

OPERATOR

Company: CARRIE EXPLORATION AND DEVELOPMENT
 Address: 210 W 22ND STREET
 HAYS, KANSAS 67601

Contact Geologist: RON HEROLD
 Contact Phone Nbr: 913-961-2760
 Well Name: SARA C-1
 Location: SW SW SW Sec 8-22s-10w
 Pool: WILDCAT
 State: KANSAS

API: 15-155-21,618-00-00
 Field: UNNAMED
 Country: USA

Scale 1:240 Imperial

Well Name: SARA C-1
 Surface Location: SW SW SW Sec 8-22s-10w
 Bottom Location:
 API: 15-155-21,618-00-00
 License Number: 6768
 Spud Date: 1/2/2013
 Region: RENO COUNTY
 Drilling Completed: 1/9/2013
 Surface Coordinates: 330' FSL & 330' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 1764.00ft
 K.B. Elevation: 1772.00ft
 Logged Interval: 2600.00ft
 Total Depth: 3650.00ft
 Formation: VIOLA
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

Time: 11:00 PM
 Time: 10:59 AM
 To: 3650.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 330' FSL
 E/W Co-ord: 330' FWL

LOGGED BY

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

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

CONTRACTOR

Contractor: FOSSIL DRILLING INC.
 Rig #: 2
 Rig Type: MUD ROTARY
 Spud Date: 1/2/2013
 TD Date: 1/9/2013
 Rig Release: 1/10/2013

Time: 11:00 PM
 Time: 10:59 AM
 Time: 6:30 AM

ELEVATIONS

K.B. Elevation: 1772.00ft
 K.B. to Ground: 8.00ft
 Ground Elevation: 1764.00ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF THREE DRILL STEM

TESTS OVER PRIMARY ZONES OF INTEREST.

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG

DRILL STEM TESTING BY SUPERIOR TESTERS ENTERPRISES, LLC: THREE (3) CONVENTIONAL TESTS

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY


**SARA C # 1
330' FSL & 330' FWL, SW/4
Sec 8-22s-10w
1764' GL 1772' KB**

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>
Heebner Shale	2986-1214	2985-1213
Toronto	3008-1236	3007-1235
Douglas Shale	3026-1254	3024-1252
Brown Lime	3123-1351	3121-1349
LKC	3149-1377	3150-1378
BKC		3437-1665
Viola		3497-1725
Simpson Shale		3525-1753
Simpson Dolomite		3543-1771
Simpson Sand		3555-1783
Arbuckle		3587-1815
RTD	3650-1878	
LTD		3650-1878

SUMMARY OF DAILY ACTIVITY

1-02-13	Spud, set 8 5/8" surface casing to 284' w/ 225 sxs Common, 2%gel, 3%CC, plug down 8:30PM
1-03-13	291', replace drill line, drill plug, drilling
1-04-13	1504', drilling
1-05-13	2380', drilling
1-06-12	3125', drilling, short trip 20STDs, DST # 1 3164'-3240' "C-F" LKC
1-07-13	3240', drilling
1-08-13	3530', DST # 2 3490'-3530' Viola, DST # 3 3540'-3572', Simpson
1-09-13	3578', RTD 3650'@ 10:59AM, CCH, Logs, P&A
1-10-13	3650', finish laying down DP, last plug down 6:30AM

DST # 1 3164' TO 3240' "C-F" LKC

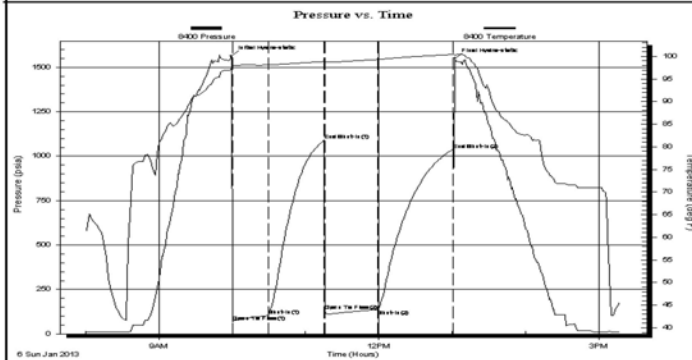
	DRILL STEM TEST REPORT	
	Carrie Exploration	8-22s-10-w Reno
	210 West 22nd Hays Kansas 67601	Sara C-1
ATTN: Herb Deines	Job Ticket: 17723	DST#: 1
	Test Start: 2013.01.06 @ 08:00:00	

GENERAL INFORMATION:

Formation: Lansing C-F	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Dustin Ellis
Time Tool Opened: 10:00:00	Unit No: 3315-Great Bend-75
Time Test Ended: 15:18:00	Reference Elevations: 1772.00 ft (KB)
Interval: 3164.00 ft (KB) To 3240.00 ft (KB) (TVD)	1764.00 ft (CF)
Total Depth: 3240.00 ft (KB) (TVD)	KB to GR/CF: 8.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Fair

Serial #: 8400	Outside	Capacity: 5000.00 psia
Press@RunDepth: 137.09 psia @ 3237.07 ft (KB)	Start Date: 2013.01.06	Last Calib.: 2013.01.07
End Date: 2013.01.06	End Time: 15:18:00	Time On Btm: 2013.01.06 @ 09:59:30
Start Time: 08:00:00	End Time: 15:18:00	Time Off Btm: 2013.01.06 @ 13:02:30

TEST COMMENT: 1st Open 30 minutes Fair building blow blew bottom bucket 4 minutes.
 1st Shut in 45 minutes No blow back
 2nd Open 45 minutes Fair building blow blew bottom bucket 6 minutes.
 2nd Shut in 60 minutes Yes blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1565.28	97.43	Initial Hydro-static
1	69.14	97.57	Open To Flow (1)
30	104.33	98.08	Shut-In(1)
76	1089.81	98.85	End Shut-In(1)
77	131.89	98.57	Open To Flow (2)
120	137.09	99.32	Shut-In(2)
182	1037.88	100.40	End Shut-In(2)
183	1550.57	100.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Oil cut mud Oil 10% Mud 90%	0.07
61.00	Oil pluse gas cut muddy w ater	0.30
0.00	Gas 65% Oil 15% Mud 10% Water 10%	0.00
61.00	Oil spotted muddy w ater	0.41
0.00	Mud 20% Water 80%	0.00
0.00	Chlorides 36,000 .3ohms	0.00

Gas Rates


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

Superior Testers Enterprises LLC

Ref. No: 17723

Printed: 2013.01.07 @ 03:38:21

DST # 2 3490' TO 3530' VIOLA

	DRILL STEM TEST REPORT	
	Carrie Exploration	8-22s-10-w Reno
	210 West 22nd Hays Kansas 67601	Sara C-1
ATTN: Herb Deines	Job Ticket: 17724	DST#: 2
	Test Start: 2013.01.08 @ 02:55:00	

GENERAL INFORMATION:

Formation: **Simpson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:51:30
 Time Test Ended: 09:27:30

Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Great Bend-75

Interval: **3490.00 ft (KB) To 3530.00 ft (KB) (TVD)**
 Total Depth: 3530.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1772.00 ft (KB)
 1764.00 ft (CF)
 KB to GR/CF: 8.00 ft

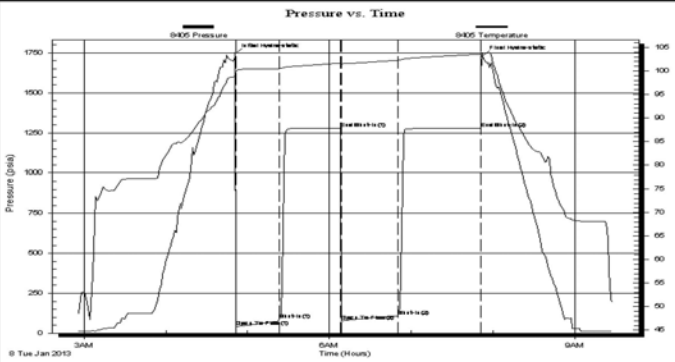
Serial #: 8405

Inside

Press@RunDepth: 107.92 psia @ 3526.00 ft (KB)
 Start Date: 2013.01.08 End Date: 2013.01.08
 Start Time: 02:55:00 End Time: 09:27:30

Capacity: 5000.00 psia
 Last Calib.: 2013.01.08
 Time On Btm: 2013.01.08 @ 04:51:00
 Time Off Btm: 2013.01.08 @ 07:52:30

TEST COMMENT: 1st Open 30 minutes Fair building blow blew 4.5 inches .
 1st Shut in 45 minutes No blow back.
 2nd Open 45 minutes Fair building blow blew 5 inches.
 2nd Shut in 60 minutes No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1746.49	100.00	Initial Hydro-static
1	41.36	99.86	Open To Flow (1)
33	84.68	100.51	Shut-In(1)
77	1278.93	101.66	End Shut-In(1)
78	77.40	101.53	Open To Flow (2)
120	107.92	102.30	Shut-In(2)
180	1278.03	103.57	End Shut-In(2)
182	1730.19	103.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
130.00	Oil spotted muddy water	0.64
0.00	Mud 20% Water 80%	0.00
0.00	Chlorides 37,000 .4 ohms @59 Degrees	0.00

Gas Rates

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

Superior Testers Enterprises LLC

Ref. No: 17724

Printed: 2013.01.08 @ 09:44:55

DST # 3 3540' TO 3572' SIMPSON SAND



DRILL STEM TEST REPORT

Carrie Exploration
 210 West 22nd Hays Kansas
 67601
 ATTN: Herb Deines

8-22s-10-w Reno

Sara C-1
 Job Ticket: 17725 **DST#: 3**
 Test Start: 2013.01.08 @ 06:35:00

GENERAL INFORMATION:

Formation: **Lower Simpson sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:12:00
 Time Test Ended: 13:01:00

Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Great Bend-75

Interval: **3540.00 ft (KB) To 3572.00 ft (KB) (TVD)**
 Total Depth: 3572.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1772.00 ft (KB)
 1764.00 ft (CF)
 KB to GR/CF: 8.00 ft

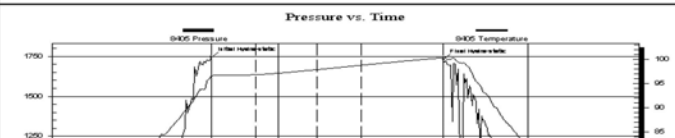
Serial #: 8405

Inside

Press@RunDepth: 40.42 psia @ 3568.00 ft (KB)
 Start Date: 2013.01.08 End Date: 2013.01.08
 Start Time: 06:35:00 End Time: 13:01:00

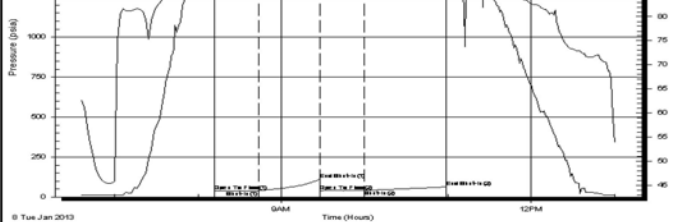
Capacity: 5000.00 psia
 Last Calib.: 2013.01.09
 Time On Btm: 2013.01.08 @ 08:11:30
 Time Off Btm: 2013.01.08 @ 10:59:00

TEST COMMENT: 1st Open 30 minutes Weak but steady blow 1/2 inch.
 1st Shut in 45 minutes No blow back
 2nd Open 30 minutes Dead Flushed tool 20 minutes in no help.
 2nd Shut in 60 minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1745.60	96.51	Initial Hydro-static
1	39.37	96.36	Open To Flow (1)
32	39.16	96.81	Shut-In(1)



76	112.35	97.86	End Shut-In(1)
77	39.74	97.85	Open To Flow (2)
108	40.42	98.76	Shut-In(2)
168	63.20	100.32	End Shut-In(2)
168	1729.35	100.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
7.00	Slightly oil cut mud 100% Mud	0.03

Gas Rates

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

Superior Testers Enterprises LLC Ref. No: 17725 Printed: 2013.01.09 @ 01:16:23

ROCK TYPES

Cht	Dolprim	shale, grn	Shcol
Cht vari	Dolsec	shale, gry	Lscongl
Clystool	Lmst fw<7	Carbon Sh	CglSandy
Chtcongl	Lmst fw>7	shale, red	

ACCESSORIES

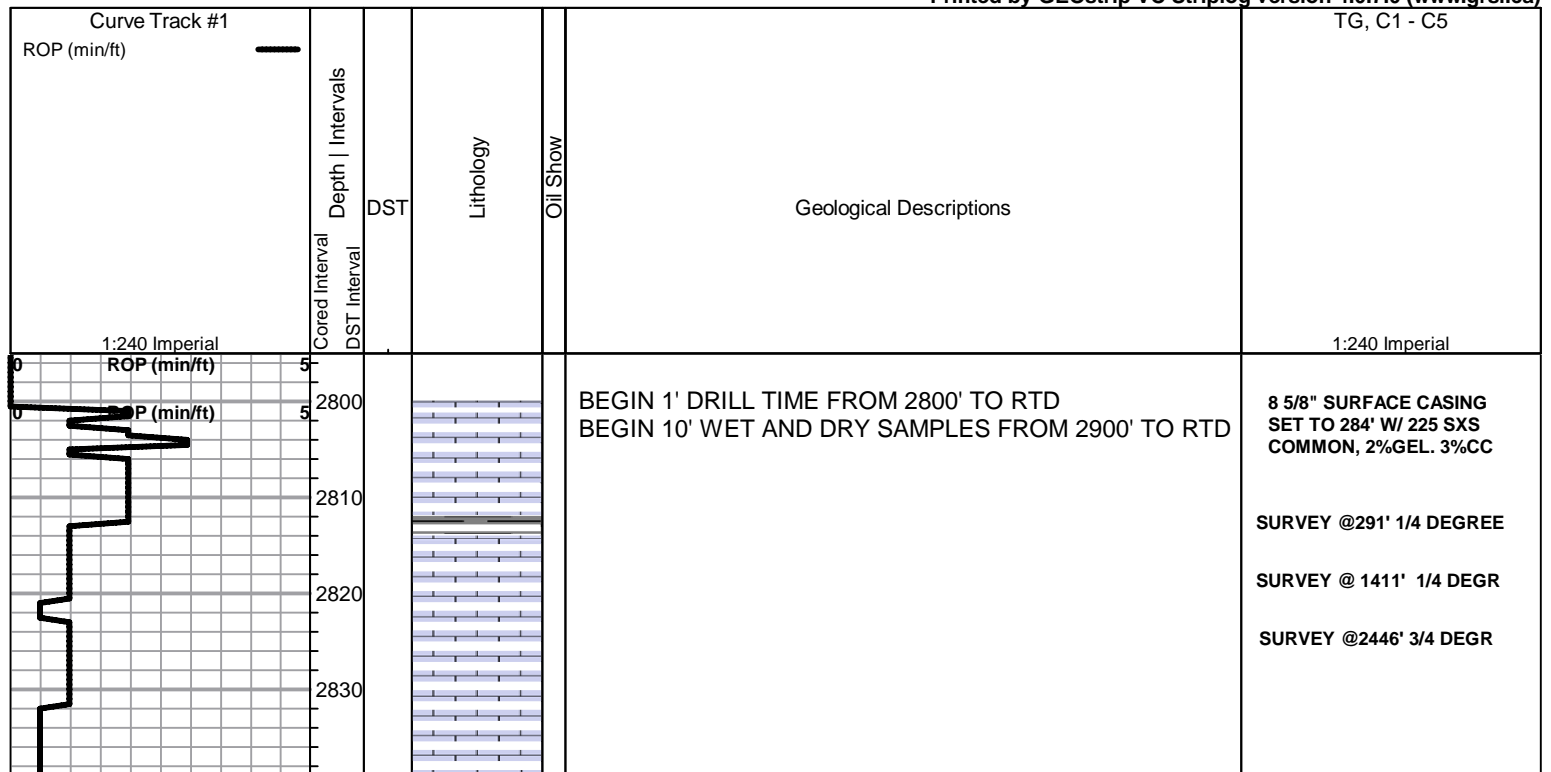
MINERAL	FOSSIL
▲ Chert, dark	F Fossils < 20%
P Pyrite	○ Oolite
* Sandy	⊕ Oomoldic
△ Chert White	
▧ Euhed rhombs of dol or i	

OTHER SYMBOLS

DST

	DST Int
	DST alt
	Core

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



TG, C1 - C5

1:240 Imperial

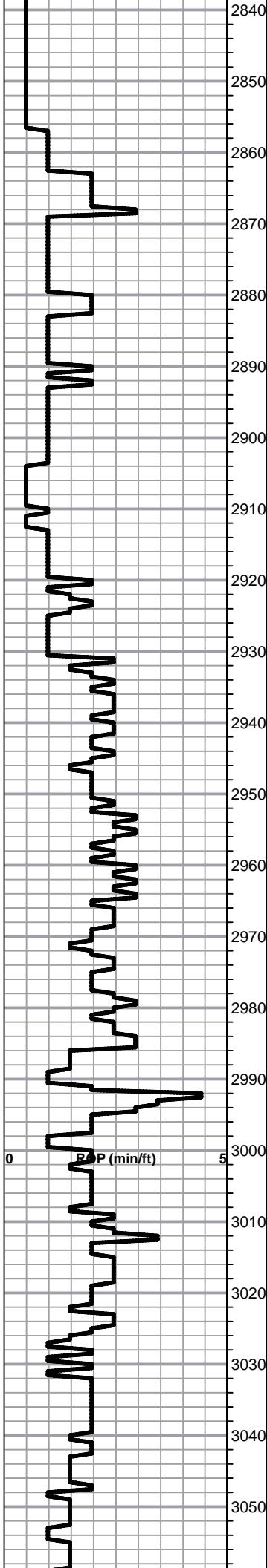
BEGIN 1' DRILL TIME FROM 2800' TO RTD
 BEGIN 10' WET AND DRY SAMPLES FROM 2900' TO RTD

8 5/8" SURFACE CASING
 SET TO 284' W/ 225 SXS
 COMMON, 2%GEL. 3%CC

SURVEY @291' 1/4 DEGREE

SURVEY @ 1411' 1/4 DEGR

SURVEY @2446' 3/4 DEGR



2840
2850
2860
2870
2880
2890
2900
2910
2920
2930
2940
2950
2960
2970
2980
2990
3000
3010
3020
3030
3040
3050

Lime, lt-med brn-grayish brn, fnxln

Lime, lt brn, granular, NS

Lime, lt-med brn, fnxln-granular, slightly fossiliferous
Shale, gray-black carbonaceous

Lime, crm-lt brn-lt grayish brn, fnxln-granular, slightly fossiliferous

Lime, crm-lt brn, granular with scattered fusulinds

P

Lime, crm-lt brn, granular, scattered pyrite clusters

Lime, lt-med brn, fnxln

Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fn-vfxln grading into lt brn granular

Lime, lt-med brn, fnxln-granular

HEEBNER SHALE 2985-1213

Shale, black carbonaceous, blocky
Lime, lt-med brn fn-vfxln, hard on crush

Shale, grayish green, soft, blocky

TORONTO 3007-1235

Lime, white-crm, fnxln, NS

Lime, lt-med brn, fnxln, NS

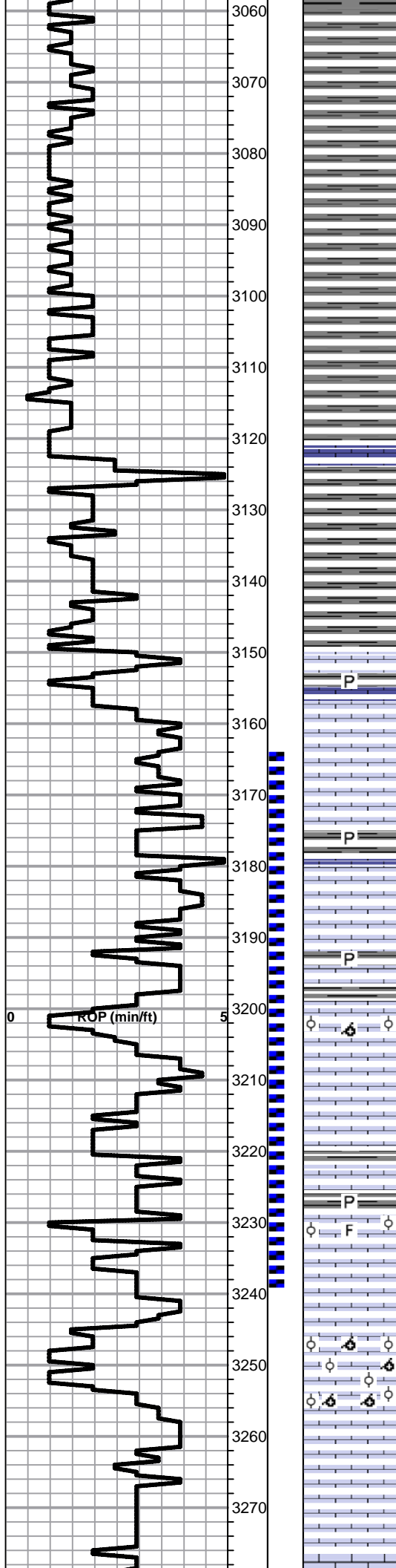
DOUGLAS SHALE 3024-1252

Shale, lt gray, soft, blocky

Shale, lt-med gray, soft, blocky

Shale, lt-med gray, soft, blocky with scattered lt gray, fine, poorly sorted, glauconitic, gritty sandstone, NS or staining

0 R.P.P (min/ft) 5



Shale, lt-med gray, soft, blocky with mixed sandstone clusters as above

Shale, lt gray, soft, blocky, micaceous with scattered fine, green, glauconitic sandstone, NS

Shale, lt gray, soft, with sticky, argillaceous in part

Shale, lt gray, soft with sticky clumps in part

BROWN LIME 3121-1349

Lime, med-dark brn, fnxln

SHORT TRIP @ 3125'
PULLED 20 STDS

Shale, med gray, blocky

Shale, lt gray, soft, sticky clumps in part

LKC 3150-1378

Lime, lt-med brn, fnxln, fossiliferous in part
Shale, lt gray, pyritic clusters

Lime, lt-med brn, fnxln, fossiliferous, NS

Lime, med brn-grayish brn, fnxln, NS

Shale, lt gray, blocky, pyritic clusters

Lime, med brn-grayish brn, fnxln

Lime, med brn-grayish brn, fnxln, well cemented fossiliferous, NS

DST # 1 3164' TO 3240' SEE
HEADER FOR TEST
SUMMARY

Lime, crm, oolitic/oolmoldic in part, lt scattered staining in interoolitic porosity with scattered, fine vugs with fine crystal growth in pores.

CFS @ 3210'

Lime, med brn, fn-vfxln, slightly fossiliferous

Shale, dark gray, fossil fragments in part
Lime, med brn-grayish brn, fnxln, fine gray speckling in part

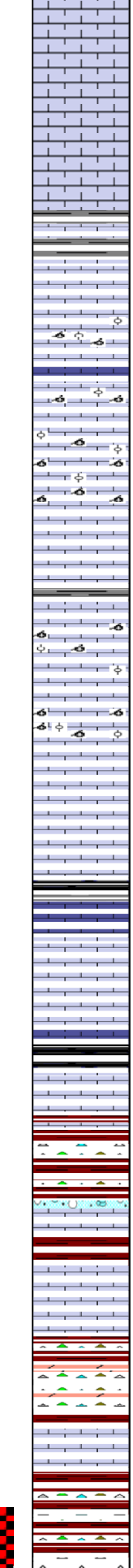
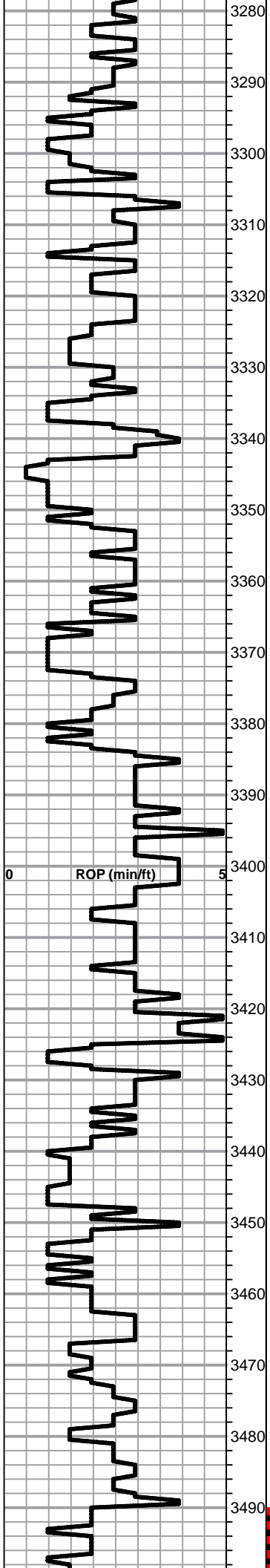
Lime, grayish brn, fnxln-granular with mixed oolites and fossil fragments, VMSFO on break, V Lt odor

CFS @ 3240'

Lime, lt-med brn, oolitic/oolmoldic, NS, No staining, much of fine oolitic material well cemented with no visible porosity

Lime, lt-med brn, fn-vfxln, hard on crush, thin fusulinid beds

Lime, lt brn, fnxln



Lime, lt-med brn, fnxln

Lime, lt-med brn, fn-vfxln, scattered fossils-fusulinids

Lime, lt-med brn, fnxln-oolmoldic, NS

Shale, dark gray, fossil fragments
Lime, lt-med brn, fnxln

Lime, crm, fnxln with scattered oolitic beds, NS

Lime, crm-lt brn, fnxln with scattered oolmoldic material, NS

Lime, crm-lt brn, fnxln with scattered oolmoldic material, NS

Lime, crm-lt brn, oolmolic grading to fnxln, NS

Lime, lt brn, fnxln

Lime, lt brn-lt grayish brn, fnxln-oolmoldic, NS

Lime, crm-lt brn, fnxln-oolmoldic, NS, slight bed chalk in part

Lime, crm-lt brn, fnxln, slight chalk in part

Lime, lt-med brn, fnxln, slight chalk in part

Shale, gray-black, soft, blocky
Lime, lt brn, fnxln

Lime, lt brn, fnxln

Shale, gray-black, soft, blocky
Lime, lt-med brn, fnxln

BKC 3437-1665

Shale, reddish brn, soft, blocky with scattered vari colored cherts and nodules

Lime, clastic mix in part to lt-med brn, fnxln

Shale, reddish brn

Lime, lt brn, fnxln

Shale, red wash, lime, pale green, fnxln

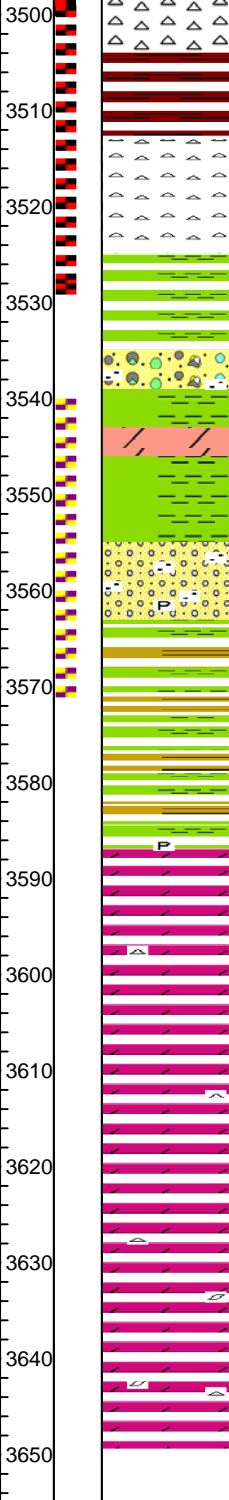
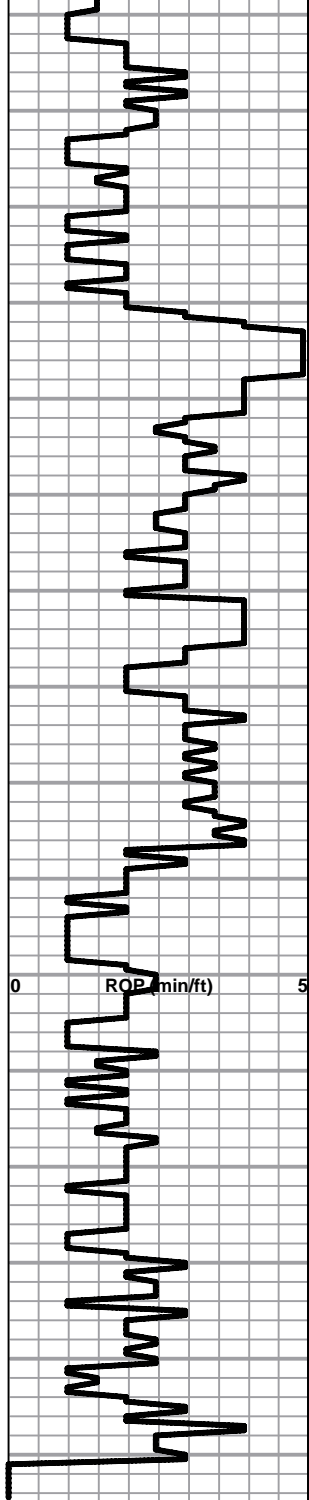
Lime, lt brn, fnxln

Shale, red wash, vari colored cherts

VIOLA 3497-1725

CFS @ 3310'

CFS @ 3487'



3500 Cherts vari colored, fresh, sharp, NS

3510 Shale, red wash, soft mud

3520 Cherts, vari colored with gilsonitic deposits, good, bright wet cut

SIMPSON SHALE 3525-1753

3530 Shale, pale, blue green, waxy with quartz grain inclusions

3540 Cherts, vari colored

SIMPSON DOLOMITE 3543-1771

3550 Mix of cherts and dolomite chips, lt staining in one or two pcs of dolomite, No Odor

SIMPSON SAND 3555-1783

3560 Mix of cherts with increasing sand clusters, some coarse grained, angular, poorly sorted sand with lt staining and lt odor, NFO. Appears laminated with shale and fine grained sand beds

3570 Shale, mixed colors

ARBUCKLE 3587-1815

3590 Dolomite, lt brn, fnxln-granular, NS, no staining, pyritic at boundary

3600 Dolomite, ivory- lt brn, fnxln-granular, scattered green tinted in part, scattered white, fresh, sharp chert

3610 Dolomite, crm-ivory, fn-cxln, good interxln porosity, NS

3620 Dolomite, lt brn, fine oolmoldic in part, NS

3630 Dolomite, lt brn, fn-cxln, good visible porosity, NS

3640 Dolomite, crm-ivory, fn-cxln, sucrosic in part,

3650 **RTD 3650-1878 LTD 3650-1878**

DST # 2 3490' TO 3530' SEE HEADER FOR TEST SUMMARY

CFS @ 3517'

SURVEY @ 3530' 1 DEGREE

CFS @ 3530'

DST # 3 3540' TO 3572' SEE HEADER FOR TEST SUMMARY

CFS @ 3572'

CFS @ 3593'

1st plug @ 3593' w/ 35 sxs
 2nd plug @ 1350' w/ 35 sxs
 3rd plug @ 900' w/ 35 sxs
 4th plug @ 335' w/ 35 sxs
 5th plug @ 60' w/ 25 sxs
 Rathole w/ 25 sxs.
 Plug down 6:30am 1-10-2013
 Allied Cement ticket 059234