

**OPERATOR**

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

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-259-3141  
 Well Name: WERTH # 1  
 Location: W2 NE SW NW  
 Pool: IN FIELD  
 State: KANSAS

API: 15-051-26,272-00-00  
 Field: ELLIS  
 Country: USA



Scale 1:240 Imperial

Well Name: WERTH # 1  
 Surface Location: W2 NE SW NW  
 Bottom Location:  
 API: 15-051-26,272-00-00  
 License Number: 4787  
 Spud Date: 4/30/2012 Time: 8:00 AM  
 Region: ELLIS COUNTY  
 Drilling Completed: 5/6/2012 Time: 5:25 AM  
 Surface Coordinates: 1650' FNL & 800' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2137.00ft  
 K.B. Elevation: 2146.00ft  
 Logged Interval: 3100.00ft To: 390000.00ft  
 Total Depth: 3900.00ft  
 Formation: ARBUCKLE  
 Drilling Fluid Type: GEL/CHEMICAL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 N/S Co-ord: 1650' FNL  
 E/W Co-ord: 800' FWL  
 Latitude:

**LOGGED BY**

Company: SOLUTIONS CONSULTING  
 Address: 108 W 35TH  
 HAYS, KS 67602

Phone Nbr: (785) 259-1337  
 Logged By: Geologist Name: HERB DEINES

**CONTRACTOR**

Contractor: SOUTHWIND DRILLING INC.  
 Rig #: 2  
 Rig Type: MUD ROTARY  
 Spud Date: 4/30/2012 Time: 8:00 AM  
 TD Date: 5/6/2012 Time: 5:25 AM  
 Rig Release: 5/7/2012 Time: 12:00 AM

**ELEVATIONS**

K.B. Elevation: 2146.00ft  
 K.B. to Ground: 9.00ft  
 Ground Elevation: 2137.00ft

**NOTES**

RECOMMENDATION TO RUN PRODUCTION CASING TO TEST ARBUCKLE, LKC AND TOPEKA-30' BREAK BASED ON FAVORABLE STRUCTURE AND POSITIVE RESULTS OF DST # 1

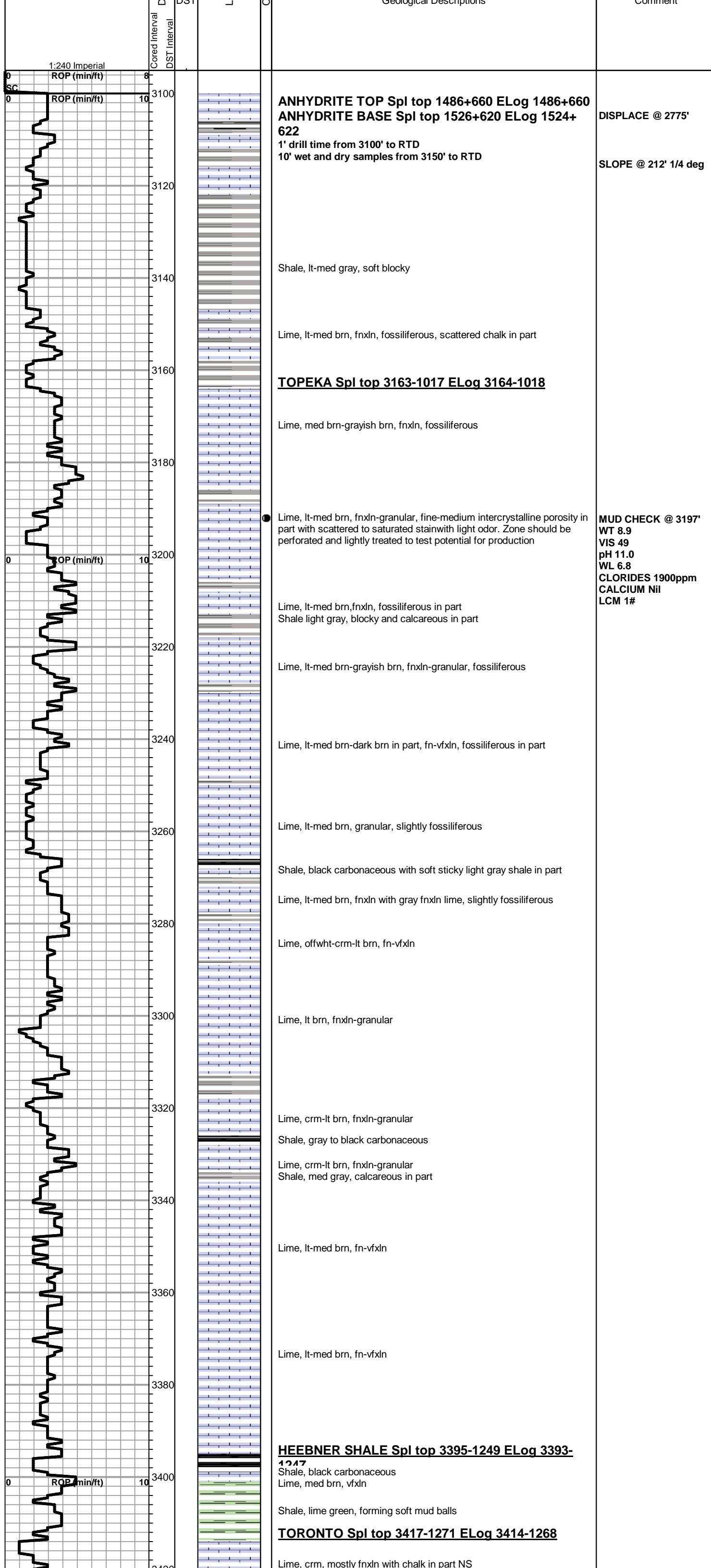
**FORMATION TOPS AND DAILY PROGRESS REPORT OF DEPTH AND ACTIVITY**

WERTH # 1  
 1650' FNL & 800' FWL, NW/4 SEC.5-13s-20w  
 ELLIS COUNTY, KANSAS  
 GL ELEVATION=2137' KB ELEVATION=2146'

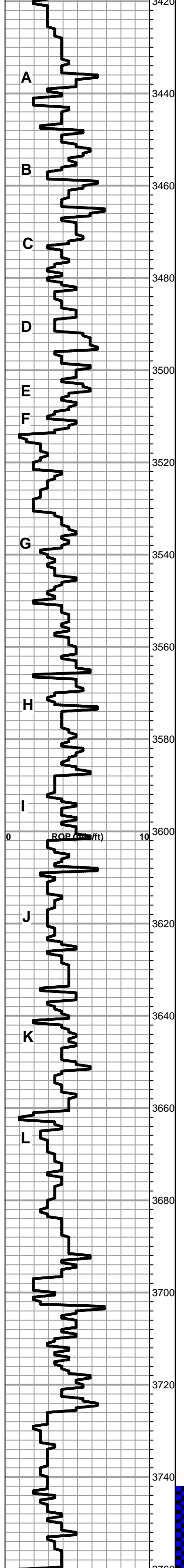
**FORMATION****SAMPLE TOP****LOG TOP**











**LKC Spl top 3435-1289 ELog 3432-1286**

Lime, crm-lt brn, fnxn with chalk in part, NS

Lime, crm-lt brn, fnxn-granular in part, NS

Lime, crm-dark brn, fnxn, slightly fossiliferous in part, NS

Lime, crm-lt brn, mostly fnxn with few pieces of oolitic with scattered staining, NFO, No odor

Shale, gray-black carbonaceous  
Lime, lt-med brn, fnxn

Lime, crm, fnxn-granular with chalk in part, few pieces with very light scattered stain, NFO, No Odor

Lime, wht-crm, fnxn-granular, bedded chalk in part, NS

Lime, crm-lt brn, fnxn

Lime, crm-lt brn, fnxn, chalk in part

Lime, crm, fnxn-granular with chalk in part, NS

Lime, lt-med brn, fn-vfxln NS

Lime, crm-lt brn, fnxn NS

Lime, crm-lt brn, mostly fnxn, few pieces with scattered vuggy porosity with scattered staining, No odor. Sample shows lagged back to this interval.

Lime, crm-lt brn, fnxn

**BKC Spl top 3681-1535 ELog 3672-1526**

Shale, reddish brn, blocky with gray pyritic shale in part

Lime, crm, fnxn

Shale, red,brn, maroon mix of clastic lime and shale in part

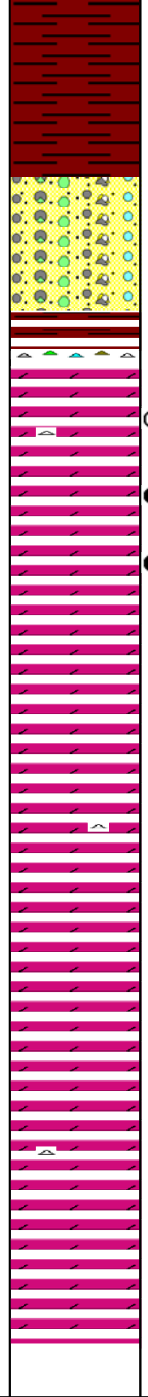
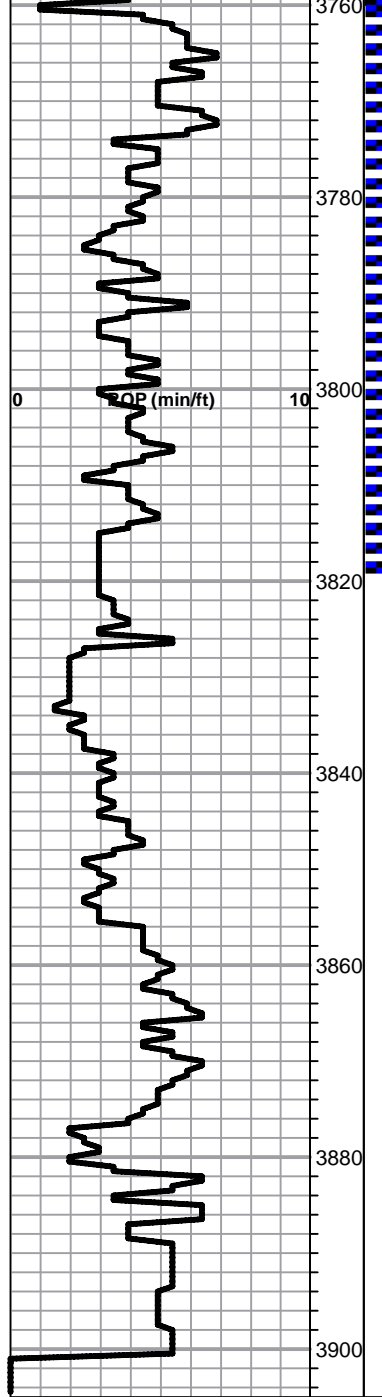
Clastic lime mix

**MARMATON Spl top 3723-1577 ELog 3723-1577**

Dolomitic lime, fn-med crystalline, with scattered orange chert with much light brn chert, fresh, sharp. Light odor noted in sample with good wet cut on break, NFO noted.

Dolomitic lime, crm-med brn, fn-med xln

**MUD CHECK 3592'**  
WT 9.2  
VIS 49  
pH 10.5  
WL 6.4  
CHLORIDES 1900 ppm  
CALCIUM TRACE  
LCM 1#



Shale, reddish brn, soft, sticky in part

Shale, vari colored, with fresh, sharp chert in part

Cherts, vari colored mixed with reworked dolomite, NS

**ARBUCKLE Spl top 3794-1648 ELog 3798-1652**

Dolomite, ivory-crm, fnxn-sucrosic in part, very light odor, scattered to saturated staining.

Dolomite, ivory-crm, fn-cxln, fair odor, MSFO, scattered to saturated staining. Good intercrystalline porosity in part with mix of fine crystalline to coarse with good rhombic crystalline development in part. Zones of porosity thin but well developed with coarse crystalline dolomite.

Dolomite, crm-ivory, fnxln to fine grained granular, NS, No odor

Dolomite, crm-ivory, fn-cxln in part, scattered specks of glauconite, qtz grains with clear dolomite crystals in part

Dolomite, Ivory-lt brn, fn-cxln in part

Dolomite, crm-ivory, fnxln

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

Dolomite, crm-ivory, fnxln

**RTD 3900-1754 LTD 3901-1755**

**DST #1 STRADDLE**  
**3742'-3820'**  
**30-30-45-45**  
**Rec: 63' VSOCGM**  
**46'HOCM-25%OIL**  
**126' GASSY OIL**  
**GRAVITY 34**  
**ISIP: 1160#**  
**FSIP: 1178#**  
**FP: 65-95, 106-145**  
**BHT: 121 DEGREES**  
**1st OPEN: BOB 22 min**  
**BLOW BACK-WK 20"**  
**2nd OPEN: BOB 19.5"**  
**BLOW BACK-WK**

**MUD CHECK @ 3900'**  
**WT 9.3**  
**VIS 59**  
**pH 10.5**  
**WL 6.8**  
**CHLORIDES 1900ppm**  
**CALCIUM Trace**  
**LCM 2#**

**SLOPE 1 1/4 DEGREES**



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 498

Cell 785-324-1041

Date	4-30-12	Sec.	5	Twp.	13	Range	20	County	Ellis	State	Kansas	On Location		Finish	2:30 PM
Lease	Worth	Well No.	1		Location		Ellis NW 34 Sinto								
Contractor	Southwind Drilling Rig 2							Owner							
Type Job	Surface							To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	12 1/4		T.D.		212		Charge To								
Csg.	8 3/8 23 1/2		Depth				To TDI								
Tbg. Size			Depth				Street								
Tool			Depth				City				State				
Cement Left in Csg.	10-15		Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.										
Meas Line			Displace		12 1/2 Bbl		Cement Amount Ordered				150 Common 30 CL 28 bbl				

**EQUIPMENT**

Pumptrk	5	No.	Cementer		Common	150
			Helper	Steve		
Bulktrk	8	No.	Driver		Poz. Mix	
			Driver	Bratt		
Bulktrk		No.	Driver		Gel.	3
			Driver	Len		

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38

Cement did Circulate

Sand	
Handling	158
Mileage	

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

SLUDGE

Pumptrk Charge	Surface
Mileage	17

Tax	
Discount	
Total Charge	

X Signature 



