Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1220485

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 4787
Name: TDI
Address 1: 1310 BISON RD
Address 2:
City: HAYS State: KS Zip: 67601 + 9696
Contact Person: Tom Denning
Phone: (785) 628-2593
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Herb Deines
Purchaser:

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☑ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

7/15/2014	7/21/2014	7/22/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-165-22073-00-00
Spot Description:
SW NE SW SW Sec. 2 Twp. 17 S. R. 19 ☐ East ☑ West
705 Feet from ☐ North / ☑ South Line of Section
735 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Rush
Lease Name: Lester Well #: 1
Field Name: Unnamed
Producing Formation: Dry Hole
Elevation: Ground: 2119 Kelly Bushing: 2129
Total Vertical Depth: 4056 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 221 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 19400 ppm Fluid volume: 850 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 09/02/2014
☑ **Confidential Release Date:** 09/01/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 09/02/2014

[redacted] 1220485

Operator Name: TDI Lease Name: Lester Well #: 1

Sec. 2 Twp. 17 S. R. 19 ☐ East ☑ West County: Rush

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Dual Induction Log
Dual Compensated Porosity Log
Microresistivity Log

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Anhydrite	1358'	+771'
Topeka	3207'	-1078'
Heebner	3493'	-1364'
Lansing/Kansas City	3540'	-1411'
Base Kansas City	3804'	-1675'
Conglomerate	3900'	-1771'

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	221	Common	150	3% cc, 2% gel

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Form	ACO1 - Well Completion
Operator	TDI
Well Name	Lester 1
Doc ID	1220485

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	221	Common	150	3% cc, 2% gel

OPERATOR

Company:	TDI, INC.		
Address:	1310 BISON ROAD HAYS, KANSAS 67601		
Contact Geologist:	TOM DENNING		
Contact Phone Nbr:	785-628-2593		
Well Name:	LESTER # 1		
Location:	SW NE SW SW, Sec.T17S-R19W		
API:	15-165-22,073-00-00		
Pool:	WILDCAT	Field:	UNNAMED
State:	KANSAS	Country:	USA

Scale 1:240 Imperial

Well Name:	LESTER # 1		
Surface Location:	SW NE SW SW, Sec.T17S-R19W		
Bottom Location:			
API:	15-165-22,073-00-00		
License Number:	4787		
Spud Date:	7/15/2014	Time:	1:30 PM
Region:	RUSH COUNTY		
Drilling Completed:	7/21/2014	Time:	10:48 AM
Surface Coordinates:	705' FSL & 735' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	2119.00ft		
K.B. Elevation:	2129.00ft		
Logged Interval:	3000.00ft	To:	4056.00ft
Total Depth:	4056.00ft		
Formation:	CONGLOMERATE SAND		
Drilling Fluid Type:	CHEMICAL/FRESH WATER GEL		

SURFACE CO-ORDINATES

Well Type:	Vertical
Longitude:	-99.399099
Latitude:	38.5991738
N/S Co-ord:	705' FSL
E/W Co-ord:	735' FWL

LOGGED BY

Company:	SOLUTIONS CONSULTING, INC.		
Address:	108 WEST 35TH STREET HAYS, KANSAS 67601		
Phone Nbr:	785-625-3380		
Logged By:	GEOLOGIST	Name:	HERB DEINES

CONTRACTOR

Contractor:	SOUTHWIND DRILLING, INC.		
Rig #:	1		
Rig Type:	MUD ROTARY		
Spud Date:	7/15/2014	Time:	1:30 PM
TD Date:	7/21/2014	Time:	10:48 AM

Rig Release:	7/22/2014	Time:	2:30 AM

ELEVATIONS

K.B. Elevation:	2129.00ft	Ground Elevation:	2119.00ft
K.B. to Ground:	10.00ft		

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF DST # 1, LOG ANALYSIS AND LOW STRUCTURE.

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

DRILL STEM TESTING BY TRILOBITE TESTING INC: ONE (1) CONVENTIONAL TEST

FORMATION TOPS COMPARISON

	LESTER # 1 **SW NE SW SW** **SEC.2-17S-19W** **2119'GL 2129'KB**	**SCHWINDT #1** **150'NE of NE SW SE** **SEC.2-17-19W** **KB 2102'**	**SCHWINN FMS # 1** **SW NE SW** **SEC.11-17-19W** **KB 2136'**
FORMATION	LOG TOPS	LOG TOPS	LOG TOPS
Anhydrite	**1358 +771**		**+797**
B-Anhydrite	**1386 +743**		**+766**
Topeka	**3207-1078**	**- 998**	**-1041**
Heebner Sh.	**3493-1364**	**-1300**	**-1328**
Toronto	**3512-1383**	**-1321**	**-1348**
LKC	**3540-1411**	**-1347**	**-1376**
BKC	**3804-1675**	**-1589**	**-1640**
Marmaton	**3832-1703**	**-1628**	**-1670**
Pawnee	**3858-1729**		**-1686**
Conglomerate	**3900-1771**	**-1678**	**-1722**
Arbuckle	**Not Reached**		
RTD	**4056-1927**	**-1714**	**-1844**

SUMMARY OF DAILY ACTIVITY

7-15-14	**RU, Spud 1:30 PM, set 8 5/8" surface casing to 221' w/ 150 sxs Common 2%Gel 3%CC, slope 3/4 degree, plug down 7:30 PM**
7-16-14	**460', drill plug 3:30 AM**
7-17-14	**1751', drilling**
7-18-14	**2655', drilling, displaced 2853' to 2880'**
7-19-14	**3315', CFS 3576', CFS 3749'**
7-20-14	**3860', drilling, CFS 3860', short trip 25 stands, CFS 3929', CFS 3970',**

DST # 1 3880' to 3970', conglomerate sand, slope-misrun, TOWB, logs, decision to P&A, TIWB, LDDP

7-22-14 4056', finish LDDP and plugging well, plug down 2:15 AM, RD

DST # 1 TEST SUMMARY

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI, Inc

1310 Bison Rd
Hays KS, 67601

ATTN: Herb

2-17s-19w Rush KS

Lester

Job Ticket: 59326 **DST#: 1**

Test Start: 2014.07.20 @ 21:15:00

GENERAL INFORMATION:

Formation: **Cong. Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:01:30
Time Test Ended: 04:46:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Cody Bloedorn
Unit No: 73

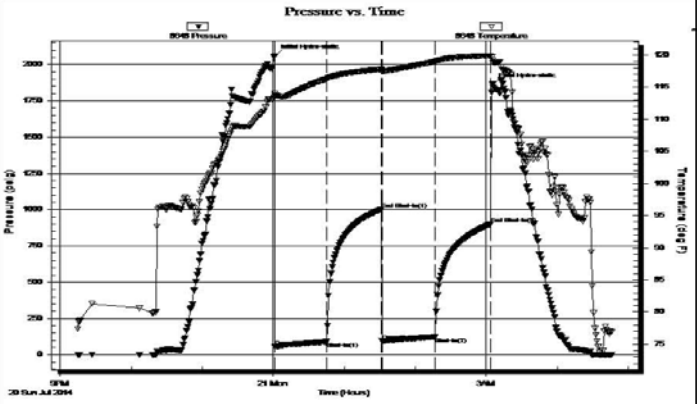
Interval: 3880.00 ft (KB) To 3970.00 ft (KB) (TVD)
Total Depth: 3970.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2129.00 ft (KB)
2121.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8648 **Inside**
Press@RunDepth: 122.27 psig @ 3949.00 ft (KB)
Start Date: 2014.07.20 End Date: 2014.07.21
Start Time: 21:15:05 End Time: 04:46:29

Capacity: 8000.00 psig
Last Calib.: 2014.07.21
Time On Btm: 2014.07.21 @ 00:01:15
Time Off Btm: 2014.07.21 @ 03:05:00

TEST COMMENT: 45 - IF- 6.5" blow
45 - ISI- No return
45 - FF- 3.75" blow
45 - FSI- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2062.16	114.00	Initial Hydro-static
1	52.82	113.33	Open To Flow (1)
44	89.55	116.28	Shut-In(1)
90	1002.54	117.77	End Shut-In(1)
91	95.33	117.40	Open To Flow (2)
136	122.27	118.96	Shut-In(2)
183	902.03	119.90	End Shut-In(2)
184	1865.66	119.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	MW, 2%W, 98%M	0.87
93.00	Mud, 100%M	1.30

Gas Rates

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

Image Header 03

Image Header 04

Image Header 05

ROCK TYPES

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

ACCESSORIES

MINERAL
- Chert, dark
- Pyrite
- Varicolored chert

FOSSIL
- Oolite
- Oomoldic

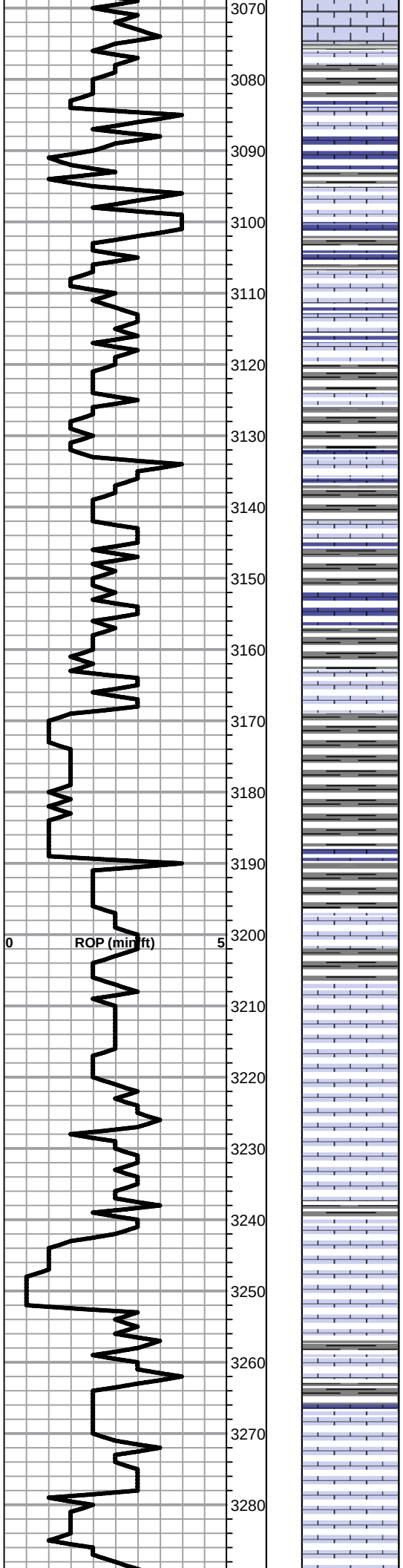
OTHER SYMBOLS

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

Printed by GEOstrip VC Striplog version 4.0.8.9 (www.grsi.ca)

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) 5 0 ROP (min/ft) 5	3000 3010 3020 3030 3040 3050 3060				BEGIN 1' DRILL TIME FROM 3000' TO RTD BEGIN 10' WET AND DRY SAMPLES FROM 3100' TO RTD **ANHYDRITE TOP 1358+771** **ANHYDRITE BASE 1386+743**	SET 8 5/8" SURFACE CASING TO 221' W/ 150 SXS COMMON 2%GEL 3%CC SLOPE 3/4 DEGREE @221' 1ST PLUG @1410' W/ 50 SXS 2ND PLUG @550' W/50 SXS 3RD PLUG @250' W/50 SXS 4TH PLUG @ 60' W/20 SXS RATHOLE W/ 30 SXS MOUSEHOLE W/ 20 SXS 220 SXS 60/40 POS 4%GEL 1/4" FLOCELE PER SX



Lime, lt-med brn-med gray, fnxln

Lime lt-med grayish brn-gray, fnxln, slightly fossiliferous

Lime, lt-med brn-lt-med gray, fnxln

Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, lt brn, fnxln, scattered gray mottling

Lime, lt-med brn-lt gray, fnxln

Lime,lt gray, fnxln

Lime, lt brn, fnxln, slightly fossiliferous

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

Lime, dark brn, fn-vfxln

Lime, crm-lt brn, fnxln, slightly fossiliferous

TOPEKA ELog 3207-1078

Lime, crm-lt brn, fnxln to slightly granular in part w/ bedded chalk

Lime, lt-med brn-lt grayish brn, fn-vfxln

Lime, crm-lt-med brn, fnxln

Lime, crm-offwhite-lt gray, fnxln

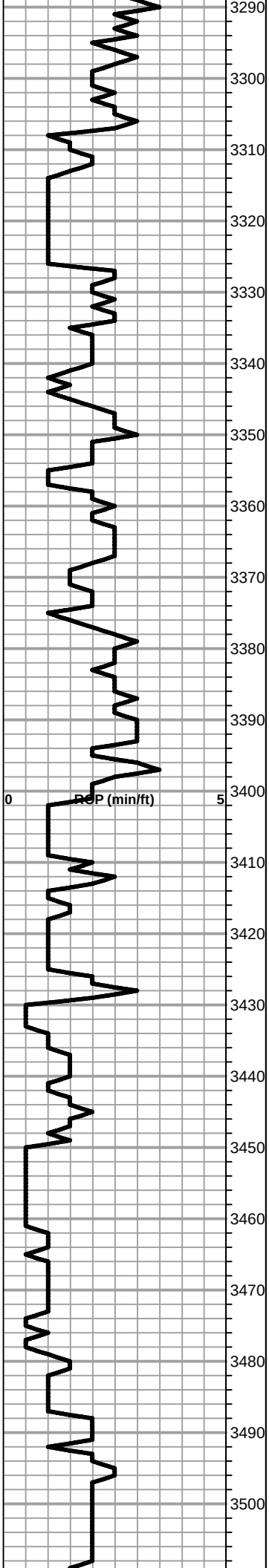
Lime, lt brn, granular, NS

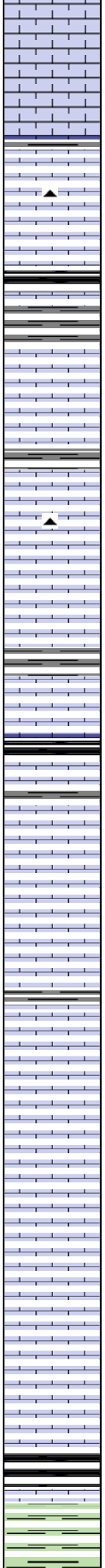
Lime, lt-med brn-grayish brn, fn-vfxln

Lime, lt brn-lt grayish brn, fnxln

Lime,lt brn-lt grayish brn, fnxln, slightly fossiliferous

Lime, tan-lt brn, fnxln-granular with bedded chalk





3290

3300 Lime, lt brn, fnxln-granular with bedded chalk with sticky clumps in part

3310 Lime, lt brn, granular, white chalky wash, NS

3320

3330 Shale, black carbonaceous, fissile, blocky

3340 Lime, crm-lt brn, fn-vfxln, slight bedded chalk, sublithographic

3350 Lime, tan-lt brn, fnxln, slight bedded chalk

3360 Lime, tan-lt brn, fnxln, slight bedded chalk

3370 Lime, lt-med brn, fnxln, scattered fusilinids in white chert

3380

3390 Lime, lt-med brn-lt gray, fnxln,

Shale, black carbonaceous, fissile, blocky
Lime, lt brn, fnxln

3400 Lime, tan-lt brn, fnxln-granular, bedded chalk with sticky clumps in part, white chalky wash, NS

3410

3420 Lime, lt brn, granular, bedded chalk with sticky clumps, NS

3430 Lime, lt-med brn, micro oolitic/oomoldic, NS

3440 Lime, lt0med brn, granular, bedded chalk with sticky clumps

3450 Lime, lt-med brn, granular, increasing bedded chalk content

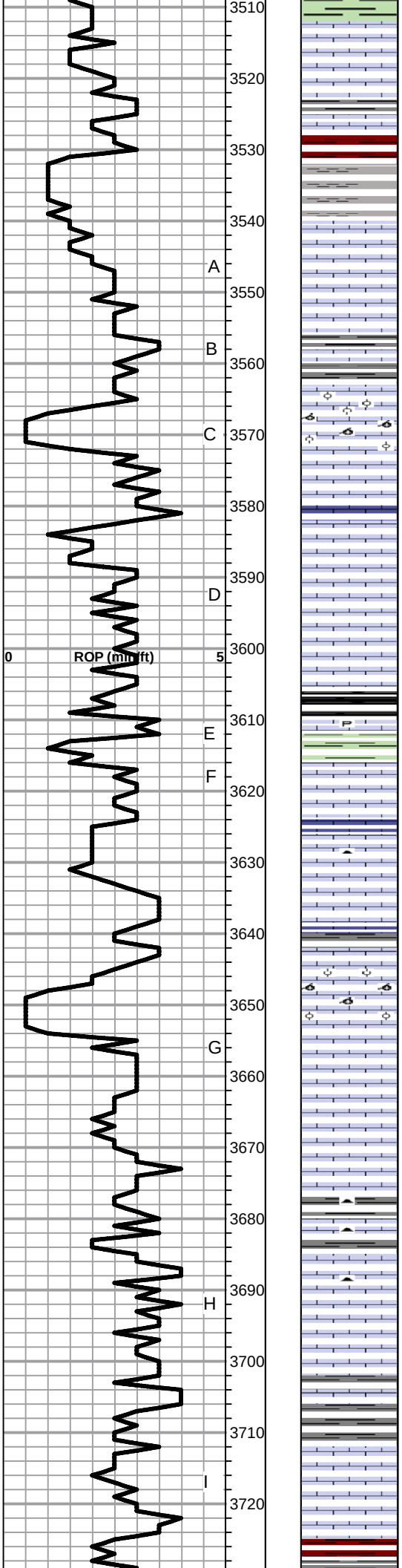
3460

3470 Lime, lt-med brn, granular, bedded chalk

3480 Lime, lt-med brn, fnlxn-granular, bedded chalk

3490 **HEEBNER SHALE ELog 3493-1364**
Shale, black carbonaceous, fissile, blocky
Lime, med brn, micro xln

3500 Shale, lime green, soft mud



TORONTO ELog 3512-1383

Lime, white-crm, fnxln-granular in part, slight bedded chalk, NS

Lime, tan-lt brn, fn-vfxln, slight bedded chalk

Shale, reddish brn, soft blocky with lt red wash

LKC ELog 3540-1411

Lime, lt brn, fn-vfxln

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

Lime, lt-med brn, fn-vfxln

Lime, lt brn, oolitic/oomoldic, NS, No Wet Cut

Lime, offwhite-lt brn, fnxln, bedded chalk

CFS 3576'

Lime, tan-lt brn, fn-vfxln, slight bedded chalk, few chips of oolitic chert

Lime, fnxln, slight bedded chalk, NS

Lime, tan, fn-vfxln, slight bedded chalk grading into lt gray tinted lime near shale boundary, fnxln

Shale, black carbonaceous, fissile, blocky
Lime, lt grayish brn, fn-vfxln

Lime, tan-lt brn, cemented oolitic beds, NS

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

Lime, crm-tan, fnxln, bedded chalk

Lime, lt brn, oolitic/oomoldic, NS, No Wet Cut

Lime, buff-lt brn, fn-micro xln

Lime, crm-lt brn, fn-micro xln

Lime, lt gray, micro xln, few chips of black chert

Lime, crm, fn-micro xln, tan chert

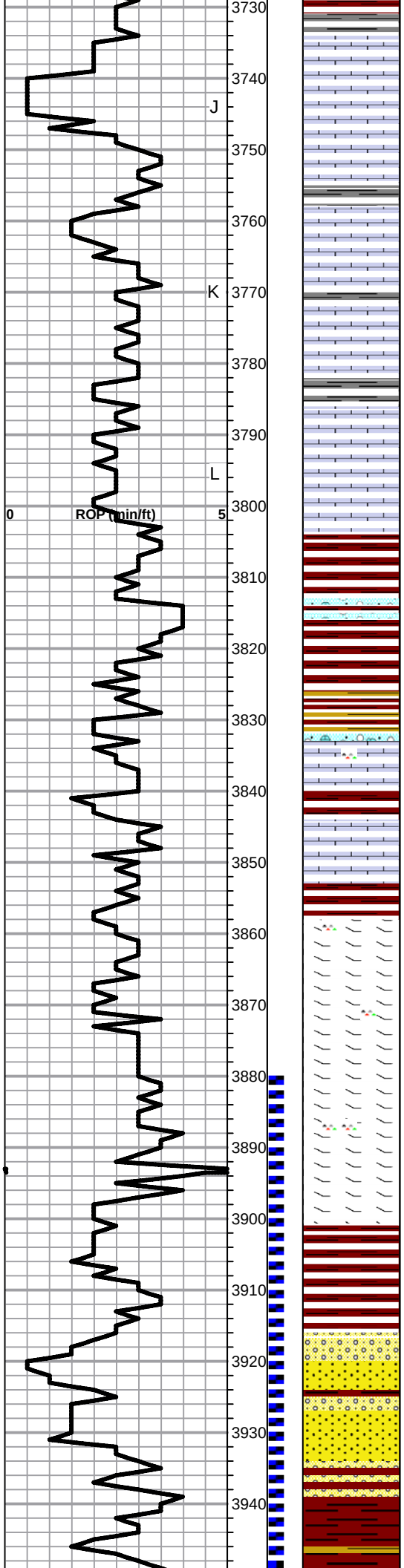
Lime, crm-tan, fn-micro xln, slight bedded chalk

Shale, lt-med gray, firm blocky

Lime, offwhite-tan, fn-micro xln, slight bedded chalk, NS

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

Shale, lt red wash, soft mud to soft blocky



Lime, lt brn, fnxln-oolitic/oomoldic, NS, No Wet Cut

Lime, tan, fnxln, slight bedded chalk

CFS 3750'

Lime, crm-tan, fnxln

Lime, grayish brn, fnxln

Lime, crm-lt brn, fnxln

Lime, crm-tan, fnxln, bedded chalk

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

Lime, lt brn, fn-vflxn

BKC ELog 3804-1675

Shale, reddish brn, soft blocky

Shale, reddish brn, soft blocky, clastic lime mix

Shale, reddish brn-vari colored , soft blocky with few chert nodules

MARMATON ELog 3832-1703

Lime, tan, fnxln with bright orange chert fragments

Lime, lt brn, fn-vfxln

PAWNEE ELog 3858-1729

Lime, crm-lt brn, fn-vfxln

CFS @3860', short trip 25 stands

Lime, crm-tan, fnxln-slightly granular, slight bedded chalk
Chert, tan, white, orange, fresh, sharp

Lime, crm-lt brn, fnxln-granular, slightly dolomitic

Lime, crm-tan, fnxln, slightly dolomitic

CONGLOMERATE ELog 3900-1771

Shale, dark brn with deep red wash

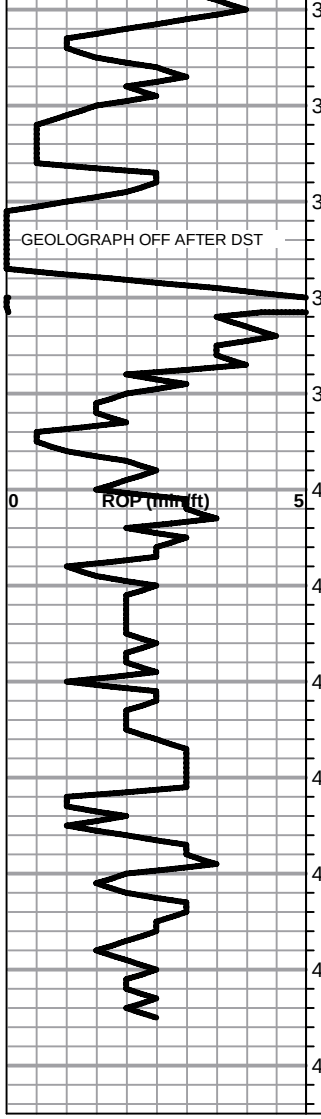
Shale, red-reddish brn, red wash
Clay, white, sticky clumps

Sandstone, quartz, poorly sorted, cemented with dolomite, NS, No Staining, No Wet Cut

DST # 1 3880' TO 3970' SEE HEADER FOR TEST SUMMARY

Sandstone, quartz, scattered clusters, friable in part, poorly sorted, lightly cemented, NS

Shale, red, med-dark brn, deep red wash



3950	Shale and cherts, vari colored, deep red wash	
3960	Sandstone, quartz, coarse loose grains, clear to slightly frosted, no stain, no wet cut	
3970		CFS 3970', MINI SHORT TRIP
	Sandstone, coarse, loose grains, NS	
3980	Shale, brns and red shades to vari colored, firm, slight waxy	
3990	Quartz grains and chert, vari colored shales	
4000	Shales vari colored-dark brn-maroon, firms with clastics in mix	
4010	Shale and cherts, reds and brns with red wash, vari color	
4020	Shale and cherts, as above	
4030	Shale and cherts with scattered sandstone clusters, NS	
4040	Shales, cherts and sandstone clusters, NS	
4050	Arbuckle dolomite not found or reached	
4060	**RTD 4056-1927 LTD 4058-1929**	

GLOBAL CEMENTING, L.L.C.

1393

REMIT TO 18048 170RD
RUSSELL, KS 67665

SERVICE POINT: Russell KS

DATE 7-15-14	SEC. 9	TWP. 13S	RANGE 12W	CALLED OUT	ON LOCATION	JOB START	JOB FINISH 7:30 PM
LEASE Lester	WELL # 1		LOCATION			COUNTY Ellis RUSH	STATE KS
OLD OR NEW (CIRCLE ONE)							

CONTRACTOR Southwind #1
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 222 ft
CASING SIZE 8⅝ DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS
DISPLACEMENT

EQUIPMENT

PUMP TRUCK # P1 CEMENTER Cody
HELPER Brad
BULK TRUCK # 84 DRIVER Erick
BULK TRUCK # DRIVER

OWNER

CEMENT
AMOUNT ORDERED 150sks 3%CC 2%gel
Common

COMMON		@	
POZMIX		@	
GEL	3	@	
CHLORIDE		@	
ASC		@	
HANDLING		@	
MILEAGE			
		TOTAL	

REMARKS:

Ran 5 Jts 8⅝ Casing with Landing Joint
pumped 150sks displaced 12.5 bbls H2O
Shut in at 200 psi

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			
EXTRA FOOTAGE		@	
MILEAGE	24×2	@	
MANIFOLD		@	
		@	
		@	
		TOTAL	

CHARGE TO: TDI
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

		@	
		@	
		@	
		@	
		@	
		TOTAL	

Global Cementing, L.L.C.,
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

PRINTED NAME Larry Beaudoin
SIGNATURE Larry Beaudoin

GLOBAL CEMENTING, L.L.C. 1383

REMIT TO 18048 170RD
RUSSELL, KS 67665

SERVICE POINT: Russell KS

DATE 7-22-14	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH 1:15 AM
LEASE Ernst	WELL #. 1		LOCATION			COUNTY Rush	STATE Ks

OLD OR NEW (CIRCLE ONE)

CONTRACTOR Southwind #1
TYPE OF JOB Rotary Plug
HOLE SIZE 7 7/8 T.D. 4056
CASING SIZE DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS
DISPLACEMENT

EQUIPMENT

PUMP TRUCK CEMENTER Heath - Cody
P1 HELPER Brad
BULK TRUCK
B1 DRIVER Eric
BULK TRUCK
DRIVER

REMARKS:

1st Plug @ 1410 ft 50 sks
2nd Plug @ 550 ft 50 sks
3rd Plug 250 ft 50 sks
Top plug 60 ft 20 sks w/ pcl plug
MS 30 sks Rt 30 sks

CHARGE TO: TDI
STREET
CITY STATE ZIP

Global Cementing, L.L.C.,
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME K.L. Thompson

SIGNATURE K.L. Thompson

OWNER

CEMENT
AMOUNT ORDERED 220 sks 60/40 4% gel
1/4 Flow

COMMON @
POZMIX @
GEL @
CHLORIDE @
ASC @
@
@
@
@
@
@
@
@
HANDLING @
MILEAGE

TOTAL

SERVICE

DEPTH OF JOB
PUMP TRUCK CHARGE
EXTRA FOOTAGE @
MILEAGE 24 @
MANIFOLD @
@
@

TOTAL

PLUG & FLOAT EQUIPMENT

@
8 5/8 dry hole @
56 @
@
@

TOTAL

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **TDI, Inc**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Lester #1

2-17s-19w Rush KS

Start Date: 2014.07.20 @ 21:15:00
End Date: 2014.07.21 @ 04:46:30
Job Ticket #: 59326 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.07.21 @ 11:18:26

DRILL STEM TEST REPORT

TDI, Inc

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

2-17s-19w Rush KS

Lester #1

Job Ticket: 59326 **DST#: 1**

Test Start: 2014.07.20 @ 21:15:00

GENERAL INFORMATION:

Formation: **Cong. Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:01:30
Time Test Ended: 04:46:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Cody Bloedorn
Unit No: 73

Interval: 3880.00 ft (KB) To 3970.00 ft (KB) (TVD)
Total Depth: 3970.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

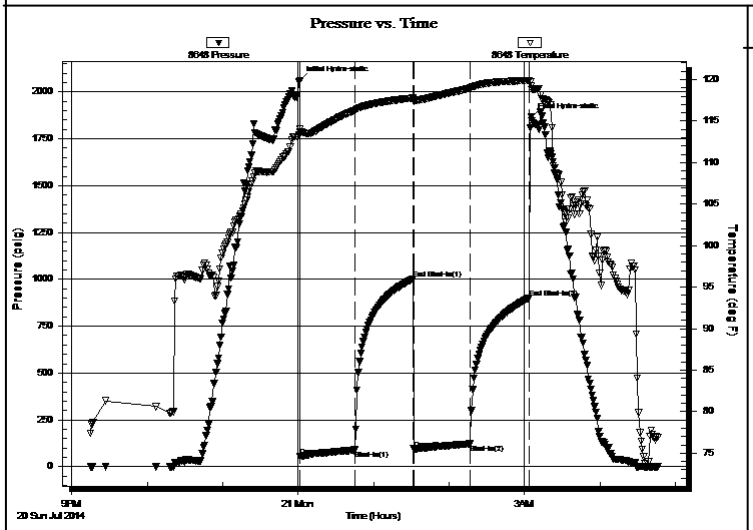
Reference Elevations: 2129.00 ft (KB)
2121.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: 122.27 psig @ 3949.00 ft (KB)
Start Date: 2014.07.20 End Date: 2014.07.21
Start Time: 21:15:05 End Time: 04:46:29

Capacity: 8000.00 psig
Last Calib.: 2014.07.21
Time On Btm: 2014.07.21 @ 00:01:15
Time Off Btm: 2014.07.21 @ 03:05:00

TEST COMMENT: 45 - IF- 6 1/2" blow
45 - ISI- No return
45 - FF- 3 3/4" blow
45 - FSI- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2062.16	114.00	Initial Hydro-static
1	52.82	113.33	Open To Flow (1)
44	89.55	116.28	Shut-In(1)
90	1002.54	117.77	End Shut-In(1)
91	95.33	117.40	Open To Flow (2)
136	122.27	118.96	Shut-In(2)
183	902.03	119.90	End Shut-In(2)
184	1865.66	119.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	MW, 2%W. 98%M	0.87
93.00	Mud, 100%M	1.30

Gas Rates

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

DRILL STEM TEST REPORT

TDI, Inc

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

2-17s-19w Rush KS

Lester #1

Job Ticket: 59326 **DST#: 1**

Test Start: 2014.07.20 @ 21:15:00

GENERAL INFORMATION:

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Deviated: No Whipstock: ft (KB)
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Test Type: Conventional Bottom Hole (Initial)
Tester: Cody Bloedorn
Unit No: 73

Interval: 3880.00 ft (KB) To 3970.00 ft (KB) (TVD)
Total Depth: 3970.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

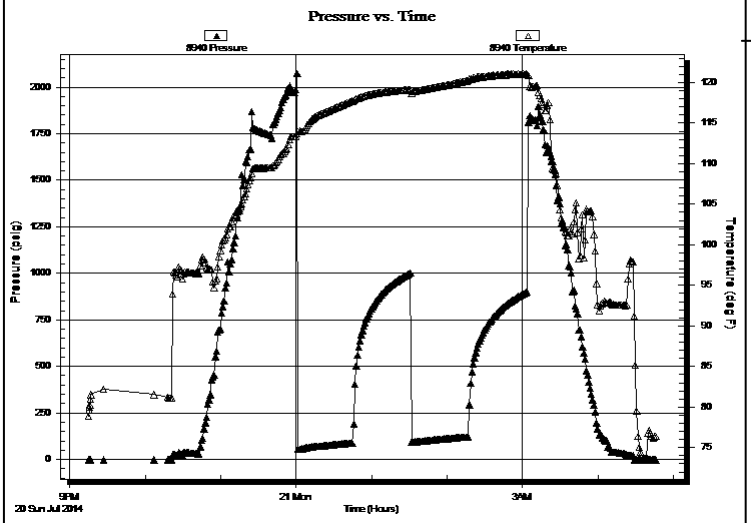
Reference Elevations: 2129.00 ft (KB)
2121.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8940 **Outside**

Press@RunDepth: psig @ 3949.00 ft (KB)
Start Date: 2014.07.20 End Date: 2014.07.21
Start Time: 21:15:05 End Time: 04:46:29

Capacity: 8000.00 psig
Last Calib.: 2014.07.21
Time On Btm:
Time Off Btm:

TEST COMMENT: 45 - IF- 6 1/2" blow
45 - ISI- No return
45 - FF- 3 3/4" blow
45 - FSI- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
62.00	MW, 2%W. 98%M	0.87
93.00	Mud, 100%M	1.30

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI, Inc

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

2-17s-19w Rush KS

Lester #1

Job Ticket: 59326 **DST#: 1**

Test Start: 2014.07.20 @ 21:15:00

Tool Information

Drill Pipe:	Length:	3879.00 ft	Diameter:	3.80 inches	Volume:	54.41 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight to Pull Loose:		48000.00 lb
					Total Volume:	54.41 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		20.00 ft					String Weight:	Initial	44000.00 lb
Depth to Top Packer:		3880.00 ft						Final	44000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		90.00 ft							
Tool Length:		111.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3860.00		
Shut In Tool	5.00			3865.00		
Hydraulic tool	5.00			3870.00		
Packer	5.00			3875.00	21.00	Bottom Of Top Packer
Packer	5.00			3880.00		
Stubb	1.00			3881.00		
Perforations	4.00			3885.00		
Change Over Sub	1.00			3886.00		
Drill Pipe	62.00			3948.00		
Change Over Sub	1.00			3949.00		
Recorder	0.00	8648	Inside	3949.00		
Recorder	0.00	8940	Outside	3949.00		
Perforations	18.00			3967.00		
Bullnose	3.00			3970.00	90.00	Bottom Packers & Anchor
Total Tool Length:	**111.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI, Inc

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

2-17s-19w Rush KS

Lester #1

Job Ticket: 59326 **DST#: 1**

Test Start: 2014.07.20 @ 21:15:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	68.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

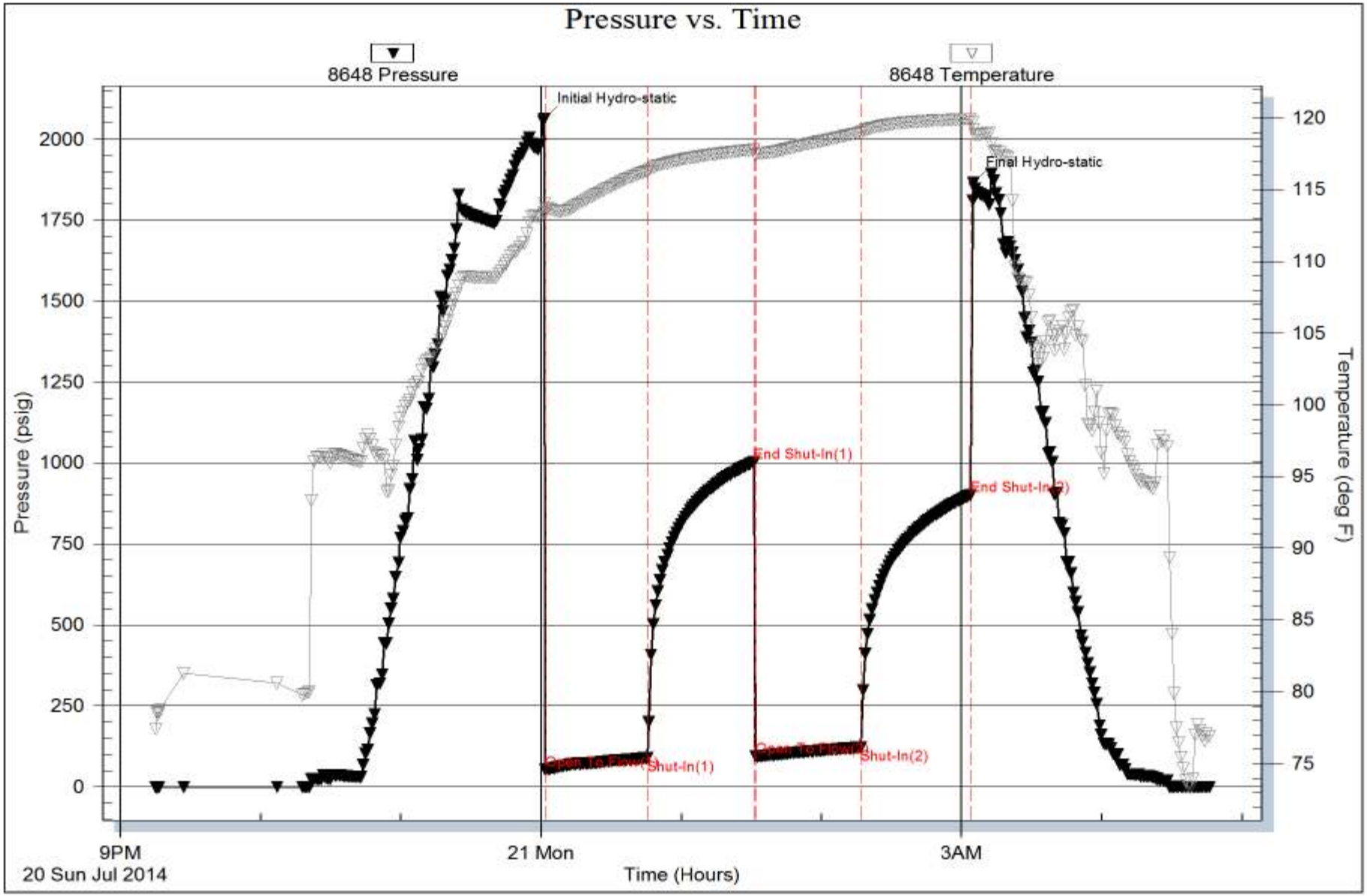
Recovery Table

Length ft	Description	Volume bbl
62.00	MW, 2%W. 98%M	0.870
93.00	Mud, 100%M	1.305

Total Length: 155.00 ft Total Volume: 2.175 bbl

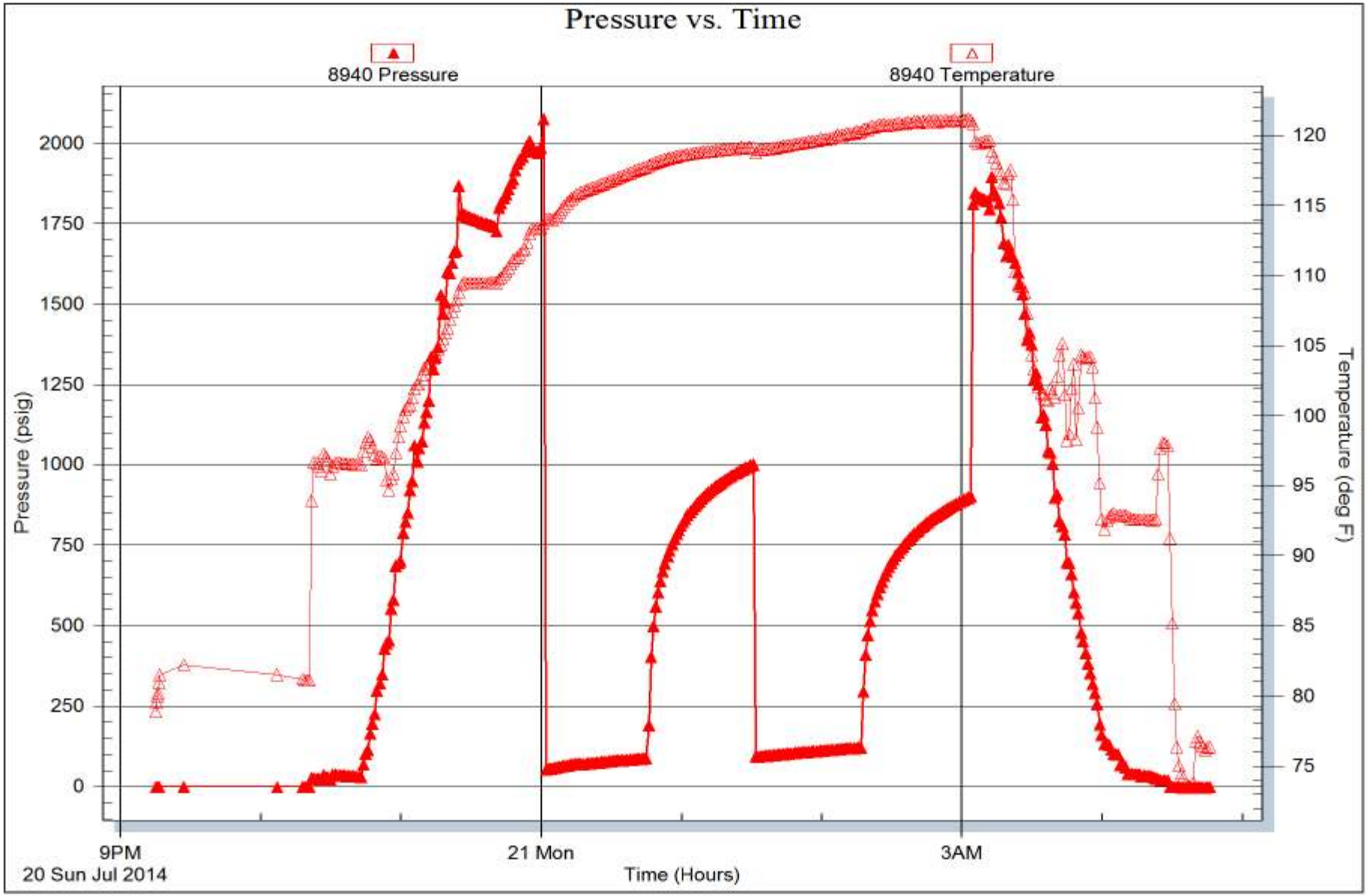
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8648 **Inside** TDI, Inc Lester #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 59326 Printed: 2014.07.21 @ 11:18:27

Serial #: 8940 **Outside** TDI, Inc Lester #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 59326 Printed: 2014.07.21 @ 11:18:27

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 59326

Well Name & No. Lester #1 Test No. 1 Date 7-20-14

Company TDI, Inc Elevation 2129 KB 2121 GL

Address 1310 Bison Rd, Hays KS, 67601

Co. Rep / Geo. Herb Rig Southwind #1

Location: Sec. 2 Twp. 17s Rge. 19w Co. Rush State KS

Interval Tested 3880-3970 Zone Tested Cong

Anchor Length 90' Drill Pipe Run 3879 Mud Wt. 9.2

Top Packer Depth 3875 Drill Collars Run — Vis 68

Bottom Packer Depth 3880 Wt. Pipe Run — WL 9.6

Total Depth 3970 Chlorides 5,200 ppm System LCM 1

Blow Description IF- 6½" blow

ISI- No return

FF- 3.75" blow

FSI-

Rec 62	Feet of MW	%gas	%oil	2 %water	98 %mud	
Rec 93	Feet of Mud	%gas	%oil	%water	100 %mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 155 BHT — Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2062	☑ Test 1150	T-On Location 2100	
(B) First Initial Flow 52	☐ Jars	T-Started 2115	
(C) First Final Flow 89	☐ Safety Joint	T-Open 1202	
(D) Initial Shut-In 1002	☐ Circ Sub	T-Pulled 0302	
(E) Second Initial Flow 95	☐ Hourly Standby	T-Out 0447	
(F) Second Final Flow 122	☑ Mileage 53RT 82.15	Comments	
(G) Final Shut-In 902	☐ Sampler		
(H) Final Hydrostatic 1865	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 45	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 45	☐ Extra Recorder	Sub Total 0	
Final Flow 45	☐ Day Standby	Total 1232.15	
Final Shut-In 45	☐ Accessibility	MP/DST Disc't	
	Sub Total 1232.15		

Approved By _____ Our Representative Cody Bloldorn