

OPERATOR

Company: TDI, INC.
 Address: 1310 BISON ROAD
 HAYS, KANSAS 67601-9696

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: VONLINTEL # 1
 Location: NW NE SE SE SEC.28-T14S-R16W
 API: 15-051-26,865-00-00
 Pool:
 State: KANSAS

Field: DREILING
 Country: USA



Scale 1:240 Imperial

Well Name: VONLINTEL # 1
 Surface Location: NW NE SE SE SEC.28-T14S-R16W
 Bottom Location:
 API: 15-051-26,865-00-00
 License Number: 4787
 Spud Date: 3/15/2017 Time: 12:00 AM
 Region: ELLIS COUNTY
 Drilling Completed: 3/20/2017 Time: 1:53 AM
 Surface Coordinates: 1050' FSL & 370' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 1876.00ft
 K.B. Elevation: 1886.00ft
 Logged Interval: 0.00ft To: 0.00ft
 Total Depth: 3425.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.096968
 Latitude: 38.8012913
 N/S Co-ord: 1050' FSL
 E/W Co-ord: 370' 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 #: 1
 Rig Type: MUD ROTARY
 Spud Date: 3/15/2017 Time: 12:00 AM
 TD Date: 3/20/2017 Time: 1:53 AM

ELEVATIONS

K.B. Elevation: 1886.00ft Ground Elevation: 1876.00ft
 K.B. to Ground: 10.00ft

NOTES

SAMPLES WERE EXAMINED WITH MINOR HYDROCARBON SHOWS NOTED IN A NUMBER OF POORLY DEVELOPED ZONES IN THE LKC. THE ARBUCKLE CAME IN VERY LOW STRUCTURALLY COMPARED TO OFFSET WELLS AND HAD CONSIDERABLE INFILL OF RED SHALE, CHERTS AND REWORKED DOLOMITE. NO OPEN HOLE LOGS OR DRILL STEM TESTS WERE RAN ON THIS WELL.

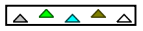




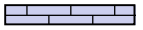




VONLINTEL # 1	ROHLER # 3	VONLINTEL # 1
NW NE SE SE	NE SW NW SW	E2 SW SE SE
SEC.28-14S-16W	SEC.27-14-16W	SEC.28-14-16W
1886'KB	KB 1867'	KB 1897'

<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	989 +897	+ 895	+ 890
B-Anhydrite	1026 +860	+ 859	+ 852
Topeka	2879 - 993	- 980	- 996
Heebner Sh.	3098-1212	-1199	-1216
Toronto	3118-1232	-1219	-1234
LKC	3146-1260	-1247	-1268
BKC	3375-1489	-1476	-1493
Rework Arbuckle	3404-1518		
Arbuckle	3420-1534	-1491	-1511
RTD	3425-1539	-1633	-1683

SUMMARY OF DAILY ACTIVITY

- 3-15-17 Spud 3:30 PM, set 8 5/8" surface casing to 224' w/ 150 sxs Common 2%gel 3%CC, WOC 8 hrs, slope 1/2 degree.
- 3-16-17 274, drilling
- 3-17-17 1387', drilling
- 3-18-17 2350', drilling, displaced 2698-2730
- 3-19-17 3032', drilling
- 3-20-17 3425', CFS 3411', CFS 3425', decision to P&A, LDDP, P&A, RD

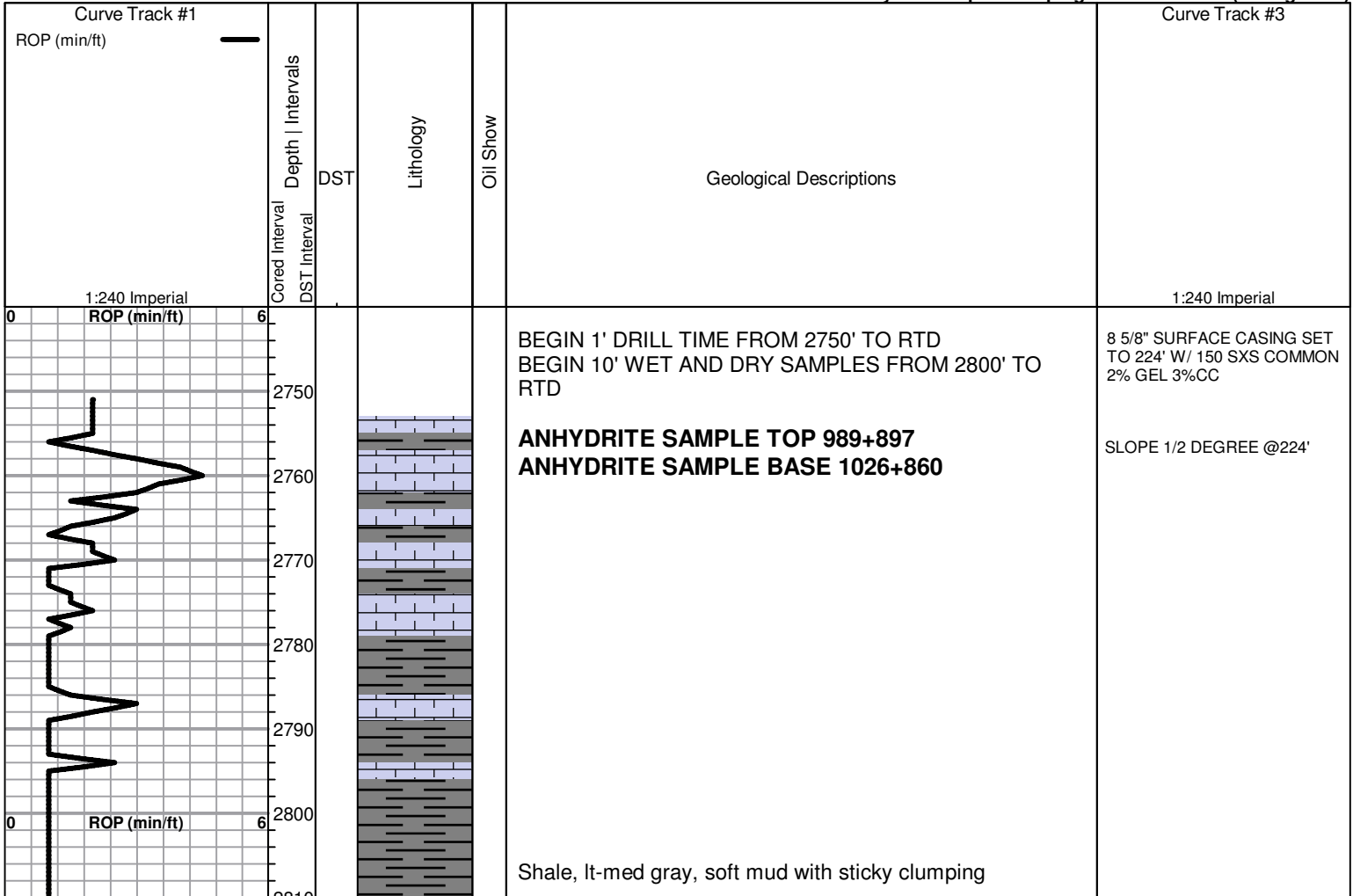
ROCK TYPES

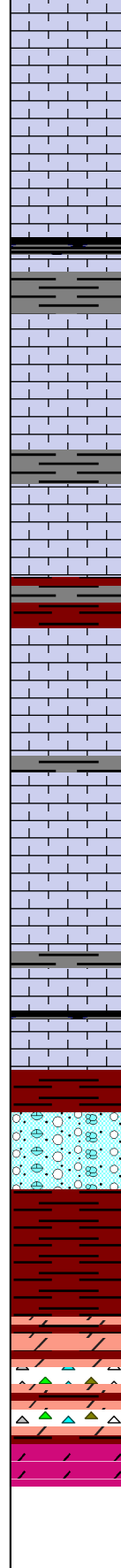
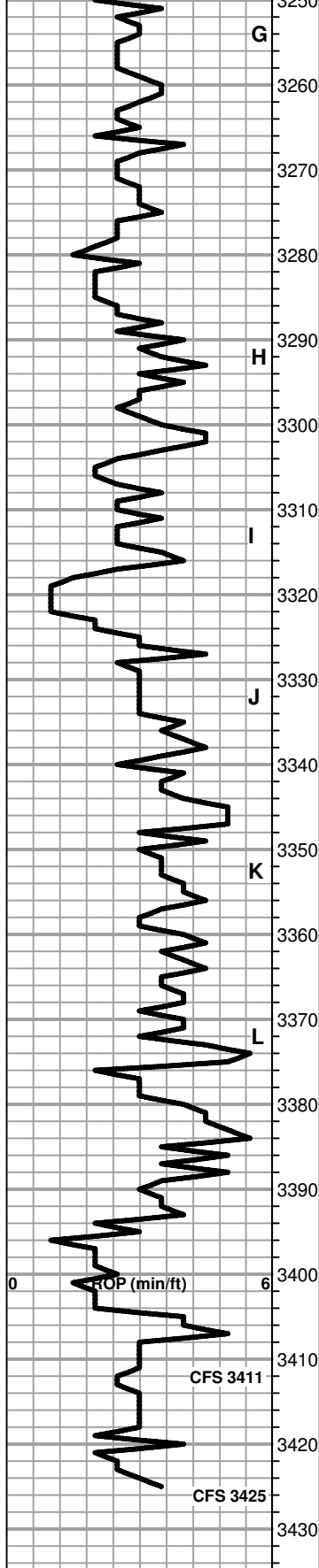
 Cht vari	 Dolsec	 shale, grn	 shale, red
 Clystgy	 Lmst fw7>	 shale, gry	
 Dolprim	 Lscongl	 Carbon Sh	

ACCESSORIES

MINERAL

- ▲ Chert, dark
- P Pyrite





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

Lime, crm-lt brn, fn-vfxln with bedded chalk

Lime, crm-lt brn, fn-vfxln

Shale, black carbonaceous, blocky

Lime, crm-tan, mostly fn-micro xln, few chips with dead oil staining, NFO, no odor

Lime, crm-tan, fn-micro xln

Lime, crm-tan, fn-micro xln

Lime, crm, fn-micro xln, bedded chalk

Lime, crm-tan, fn-micro xln, bedded chalk

Lime, crm-tan, fn-vfxln

Lime, crm-tan, fn-micro xln

Lime, crm-tan, fn-vfxln

Lime, crm-lt brn, fn-micro xln

BKC SPL TOP 3375-1489

Shale, red-reddish brn, soft blocky

Lime, crm, fn-vfxln, chalky in part

Shale, red wash, soft mud

REWORKED ARBUCKLE SPL TOP 3404-1518

Dolomite, med brn, hard on crush, no visible porosity or odor

Dolomite-reworked, vary colored cherts and lt red wash,

ARBUCKLE SPL TOP 3420-1534

Dolomite, lt brn, NS, fnxln-granular

RTD 3425-1539

1st plug @ 3400' w/ 50 sxs
 2nd plug @ 1000' w/ 50 sxs
 3rd plug @ 400' w/ 50 sxs
 4th plug @ 275' w/ 50 sxs
 5th plug @ 40' w/ 10 sxs
 Rathole w/ 30 sxs
 Mousehole w/ 15 sxs

Ordered 285 sxs 60/40 4%gel
 with 1/4# flocele per sack