
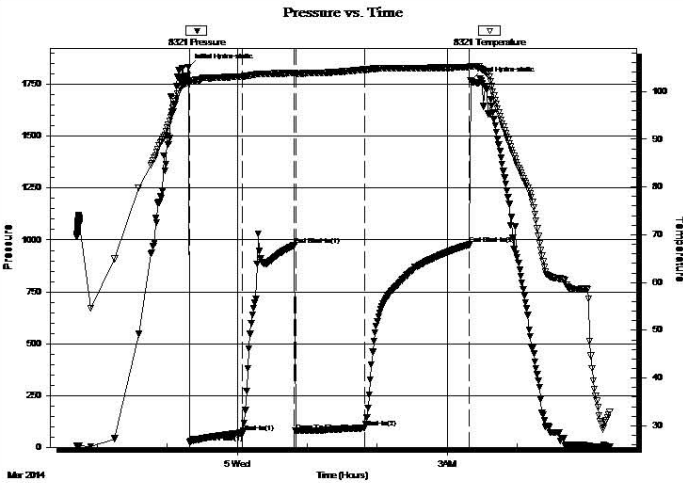


CHRONOLOGY OF DAILY ACTIVITY

- 2-28-14** RU, Spud 2:00 PM, set 8 5/8" surface casing to 209' w/150 sxs
Common 2%gel 3%CC, plug down 5:45PM, slope 1/4 degree
- 3-01-14** 690', drill plug at 1:45 AM
- 3-02-14** 2357', drilling, displacement complete at 2901'
- 3-03-14** 3233', drilling, CFS 3330', short trip-pulled 34 stands, CFS 3380'
- 3-04-14** 3621', drilling, CFS 3621', CFS 3626', RTD 3626' @7:05 AM, mini
short trip 14 stands, DST # 1, 3568' to 3626'-packer failure, TOWT,
logs, start DST # 2 3576' to 3626' Arbuckle
- 3-05-14** 3626', finish DST # 2, TIWB, CCH, LDDP, run production casing, RD

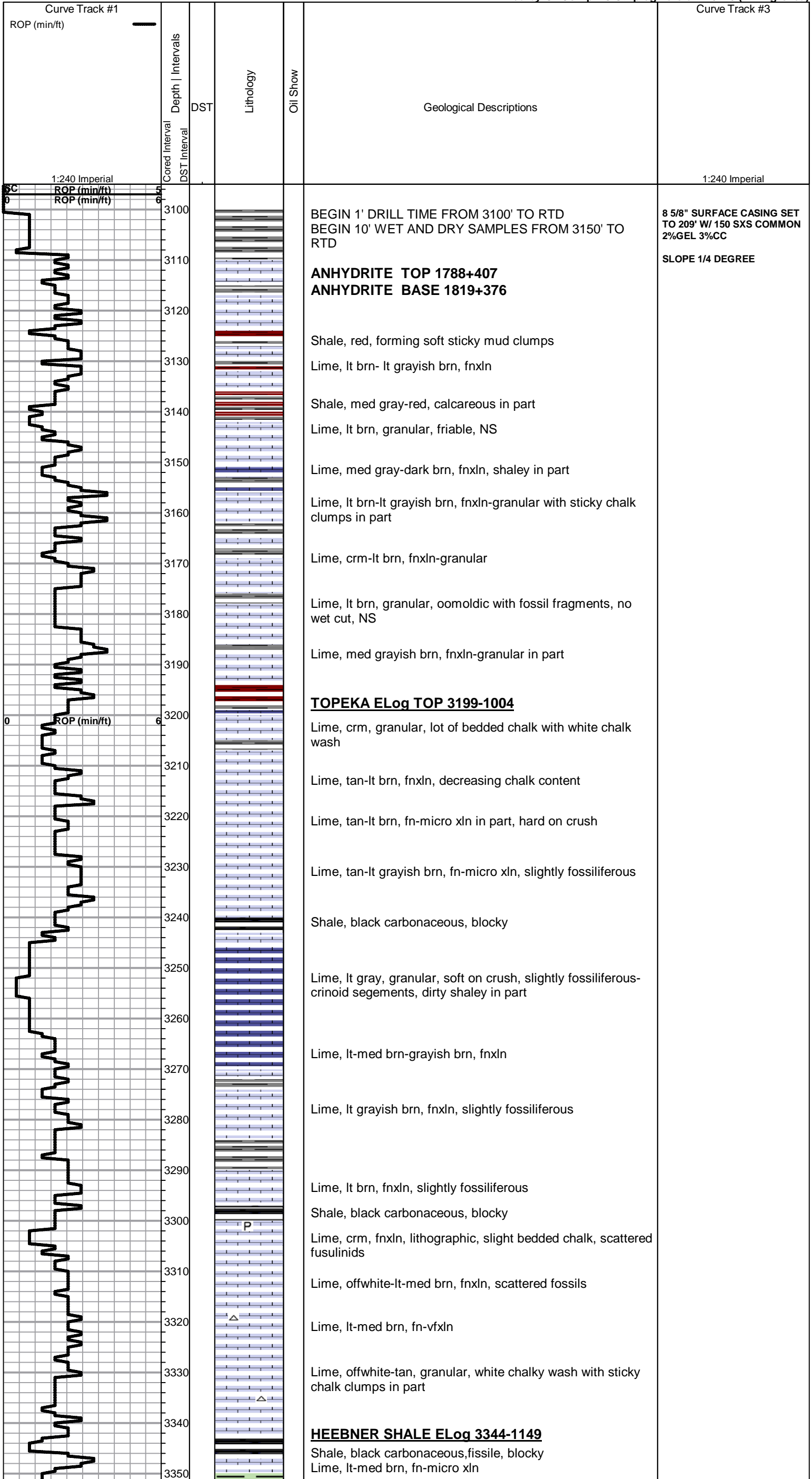
DST # 2 3576' TO 3626' ARBUCKLE

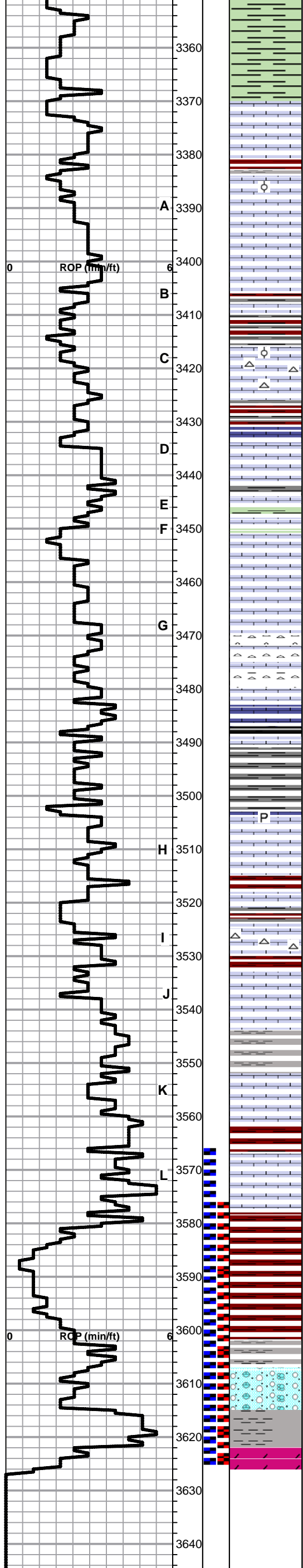
	DRILL STEM TEST REPORT			
	Black Diamond Oil, Inc. PO Box 641 Hays, KS 67601 ATTN: Herb Deines	23-5S-21W Norton, KS Kemper B(Unit)#2 Job Ticket: 54012 DST#: 2 Test Start: 2014.03.04 @ 21:42:37		
GENERAL INFORMATION:				
Formation: Arbuckle Deviated: No Whipstock: ft (KB) Time Tool Opened: 23:19:07 Time Test Ended: 05:19:07		Test Type: Conventional Bottom Hole (Reset) Tester: Brannan L Unit No: 46		
Interval: 3576.00 ft (KB) To 3626.00 ft (KB) (TVD) Total Depth: 3626.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair		Reference Elevations: 2195.00 ft (KB) 2186.00 ft (CF) KB to GR/CF: 9.00 ft		
Serial #: 8321 Inside Press@RunDepth: 93.58 psig @ 3577.00 ft (KB) Capacity: 8000.00 psig Start Date: 2014.03.04 End Date: 2014.03.05 Last Calib.: 2014.03.05 Start Time: 21:42:38 End Time: 05:19:07 Time On Btm: 2014.03.04 @ 23:18:07 Time Off Btm: 2014.03.05 @ 03:20:07				
TEST COMMENT: 45- IF- Slow ly built to 5.5" 45- IS- No blow 60- FF- Slow ly built to 5.5" 90- FS- No blow				
	PRESSURE SUMMARY			
	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
	0	1834.47	101.82	Initial Hydro-static
	1	24.01	101.79	Open To Flow (1)
	47	70.32	103.14	Shut-In(1)
	91	974.95	103.84	End Shut-In(1)
	92	78.63	103.66	Open To Flow (2)
	151	93.58	104.54	Shut-In(2)
	241	977.96	105.03	End Shut-In(2)
	242	1771.01	105.24	Final Hydro-static
Recovery		Gas Rates		
Length (ft)	Description	Volume (bbl)		
175.00	OCM, 70%M 30%O	1.33	Choke (inches)	Pressure (psig)
			Gas Rate (Mcf/d)	
* Recovery from multiple tests				

ROCK TYPES					
	Cht		Lmst fw<7		shale, grn
	Clystgy		Lmst fw7>		shale, gry
	Dolprim		Lscongl		Carbon Sh
					shale, red

ACCESSORIES	
MINERAL	FOSSIL
P Pyrite	φ Oolite
△ Chert White	

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Shale, dove gray-lime green, soft forming soft mud

TORONTO ELog 3370-1175

Lime, crm, fnxln, lot of chalk, some sticky clumps, trace of stain in fine interxln granular lime, lt halo wet cut, NFO, No Odor

LKC ELog 3384-1189

Lime, tan, most fnxln with chalk, few pieces oolitic with trace of lt stain in interoolitic porosity. Appears poorly developed

Lime, tan, fn-sub micro xln, slight bedded chalk

Shale, red wash forming soft mud

Lime, med brn-med grayish brn, fn-micro xln, hard on crush

Lime, crm, fnxln-granular in part, lot of chalk with white chalk wash, few oolitic chips with trace of spotty staining, NFO, interoolitic porosity with scattered fine vugs in part,

Shale, reddish brn-lime green in part, soft-sticky in part

Lime, tan-lt brn, fn-micro xln, bedded chalk, hard, NS

Shale, gray-black, blocky

Lime, lt gray w/ green tint, fnxln

Lime, tan, fnxln with few oolitic chips, trace of staining, NFO, no odor, appears poorly developed

Lime, tan, fnxln, chalky with white chalk wash

Lime, crm-tan, fnxln, lot of bedded chalk with white wash
Chert, tan, fresh, sharp, conchodial, bedded

Lime, dark grayish brn, fnxln, gray mottling, slightly fossiliferous

Shale, dove gray, soft forming soft mud and sticky clumps

Lime, off white-crm-tan, fnxln, lot of bedded chalk and fine xln pyrite inclusions in lime

Shale, deep red, soft forming soft mud and sticky clumps

Lime, tan-lt brn, fn-vfxln, flaky dead oil in many chips with trace of fresh oil stain in a few, NFO, No odor

Shale, red wash

Lime, tan-lt grayish brn, fn-vfxln, slight bedded chalk, trace of dead oil staining, no visible porosity

Shale, dove gray, soft mud forming sticky clumps in part

Lime, crm-tan, fnxln, bedded chalk w/ chalky white wash, thin bed of oolitic-fossil fragments, spotty staining, NFO, no odor

Shale, red to dark brn, firm blocky

Lime, lt-med brn, slightly fossiliferous, micro xln, hard

BKC ELog 3578-1383

Shale, red to reddish brn, dark red wash

Shale, red-brn, soft with reddish brn wash

Shale, dove gray, soft, sticky

Lime, crm-tan, mostly granular, soft on crush, chalky with white chalk wash

Shale, lt gray, soft sticky

ARBUCKLE SPL TOP 3622-1427

Ar buckle, ivory-tan, fnxln-granular, interxln porosity, scattered to saturated staining, good odor with MSFO, range of fine inter xln to coarse xln with rhombic xln development with evidence of vuggy channel enlargement with recrystallized surfaces

DST # 1 3568' TO 3626'
PACKER FAILURE

DST # 2 3576' TO 3626' SEE
HEADER FOR TEST
SUMMARY

STRAP 3642.54
BOARD 3644.03
1.49

SLOPE 3/4 DEGREE @3626'

CFS 3621'
CFS 3626'

88 JTS 5 1/2" SET TO 3626'
W/ 600 SXS QMD-QUALITY
CEMENTING