

OPERATOR

Company: BLACK DIAMOND OIL, INC.
 Address: PO BOX 641
 HAYS, KANSAS 67601

Contact Geologist: KEN VEHIGE
 Contact Phone Nbr: 785-625-5891
 Well Name: KEMPER # 2
 Location: NE NW NE NW Sec.27-5s-21w
 Pool: NE NW NE NW Sec.27-5s-21w
 State: KANSAS
 API: 15-137-20,689-00-00
 Field: RAY WEST
 Country: USA

Scale 1:240 Imperial

Well Name: KEMPER # 2
 Surface Location: NE NW NE NW Sec.27-5s-21w
 Bottom Location:
 API: 15-137-20,689-00-00
 License Number: 7076
 Spud Date: 3/6/2014
 Region: NORTON COUNTY
 Drilling Completed: 3/9/2014
 Surface Coordinates: 30' FNL & 1950' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2175.00ft
 K.B. Elevation: 2180.00ft
 Logged Interval: 3100.00ft
 Total Depth: 3609.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL
 Time: 8:28 PM
 Time: 10:02 PM
 To: 3609.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.6767942
 N/S Co-ord: 30' FNL
 E/W Co-ord: 1950' FWL
 Latitude: 39.5959863

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 Address: 108 W 35TH
 HAYS, KS 67601

Phone Nbr: (785) 639-1337
 Logged By: GEOLOGIST
 Name: HERB DEINES

CONTRACTOR

Contractor: WW DRILLING, LLC
 Rig #: 6
 Rig Type: MUD ROTARY
 Spud Date: 3/6/2014
 TD Date: 3/9/2014
 Rig Release: 3/11/2014
 Time: 8:28 PM
 Time: 10:02 PM
 Time: 3:45 AM

ELEVATIONS

K.B. Elevation: 2180.00ft
 K.B. to Ground: 5.00ft
 Ground Elevation: 2175.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING TO FURTHER TEST ARBUCKLE BASED ON POSITIVE RESULTS OF DST # 1 AND FAVORABLE STRUCTURE.

OPEN HOLE LOGGING BY: NABORS COMPLETION & PRODUCTION SERVICES CO: DUAL INDUCTION LOG, COMPENSATED DENSITY/NEUTRON LOG, MICRO LOG

DRILL STEM TESTING BY TRILOBITE TESTING INC: ONE (1) CONVENTIONAL TEST


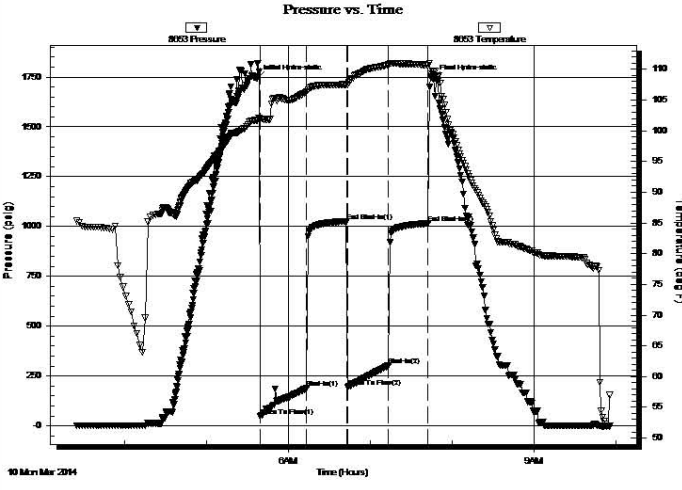
FORMATION COMPARISON CHART AND CHRONOLOGY OF DAILY ACTIVITY

	KEMPER #2 NE NW NE NW SEC.27-5S-21W 2175'GL 2180'KB	KEMPER #1 NW SE SE SEC.22-5-21W	KEMPER # 1 SE SE SW SEC.22-5-21W
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1775 +405	+ 409	+409
B-Anhydrite	1805 +375	+ 380	
Topeka	3179 -999	- 998	
Heebner Sh.	3327-1147	-1146	-1159
Toronto	3354-1174	-1174	-1176
LKC	3372-1192	-1191	-1192
BKC	3560-1380	-1377	
Arbuckle	3605-1425	-1422	-1422
RTD	3609-1429	-1424	-1429

CHRONOLOGY OF DAILY ACTIVITY

- 3-06-14** RU, Spud 1:30 PM, set 8 5/8" surface casing to 207' w/150 sxs
Common 2%gel 3%CC, plug down 5:00PM, slope 1/4 degree
- 3-07-14** 1020', drill plug at 1:00 AM
- 3-08-14** 2357', drilling, displacement complete at 2972'
- 3-09-14** 3300', drilling, CFS 3300', short trip-pulled 33 stands, CFS 3609', RTD
3609' @10:02 PM, mini trip 20 stands, CCH, TOWB, slope 3/4 degree,
strap 3610.65 board 3611.63
- 3-10-14** 3609', DST # 1 3561' to 3609' Arbuckle, log behind DST # 1, TIWB,
CCH, LDDP, run and cement production casing
- 3-11-14** 3609', cementing-plug down 1:30AM, RD, rig released 3:45 AM

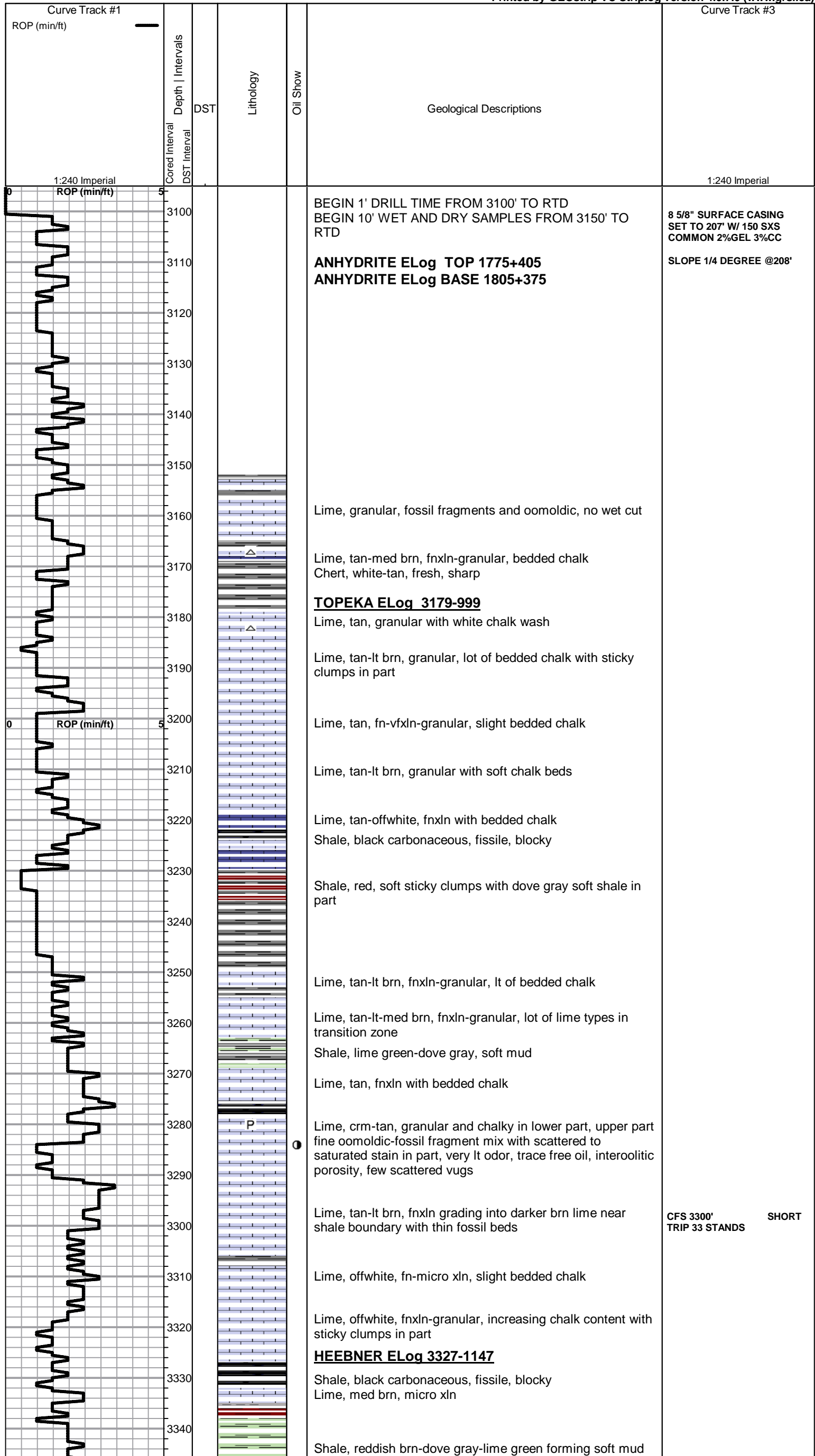
DST # 1 3561' TO 3609' ARBUCKLE

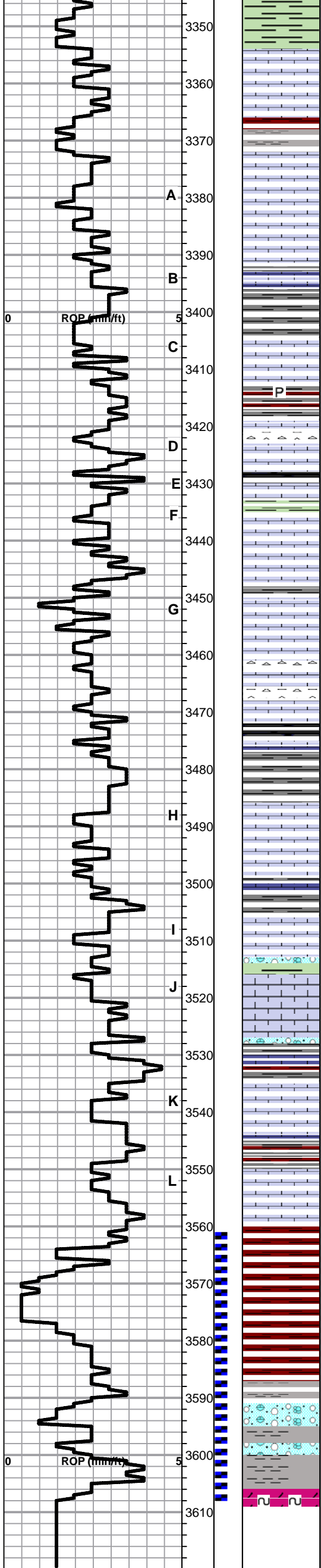
	DRILL STEM TEST REPORT																																										
	Black Diamond Oil PO Box 641 Hays, KS 67601 ATTN: Herb Deines	27-5S-21W Norton, KS Kemper #2 Job Ticket: 56955 DST#: 1 Test Start: 2014.03.10 @ 03:24:00																																									
GENERAL INFORMATION:																																											
Formation: Arbuckle Deviated: No Whipstock: ft (KB) Time Tool Opened: 05:39:30 Time Test Ended: 09:56:00		Test Type: Conventional Bottom Hole (Initial) Tester: Kevin Mack Unit No: 66																																									
Interval: 3561.00 ft (KB) To 3609.00 ft (KB) (TVD) Total Depth: 3609.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good		Reference Elevations: 2172.00 ft (KB) 2167.00 ft (CF) KB to GR/CF: 5.00 ft																																									
Serial #: 8653 Outside Press@RunDepth: 302.68 psig @ 3562.00 ft (KB) Capacity: 8000.00 psig Start Date: 2014.03.10 End Date: 2014.03.10 Last Calib.: 2014.03.10 Start Time: 03:25:00 End Time: 09:56:00 Time On Btm: 2014.03.10 @ 05:37:00 Time Off Btm: 2014.03.10 @ 07:46:00																																											
TEST COMMENT: 30 - IF- BoB in 12 min. 30 - IS- No Return 30 - FF- BoB in 15 min. 30 - FS- No Return																																											
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ROCK TYPES					
	Cht		Lmst fw<7		shale, grn
	Clystgy		Lmst fw7>		shale, gry
	Dolprim		Lscongl		Carbon Sh
					shale, red

ACCESSORIES	
MINERAL	
∩ Glauconite	
P Pyrite	
△ Chert White	

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





and sticky clumps

TORONTO ELog 3354-1174

Lime, mostly fn-micro xln, thin bed oolitic w poor inter oolitic porosity, scattered stain, NFO, No Odor

CFS 3365'

LKC ELog 3372-1192

Lime, tan-lt brn, fn-micro xln, slight bedded chalk, thin zone with oolitic w poorly developed interoolitic porosity, show of hvy oil, no odor, scattered staining

Lime, tan, fn-micro xln, slight bedded chalk, hard on crush

Shale, med-dark gray, calcareous in part
Lime, med-dark grayish brn, fn-micro xln

Lime, crm-tan, fn-vfxln w/ bedded chalk, thin zone of fossil molds with few scattered vugs, trace of staining, NFO, no odor

Shale, red soft blocky with scattered chert nodules

Lime, crm, fnxln
Chert, white-orange, fresh, sharp. NS

Shale, black carbonaceous
Lime, lt-med gray, fnxln

Lime, crm-tan, fnxln-granular, few specks of oil on crush, no odor, spotty staining

Lime, crm-tan, fnxln, bedded chalk with white chalk wash

Lime, crm-tan, fnxln, bedded chalk

Lime, crm-tan, fnxln, bedded chalk
Chert, white-tan, fresh, sharp

Shale, black carbonaceous
Lime, tan-med grayish brn, fn-vfxln, gray mottling

Lime, crm-lt gray, fnxln with white chalk wash, thin zone with fine interxln porosity, spotty staining, NFO, No Odor, lt halo wet cut. Appears poorly developed

Shale, lt gray-lime green, soft sticky clumps

Lime, tan-lt brn, fn-micro xln, slight bedded chalk

Shale, lime green, soft sticky with lime mix near boundary

Lime, lt brn-lt grayish brn, fn-micro xln, slight bedded chalk, trace of organic content and lt spotty staining w/o visible porosity, NFO, no odor

Shale, lt gray-tan, forming soft sticky clumps

Lime, crm-tan, fnxln, thin bed of oolitic-fossil fragments with trace of staining, very lt odor, NFO, spotty staining. Appears poorly developed

Shale, dove gray-red, soft mud, sticky clumps

Lime, crm-tan, fnxln

BKC ELog 3563-1380

Shale, red, very soft and sticky

Shale, red, very soft and sticky

Shale, lt gray, soft and very sticky

Lime, clastic mix, crm, chalky, soft on crush

Shale, dove gray, soft and sticky

ARBUCKLE SPL TOP 3606-1426

Dolomite, tan-lt brn, fnxln-granular, fn-cxln, glauconitic, scattered quartz grains, good odor and saturation with SFO. Appears to be reworked with clear dolomite recrystallization

86 joints 5 1/2" production casing set to 3608' with 150 sxs lite followed by 420 sxs QMD, 30 sxs in rathole, plug down 1:45AM 3-11-14

DST # 1 3561' TO 3609' SEE HEADER FOR TEST SUMMARY

STRAP 3610.65
BOARD 3611.28
.63 SHORT

SLOPE @3609' 3/4 DEGREE

CFS 3609'
Mini short trip 20 stands, CCH