

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: PEACE CREEK C-1
 Location: SE SE Sec.25-22s-10w
 Pool: WILDCAT
 State: KANSAS
 API: 15-155-21,670-00-00
 Field: UNNAMED
 Country: USA

Scale 1:240 Imperial

Well Name: PEACE CREEK C-1
 Surface Location: SE SE Sec.25-22s-10w
 Bottom Location:
 API: 15-155-21,670-00-00
 License Number: 6768
 Spud Date: 10/21/2013 Time: 9:00 PM
 Region: RENO COUNTY
 Drilling Completed: 10/28/2013 Time: 7:20 PM
 Surface Coordinates: 660' FSL & 660' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 1738.00ft
 K.B. Elevation: 1747.00ft
 Logged Interval: 2600.00ft To: 3980.00ft
 Total Depth: 3980.00ft
 Formation: VIOLA
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -98.3647606 Latitude: 38.1025227
 N/S Co-ord: 660' FSL
 E/W Co-ord: 660' FEL

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: SOUTHWIND DRILLING, INC.
 Rig #: 8
 Rig Type: MUD ROTARY
 Spud Date: 10/21/2013 Time: 9:00 PM
 TD Date: 10/28/2013 Time: 7:20 PM
 Rig Release: 10/29/2013 Time: 4:00 PM

ELEVATIONS

K.B. Elevation: 1747.00ft Ground Elevation: 1738.00ft
 K.B. to Ground: 9.00ft

NOTES

PRODUCTION CASING WAS RAN TO FURTHER TEST THE VIOLA SECTION IN THIS WELL. WELL WAS DEEPENED AFTER THE LOGS TO 4075' FOR POSSIBLE FUTURE COMPLETION AS AN ARBUCKLE SALT WATER DISPOSAL WELL

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

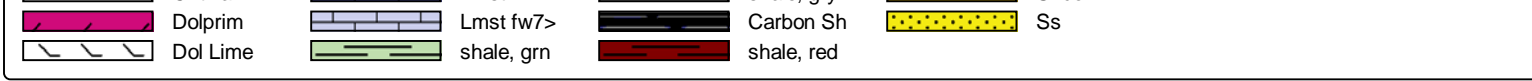
DRILL STEM TESTING BY SUPERIOR TESTERS ENTERPRISES, LLC: TWO (2) CONVENTIONAL TESTS

FORMATION TOPS SUMMARY:

FORMATION	SAMPLE TOP/DATUM	ELOG TOP/DATUM
TOPEKA	2723 -976	2722 -975
HEEBNER SHALE	3018-1271	3016-1269
TORONTO	3033-1286	3031-1284
DOUGLAS SHALE	3039-1292	3038-1291
BROWN LIME	3169-1422	3167-1420
LKC	3202-1455	3201-1454
BKC	3484-1737	3483-1736
VIOLA	3680-1933	3682-1935
SIMPSON SHALE	3785-2038	3778-2031
SIMPSON SAND	3793-2046	3784-2037
ARBUCKLE	3843-2096	3843-2096
RTD	3980-2233	3979-2232
DDTD	4075-2328	

ROCK TYPES

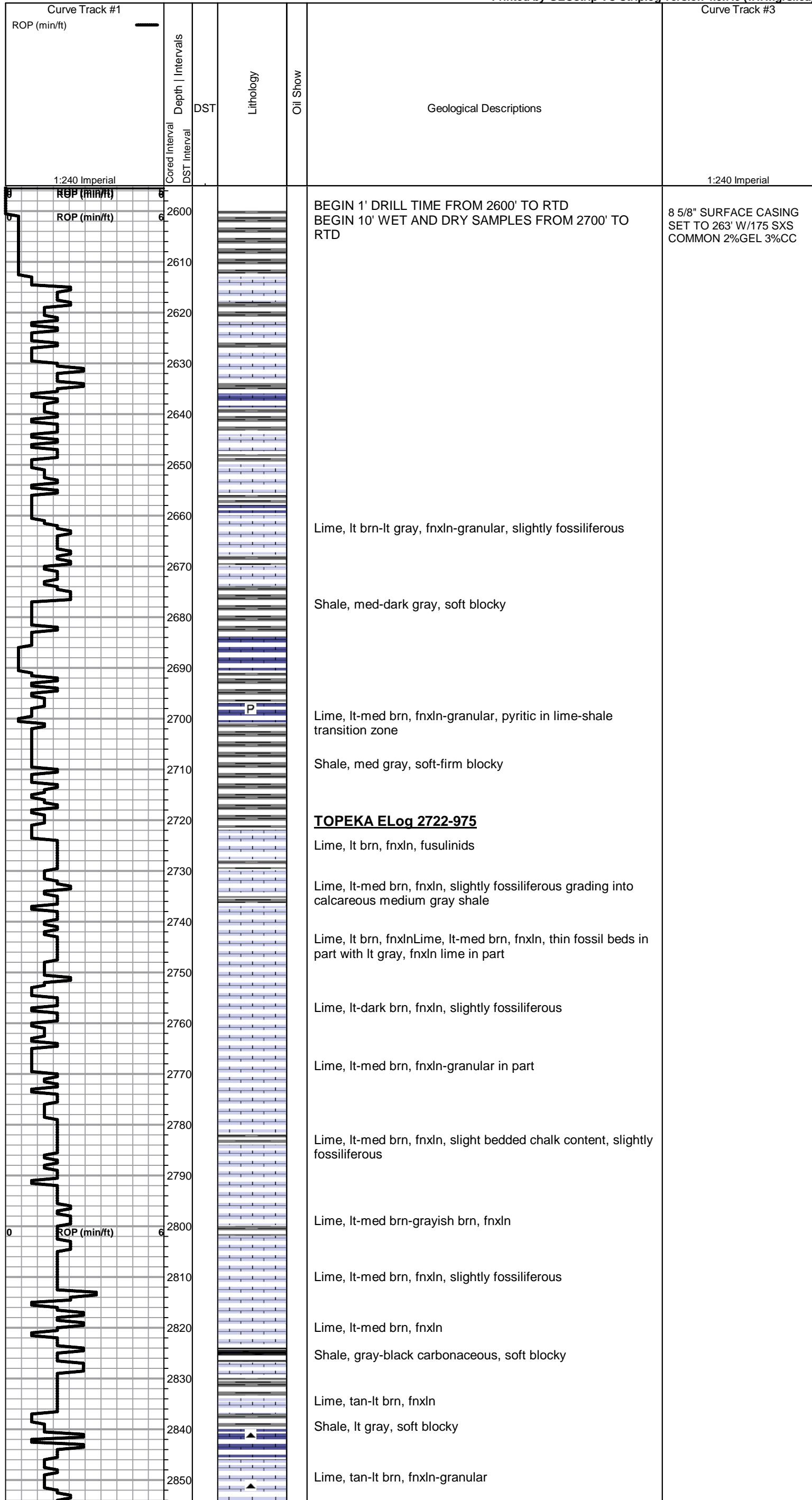
▲ ▲ ▲ ▲ Cht vari ■ Lmst fw<7 ■ shale. arv ■ Shcol

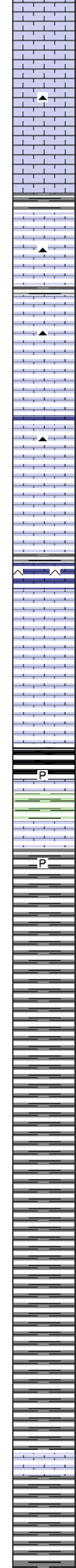
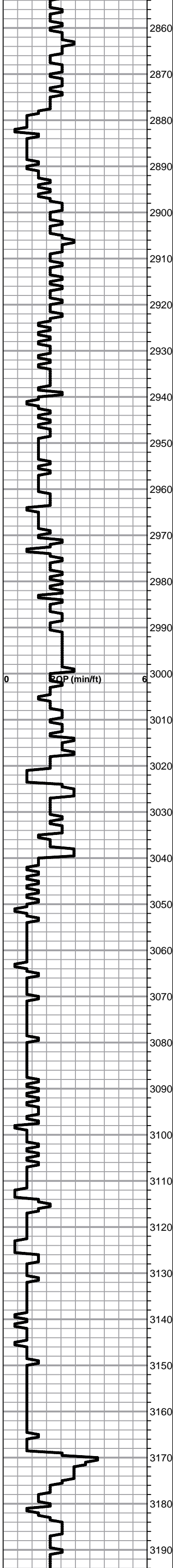


ACCESSORIES

- MINERAL**
- ▲ Chert, dark
 - P Pyrite
 - △ Siliceous
 - △ Varicolored chert
 - △ Chert White
- FOSSIL**
- Oolite
 - ⊗ Oomoldic

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Lime, crm-tan, fnxln, slight bedded chalk content

Lime, tan-lt brn, fnxln-granular, slightly fossiliferous, slight bedded chalk content

Lime, crm-tan, fnxln-granular, slight bedded chalk content, slightly fossiliferous

Lime, lt brn, granular-fnxln

Shale, lt-med gray, soft blocky

Lime, lt-med brn, fnxln

Lime, tan-lt brn, fnxln, slight bedded chalk content

Lime, tan-lt brn, fnxln-granular, slight bedded chalk content

Lime, crm-tan-lt brn, fnxln

Lime, tan, fnxln-granular, slight bedded chalk content

Lime, tan-lt brn, fnxln-granular, slightly fossiliferous

Lime, tan-lt brn, fnxln-granular, slightly fossiliferous

Lime, tan-lt brn, fnxln, slightly fossiliferous

Lime, crm-med brn, fnxln

Lime, crm-lt brn, fnxln-granular in part, slightly fossiliferous

Lime, lt brn, fnxln

HEEBNER SHALE ELog 3016-1269

Shale, gray-black carbonaceous, soft-firm blocky
Lime, lt brn, micro xln

TORONTO ELog 3031-1284

Lime, crm-tan, fnxln, slightly fossiliferous, NS

DOUGLAS SHALE ELog 3038-1291

Shale, lt-med grany, soft-firm blocky

Shale, lt-med gray, firm blocky

Shale, as above

Shale, as above

Shale, as above

Shale, lt gray, soft blocky, waxy

Shale, lt gray, soft blocky

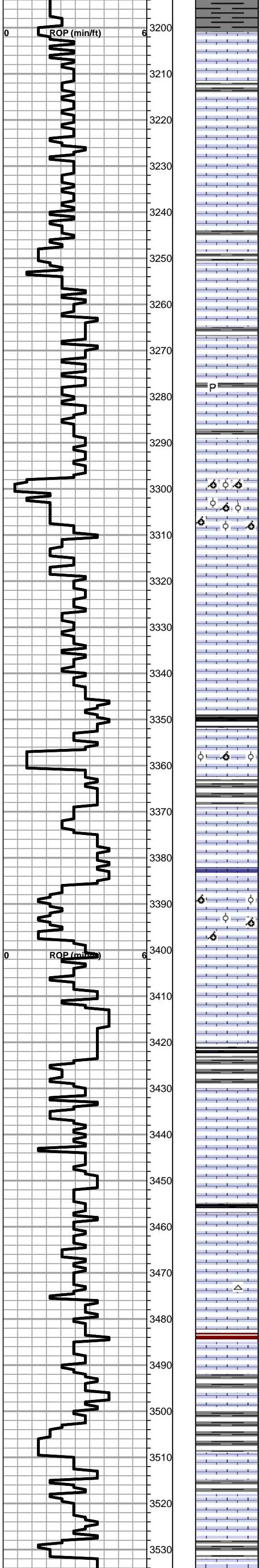
Shale, lt-med gray, soft blocky

Shale, as above

BROWN LIME SPL 3169-1422 ELog 3167-1420

Lime, med brn, fn-vfxln, hard on crush

Shale, lt-med gray, firm blocky with sticky clumps in part



LKC ELog 3201-1454

Lime, lt-med brn, fnxln

Lime, crm-lt brn, fnxln

Lime, med-dark brn, fnxln, fusulinid beds

Lime, lt-med brn, fnxln

Lime, crm--lt-med brn, fnxln-slightly granular in part

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

Lime, lt-med brn, slight bedded chalk content

Lime, lt-dark brn, fnxln with fine gray mottling in part

Lime, lt-med brn, fnxln with bedded chalk content

Lime, lt-med brn, oolitic/oomoldic, NS

Lime, lt-med brn, fnxln-micro xln in part, slight bedded chalk

Lime, lt brn, fnxln, bedded chalk content

Lime, lt brn, fn-micro xln in part, bedded chalk content

Lime, lt brn, fn-vfxln, bedded chalk content

Shale, gray-black, soft sticky in part

Lime, lt brn, fnxln grading into oolitic/oomoldic, NS , No wet cut

Lime, lt brn, fnxln, bedded chalk content, thin fossil beds

Lime, lt brn, fnxln

Lime, lt-med brn, fnxln-oomoldic, chalky white wash, NS

Lime, lt-med brn, fn-vfxln, bedded chalk content

Lime, lt-med brn, fnxln, bedded chalk content

Shale, gray-black carbonaceous in part, soft blocky

Lime, lt-med brn, fnxln, slight bedded chalk content with granular in part, NS

Lime, lt-med brn, fn-vfxln, slight bedded chalk content, slightly fossiliferous in part

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

Lime, lt brn, mostly fnxln, 1 chip with oolitic material with vuggy development, SFO on crush with lt odor

Lime, lt brn-lt grayish brn, fn-micro xln
Chert, white, fresh, sharp

BKC ELog 3483-1736

Shale, red, soft-firm blocky

Lime,lt brn-lt grayish brn, fn-micro xln, slight bedded chalk

Lime, lt grayish brn, micro xln

Shale, med gray, firm, blocky

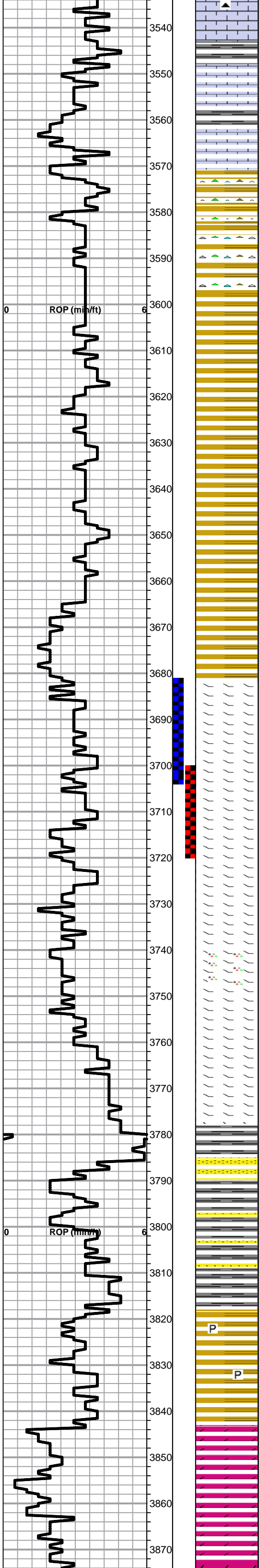
Lime, lt grayish brn, fnxln

Lime, lt brn-lt grayish brn, fn-micro xln, slight bedded chalk content

Shale, lt grayish green, soft blocky

LOSING PUMP
PRESSURE TRIP OUT TO
CHECK FOR HOLES IN
DRILL PIPE. TORQUE
CONVERTER ON DW
WENT OUT. REPLACED
AND DRILLED AHEAD

MICROLOG SHOWED NO
PERMEABILITY
THROUGH INTERVAL



Lime, lt-med brn, fn-vfxln

Shale, med gray, firm blocky

Lime, crm-lt brn, fn-vfxln, increased bedded chalk content

Lime, crm-lt brn, fn-vfxln

Shale, redds, brns, maroon, vari color with mix of vari color chert

Shale, brns, maroon, grays, firm blocky with vari color cherts

Shale, maroon, yellows, blue-green, firm blocky, waxy

Shales, vari color, firm blocky

Shale, vari color, waxy, firm

Shale, as above

Shale, brns, grays, maroon, firm blocky

Shale, as above

Shale, as above

Shale, as above

Shale, vari colored

VIOLA ELog 3682-1935

● Lime, tan, granular, dolomitic, fine-medium grained inter xln porosity with lt saturated staining, fair odor with show of lt gassy oil

Lime, crm-lt brn, fnxln, dolomitic in part, scattered chert fragments, continued lt odor

* Lime, crm-lt brn, fnxln-granular, lt odor in dolomitic granular lime with fn-med inter xln porosity

* Lime, crm-lt brn, granular with increasing chert content, fresh, sharp, continued lt odor but no staining or free oil noted.

Lime, crm-tan, fnxln-granular, hard on crush
Chert, bone white-semi opaque, fresh, sharp

Lime, crm-tan, fnxln-granular, dolomitic in part, increasing white and smoky gray cherts, fresh, sharp

Lime, crm-tan-med brn, granular, hard on crush, decreasing white chert content

Lime, crm-lt brn, fnxln, hard on crush, decreasing chert content

Lime, lt brn, dolomitic, fnxln-hard fine grained granular

SIMPSON SHALE ELog 3778-2031

SIMPSON SAND ELog 3784-2037

Sandstone, quartz, well sorted, semi clear polished grains, light grain bonding, NS, no wet cut

Shale, dove gray, soft sticky clumps

Shale, med gray, firm blocky, scattered sandstone clusters, NS

Shale, lt-med gray, firm, blocky, waxy

P

Shale, lt grays, greenish blue, waxy, fine pyritic xls inclusions typical of Simpson shale

P

ARBUCKLE ELog 3843-2096

Dolomite, crm-lt brn, granular, oomoldic in part, NS, No Wet Cut, No staining or gilsonite

Dolomite, tan-lt brn, granular with sucrosic in part

Dolomite, crm-tan, fn-cxln

DST # 1 3681' TO 3704'
SEE HEADER FOR TEST SUMMARY

DST # 2 3700' TO 3720'
SEE HEADER FOR TEST SUMMARY

