S-10W 1774 KB				COMPARISON WELL Gross Drilling Co.- #1 Manke SW-SW-NE 7-19S-10W 1773 KB			
	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Heebner	2892	-1106			2889	-1115	9		2888	-1114	8	
Toronto	2906	-1120			2908	-1134	14					
Douglas	2924	-1138			2921	-1147	9					
Brown Lime	3011	-1225			3007	-1233	8		3005	-1231	6	
Lansing	3033	-1247			3024	-1250	3		3026	-1252	5	
BKC	3301	-1515			3297	-1523	8					
Conglomerate	3348	-1562			3330	-1556	-6		3340	-1566	4	
Arbuckle	3374	-1588			3347	-1573	-15		3356	-1582	-6	
RTD	3391	-1605			3395	-1621	16		3456	-1682	77	



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

K & N Petroleum Inc
1105 Walnut
Great Bend KS 67530

7 19s 10w Rice

K & K Unit # 1

Job Ticket: 56010

DST#: 1

GENERAL INFORMATION:

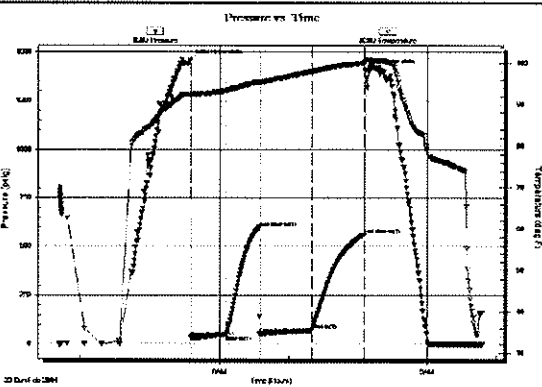
Formation: LKC " A - C "
 Deviated: No Whipstock: 1781.00 ft (KB)
 Time Tool Opened: 05:35:45
 Time Test Ended: 09:48:00
 Interval: 3023.00 ft (KB) To 3065.00 ft (KB) (TVD)
 Total Depth: 3065.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches -hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 1781.00 ft (KB)
 1773.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8289

Outside

Press@RunDepth: 71.78 psig @ 3030.00 ft (KB)
 Start Date: 2014.02.23 End Date: 2014.02.23
 Start Time: 03:42:02 End Time: 09:48:00
 Capacity: 8000.00 psig
 Last Calib.: 2014.02.23
 Time On Btm: 2014.02.23 @ 05:35:15
 Time Off Btm: 2014.02.23 @ 08:05:45

TEST COMMENT: 30-FP- Surface Blow Building to 6 1/2in. in 20min. Died Back in 23min.
 30-ISP- No Blow
 45-FFP- BOB in 17min.
 45-FSP- Surface Blow



PRESSURE SUMMARY

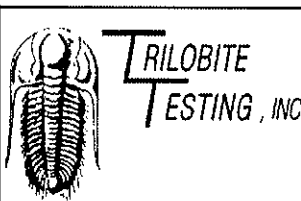
Time (Min)	Pressure (psig)	Temp (deg F)	Annotation
0	1457.66	92.51	Initial Hydro-static
1	36.70	92.33	Open To Flow (1)
30	48.27	93.44	Shut-in(1)
59	601.81	95.62	End Shut-in(1)
60	53.33	95.49	Open To Flow (2)
105	71.78	98.10	Shut-in(2)
150	562.97	100.12	End Shut-in(2)
151	1406.34	100.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bb)
120.00	OSM 100%	1.68
0.00	250 GP	0.00

Gas Rates

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



DRILL STEM TEST REPORT

K & N Petroleum Inc
 1105 Walnut
 Great Bend KS 67530
 ATTN: Wyatt Urban
 7 19s 10w Rice
 K & K Unit # 1
 Job Ticket: 56011 DST#: 2
 Test Start: 2014.02.24 @ 16:00:00

GENERAL INFORMATION:

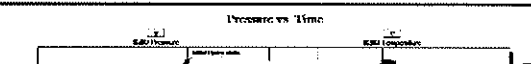
Formation: Arbuckle
 Deviated: No Whipstock: 1781.00 ft (KB)
 Time Tool Opened: 17:58:30
 Time Test Ended: 22:38:00
 Interval: 3288.00 ft (KB) To 3391.00 ft (KB) (TVD)
 Total Depth: 3391.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches -hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 1781.00 ft (KB)
 1773.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8289

Outside

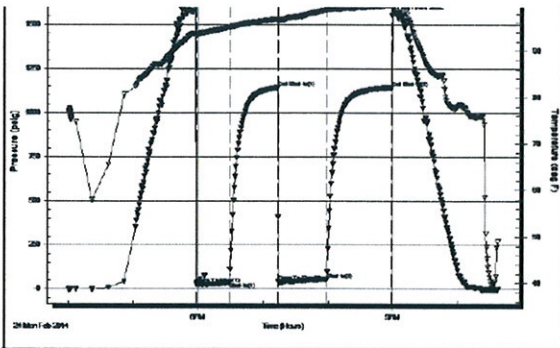
Press@RunDepth: 57.86 psig @ 3297.00 ft (KB)
 Start Date: 2014.02.24 End Date: 2014.02.24
 Start Time: 16:00:02 End Time: 22:38:00
 Capacity: 8000.00 psig
 Last Calib.: 2014.02.24
 Time On Btm: 2014.02.24 @ 17:58:15
 Time Off Btm: 2014.02.24 @ 20:58:45

TEST COMMENT: 30-FP- Surface Blow Building to 4 1/4in.
 45-ISP- No Blow
 45-FFP- Surface Blow Building to 3in.
 60-DSP- No Blow



PRESSURE SUMMARY

Time (Min)	Pressure (psig)	Temp (deg F)	Annotation



Time (hr)	Pressure (psig)	Flow Rate (Mcf/d)	Description
0	1636.57	93.74	Initial Hydro-static
1	30.42	93.26	Open To Flow (1)
31	37.23	95.05	Shut-h(1)
75	1141.57	96.83	End Shut-h(1)
76	41.96	96.58	Open To Flow (2)
120	57.86	98.80	Shut-h(2)
180	1143.56	99.93	End Shut-h(2)
181	1551.57	100.06	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
75.00	Mud 100%	1.05

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

ROCK TYPES

Chtcong1	Lmst fw<7	shale, grn	Carbon Sh	Ss
Dolsec	Lmst fw7>	shale, gry	shale, red	

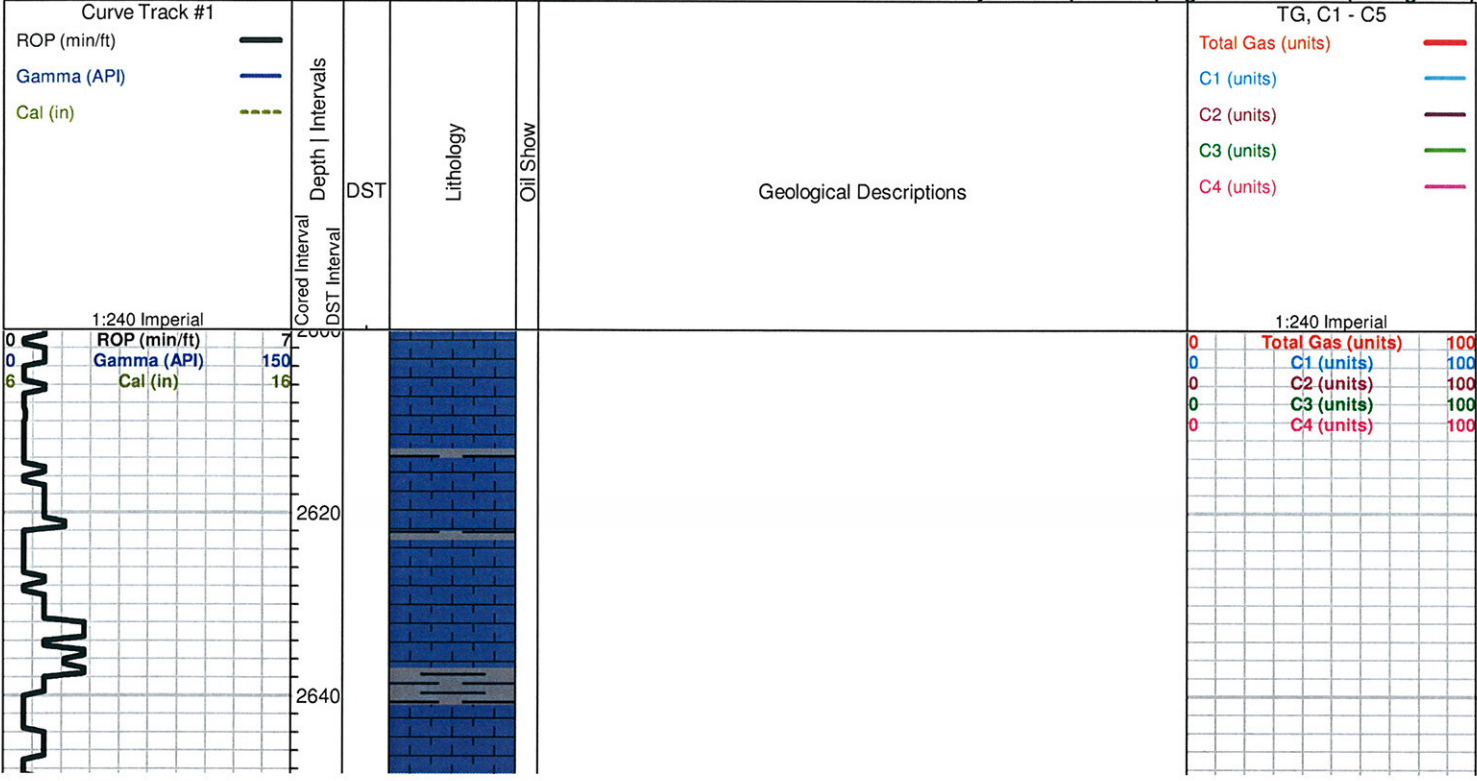
ACCESSORIES

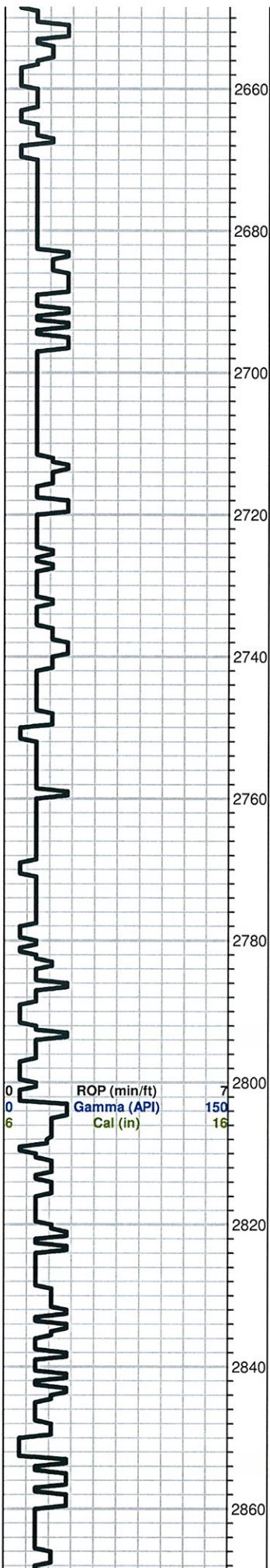
FOSSIL φ Oolite	STRINGER ~ Chert
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OTHER SYMBOLS

Oil Show ● Good Show ● Fair Show ● Poor Show ○ Spotted or Trace ○ Questionable Stn D Dead Oil Stn ■ Fluorescence * Gas	DST ■ DST Int ■ DST alt ■ Core tail pipe
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LS, tan to brown, FXL, dense, poor visible porosity, no shows

Sh. gray to black

LS, tan to brown, FXL, dense, no shows, poor scattered porosity, chalky in parts

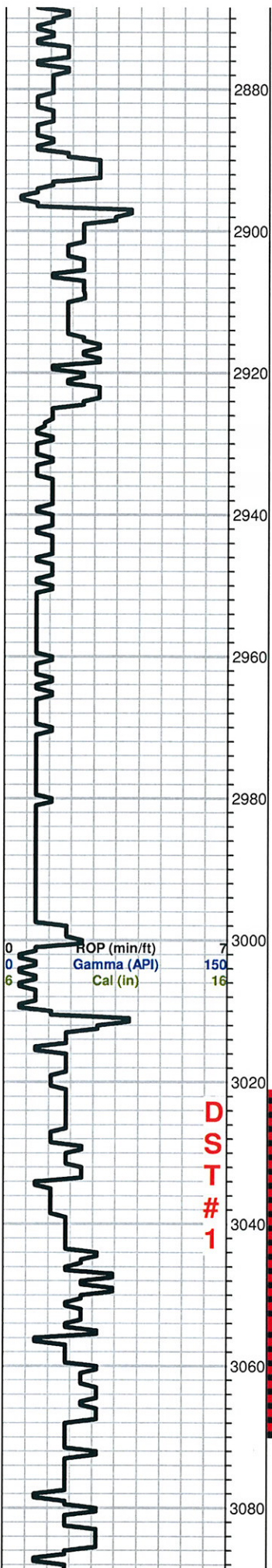
LS, tan FXL, dense, poor visible porosity, cherty no shows

LS, cream to tan, chalky, poor visible porosity, no shows

LS, cream to tan, FXL, few foss, poor visible porosity

Sh. black gray

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



LS, tan to brown, dense, mottled, poor visible porosity, FXL,

Heebner 2892 (-1106)

Black carb Sh.

Toronto

LS, tan FXL, dense, poor scattered porosity, chalky, no shows

Douglas 2921

Sh. black, gray, silty soft

Sh. maroon, gray, silty

Sh. gray, greenish, maroon, black

Sh. A/A, trc. LS, cream chalky, poor visible porosity, N/S

Brown Lime 2997 (-)

LS, brown, FXL, cherty dense, poor visible porosity, no shows

Lansing 3034 (-)

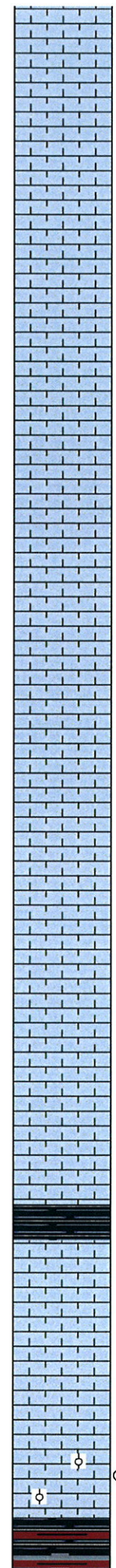
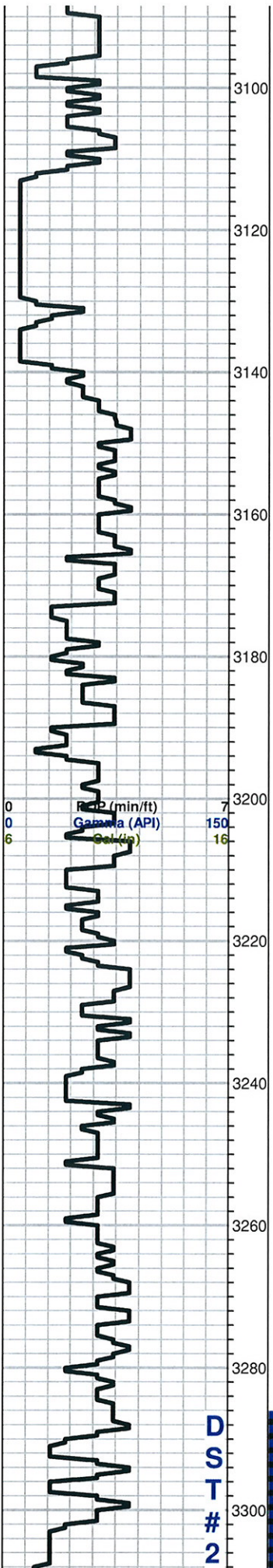
LS, tan to brown, F-MXL, few foss, poor visible porosity, chalky in parts, N/S

LS, cream to tan, FXL, poor scattered porosity, trc.SFO, Lt. golden brown stain, Ft. odor

LS, tan to brown, F-MXLN, fair scattered porosity, SFO, faint odor

Sh. gray, black, trace gray to white boney chert

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



LS, gray, ool, poor visible porosity, chalky in parts, no shows

 LS, tan, oom, fair oomoldic porosity, no shows
 LS, A/A

 LS, cream to tan, ool, good vuggy porosity, no shows

 LS, tan to brown, FXL, dense, poor scattered porosity, no shows, chalky in parts

 Sh. black carb

 LS, gray to tan, ool, poor scattered porosity, no shows

 LS, gray to tan, poorly developed ool, poor visible porosity, no shows

 LS, tan to brown, FXL, cherty porr visible porosity, no shows

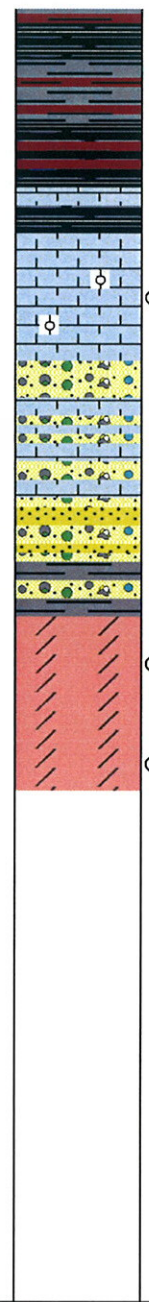
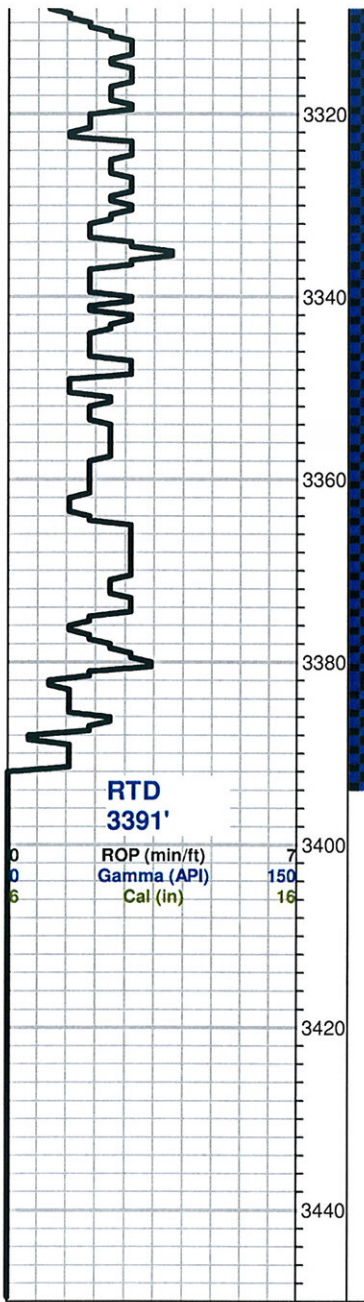
 LS, tan, FXL, cherty in parts, poor scattered porosity, few foss, trace gray shale, silty

 Sh. black carb

 LS, cream to tan, FXL, dense, poor scattered porosity, no shows

 LS, cream to white, ool, poorly developed ool, chalky, poor scattered porosity, Lt. trace SFO, trace Lt. brown stain, no odor
BKC 3301 (-1515)
 Sh. gray black carb maroon/ brick red silty

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



Sh. gray, black carb, maroon, black red, silty

Sh. black greenish, maroon, silty

Sh, black carb

LS, cream to white, ool, chalky, poor scattered porosity, trace SFO, Lt. brown stain, odor???

Conglomerate 3348 (-1562)

Sh. black carb, Chert, ool, yellow, white, opaque, trc. LS, cream, chalky, MXLN, poor to fair visible porosity, no shows

Sd. clear to gray, qtz, well rounded,

Sh. gray, black, greenish, trace yellow chert, no shows

Arbuckle 3374 (-1588)

Dol, tan, brown, FXL, dense, sucrosic, poor visible porosity, trace SFO, odor, Lt. black stain

Dol, tan, sucrosic, Lt. spotty SFO, poor visible porosity, Lt. brown stain, strong odor

	CFS 20-40-60	
	CFS 20-40-60	
	CFS 20-40-60	
	CFS 20-40-60	
	CFS 20-40-60	
0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100