

OPERATOR

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

Contact Geologist: KENNETH VEHIGE
 Contact Phone Nbr: 785-625-5891
 Well Name: KEMPER B #1
 Location: NE SE NW Sec.23 T5S R21W
 Pool: API: 15-137-20,666-00-00
 State: KANSAS Field: RAY WEST
 Country: USA

Scale 1:240 Imperial

Well Name: KEMPER B #1
 Surface Location: NE SE NW Sec.23 T5S R21W
 Bottom Location:
 API: 15-137-20,666-00-00
 License Number: 7076
 Spud Date: 9/6/2013 Time: 10:30 AM
 Region: NORTON COUNTY
 Drilling Completed: 9/11/2013 Time: 8:00 PM
 Surface Coordinates: 1650' FNL & 2310' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2179.00ft
 K.B. Elevation: 2184.00ft
 Logged Interval: 3000.00ft To: 3619.00ft
 Total Depth: 3619.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.6568937 Latitude: 39.6061716
 N/S Co-ord: 1650' FNL
 E/W Co-ord: 2310' FWL

LOGGED BY

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

Phone Nbr: (785) 639-1337
 Logged By: Geologist Name: STEVE REED / HERB DEINES

CONTRACTOR

Contractor: WW DRILLING, LLC
 Rig #: 6
 Rig Type: MUD ROTARY
 Spud Date: 9/6/2013 Time: 10:30 AM
 TD Date: 9/11/2013 Time: 8:00 PM
 Rig Release: 9/13/2013 Time: 12:00 AM

ELEVATIONS

K.B. Elevation: 2184.00ft Ground Elevation: 2179.00ft
 K.B. to Ground: 5.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON GOOD OIL SHOWS, STRUCTURE AND POSITIVE RESULTS OF DST #4. DECISION TO OPEN HOLE COMPLETE TO FURTHER TEST ARBUCKLE FORMATION.

OPEN HOLE LOGGING BY NABORS COMPLETION AND PRODUCTION SERVICES CO: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, AND MICRO RESISTIVITY LOG

DRILL STEM TESTING BY TRILOBITE TESTERS INC: FOUR (4) CONVENTIONAL TESTS WERE PERFORMED.

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

	WELL NAME		COMP. WELL	COMP. WELL
	KEMPER B#1 BLACK DIAMOND		SHUGHART #1 GOODIN	KEMPER # 1 BLACK DIAMOND
FORMATION	SAMPLE TOPS	LOG TOPS	LOG TOPS	LOG TOPS
ANHYDRITE TOP	1776 + 408		+ 415	+ 409
ANHYDRITE BASE	1811 + 373			+ 380
TOPEKA	3185 - 1001	3184 - 1001	-992	-998
HEEBNER SHALE	3334 - 1150	3328 - 1144	-1147	-1146
TORONTO	3361 - 1177	3354 - 1170	-1172	-1174
LKC	3379 - 1195	3368 - 1184	-1188	-1191
BKC	3570 - 1386	3561 - 1377	-1378	-1377
ARBUCKLE	3611 - 1427		-1422	-1422

SUMMARY OF DAILY ACTIVITY

9-6-13 RU, spud @ 10:30am; 8 5/8" surface casing set at 218' w/150 sxs common, 2% gel, 3%cc

9-7-13 1036' drilling

9-8-13 2650' drilling

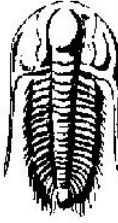
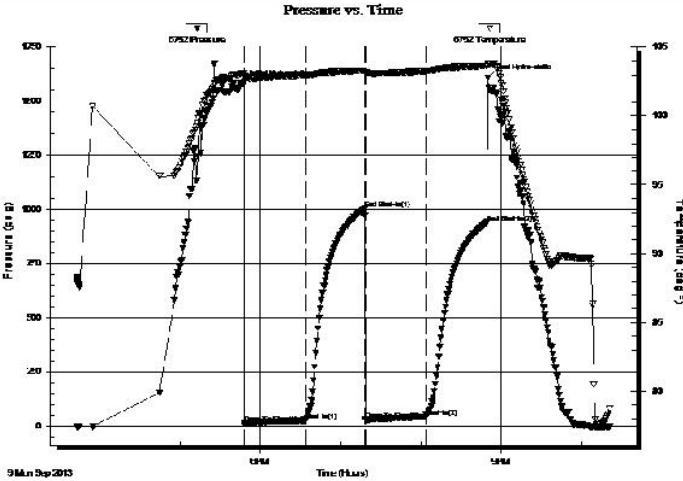
9-9-13 3330' drilling, CFS @ 3385', short trip (33 stands) DST #1 3319'-3385' Toronto-LKC "a"

9-10-13 3487' drilling, CFS @ 3470', mini trip, slope 1°, strap 3554.57', board 3554.54', .03' long, DST #2 3505'-3550' LKC "l-k"

9-11-13 CFS @ 3603', 3606', 3609', 3612', 3614', 3616' DST #3 3566'-3616' ARB. CFS @ 3619' DST #4 3566'-3619' ARB.

9-12-13 open hole logging, 5 1/2" Production casing and cementing.

DST #1 TEST SUMMARY

 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT																																					
	Black Diamond Oil P.O. Box 641 Hays KS 67601 ATTN: Steve Reed	25 - 5S - 21W - Norton Ks Kemper B #1 Job Ticket: 53514 DST#:1 Test Start: 2013.09.09 @ 15:43:00																																				
GENERAL INFORMATION: Formation: Toronto - Lkc " A " Deviated: No Whipstock: ft (KB) Time Tool Opened: 17:48:00 Time Test Ended: 22:21:00 Interval: 3319.00 ft (KB) To 3385.00 ft (KB) (TVD) Total Depth: 3385.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good Test Type: Conventional Bottom Hole (Initial) Tester: Ryan Nichols Unit No: 41 Reference Elevations: 2191.00 ft (KB) 2186.00 ft (CF) KB to GR/CF: 5.00 ft																																						
Serial #: 6752 Press@RunDepth: 43.62 psig @ ft (KB) Capacity: 8000.00 psig Start Date: 2013.09.09 End Date: 2013.09.09 Last Calib.: 2013.09.09 Start Time: 15:43:01 End Time: 22:21:00 Time On Btm: 2013.09.09 @ 17:47:50 Time Off Btm: 2013.09.09 @ 20:49:50																																						
TEST COMMENT: 45 IF - Surface blow built to 1/4" 45 ISI - No return 45 FF - No blow 45 FSI - No return																																						
	PRESSURE SUMMARY																																					
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DST # 2 TEST SUMMARY

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Diamond Oil

P.O. Box 641
Hays KS 67601

ATTN: Steve Reed

25 - 5S - 21W - Norton Ks

Kemper B #1

Job Ticket: 53515 **DST#:2**

Test Start: 2013.10.10 @ 14:16:00

GENERAL INFORMATION:

Formation: **LKC " I - K "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:03:00

Time Test Ended: 20:54:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 41

Interval: **3505.00 ft (KB) To 3550.00 ft (KB) (TVD)**

Total Depth: 3550.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2191.00 ft (KB)

2186.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8322 Outside

Press@RunDepth: 67.90 psig @ 3506.00 ft (KB)

Start Date: 2013.10.10 End Date: 2013.10.10

Start Time: 14:16:01 End Time: 20:54:40

Capacity: 8000.00 psig

Last Calib.: 2013.09.10

Time On Btm: 2013.10.10 @ 16:02:50

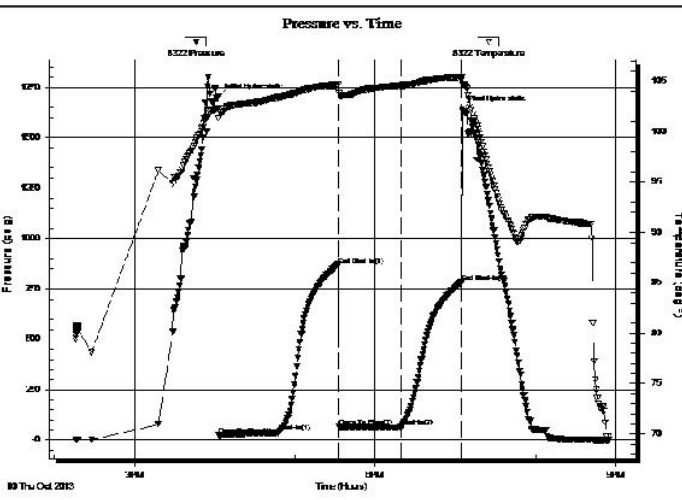
Time Off Btm: 2013.10.10 @ 19:05:20

TEST COMMENT: 45 IF - Surface blow built to 7"

45 ISI - No return

45 FF - Surface blow started @ 2 mins built to 6"

45 FSI - No return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1701.56	102.34	Initial Hydro-static
1	24.72	101.28	Open To Flow (1)
45	38.09	103.40	Shut-In(1)
90	868.47	104.60	End Shut-In(1)
90	65.80	103.76	Open To Flow (2)
137	67.90	104.57	Shut-In(2)
182	782.90	105.39	End Shut-In(2)
183	1643.51	105.40	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
120.00	MCO - 25%M - 75%o	0.59
15.00	Oil - 100%o	0.17

* Recovery from multiple tests

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

Trilobite Testing, Inc Ref. No: 53515 Printed: 2013.09.11 @ 10:19:42

DST # 3 TEST SUMMARY

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Diamond Oil

P.O. Box 641
Hays KS 67601

ATTN: Steve Reed

25 - 5S - 21W - Norton Ks

Kemper B #1

Job Ticket: 53516 **DST#:3**

Test Start: 2013.09.11 @ 11:53:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:32:20

Time Test Ended: 16:36:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 41

Interval: **3566.00 ft (KB) To 3616.00 ft (KB) (TVD)**

Total Depth: 3616.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2191.00 ft (KB)

2186.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6752 Inside

Press@RunDepth: psig @ 3567.00 ft (KB)

Start Date: 2013.09.11 End Date: 2013.09.11

Start Time: 11:53:01 End Time: 16:36:40

Capacity: 8000.00 psig

Last Calib.: 2013.09.11

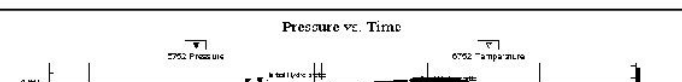
Time On Btm: 2013.09.11 @ 13:32:10

Time Off Btm: 2013.09.11 @ 14:47:40

TEST COMMENT: 30 IF - Surface blow died @ 26 mins

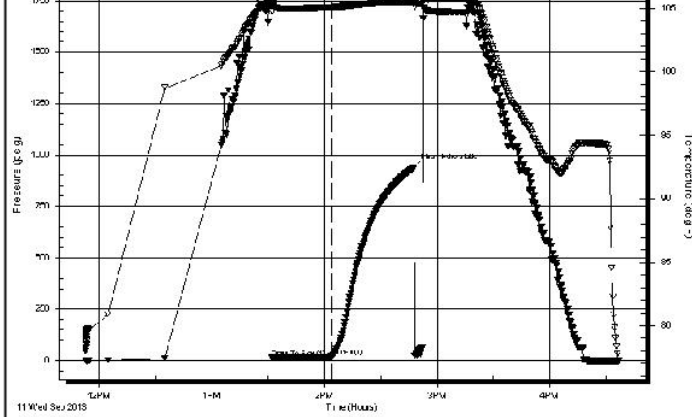
45 ISI - No return

5 FF - No blow



PRESSURE SUMMARY			
Time	Pressure	Temp	Annotation

Trilobite Testing, Inc Ref. No: 53516 Printed: 2013.09.11 @ 10:19:42



(Min.)	(psig)	(deg F)	
0	1736.32	105.44	Initial Hydro-static
1	12.60	104.74	Open To Flow (1)
32	19.88	105.08	Shut-In(1)
76	938.23	105.56	Final Hydro-static
81	1714.32	105.63	Final Hydro-static

Length (ft)	Description	Volume (bbl)
10.00	Mud w/oil spots	0.05

* Recovery from multiple tests

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

Trilobite Testing, Inc Ref. No: 53516 Printed: 2013.09.11 @ 17:20:48

DST # 4 TEST SUMMARY

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Black Diamond Oil **25 - 5S - 21W - Norton Ks**

P.O. Box 641 **Kemper B #1**
Hays KS 67601

Job Ticket: 53517 **DST#:4**

ATTN: Steve Reed Test Start: 2013.09.11 @ 21:55:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:28:50
 Time Test Ended: 05:01:00

Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Nichols
 Unit No: 41

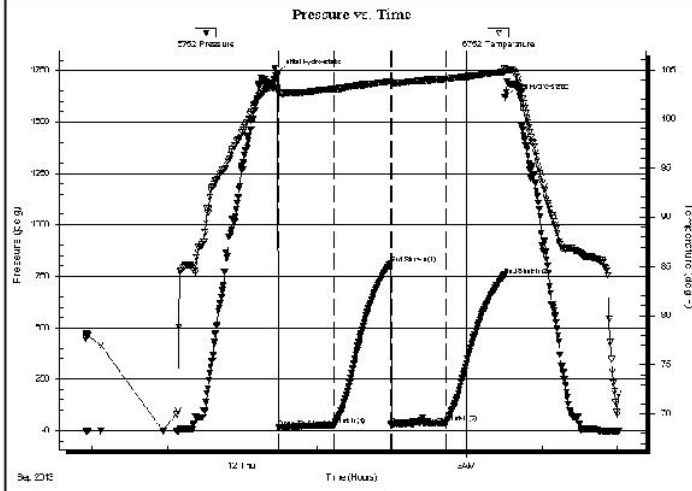
Interval: **3566.00 ft (KB) To 3619.00 ft (KB) (TVD)**
 Total Depth: 3619.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2191.00 ft (KB)
 2186.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6752 Inside

Press@RunDepth: 37.74 psig @ 3567.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.09.11	End Date: 2013.09.12
Start Time: 21:55:00	End Time: 05:01:00
	Last Calib.: 2013.09.12
	Time On Btm: 2013.09.12 @ 00:28:40
	Time Off Btm: 2013.09.12 @ 03:30:09

TEST COMMENT: 45 IF -
 45 ISI -
 45 FF -
 45 FSI -



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1738.22	103.07	Initial Hydro-static
1	15.56	102.75	Open To Flow (1)
45	26.52	103.02	Shut-In(1)
91	811.75	103.80	End Shut-In(1)
91	29.16	103.64	Open To Flow (2)
135	37.74	104.07	Shut-In(2)
182	756.94	104.74	End Shut-In(2)
182	1620.77	105.17	Final Hydro-static

Length (ft)	Description	Volume (bbl)
25.00	OCM - 7%O - 93%M	0.12

* Recovery from multiple tests

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

Trilobite Testing, Inc Ref. No: 53517 Printed: 2013.09.12 @ 05:11:25

ROCK TYPES

Cht	Dol Lime	Lscongl	shale, red
Cht vari	Lmst fw<7	shale, gry	Shcol
Dolprim	Lmst fw>7	Carbon Sh	Ss

ACCESSORIES

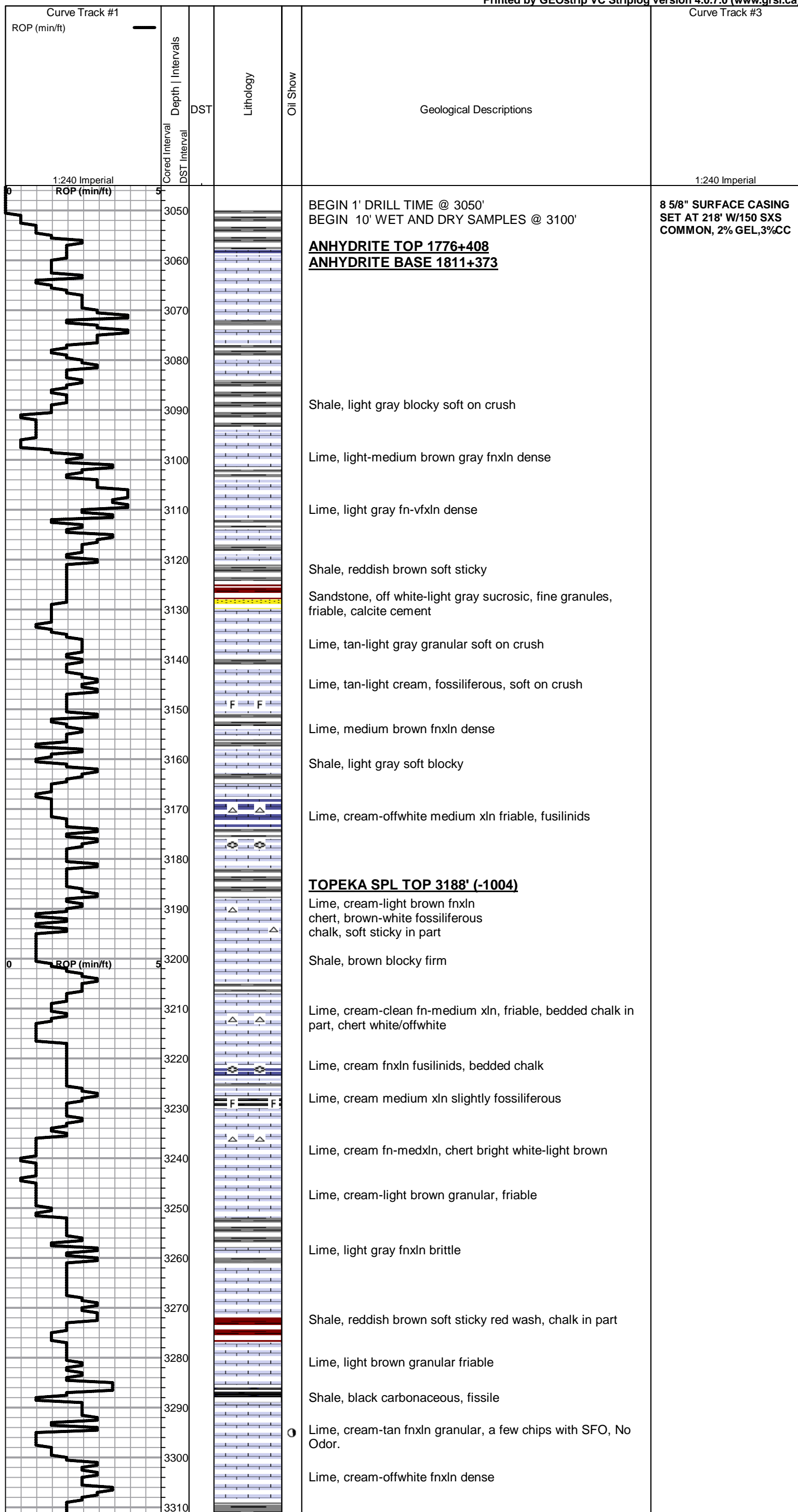
MINERAL
 ▲ Chert, dark
 P Pyrite
 △ Chert White
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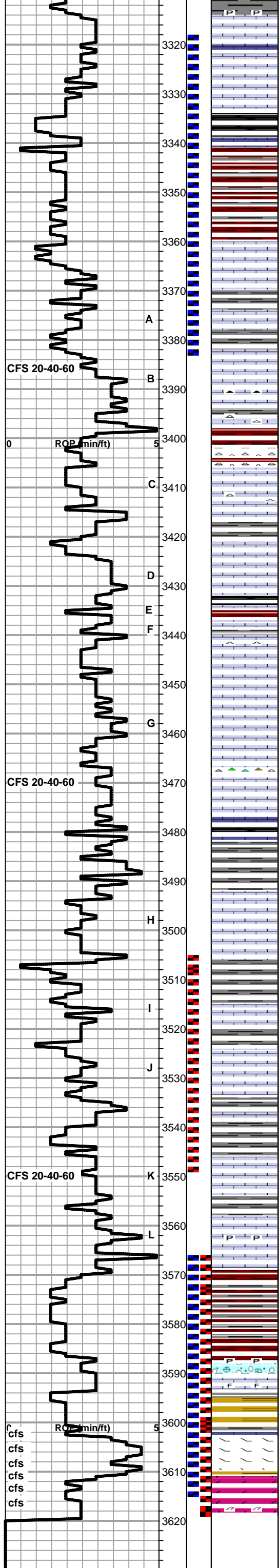
FOSSIL
 F Fossils < 20%
 ⊕ Fossilinid

OTHER SYMBOLS

DST
 ■ DST Int
 ■ DST alt

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





Lime, cream fnxln hard on crush, pyrite

Lime, cream-fnxln

HEEBNER SH SPL TOP 3334' (-1150)

Shale, black carbonaceous

Lime, medium brown vfnxln, hard on crush

Shale, reddish brown-gray soft blocky

TORONTO SPL TOP 3361' (-1177)

Lime, cream tan oolitic with SFO, good odor, fine interxln porosity, flouresence under UV.

Lime, tan-light brown slightly fossiliferous

LKC SPL TOP 3379 (-1195)

Lime, tan vfnxln NSFO, slight odor

Lime, cream-tan fn-vfxln, brittle on crush, orange chert

Lime, 1 chip oolitic with SFO, no odor, pyrite, light gray chert

Cherts, various colors, light gray, brown, white
Shale, medium brown soft blocky

Shale, reddish brown / gray soft sticky, opaque gray chert, pyrite

Lime, tan, mostly fnxln with 1 chip light scattered stain, pinpoint porosity. no odor, no sfo

Shale, light gray-black soft blocky, red wash

Lime, cream-tan fnxln, light gray chert

Lime, cream a few chips with fine pinpoint porosity, scattered stain, slight odor, SFO upon crush

Lime, tan interxln porosity with some scattered stain slight odor

Lime, cream-tan clean fnxln, various colored cherts
Lime, cream-tan fnxln, fusulinids

Shale, black carbonaceous

Shale, light gray blocky, sticky in part

Lime, cream-offwhite granular, friable

Lime, light-medium brown fnxln

Lime, tan scattered pinpoint porosity, few chips oolitic w/SFO upon crush. slight odor.

Lime, tan-light brown scattered vuggy porosity, slight stain, slight odor, nsfo

Lime, cream-light brown fn-medium xln nsfo, no odor

Lime, light brown granular with scattered vuggy porosity. SFO upon crush, slight odor

Shale, brown-gray soft blocky

Lime, tan-light brown fnxln, chert light gray, pyrite
1 chip with gilsonitic stain

BKC 3570' (-1386)

Shale, reddish brown granular sandy blocky firm on crush

Shale, reddish brown soft blocky

Lime, gray fn-vfxln, bedded chalk, gray chert, pyrite

Lime, gray-yellowish fnxln with clastics imbedded, slightly fossiliferous

Shale, brown soft sticky

Lime, off-white-gray fnxln, nsfo, no odor

ARBUCKLE SPL TOP 3611 (-1427)

Dolomite, fnxln grading into medium xln, SFO upon crush faint odor.

Dolomite, offwhite-light brown, rhombic xtals with clear qtz, glauconitic, saturated stain w SFO, good odor

RTD 3619 (-1435) LTD 3616 (-1432)

DST #1 3319'- 3385' SEE
HEADER FOR TEST
SUMMARY

DST #2 3505' - 3550' SEE
HEADER FOR TEST
SUMMARY

DST #3 3566' - 3616' SEE
HEADER FOR
TESTSUMMARY

DST #4 3566 - 3619' SEE
HEADER FOR TEST
SUMMARY