OPERATOR

Company:	TDI, INC		
Address:	1310 BISON ROAD HAYS, KANSAS 67601		
Contact Geologist:	TOM DENNING		
Contact Phone Nbr:	785-628-2593		
Well Name:	BEFORT # 2		
Location:	NW NE SE SW Sec.11-15s-19w	API:	15-051-26,555-00-00
Pool:		Field:	UNNAMED
State:	KANSAS	Country:	USA

TDI, Inc.
1310 BISON ROAD
HAYS, KANSAS 67601
(785) 628-2593

Scale 1:240 Imperial

Well Name:	BEFORT # 2		
Surface Location:	NW NE SE SW Sec.11-15s-19w		
Bottom Location:			
API:	15-051-26,555-00-00		
License Number:	4787		
Spud Date:	8/1/2013	Time:	4:30 PM
Region:	ELLIS COUNTY		
Drilling Completed:	8/7/2013	Time:	11:34 AM
Surface Coordinates:	1220' FSL & 2020' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	2028.00ft		
K.B. Elevation:	2038.00ft		
Logged Interval:	2900.00ft	To:	3730.00ft
Total Depth:	3730.00ft		
Formation:	LANSING-KANSAS CITY		
Drilling Fluid Type:	CHEMICAL/FRESH WATER GEL		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:	-99.404443	Latitude:	38.7581565
N/S Co-ord:	1220' FSL		
E/W Co-ord:	2020' FWL		

LOGGED BY

SOLUTIONS CONSULTING

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:	8/1/2013	Time:	4:30 PM
TD Date:	8/7/2013	Time:	11:34 AM
Rig Release:	8/8/2013	Time:	1:00 PM

ELEVATIONS

K.B. Elevation:	2038.00ft	Ground Elevation:	2028.00ft
K.B. to Ground:	10.00ft		

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON RESULTS OF DST # 3 OVER THE CONGLOMERATE SAND.

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

DRILL STEM TESTING BY TRILOBITE TESTING INC: TWO (2) CONVENTIONAL TESTS AND ONE (1) STRADDLE TEST

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

	BEFORT # 2		**URBAN UNIT # 1**
	1220' FSL & 2020' FWL, SW/4		**1220'FSL & 2025'FEL**
	Sec. 11-15s-19w		**Sec 11-15s-19w**
	2028' GL 2038' KB		**Reference Well**
FORMATION	**SAMPLE TOPS**	**LOG TOPS**	**LOG TOPS**
Anhydrite	1235+ 803	**1232+ 806**	*+ 799*
B-Anhydrite	1270+ 768	**1267+ 771**	*+ 765*
Topeka	3018- 980	**3017- 979**	- 981
Heebner Shale	3279-1241	**3276-1238**	*-1239*
Toronto	3297-1259	**3298-1260**	*-1258*
LKC	3326-1288	**3322-1284**	*-1285*
BKC	3570-1532	**3562-1524**	*-1533*
Marmaton	3603-1565	**3601-1563**	*-1568*
Congl. Sand	3640-1602	**3634-1596**	*-1601*
Arbuckle	3652-1614	**3651-1613**	-1639
RTD	3730-1692		
LTD		**3727-1689**	

SUMMARY OF DAILY ACTIVITY

8-01-13 **RU, spud 4:30 PM, set 8 5/8" surface pipe to 213' w/ 150 sxs common 2% gel, 3% CC, plug down 8:30 PM, slope 1 degree**

8-02-13	256', drilling
8-03-13	1740', drilling
8-04-13	2586', drilling, displace 2631' to 2644'
8-05-13	3248', CFS@3410', DST # 1 3334'-3410', A-F of LKC, slope 1 degr.
8-06-13	3420', CFS 3525', DST # 2 3478'-3525', I & J of LKC,
8-07-13	3626', drilling, RTD 3730' @11:34AM, CCH, TOWB, logs, straddle test Conglomerate sand 3610'-3656'
8-08-13	3730', rain delay, TIWB, LDDP, run production casing and cement

DST # 1 3334' TO 3410' "A" TO "F" LKC

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.

1310 Bison RD
Hays KS 67601

ATTN: Herb D

11-15-19,Ellis,KS

Befont #2

Job Ticket: 54752 **DST#: 1**

Test Start: 2013.08.05 @ 22:30:00

GENERAL INFORMATION:

Formation: **KC"D-F"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:57:00
Time Test Ended: 04:09:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Brett Dickinson
Unit No: 59

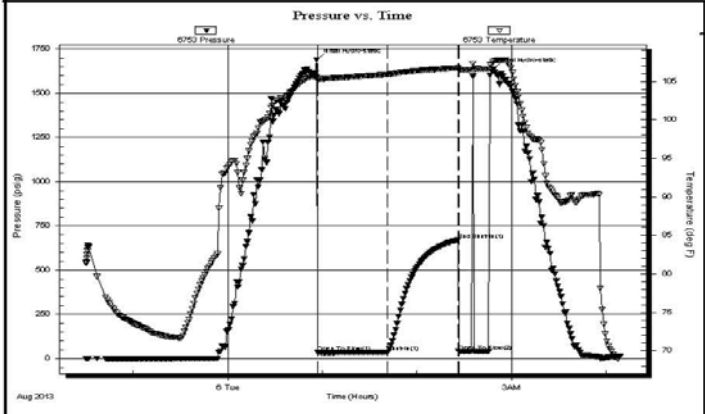
Interval: 3334.00 ft (KB) To 3410.00 ft (KB) (TVD)
Total Depth: 3410.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2038.00 ft (KB)
2030.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**
Press@RunDepth: 34.84 psig @ 3335.00 ft (KB)
Start Date: 2013.08.05 End Date: 2013.08.06
Start Time: 22:30:05 End Time: 04:08:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.06
Time On Btm: 2013.08.06 @ 00:56:30
Time Off Btm: 2013.08.06 @ 02:48:30

TEST COMMENT: IF-1in blow died to 3/4in blow
ISI-No blow
FF-No blow flush tool No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1690.12	105.60	Initial Hydro-static
1	35.45	105.15	Open To Flow (1)
45	34.84	105.87	Shut-In(1)
90	670.80	106.72	End Shut-In(1)
90	39.66	106.40	Open To Flow (2)
112	1636.40	107.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud	0.15

Gas Rates

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

DST # 2 3478' TO 3525' "I" _"J" LKC

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.

1310 Bison RD
Hays KS 67601

ATTN: Herb D

11-15-19,Ellis,KS

Befont #2

Job Ticket: 54753 **DST#: 2**

Test Start: 2013.08.06 @ 15:45:00

GENERAL INFORMATION:

Formation: **KC I,J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:40:00
Time Test Ended: 23:39:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Brett Dickinson
Unit No: 59

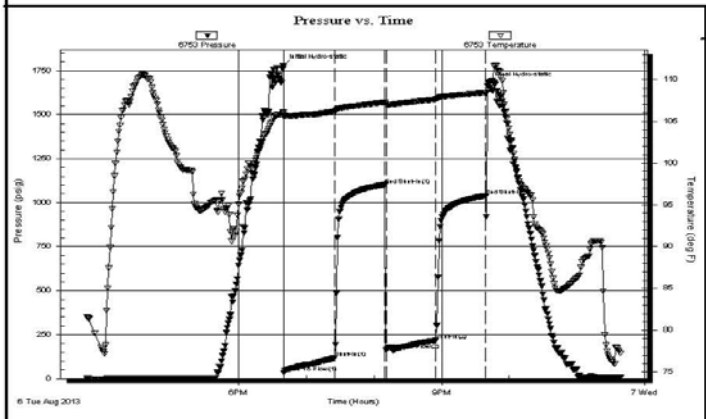
Interval: 3478.00 ft (KB) To 3525.00 ft (KB) (TVD)
Total Depth: 3525.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2038.00 ft (KB)
2030.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**
Press@RunDepth: 217.10 psig @ 3479.00 ft (KB)
Start Date: 2013.08.06 End Date: 2013.08.06
Start Time: 15:45:05 End Time: 23:38:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.06
Time On Btm: 2013.08.06 @ 18:39:00
Time Off Btm: 2013.08.06 @ 21:41:30

TEST COMMENT: IF-BOB in 19 1/2min
ISI-Very weak surface blow
FF-BOB in 31min
FSI-Very weak surface blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1779.73	105.95	Initial Hydro-static
1	34.97	105.52	Open To Flow (1)
46	117.26	106.17	Shut-In(1)
91	1102.22	107.28	End Shut-In(1)
92	161.17	107.00	Open To Flow (2)
136	217.10	107.62	Shut-In(2)
180	1039.06	108.42	End Shut-In(2)
183	1678.29	109.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
247.00	SMCW 95%W 5%M	3.19
180.00	GSOWCM 10%G 2%O 25%W 63%M	2.52
3.00	Free Oil	0.04

* Recovery from multiple tests

Gas Rates

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

DST # 3 3610' TO 3656' CONGLOMERATE SAND BOTTOM PACKER HELD

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

TDI Inc.

1310 Bison RD
Hays KS 67601

ATTN: Herb D

11-15-19,Ellis,KS

Befont #2

Job Ticket: 54754 **DST#: 3**

Test Start: 2013.08.07 @ 20:10:00

GENERAL INFORMATION:

Formation: **Cong. sd.**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:07:30
Time Test Ended: 02:08:30

Test Type: Conventional Straddle (Reset)
Tester: Brett Dickinson
Unit No: 59

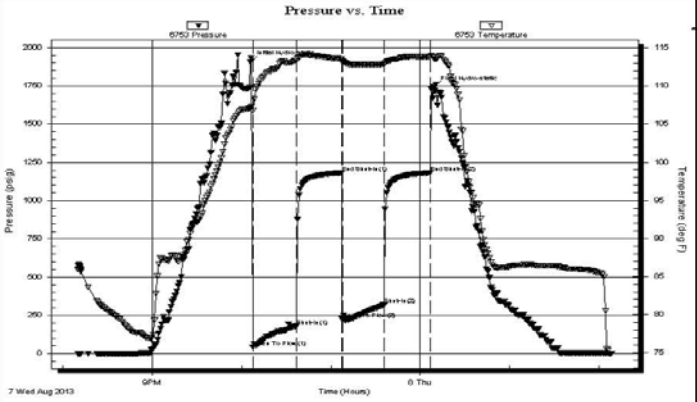
Interval: 3610.00 ft (KB) To 3656.00 ft (KB) (TVD)
Total Depth: 3730.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2038.00 ft (KB)
2030.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Outside**
Press@RunDepth: 320.65 psig @ 3645.00 ft (KB)
Start Date: 2013.08.07 End Date: 2013.08.08
Start Time: 20:10:05 End Time: 02:08:29

Capacity: 8000.00 psig
Last Calib.: 2013.08.08
Time On Btm: 2013.08.07 @ 22:06:00
Time Off Btm: 2013.08.08 @ 00:09:00

TEST COMMENT: IF-BOB in 6min
ISI-No blow
FF-BOB in 8min
FSI-Very weak surface blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1909.73	107.17	Initial Hydro-static
2	44.25	106.81	Open To Flow (1)
31	181.23	113.34	Shut-In(1)
61	1182.08	113.61	End Shut-In(1)
62	225.20	113.23	Open To Flow (2)
90	320.65	112.84	Shut-In(2)
121	1181.85	113.84	End Shut-In(2)
123	1742.77	113.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SGWOCM 5%G 10%W 45%O 40%M	0.07
520.00	GMCO 5%G 25%M 70%O	7.16
180.00	GMCO 10%G 15%M 75%O	2.52

* Recovery from multiple tests

Gas Rates

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

ROCK TYPES

Clystgy
Dolprim
Lmst fw<7
Lmst fw7>
shale, grn
shale, gry
Carbon Sh
shale, red
Shcol
Ss
Dol Lime
Lscongl
CglSandy

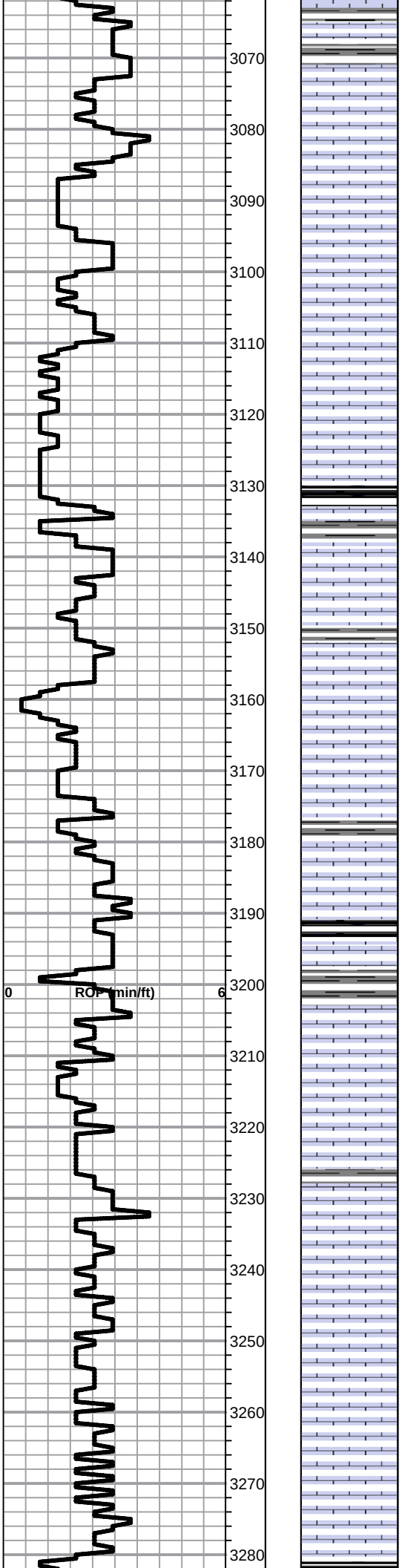
ACCESSORIES

MINERAL
P Pyrite
Varicolored chert
Chert White

OTHER SYMBOLS

DST
DST Int
DST alt
Core

Curve Track #1 ROP (min/ft) 1:240 Imperial	Depth | Intervals Cored Interval DST Interval	DST	Lithology	Oil Show	Geological Descriptions	TG, C1 - C5 1:240 Imperial
0 ROP (min/ft) 6	2900				BEGIN 1' DRILL TIME FROM 2900' TO RTD BEGIN 10' WET AND DRY SAMPLES FROM 3000' TO RTD	**8 5/8" SET TO 213' W/ 150 SXS COMMON 2%GEL 3%CC WOC 8 HRS**
	2910				**ANHYDRITE TOP ELog 1232+806** **ANHYDRITE BASE ELog 1267+771**	
	2920					
	2930					
	2940					
	2950					
	2960					
	2970				Shale, lt-med gray, soft blocky Lime, lt grayish brn, fnxln, slightly fossiliferous	
	2980					
	2990				Shale, lt-med gray, soft blocky	
0 ROP (min/ft) 6	3000				Lime, crm-lt brn, fnxln, crinoids fragments	
	3010				Lime, lt-dark brn, fnxln, fossiliferous **<u>TOPEKA ELog 3017-979</u>**	
	3020				Lime, lt-dark brn-med grayish brn, fn-micro xln, fossiliferous in part	
	3030					
	3040		P		Lime, lt-dark brn-grayish brn, shaley in part, fossiliferous Lime, lt-med brn, fnxln	
	3050				Lime, lt brn, granular, slight chalk matrix in part, NS	
	3060					



Lime, lt-med brn, fn-micro xln

Lime, lt brn, fnxln-granular, soft on crush

Lime, lt-med brn, granular, sticky chalk clumps in part

Lime, lt-med brn, fnxln-granular, crinoids segments

Lime, lt-med brn, fnxln-granular, bed chalk with sticky chalk clumps in part

Lime, lt-med brn, fnxln with increasing granular

Lime, med brn, granular, slight bedded chalk with sticky clumps in part

Shale, black carbonaceous, fissile, blocky

Lime, med brn, fnxln, fusulinids

Lime, crm, fn-vfxln, lithographic

Lime, lt-med brn, fnxln grading into granular, slight bed chalk

Lime, lt brn-lt gray, fnxln-granular

Lime, lt brn-lt gray, fnxln, gray mottling in part

Lime, lt brn-lt grayish brn, fnxln-granular, some gray spotty mottling in part

Shale, black carbonaceous

Shale, med-dark gray

Lime, lt-med brn, fnxln

Lime, crm-lt brn, fnxln, slight bedded chalk

Lime, lt-med brn, fnxln-granular, lt chalky matrix in part

Lime, crm-lt brn, fnxln-granular, slight bedded chalk

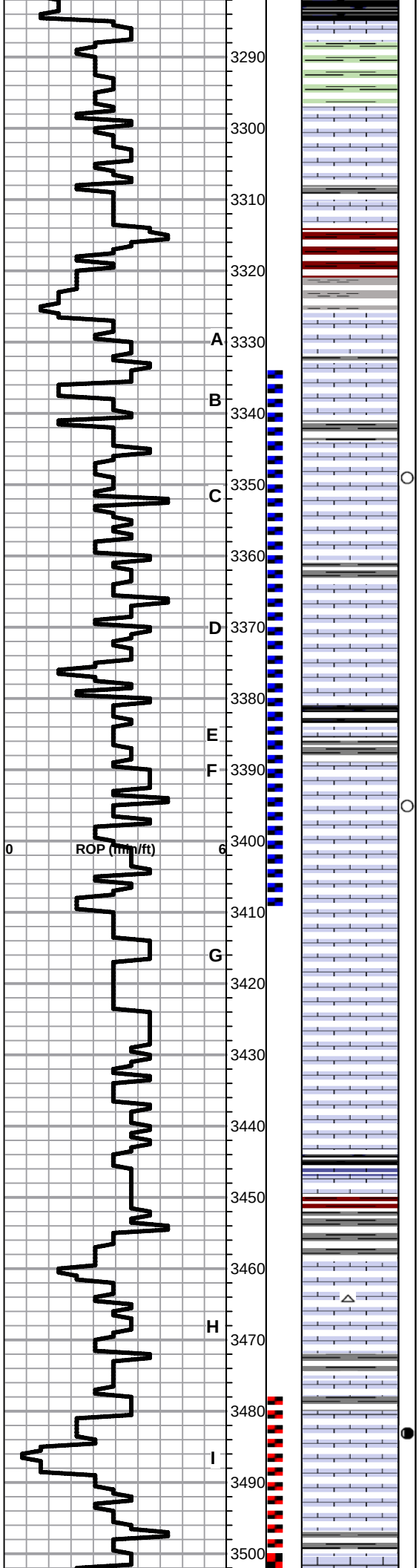
Lime, lt-med brn, fnxln, soft on crush, slight chalky matrix

Lime, crm-lt brn, fnxln-granular, bedded chalk

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

Lime, crm-lt brn, fnxln, slight bed chalk

HEEBNER SHALE SPL 3279-1241



Shale, black carbonaceous, fissile, blocky
Lime, lt brn, fn-vfxln, hard on crush

Shale, lime green, soft mud

TORONTO SPL 3297-1259

Lime, crm, fn-vfxln, bedded chalk, NS

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

SHORT TRIP @ 3311'

Shale, red, forming soft mud with lt red wash

LKC SPL 3326-1288

Lime, lt brn, fnxln

Lime, lt brn, fnxln
Shale, lt-med gray, soft blocky

Lime, tan-lt brn, fnxln with few oomoldic chips, trace of spotty stain, grading into crm-tan lime, fnxln with bedded chalk.

Lime, crm-tan, fn-vfxln

Shale, lt gray, soft, blocky

DST # 1 3334' TO 3410' SEE HEADER FOR TEST SUMMARY

Lime, crm, fn-vfxln, bedded chalk, NS

Shale, black carbonaceous
Lime, pale gray, fnxln

Lime, crm-tan, fn-vfxln, bedded chalk, 1 chip with spotty stain

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

SLOPE 1 DEGREE @3410'

Lime, crm-tan, fnxln, bedded chalk

Lime, crm-tan, fnxln, soft on crush, some lt brn lime microxln

Lime, crm-tan, fn-micro xln

Shale, gray-black carbonaceous
Lime, med grayish brn, micro xln

Shale, med-drk gray with lt brn sticky clumps in part

Lime, crm-lt brn, fn-micro xln, NS
White chert in part

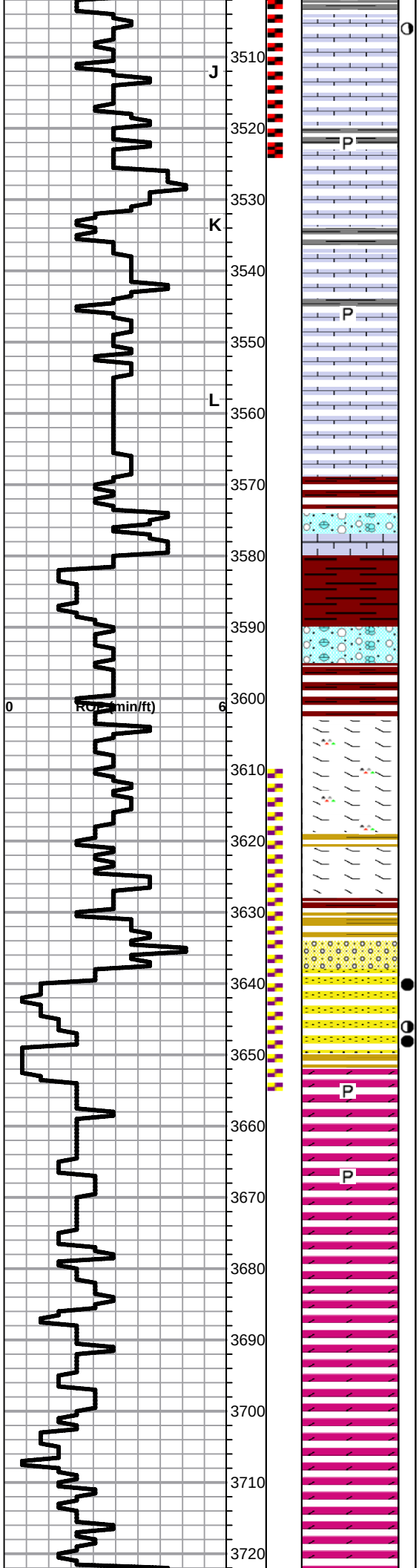
Lime, crm-lt brn-lt gray, fn-micro xln, slight bed chalk

Lime, crm-tan, oolitic/oomoldic, spotty to saturated stain, very lt odor, few free floating globules of oil.

Lime, crm-tan, fn-vfxln, slight bed chalk

DST # 2 3478' TO 3525' SEE HEADER FOR TEST SUMMARY

Shale, lt brn soft sticky clumps to lt - med gray, soft blocky



Lime, crm-tan, fn-vfxln, bedded chalk, few chips with spotty staining, not well developed

Lime, crm-tan, fn-vfxln,

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

Lime, crm-lt brn, fnxln, firm bedded chalk

Shale, med gray, pyritic

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

Lime, lt brn, microxln

BKC SPL 3570-1532

Shale, red, sandy, firm on crush

Lime, clastic mix with red shale staining in part grading into crm, fn-vfxln lime

Shale, red, gritty, firm-hard on crush

Clastic lime mix with micritic, hard lime chips in part

Shale, reddish brn, soft with lt red wash

MARMATON SPL 3603-1565

Lime, crm-lt brn, fnxln, dolomitic in part, hard on crush, chips of orange and tan chert, fresh, sharp

Lime, As Above

Shale, vari color-deep red

CONGLOMERATE SAND ELog 3634-1596

Sandstone, cemented clusters, firm grading into F-G sorted, quartz, subrounded, forming hard clusters, pure quartz in upper part of section with dolomitic cementing in lower part, very lt odor with free floating specks of oil in tray

ARBUCKLE SPL 3652-1614

Dolomite, crm, fnxln, hard on crush, NS

Dolomite, crm-cxln in part, interxln porosity, NS, fn-cxln pyrite inclusions in part

Dolomite, ivory-crm, fn-cxln

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

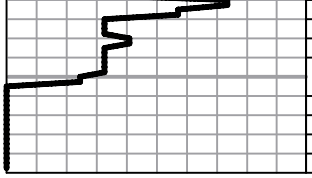
Dolomite, ivory-crm, fn-cxln, granular

Dolomite, ivory, fn- cxln, granular

Dolomite, ivory, fn-cxln granular in part

DST # 3 STRADDLE TEST 3610' TO 3656' SEE HEADER FOR TEST SUMMARY

OIL RECOVERED ON DST HAD A VERY LIGHT, BARELY DETECTABLE ODOR



Dolomite, ivory, fn-cxln,granular in part

RTD 3730-1692 LTD 3727-1689

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 **Home Office P.O. Box 32 Russell, KS 67665** **No.** 7997

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
8-1-13	11	15	19	Ellis	KS		8:30pm

Location Antonino 2s 3/4w Vinto

Lease Bebort Well No. 2

Contractor Southwind #1

Type Job Surface

Hole Size 12¼ T.D. 225

Csg. 8 5/8 Depth 225

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 15' Shoe Joint

Meas Line Displace 13 BBL

EQUIPMENT

Pumptrk 17 No. Cementer Joe G

Helper

Bulktrk No. Driver Cody

Driver

Bulktrk 19 No. Driver David

Driver

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

8 5/8 on bottom Est Circulation

Mix 150sx Displace.

Cement Circulated!

Owner

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.

Charge To TDI

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 150 com 3%cc 2%gel2

Common	150	
Poz. Mix		
Gel.	3	
Calcium	5	
Hulls		
Salt		
Flowseal		
Kol-Seal		
Mud CLR 48		
CFL-117 or CD110 CAF 38		
Sand		
Handling	158	
Mileage		
FLOAT EQUIPMENT		
Guide Shoe		
Centralizer		
Baskets	8 5/8 Swage	
AFU Inserts		
Float Shoe		
Latch Down		
Pumptrk Charge	Surface	
Mileage	12	
Tax		
Discount		
Total Charge		

X
Signature

JOB LOG

SWIFT Services, Inc.

DATE 8-8-13 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
T. D. I	#2	Beford	Cement Longstring	24987

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								TD 3730'
	12:45					14#/ft	5½	On loc - F.E. 12:45 - Rig L.D. D.C.
	15:10							Start 5½" casing to 3725'
								Insert Float Shoe w/Auto-Fill (898)
								L.D-D.V. Baffle - SJ #2 42½' @ 3682.5
								Cent #2 55-4-6-8-9-11-13-59
								Marker Jt. between #8 + 9
								Cent Baskets 3-14-60-76 - (Pin ends)
								D.V. #60 collar @ 1223' - (29.8 BBl)
								Drop fill-up ball 5 Jts out
	16:30							Fin run casing - Tag bottom - Lay JT Down
	16:35							Fill Pipe
	16:45							Start cir Desco Mud of Rotate
			12 / 20 (32)					Fin cir - 1st Stage
								500 gal Mud Flush / 20 BBl KCL Flush
								Start 150 sks EA-2 cmt.
			36					Fin cmt - Washout P/L
								Drop D.V. Latch Down Plug -
	1800	9 / 8½ / 7½ / 6½					200 / 300 / 400	Start Displ - Last 20 BBl KCL Flush
			75					Caught Latch psi
	1815		(90)				800 / 1500	Plug Down - Release & Held
								Drop D.V. Opening Tool
		8 / 5				~		Plug Rat Hole 30/15 sxs cmt
	1830	6					1000 / 150	Open D.V. - good cir.
								Start 155 sks SMD @ 11.2 #/gal
								Fin cmt - Drop D.V. Closing Plug
		5					150	Start Displ (30 BBl)
			15				350 / 400	Cmt cir @ 15 BBl - 2 sx/BBl
	1905		(30)				450 / 1400	Plug Down - D.V. Closed
	1908							Release - OK
	1930							Job Complete
								Washup Tear Down
								Don, Jon & John