



SANDLIN OIL CORPORATION

Scale 1:240 Imperial

Well Name: HACKMEISTER-MASTERS UNIT #1
 Surface Location: SE NE NE NE S26 T10S R16W
 Bottom Location:
 API: 15-163-24262-00-00
 License Number: 6677
 Spud Date: 10/8/2014 Time: 3:00 PM
 Region: ROOKS COUNTY
 Drilling Completed: 10/14/2014 Time: 12:36 AM
 Surface Coordinates: 490 FNL & 50 FEL
 Bottom Hole Coordinates:
 Ground Elevation: 2036.00ft
 K.B. Elevation: 2043.00ft
 Logged Interval: 2900.00ft To: 3700.00ft
 Total Depth: 3700.00ft
 Formation: TOPEKA, LANSING KANSAS CITY
 Drilling Fluid Type: CHEMICAL / FRESH WATER GEL

OPERATOR

Company: SANDLIN OIL CORPORATION
 Address: 621 17TH STREET STE 2055
 DENVER, COLORADO
 80293-2001
 Contact Geologist: GARY SANDLIN
 Contact Phone Nbr: 303-292-3313
 Well Name: HACKMEISTER-MASTERS UNIT #1
 Location: SE NE NE NE S26 T10S R16W
 API: 15-163-24262-00-00
 Pool:
 State: KANSAS Field: WILDCAT
 Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.0663520
 Latitude: 39.1607016
 N/S Co-ord: 490 FNL
 E/W Co-ord: 50 FEL

LOGGED BY



Company: SOLUTIONS CONSULTING, INC.
 Address: 108 WEST 35TH
 HAYS, KANSAS 67601
 Phone Nbr: 785-650-4540 / 785-639-1337
 Logged By: Geologist Name: STEVE REED

CONTRACTOR

Contractor: ROYAL DRILLING, INC
 Rig #: 2
 Rig Type: MUD ROTARY
 Spud Date: 10/8/2014 Time: 3:00 PM
 TD Date: 10/14/2014 Time: 12:36 AM
 Rig Release: 10/15/2014 Time: 6:00 AM

ELEVATIONS

K.B. Elevation: 2043.00ft Ground Elevation: 2036.00ft

NOTES

BASED ON LOW STRUCTURAL POSITION, LACK OF SIGNIFICANT SHOWS, AND LOG ANALYSIS THE DECISION WAS MADE TO PLUG AND ABANDON WELL

OPEN HOLE LOGGING PROVIDED BY: NABORS COMPLETION AND PRODUCTION SERVICES
DUAL INDUCTION LOG, COMPENSATED NEUTRON-DENSITY LOG, MICRORESISTIVITY LOG,
AND SONIC LOGS WERE PERFORMED

NO DST'S






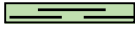




FORMATION TOPS COMPARISON AND DAILY ACTIVITY SUMMARY

	WELL NAME		COMPARISON WELL	COMPARISON WELL
	HACKMEISTER-MASTERS UNIT #1		LINQUIST #1	DOTY #1
	API: 15-163-24262		API: 15-163-21050	API: 15-163-00011
FORMATION	SAMPLE TOPS	LOG TOPS	LOG TOPS (DATUM)	LOG TOPS (DATUM)
ANHYDRITE	NO CALL	1253' (+790')	+772'	+809'
TOPEKA	3003' (-960')	2996' (-953')	-951'	-952'
HEEBNER	3238' (-1195')	3235' (-1192')	-1187'	-1190'
TORONTO	3261' (-1218')	3254' (-1211')	-1216'	-1212'
LKC	3285' (-1242')	3280' (-1237')	-1235'	-1236'
BKC	3531' (-1488')	3529' (-1486')	-1484'	-1506'
ARBUCKLE	NOT REACHED		-1596'	NA
RTD	3700' (-1657')	3698' (-1655')	-1668'	-1639'

SUMMARY OF DAILY ACTIVITY

- 10-8-14** R.U., spud @ 3:00pm, 8 5/8" surface casing set at 350' w/200 sxs common, 2% gel, 3% cc, plug down @ 2:45am, survey 3/4°
- 10-9-14** 350', WOC, drilling, bit trip @ 1369'
- 10-10-14** 1369', drilling
- 10-11-14** 2365', drilling
- 10-12-14** 2950', drilling, CFS @ 3015'
- 10-13-14** 3400', drilling, CFS@ 3532, TD of 3700' reached @ 12:36am, short trip (25 stands, CTCH, TOWB for logs, survey 1°
- 10-14-14** 3700', logging, prepare for plugging
- 10-15-14** release rig

ROCK TYPES

 Congl	 Lmst fw7>	 Carbon Sh	 Ss
 Chtcongl	 shale, grn	 shale, red	
 Lmst fw<7	 shale, gry	 Shcol	

ACCESSORIES

MINERAL

- ▲ Chert, dark
- ∩ Glauconite

FOSSIL

- F Fossils < 20%
- ⊕ Oolite
- ⊕ Oomoldic
- ⊕ Fossilinid

STRINGER

- ~ Chert
- red shale

TEXTURE

- C Chalky
- L Lithogr

OTHER SYMBOLS

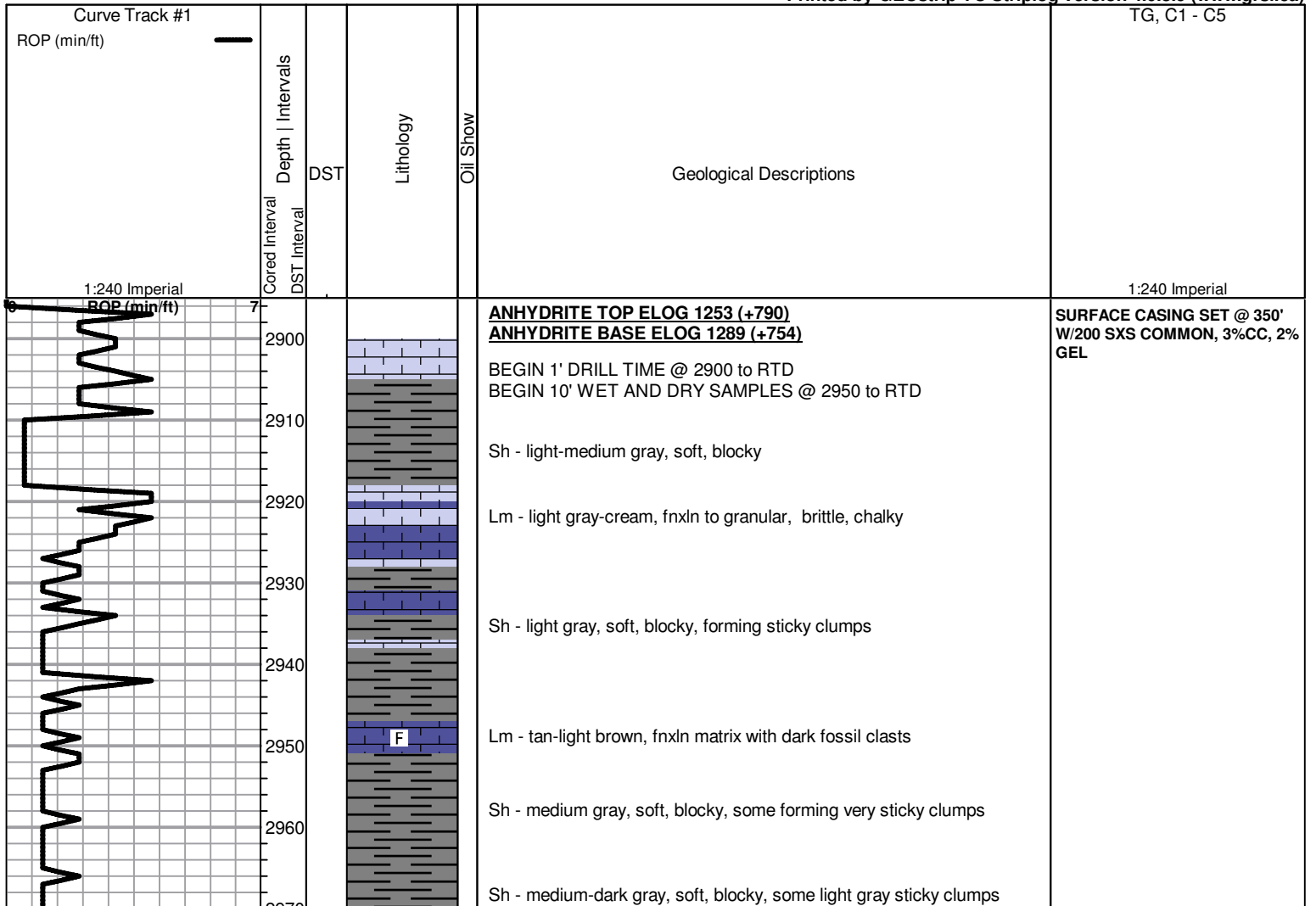
Oil Show

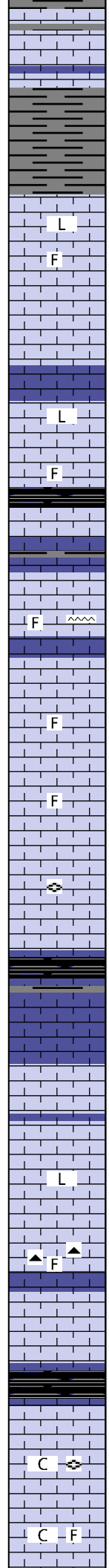
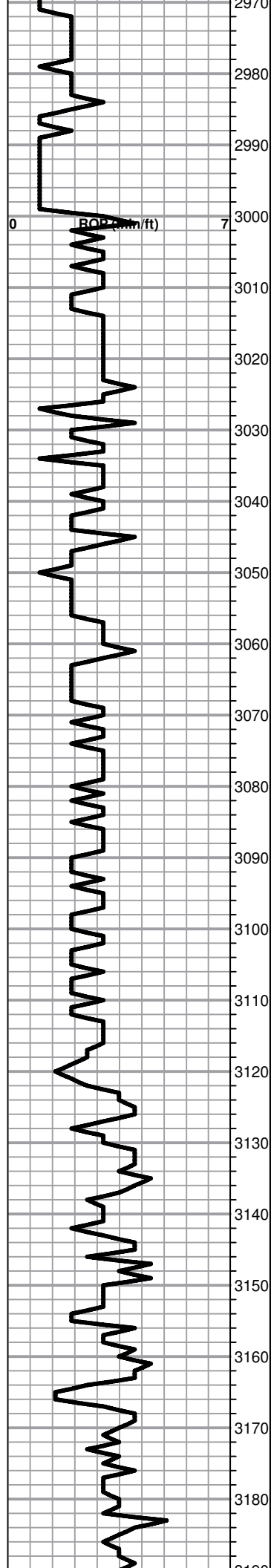
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- * Gas

DST

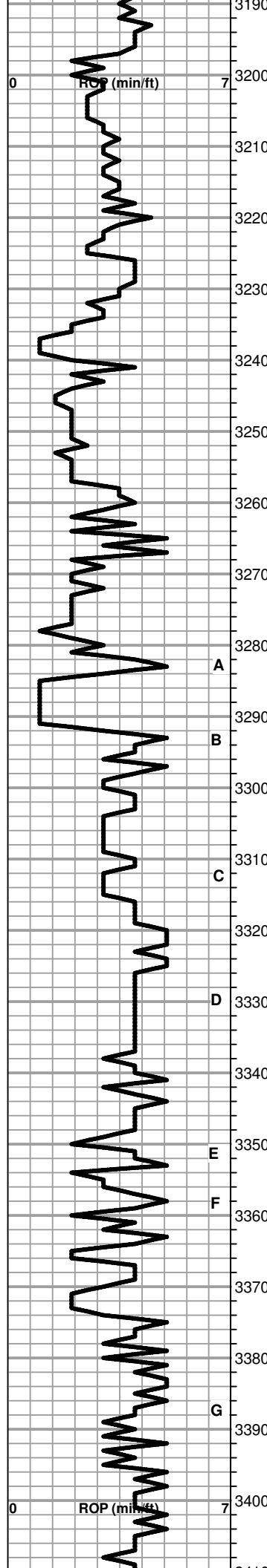
- DST Int
- DST alt
- Core
- tail pipe
- DST
- DST
- DST

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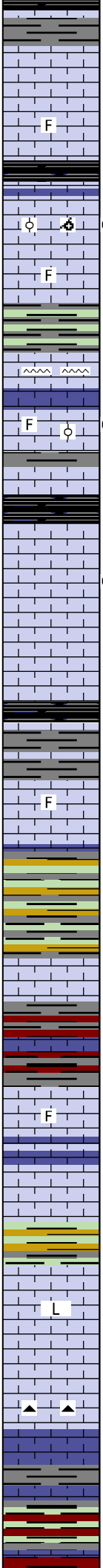
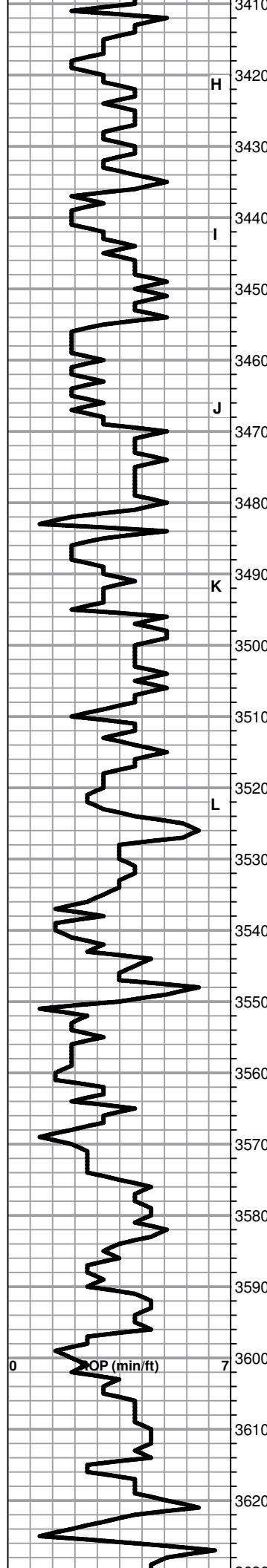


- Lm - dark gray-brown, clastic lime with various sized fragments, brittle
- Sh - light-medium gray, soft, blocky, some sticky
- TOPEKA SPL 3003 (-960) ELOG 2996 (-953)**
- Lm - cream-tan, fnxln to lithographic in some, dense, very hard
- Lm - cream-tan, fnxln, slightly fossiliferous, dense, hard, bedded chalk in part
- Lm - tan-light gray, fnxln, dense, hard
- Lm - tan-light gray, fnxln to lithographic, dense, hard
- Lm - light brown-gray, fnxln, slightly fossiliferous, brittle
- Lm - tan-light brown, fnxln, some with dark fossil clasts, dense, brittle
- Lm - cream, slightly fossiliferous, granular to fnxln, dense, hard, cherty
- Lm - cream-tan, slightly fossiliferous, medxln, brittle, bedded chalk in part
- Lm - tan, slightly fossiliferous, medxln, bedded chalk, black chert
- Lm - tan, fnxln to granular, bedded chalk, fusilinids
- Sh - black, carbonaceous, waxy, soft, fissile
- Lm - cream, fnxln to lithographic in part, dense, very hard
- Lm - cream-tan, clean and bright, vfxln to lithographic, dense, very hard
- Lm - cream-light gray, slightly fossiliferous, vfxln, dense, hard, dark gray chert
- Sh - black, carbonaceous, firm, waxy, fissile, bronze specks throughout
- Lm - cream-tan, fxn to granular, brittle, chalky, fusilinids
- Lm - tan, fossiliferous, fnxln to granular in some, brittle, chalky, no shows



3190	F ▲ C	Lm - cream-tan, fnxln, brittle, slightly chalky, black fossiliferous chert
3200	F	Lm - tan, slightly fossiliferous, bedded chalk
3210		Lm - tan-light gray, fnxln, brittle, bedded chalk, cherty
3220	D	Lm - cream-tan, granular, scattered dark brown gilsonitic stain, NSFO, no odor
3230	F	Lm - tan, fnxln, slightly fossiliferous, dense, brittle
3240		HEEBNER SPL 3238 (-1195) ELOG 3235 (-1192) Sh - black, carbonaceous, waxy, fissile
3250		Sh - greenish gray, soft, blocky, forming sticky clumps
3260		TORONTO SPL 3261 (-1218) ELOG 3254 (-1211) Lm - offwhite, vfxln, dense, hard, cherty
3270		Lm - cream-offwhite, granular to fnxln, brittle, cherty, no shows
3280	A	Sh - maroon/gray, soft, blocky, forming sticky clumps in part
3290	B	LKC SPL 3285 (-1242) ELOG 3280 (-1237) Lm - cream, fnxln, dense, very hard Sh - light gray, soft, blocky
3300	F	Lm - tan, slightly fossiliferous, fnxln, dense, hard
3310	C	Sh - medium gray, soft, blocky, some sticky
3320		Lm - cream-tan, mostly fnxln, hard, a few chips with fine pinpoint porosity and slight scattered light brown stain, good streaming wet cut under UV light, faint odor, overall very limited total porosity
3330	D	Lm - cream-tan, slightly fossiliferous, vfxln, poorly developed, very hard, tight, no shows
3340		Lm - cream, vfxln, no visible porosity, dense, very hard, cherty
3350	E	Lm - cream-offwhite, clean and bright, no visible porosity, hard, brittle, slightly chalky Sh - black, carbonaceous, soft, waxy Lm - cream, vfxln, dense, hard
3360	F	Sh - light greenish gray, soft, blocky
3370		Lm - cream-offwhite, dense, hard, vfxln, slightly fossiliferous, slight bedded chalk, cherty
3380	G	Lm - cream-light gray, slightly fossiliferous in some, mostly fnxln, dense, hard, brittle, bedded chalk
3390		Lm - cream,fnxln, hard, couple chips with slight scattered pinpoint porosity and light stain, NSFO, no odor
3400		Lm - cream, fnxln, bright and clean, bedded chalk, cherty
3410		Sh - black carbonaceous firm fissile

MUD WT 8.9
VIS 52



Sh - black, carbonaceous, firm, fissile

Lm - tan-light gray, fnxln, hard, brittle, slight bedded chalk

Sh - dark gray / black, carbonaceous, fissile

Lm - cream, oolitic / oomoldic, slight scattered interxln porosity with scattered vugs, rare light golden brown stain, NSFO, no odor, limited total porosity

Lm - cream-light gray, fnxln, slightly fossiliferous, dense, hard

Sh - light greenish gray, firm, blocky

Lm - cream-tan, fnxln, very hard, cherty

Lm - cream, fossiliferous, slightly oolitic, slight scattered fine interxln porosity with slight scattered stain, a few specks of free oil upon crush, limited total porosity

Sh - black, carbonaceous, firm, fissile

Lm - cream, fnxln with slight scattered fine interxln porosity, slight scattered golden brown stain, NSFO, no odor

Sh - black, carbonaceous, waxy, soft

Sh - light gray, soft, blocky, forming sticky clumps in part

Lm - light gray-cream, fossiliferous, fnxln to granular, dense, brittle, slight bedded chalk in part

BKC SPL 3532 (-1488) ELOG 3529 (-1486)

Sh - light gray / green / brown, firm, blocky

Lm - offwhite, granular, well cemented, hard, brittle

Sh - maroon / light gray, soft, very sticky

Lm - light gray-cream, fossiliferous, dense, well cemented, very hard, no visible porosity

Sh - light green / gray / brown, firm, blocky

Lm - tan-light gray, fnxln to lithographic, dense, very hard

Lm - cream, fnxln to granular, brittle, bedded chalk, orange chert

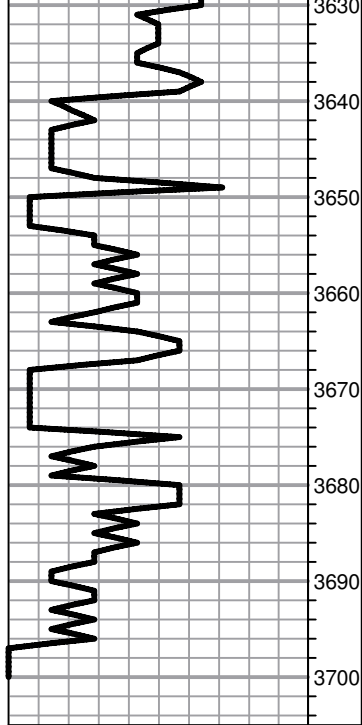
Sh - light green / brown, soft, blocky, some sticky maroon clumps

MUD WT 9.0
VIS 65

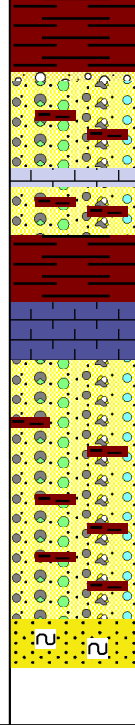
MUD WT 9.0
VIS 62

MUD WT 9.0
VIS 58

OP (min/ft)



3630
3640
3650
3660
3670
3680
3690
3700



Sh - maroon / orange, very soft, extremely sticky clumps, forming red wash

Conglomerate - Lm's various colors and textures,
Sh's green, maroon, orange, brown, gray
Cherts, orange, white, yellow, brown, black opaque

Sh - maroon, soft, very sticky

Conglomerate - A/A with extreme red wash and maroon sticky clumps

Conglomerate - A/A

SS - bright green, glauconitic, well cemented hard clusters, no shows

RTD 3700 (-1657) LTD 3698 (-1655)