

OPERATOR

Company: SANDLIN OIL CORPORATION
 Address: 621 17TH STREET, STE. 2055
 DENVER, CO 80293

Contact Geologist: GARY SANDLIN
 Contact Phone Nbr: 303-292-3313
 Well Name: MCRAE-WERTH # 1
 Location: SE SE NE SW
 API: 15-051-26,830-00-00
 Pool: INFIELD
 State: KANSAS

Field: BEMIS-SHUTTS
 Country: USA

Scale 1:240 Imperial

Well Name: MCRAE-WERTH # 1
 Surface Location: SE SE NE SW
 Bottom Location:
 API: 15-051-26,830-00-00
 License Number: 6677
 Spud Date: 6/1/2016 Time: 12:17 PM
 Region: ELLIS COUNTY
 Drilling Completed: 6/6/2016 Time: 1:53 AM
 Surface Coordinates: 1390' FSL & 2545' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2159.00ft
 K.B. Elevation: 2165.00ft
 Logged Interval: 3000.00ft To: 3790.00ft
 Total Depth: 3790.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.3070584
 Latitude: 38.9907719
 N/S Co-ord: 1390' FSL
 E/W Co-ord: 2545' FWL

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: ROYAL DRILLING INC.
 Rig #: 1
 Rig Type: MUD ROTARY
 Spud Date: 6/1/2016 Time: 12:17 PM
 TD Date: 6/6/2016 Time: 1:53 AM
 Rig Release: 6/7/2016 Time: 3:30 AM

ELEVATIONS

K.B. Elevation: 2165.00ft Ground Elevation: 2159.00ft
 K.B. to Ground: 6.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON POSITIVE RESULTS OF DST # 1 AND LOG

ANALYSIS.

OPEN HOLE LOGGING BY CASED HOLE SOLUTIONS/ELI: DUAL INDUCTION LOG, COMPENSATED DENSITY/NEUTRON LOG, MICRO LOG, SONIC LOG

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

MCRAE-WERTH #1	REEDER # 6	REEDER # 8
SE SE NE SW	S2 NE SW	NE SE SW
SEC.22-12S-18W	SEC.22-11-18W	SEC.22-11-18W
2159'GL 2165'KB	KB 2160'	KB 2163'

<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1417 +748	+ 741	+ 748
B-Anhydrite	1455 +710	+ 708	+ 713
Topeka	3133 -968	-965	-964
Heebner Sh.	3363-1198	-1193	-1195
Toronto	3386-1221	-1216	-1217
LKC	3408-1243	-1240	-1242
BKC	3644-1479	-1472	-1475
Arbuckle	3668-1503	-1496	-1505
RTD	3790-1625	-1508	-1508

SUMMARY OF DAILY ACTIVITY

6-01-16 Spud 3:00 PM, set 8 5/8" surface casing to 256' w/150 sxs 80/20
POS 2%Gel 3%CC, slope 1/4 degree, plug down 11:00PM

6-02-16 256', drill plug 7:00 AM

6-03-16 1745', drilling

6-04-16 2722', drilling, displaced 3013' to 3036'

6-05-16 3355', drilling

6-06-16 3790', drilling, RTD 3790' @1:52AM, ST, CCH, TOWB, logs, Straddle
DST # 1, 3640'-3686' Arbuckle, TIWB, LDDP, Run Production Casing

6-07-16 3790', finish running casing and cementing. Plug down 3:30AM, RD



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Sandlin Oil Corporation
621 17th St Ste 2055
Denver CO 80293-2001
ATTN: Herb Deines

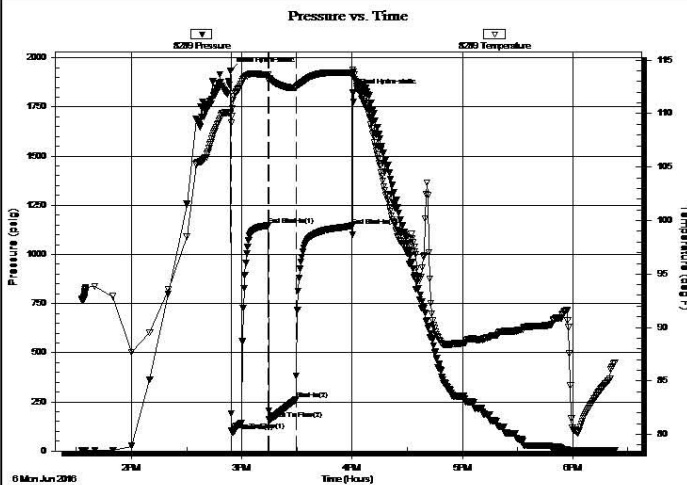
22 12s 18w Ellis
McRae- Werth #1
Job Ticket: 64928 **DST#: 1**
Test Start: 2016.06.06 @ 13:33:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:54:30
Time Test Ended: 18:23:00
Interval: **3640.00 ft (KB) To 3686.00 ft (KB) (TVD)**
Total Depth: 3790.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Initial)
Tester: Jim Svaty
Unit No: 76
Reference Elevations: 2165.00 ft (KB)
2159.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8289 **Outside**
Press@RunDepth: 261.35 psig @ 3645.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.06.06 End Date: 2016.06.06 Last Calib.: 2016.06.06
Start Time: 13:33:02 End Time: 18:23:00 Time On Btm: 2016.06.06 @ 14:54:00
Time Off Btm: 2016.06.06 @ 16:00:30

TEST COMMENT: 5-IFP- BOB IN 2min.
15-ISIP- No Blow
15-FFP- BOB in 2 1/2min.
30-FSIP- Surface Blow Died in 12min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1935.54	110.01	Initial Hydro-static
1	104.16	109.73	Open To Flow (1)
6	141.15	112.78	Shut-In(1)
21	1147.00	113.62	End Shut-In(1)
21	163.20	113.28	Open To Flow (2)
36	261.35	112.44	Shut-In(2)
66	1145.49	113.79	End Shut-In(2)
67	1821.94	114.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
380.00	CO 100%	5.33
166.00	MCO 20% m 80%o	2.33
0.00	GIP 145	0.00

Gas Rates

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

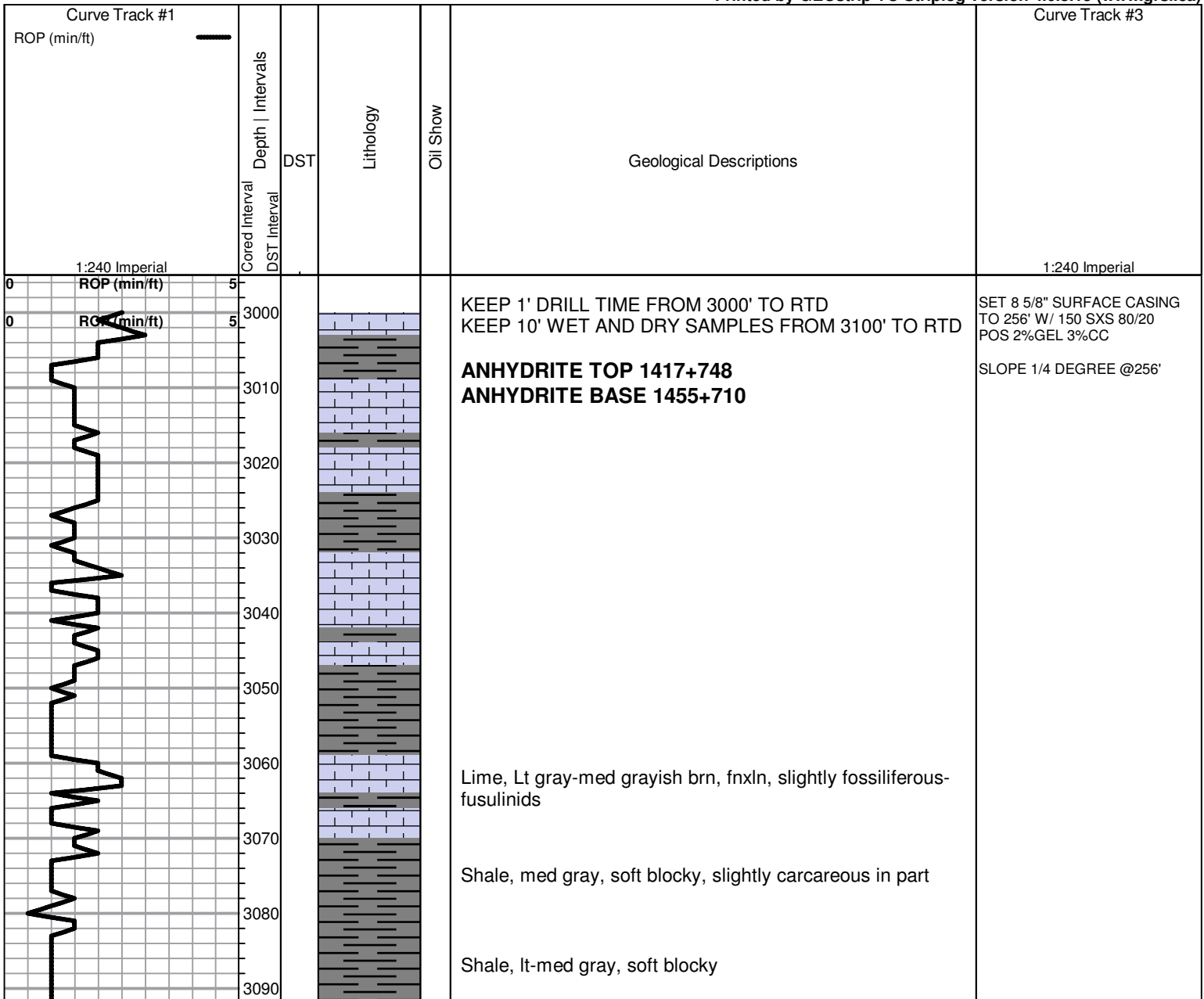
ROCK TYPES

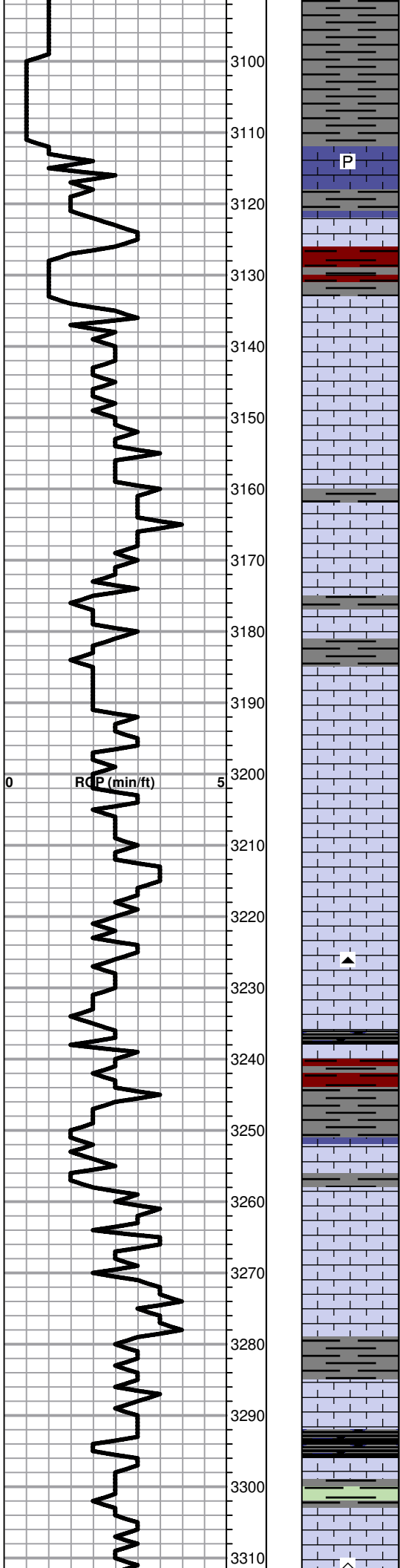
Clystcol	Lmst fw<7	shale, gry	Shcol
Chtcongl	Lmst fw7>	Carbon Sh	
Dolprim	shale, grn	shale, red	

ACCESSORIES

<p>MINERAL</p> <ul style="list-style-type: none"> ▲ Chert, dark P Pyrite △ Chert White 	<p>FOSSIL</p> <ul style="list-style-type: none"> 🦠 Oomoldic
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Shale, lt-med gray, soft blocky with soft sticky mud clumps in part

P

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

Lime, crm, fnxln
Shale, reddish brn, soft blocky

TOPEKA 3133-968

Lime, lt gray with scattered mottling, fnxln

Lime, lt brn-lt gray, fn-vfxln

Lime, lt-med grayish brn-gray, fn-vfxln

Lime, lt-med brn, fn-micro xln

Lime, lt-med brn, fn-vfxln

Lime, offwhite-lt-med brn, fn-micro xln

Lime, lt gray-lt brn, fn-micro xln

Lime, lt brn-lt gray, fnxln to slightly granular in part NS

Lime, lt brn-lt gray, fnxln w/ soft chalky matrix in part

▲

Lime, lt brn-lt gray, fnxln

Shale, black carbonaceous, blocky, soft

Sale, reddish brn-med gray, soft to firm blocky

Lime, crm-lt brn, fnxln, soft on crush, NS

Lime, crm-lt brn, fn-micro xln

Lime, crm, fn-micro xln, bedded chalk in part

Lime, crm-lt brn, fn-micro xln

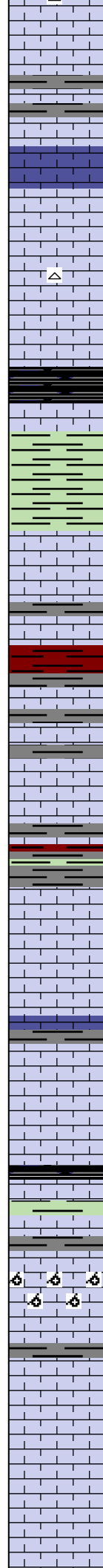
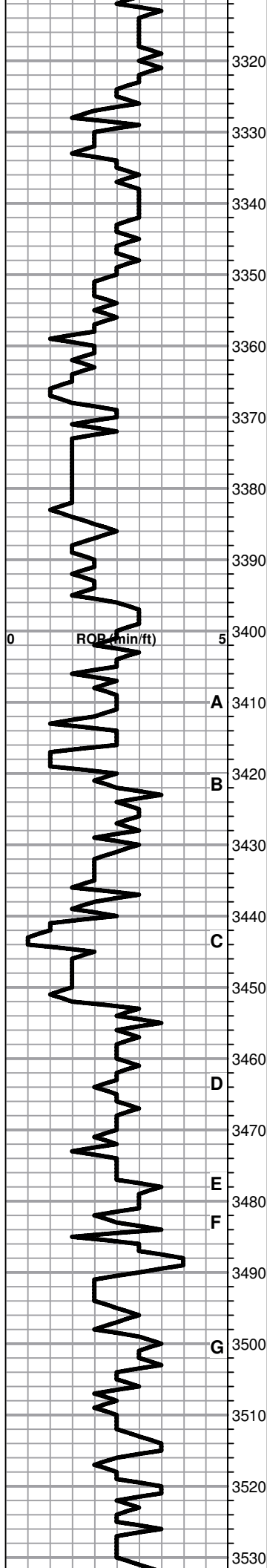
Lime, crm-lt brn, fn-vfxln

Shale, black carbonaceous, fissile, blocky

Lime, lt gray, fn-vfxln
Shale, lt grayish green, soft blocky

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Lime, crm-lt brn, fn-vfxln



Lime, crm-lt brn-lt gray, fn-micro xln

Lime, crm-lt brn-lt gray, fn-vfxln

Lime, crm-lt brn, fn-vfxln

Lime, crm-lt brn, fn-vfxln, NS

Lime, lt brn, fnxln

HEEBNER SHALE 3363-1198

Shale, black carbonaceous, fissile, blocky
Lime, lt gray-lt brn, fn-vfxln

Shale, med grayish green, soft-firm blocky

TORONTO 3386-1221

Lime, crm-lt brn, fnxln NS

Lime, crm-lt brn, fn-vfxln
shale, reddish brn, soft blocky

LKC 3408-1243

Lime, crm-lt brn, fnxln

Lime, lt-med brn, fn-vfxln

Lime, crm-lt brn, fn-micro xln
Shale, red-lt gray-lime green, soft blocky to sticky in part

Lime crm-lt brn, fnxln, thin zone of oomoldic, v lt odor, small chips with saturated staining, NFO

Lime, crm-lt brn, fn-micro xln

Lime, crm-lt brn, fn-vfxln, NS

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

Lime, crm, fine fossil fragments with spotty lt stain, NFO, very lt odor

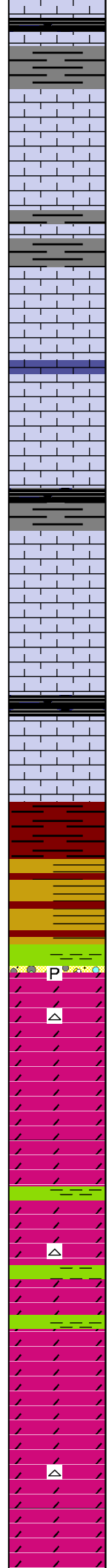
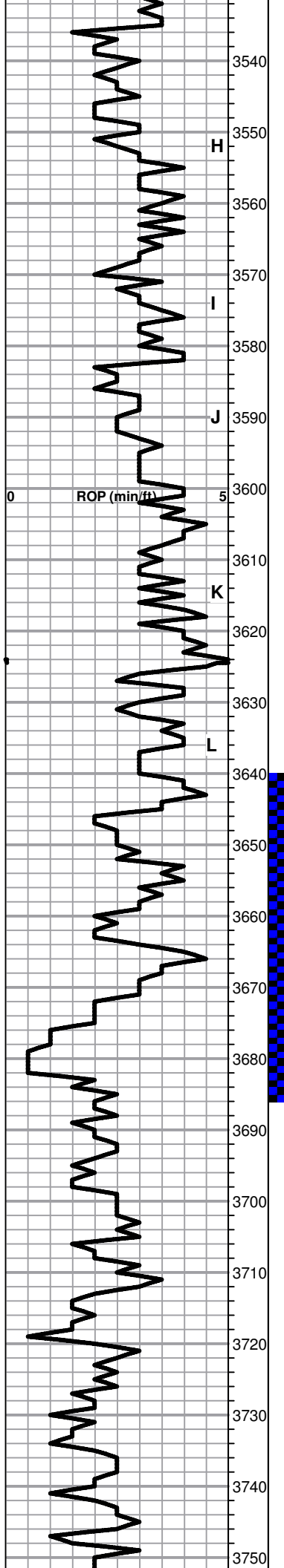
Lime, crm, fnxln-oomoldic, scattered to small sat chips, F NFO, No Odor

Lime, crm-lt brn, fn-vfxln

Lime, white-crm, fn-vfxln

Lime, crm-lt brn, fn-micro xln

Lime, lt brn, fn-vfxln



Shale, gray-black carbonaceous

Lime, crm-lt brn, fn-micro xln, some cemented oolitic chips, no visible porosity development

Lime, white-lt brn, fn-micro xln

Lime, whtie-lt brn, fn-micro xln

Lime, lt brn, fn-micro xln

Lime, crm-lt brn, fnxln

Shale, gray-black carbonaceous, blocky

Lime, crm-lt brn,fn-micro xln

Lime, lt-med brn, fn-micro xln

Shale, gray-black carbonaceous

Lime, crm-lt brn, fn-vfxln

BKC 3644-1479

Shale, mix of reddish brn with vari colored shales, soft blocky

ARBUCKLE 3668-1503

○ Dolomite, lt brn, fnxln-granular,, very lt odor with scattered staining

● Dolomite,lt-med brn, granular, strong odor, oily sheen with free floating oil in tray, saturated staining

Dolomite, lt-med brn, fnxln-granular, interxln porosity, good odor and staining, somce cxln with rhomic xls

Dolomite, crm-lt-med brn, fnxln-granular

● Dolomite, fnxln-granular with med to coarse granular chips, oily sheen with free floating oil, good odor and staining

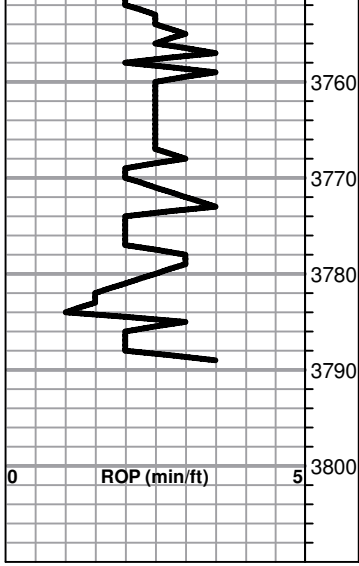
○ Dolomite, crm-lt brn, fnxln with decreasing odor and staining with increasing flaky gilsonite

Dolomite, buff-crm-lt brn, fnxln-granular
Chert white, fresh, sharp

Dolomite,crm-lt brn, fnxln-granular

Dolomite, crm-lt brn, fnxln-granular

STRADDLE DST # 1 3640' TO 3686' SEE HEADER FOR TEST SUMMARY



Dolomite, crm-lt brn, mostly fnxln

Dolomite, lt salmon-crm-lt brn, fnxln-granular

Dolomite, white, crm-lt brn, fnxln-granular
 Chert, white opaque, bone white, fresh, sharp

Dolomite, crm-lt brn, fnxln-granular

RTD 3790-1625 LTD 3790-1625

SET 5 1/2" PRODUCTION
 CASING TO 3784' W/ 150 SXS
 COMMON 10% SALT

SLOPE 1 DEGREE @3790'