Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1233246

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 #:

| 11/1/2014 | 11/6/2014 | 11/7/2014 |
|---|---|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |

API No. 15 - 15-051-26752-00-00
Spot Description:
E2 - SE - SE - NW Sec. 30 Twp. 14 S. R. 17 ☐ East ☑ West
2310 Feet from ☑ North / ☐ South Line of Section
2375 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: Ellis
Lease Name: Munjor East Well #: 1
Field Name: Unnamed
Producing Formation: Dry Hole
Elevation: Ground: 1937 Kelly Bushing: 1947
Total Vertical Depth: 3625 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1130 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: 48000 ppm Fluid volume: 700 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: 11/28/2014
☑ **Confidential Release Date:** 12/01/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
**ALT** ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 12/01/2014

[redacted] 1233246

Operator Name: TDI Lease Name: Munjor East Well #: 1

Sec. 30 Twp. 14 S. R. 17 ☐ East ☑ West County: Ellis

**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

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

| Name | Top | Datum |
|---|---|---|
| Anhydrite | 1130' | +817' |
| Topeka | 2939' | -992' |
| Heebner | 3201' | -1254' |
| Lansing/Kansas City | 3248' | -1301' |
| Base Kansas City | 3475' | -1528' |
| Arbuckle | 3548' | -1601' |

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 | 1130 | SMD | 375 | |
| | | | | | | | |
| | | | | | | | |

ADDITIONAL CEMENTING / SQUEEZE RECORD

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

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 | Munjor East 1 |
| Doc ID | 1233246 |

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 | 1130 | SMD | 375 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## OPERATOR

| | | | |
|---|---|---|---|
| Company: | TDI, INC. | | |
| Address: | 1310 BISON ROAD<br>HAYS, KANSAS 67601 | | |
| Contact Geologist: | TOM DENNING | | |
| Contact Phone Nbr: | 785-628-2593 | | |
| Well Name: | MUNJOR EAST # 1 | | |
| Location: | W2 SE SE NW, Sec.30-T14S-R17W | | |
| API: | 15-051-26,752-00-00 | | |
| Pool: | | Field: | UNNAMED |
| State: | KANSAS | Country: | USA |

Scale 1:240 Imperial

| | | | |
|---|---|---|---|
| Well Name: | MUNJOR EAST # 1 | | |
| Surface Location: | W2 SE SE NW, Sec.30-T14S-R17W | | |
| Bottom Location: | | | |
| API: | 15-051-26,752-00-00 | | |
| License Number: | 4787 | | |
| Spud Date: | 11/1/2014 | Time: | 1:45 PM |
| Region: | ELLIS COUNTY | | |
| Drilling Completed: | 11/6/2014 | Time: | 4:35 PM |
| Surface Coordinates: | 2310' FNL & 2300' FWL | | |
| Bottom Hole Coordinates: | | | |
| Ground Elevation: | 1937.00ft | | |
| K.B. Elevation: | 1947.00ft | | |
| Logged Interval: | 2800.00ft | To: | 3625.00ft |
| Total Depth: | 3625.00ft | | |
| Formation: | LANSING-KANSAS CITY | | |
| Drilling Fluid Type: | CHEMICAL/FRESH WATER GEL | | |

## SURFACE CO-ORDINATES

| | |
|---|---|
| Well Type: | Vertical |
| Longitude: | -99.2542593 |
| Latitude: | 38.8066486 |
| N/S Co-ord: | 2310' FNL |
| E/W Co-ord: | 2300' FWL |

## LOGGED BY

| | | | |
|---|---|---|---|
| Company: | SOLUTIONS CONSULTING, INC. | | |
| Address: | 108 WEST 35TH STREET<br>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: | 11/1/2014 | Time: | 1:45 PM |
| TD Date: | 11/6/2014 | Time: | 4:35 PM |

| | | | |
|---|---|---|---|
| Rig Release: | 11/7/2014 | Time: | 1:00 PM |

**ELEVATIONS**

| | | | |
|---|---|---|---|
| K.B. Elevation: | 1947.00ft | Ground Elevation: | 1937.00ft |
| K.B. to Ground: | 10.00ft | | |

**NOTES**

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

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

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

**FORMATION TOPS COMPARISON**

| | MUNJOR EAST # 1<br>W2 SE SE NW<br>SEC.30-14S-17W<br>1937'GL 1947'KB | GRABBE # 1<br>NW NE<br>SEC.30-14-17W<br>KB 1947' | COPPER # 1-30<br>NE NW SW SE<br>SEC.30-14-17W<br>KB 1942' |
|---|---|---|---|
| FORMATION | LOG TOPS | LOG TOPS | LOG TOPS |
| Anhydrite | 1130+ 817 | + 815 | + 822 |
| B-Anhydrite | 1170+ 777 | + 778 | + 786 |
| Topeka | 2939- 992 | - 979 | - 970 |
| Heebner Shale | 3201-1254 | -1243 | -1230 |
| Toronto | 3220-1273 | -1263 | -1248 |
| LKC | 3248-1301 | -1289 | -1279 |
| BKC | 3475-1528 | -1511 | -1498 |
| Arbuckle | 3548-1601 | -1580 | -1581 |
| RTD | 3625-1678 | -1628 | -1668 |

**SUMMARY OF DAILY ACTIVITY**

| | |
|---|---|
| 11-01-14 | RU, spud 1:45 PM, drilling |
| 11-02-14 | 1130', set 8 5/8" surface casing to 1130' w/ 375sxs SMD, slope 3/4 degree, plug down 2:30 PM, WOC 12 hours |
| 11-03-14 | 1310', drill plug 2:30 AM |
| 11-04-14 | 2575', drilling, displaced 2871' to 2885' |
| 11-05-14 | 3180', CFS 3180', short trip to collars, CFS 3310', DST # 1 3258' to 3310' "C" and "D" LKC |
| 11-06-14 | 3410', RTD 3625' @4:35 PM, CCH, rig repair, TOWB |
| 11-07-14 | 3625', logging, P&A |

## DST # 1 TEST SUMMARY

TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

TDI

1310 Bison Rd
Hays, KS 67601

ATTN: Herb Deines

**30-14S-17W Ellis, KS**

**Munjor East #1**

Job Ticket: 58405 **DST#: 1**

Test Start: 2014.11.05 @ 17:21:53

## GENERAL INFORMATION:

Formation: **LKC "C&D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:05:53
Time Test Ended: 23:37:53

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan Lonsdale
Unit No: 62

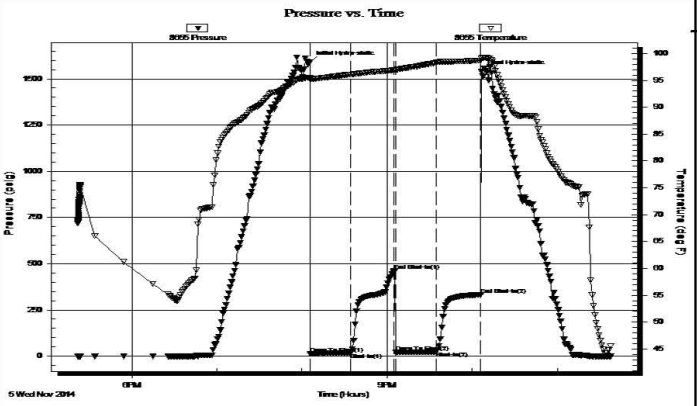
**Interval: 3258.00 ft (KB) To 3310.00 ft (KB) (TVD)**
Total Depth: 3310.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1947.00 ft (KB)
1937.00 ft (CF)
KB to GR/CF: 10.00 ft

**Serial #: 8655** **Outside**
Press@RunDepth: 24.08 psig @ 3259.00 ft (KB)
Start Date: 2014.11.05 End Date: 2014.11.05
Start Time: 17:21:54 End Time: 23:37:53

Capacity: 8000.00 psig
Last Calib.: 2014.11.05
Time On Btm: 2014.11.05 @ 20:05:23
Time Off Btm: 2014.11.05 @ 22:06:23

TEST COMMENT: 30- IF- Slow ly built to 1"
30- ISI- No blow
30- FF- No blow
30- FSI- No blow




### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1589.61 | 95.55 | Initial Hydro-static |
| 1 | 13.24 | 95.24 | Open To Flow (1) |
| 29 | 19.59 | 96.10 | Shut-In(1) |
| 60 | 463.51 | 96.90 | End Shut-In(1) |
| 61 | 20.33 | 96.89 | Open To Flow (2) |
| 89 | 24.08 | 98.33 | Shut-In(2) |
| 121 | 332.30 | 98.72 | End Shut-In(2) |
| 121 | 1539.26 | 99.11 | Final Hydro-static |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 30.00 | M | 0.41 |
| | | |
| | | |
| | | |
| | | |
| | | |

### Gas Rates

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

## ROCK TYPES

Congl
Chtcongl
Dolprim
Lmst fw<7
Lmst fw7>
shale, grn
shale, gry
Carbon Sh
shale, red
Shcol
Lscongl

## ACCESSORIES

**MINERAL**
- Chert, dark
- Chert White

**FOSSIL**
- Oomoldic

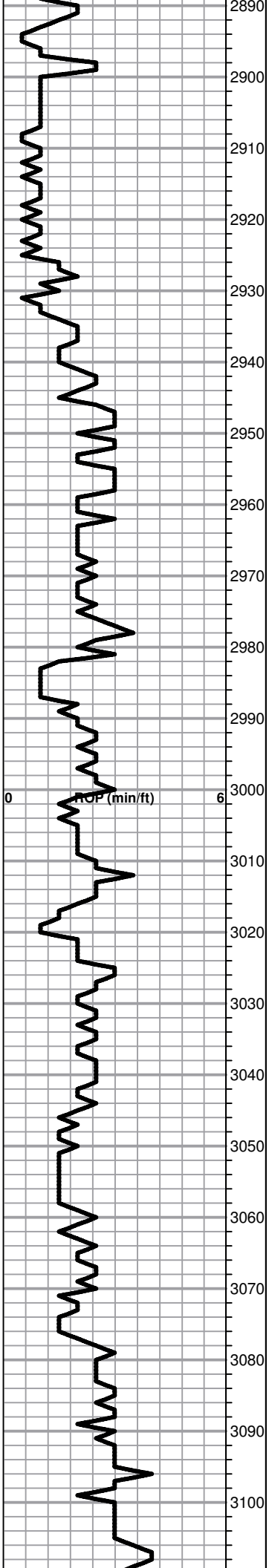
## OTHER SYMBOLS

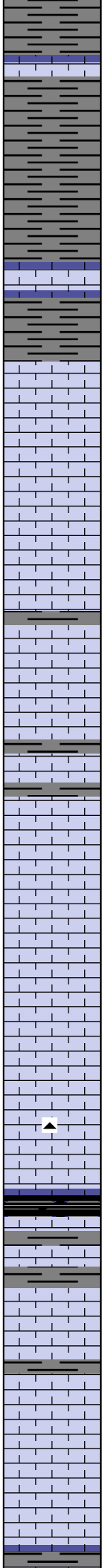
**Oil Show**
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- Gas

**DST**
- DST Int
- DST alt
- Core
- tail pipe

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

| Curve Track #1<br>ROP (min/ft)<br>1:240 Imperial | Depth \| Intervals<br>Cored Interval<br>DST Interval | DST | Lithology | Oil Show | Geological Descriptions | TG, C1 - C5<br>1:240 Imperial |
|---|---|---|---|---|---|---|
| 0 ROP (min/ft) 6 | 2810<br>2820<br>2830<br>2840<br>2850<br>2860<br>2870<br>2880 | | | | BEGIN 1' DRILL TIME FROM 2800' TO RTD<br>BEGIN 10' WET AND DRY SAMPLES FROM 2900' TO RTD<br><br>**ANHYDRITE TOP 1130+817**<br>**ANHYDRITE BASE 1170+777**<br><br>Lime, crm-lt brn, fnxln, micro fossiliferous<br><br>Shale, lt gray, soft mud to soft blocky | **8 5/8" SURFACE CASING SET TO 1130' W/ 375 SXS SMD WOC 12 HOURS**<br><br>**SLOPE 3/4 DEGREE @ 1132'** |



Lime, lt-med brn, fnxln

Shale, dove gray soft mud to med gray, soft blocky

Lime, crm-lt brn, fnxln

**TOPEKA ELog 2939-992**

Lime, lt-med brn, fnxln

Lime, lt brn-lt gray, fnxln, slight chalky matrix in part

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

Lime, lt-med brn-med grayish brn, fnxln-granular

Lime, lt brn-med gray, fnxln

Lime, lt-med brn, granular, NS

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

Lime, lt brn-lt grayish brn, fnxln

Lime, lt-med brn-med grayish brn, fnxln-granular in part

Lime, lt-med brn, fnxln-granular with lt chalk matrix

Lime, lt brn-med grayish brn, fnxln

Lime, lt-med brn, granular with increasing bedded chalk

Lime, lt-med brn, granular, bed chalk

Shale, black carbonaceous, blocky

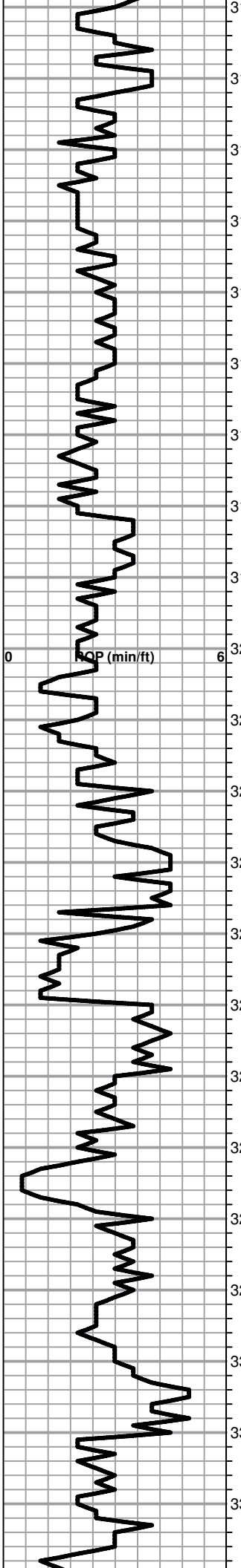
Lime, crm-lt brn, fnxln, sublithographic

Lime, crm-lt brn, fnxln

Lime, lt brn, fnxln, slight bedded chalk

Lime, lt brn, fn-vfxln

Lime, lt brn, fnxln




Lime, lt brn, mostly fnxln grading into micro xln

Shale, black carbonaceous, blocky

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

Lime, lt-med brn, fnxln-granular

Lime, lt-med brn, fnxln-granular

Lime, lt-med brn, fnxln

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

Lime, lt brn, fnxln-granular — **CFS 3180' AND SHORT TRIP**

Lime, lt brn, fn-vfxln

Lime, lt brn, fn-vfxln

**HEEBNER SHALE ELog 3201-1254**

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

Shale, lime green soft sticky mud

**TORONTO ELog 3220-1273**

D Lime, crm-lt brn, fnxln-granular, scattered dead oil flakes, NFO, No Odor

Lime, crm-lt brn, fnxln, white chalk wash

Shale, red with lt red wash, soft mud-soft blocky

**LKC ELog 3248-1301**

◑ Lime, lt brn,fnxln, thin fossil beds with spotty staining, NFO, No Odor

Lime, lt-med brn, fn-vfxln

◑ Lime, lt brn, fnxln grading into oomoldic zone, lt spotty staining, very lt odor, SFO on crush

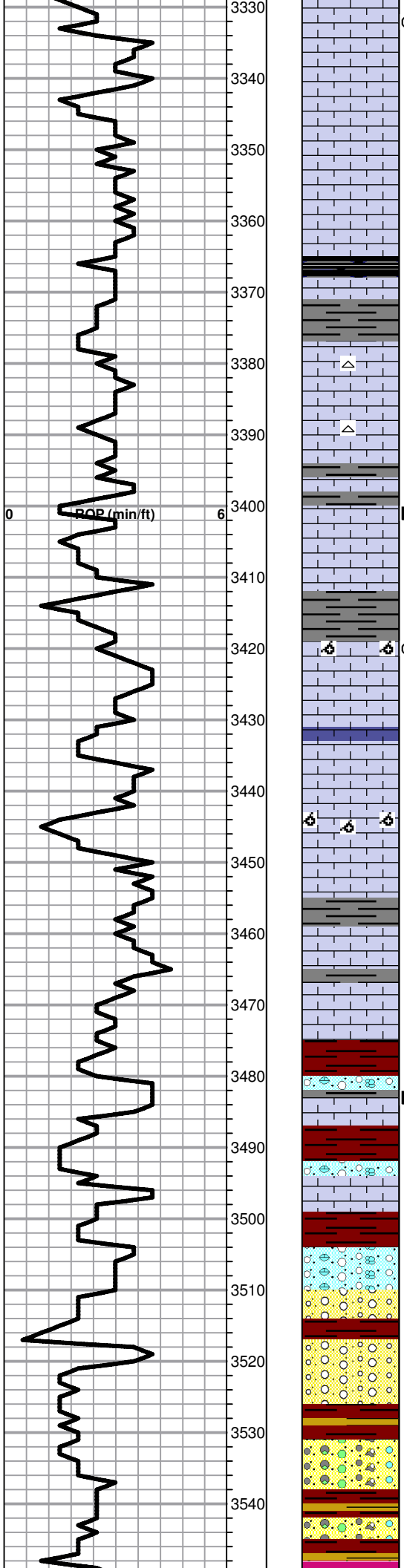
Lime, tan-lt brn, fnxln — **DST # 1 3258' TO 3310' SEE HEADER FOR TEST SUMMARY**

◑ Lime, crm-lt brn, fnxln with white chalk wash grading into a granular lime, fine interxln porosity, spotty staining, very lt odor, NFO

Lime, crm-lt brn, fn-vfxln

Shale, black carbonaceous, blocky
Lime, lt gray, fnxln

◑ Lime, crm, fnxln, thin fossil beds with scattered staining, NFO, No Odor




Lime, crm-lt brn, fn-micro xln in part with lt brn granular, specks of heavy oil stain, NFO, No Odor

Lime, crm, fn-micro xln, sublithographic in part, slight bedded chalk

Lime, white-crm, fn-vfxln, lithographic

Lime, crm, fn-micro xln, lithographic in part

Shale, gray-black, dull luster, soft blocky

Lime, crm, fn-micro xln
Chert, white, fresh, sharp

Lime, crm-lt brn, fn-micro xln

D Lime, crm-tan, mostly fnxln with fine grained granular with specks of dead oil stain, NFO, No Odor , appears poorly developed

Lime, crm-lt brn, fnxln with oomoldic chips, spotty lt stain, NFO, very lt detectable odor

Lime, lt brn, fnxln-slightly granular, NS

Lime, lt brn, oomoldic, NSFO, No Odor, No Wet Cut

Lime, offwhite-crm, fnxln, moderate bedded chalk

Lime, off white-lt brn, fn-vfxln

Lime, lt-med brn-lt gray, fn-vfxln, slightly dolomitic in part

**BKC ELog 3475-1528**

Shale, red-dark brn, soft mud to soft blocky, lt red wash

D Lime, lt-med brn, fn-vfxln, clastic lime mix with red shale staining

Shale, red-dark brn, soft mud with red wash-soft blocky

Lime, clastic mix of lime with scattered gilsonite flakes, NFO, No Odor

Shale, deep red wash, soft mud

Clastic mix of lime, vari color chert, quartz sand grains and red shale,

Shale, red wash, soft mud to dark brn, soft blocky

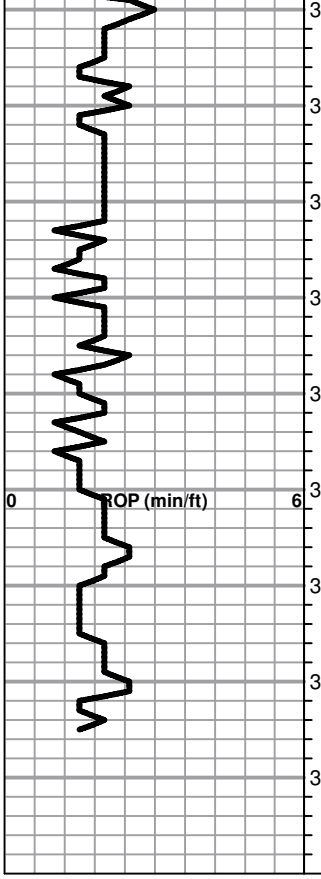
Chert, vari color with bright red wash shale

Shale, bright red wash with vari color shales

Chert, vari color with red wash shale

Shale, red wash, vari color cherts with few oolitic chert fragments

**ARBUCKLE ELog 3548-1601**




3550
3560
3570
3580
3590
3600
3610
3620
3630

Dolomite, crm, fnxln, NS

Dolomite, ivory-crm, fnxln-granular

Dolomite, ivory-crm, fnxln-granular, slightly sucrosic

Dolomite, ivory-crm, granular, fine-coarse grained, sucrosic in part

Dolomite, ivory-crm, fnxln-granular

Dolomite, crm-tan, fnxln-granular

Dolomite, ivory, fnxln-granular

Dolomite, tan, opaque, slightly oolitic

**RTD 3625-1678 LTD 3625-1678**

JOB LOG

# SWIFT Services, Inc.

DATE 11-2-14 | PAGE NO. 1

| CUSTOMER | WELL NO. | LEASE | JOB TYPE | TICKET NO. |
|---|---|---|---|---|
| TDI | #1 | Munjor East | Deep Surface | 26835 |

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS T | PUMPS C | PRESSURE (PSI) TUBING | PRESSURE (PSI) CASING | DESCRIPTION OF OPERATION AND MATERIALS |
|---|---|---|---|---|---|---|---|---|
| | 1000 | | | | | | | on loc w/ FE |
| | | | | | | | | RTD 1123' |
| | | | | | | | | 8 5/8" x 23# x x 23' |
| | | | | | | | | Cent 1, 3, 13 |
| | 1130 | | | | | | | Start FF |
| | 1315 | | | | | | | Break Circ |
| | 1335 | 5 | 0 | | | | 150 | start 500 gal Mudflush |
| | | 5 | 12/0 | | | | 150 | start 20 bbl KCL flush |
| | 1340 | 5 | 20/0 | | | | 150 | start 100 sks SMD @ 11.8# |
| | 1345 | 5 | 46/0 | | | | 150 | 150 sks SMD @ 12.5# |
| | 1356 | 5 | 57/0 | | | | 150 | 75 sks SMD @ 13# |
| | 1404 | 5 | 25/0 | | | | 150 | 50 sk SMD @ 14.5# |
| | 1408 | | 13 | | | | | End Cement |
| | | | | | | | | Drop Plug |
| | 1415 | 6 | 0 | | | | 150 | start Displacement |
| | 1419 | 5 | 24 | | | | 250 | Circ Cement |
| | 1430 | | 70 | | | | 450/1000 | Land Plug |
| | | | | | | | | Shut In |
| | | | | | | | | Circ 70 sks to pit |
| | | | | | | | | Thank you |
| | | | | | | | | Nick, David E., Austin + Isaac |

# GLOBAL CEMENTING, L.L.C.

1506

REMIT TO 18048 170RD
RUSSELL, KS 67665

SERVICE POINT: Russell KS

| DATE 11-7-14 | SEC. | TWP. | RANGE | CALLED OUT | ON LOCATION | JOB START 800 | JOB FINISH 1200pm |
|---|---|---|---|---|---|---|---|
| LEASE Manjoo East | WELL # 1 | | LOCATION | | | COUNTY Ellis CO | STATE KS |
| OLD OR (NEW) (CIRCLE ONE) | | | | | | | |

CONTRACTOR Southwind Drilling Rig #1
TYPE OF JOB Plug
HOLE SIZE 7 7/8
CASING SIZE 4 1/2
TUBING SIZE
DRILL PIPE
TOOL
PRES. MAX
MEAS. LINE
CEMENT LEFT IN CSG.
PERFS
DISPLACEMENT

T.D.
DEPTH
DEPTH
DEPTH
DEPTH
MINIMUM
SHOE JOINT

OWNER

CEMENT
AMOUNT ORDERED 255 sks 60/40 Poz
4 sel 1/4 Flo seal

EQUIPMENT

PUMP TRUCK CEMENTER Cody
# HELPER Brad
BULK TRUCK
# DRIVER Budd
BULK TRUCK
# DRIVER

REMARKS:

1 3528 50sks
2 1170 50sks
3 520 100sks
center 40ft 100sks wipeplug
MS 15 Rt 30 sks

CHARGE TO: TDI Inc
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 LARRY Beams
SIGNATURE Larry Beams

| | | | |
|---|---|---|---|
| COMMON | @ | | |
| POZMIX | @ | | |
| GEL | @ | | |
| CHLORIDE | @ | | |
| ASC | @ | | |
| | @ | | |
| | @ | | |
| | @ | | |
| | @ | | |
| | @ | | |
| | @ | | |
| | @ | | |
| | @ | | |
| HANDLING | @ | | |
| MILEAGE | | | |
| | | TOTAL | |

SERVICE

DEPTH OF JOB
PUMP TRUCK CHARGE

| | | | |
|---|---|---|---|
| EXTRA FOOTAGE | @ | | |
| MILEAGE | @ | | |
| MANIFOLD | @ | | |
| | @ | | |
| | @ | | |
| | | TOTAL | |

PLUG & FLOAT EQUIPMENT

| | | | |
|---|---|---|---|
| | @ | | |
| Dry hole Plug | @ | | |
| | @ | | |
| | @ | | |
| | @ | | |
| | | TOTAL | |

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

TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **TDI**

1310 Bison Rd
Hays, KS 67601

ATTN: Herb Deines

## Munjor East #1

## 30-14s-17w Ellis,KS

Start Date: 2014.11.05 @ 17:21:53
End Date: 2014.11.05 @ 23:37:53
Job Ticket #: 58405 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.11.08 @ 11:08:33

# DRILL STEM TEST REPORT

TDI

1310 Bison Rd
Hays, KS 67601

ATTN: Herb Deines

**30-14s-17w Ellis,KS**

**Munjor East #1**

Job Ticket: 58405 **DST#: 1**

Test Start: 2014.11.05 @ 17:21:53

## GENERAL INFORMATION:

Formation: **LKC "C&D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:05:53
Time Test Ended: 23:37:53

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan Lonsdale
Unit No: 62

**Interval: 3258.00 ft (KB) To 3310.00 ft (KB) (TVD)**
Total Depth: 3310.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

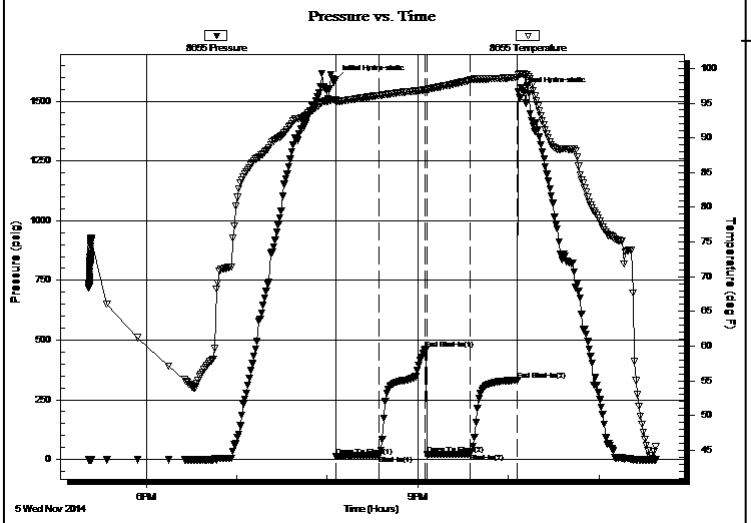
Reference Elevations: 1947.00 ft (KB)
1937.00 ft (CF)
KB to GR/CF: 10.00 ft

**Serial #: 8655** **Outside**

Press@RunDepth: 24.08 psig @ 3259.00 ft (KB)
Start Date: 2014.11.05 End Date: 2014.11.05
Start Time: 17:21:54 End Time: 23:37:53

Capacity: 8000.00 psig
Last Calib.: 2014.11.05
Time On Btm: 2014.11.05 @ 20:05:23
Time Off Btm: 2014.11.05 @ 22:06:23

TEST COMMENT: 30- IF- Slow ly built to 1"
30- ISI- No blow
30- FF- No blow
30- FSI- No blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 1589.61 | 95.55 | Initial Hydro-static |
| 1 | 13.24 | 95.24 | Open To Flow (1) |
| 29 | 19.59 | 96.10 | Shut-In(1) |
| 60 | 463.51 | 96.90 | End Shut-In(1) |
| 61 | 20.33 | 96.89 | Open To Flow (2) |
| 89 | 24.08 | 98.33 | Shut-In(2) |
| 121 | 332.30 | 98.72 | End Shut-In(2) |
| 121 | 1539.26 | 99.11 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 30.00 | M | 0.41 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

# DRILL STEM TEST REPORT

TDI

1310 Bison Rd
Hays, KS 67601

ATTN: Herb Deines

**30-14s-17w Ellis,KS**

**Munjor East #1**

Job Ticket: 58405 **DST#: 1**

Test Start: 2014.11.05 @ 17:21:53

## GENERAL INFORMATION:

Formation: **LKC "C&D"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:05:53
Time Test Ended: 23:37:53

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan Lonsdale
Unit No: 62

**Interval: 3258.00 ft (KB) To 3310.00 ft (KB) (TVD)**
Total Depth: 3310.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

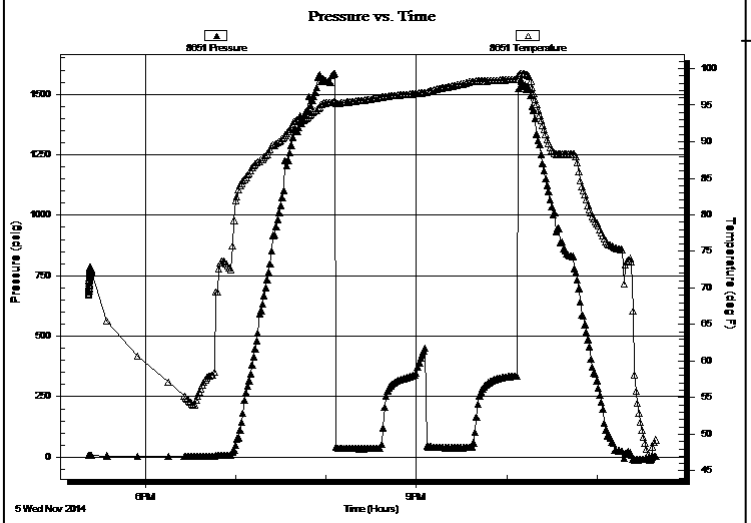
Reference Elevations: 1947.00 ft (KB)
1937.00 ft (CF)
KB to GR/CF: 10.00 ft

**Serial #: 8651** **Inside**

Press@RunDepth: psig @ 3259.00 ft (KB)
Start Date: 2014.11.05 End Date: 2014.11.05
Start Time: 17:22:18 End Time: 23:39:17

Capacity: 8000.00 psig
Last Calib.: 2014.11.05
Time On Btm:
Time Off Btm:

TEST COMMENT: 30- IF- Slow ly built to 1"
30- ISI- No blow
30- FF- No blow
30- FSI- No blow




## PRESSURE SUMMARY

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

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 30.00 | M | 0.41 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

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

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI

1310 Bison Rd
Hays, KS 67601

ATTN: Herb Deines

**30-14s-17w Ellis,KS**

**Munjor East #1**

Job Ticket: 58405 **DST#: 1**

Test Start: 2014.11.05 @ 17:21:53

## Tool Information

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 3242.00 ft | Diameter: | 3.75 | inches | Volume: | 44.29 | bbl | |
| Heavy Wt. Pipe: | Length: | ft | Diameter: | | inches | Volume: | - | bbl | |
| Drill Collar: | Length: | 0.00 ft | Diameter: | 2.25 | inches | Volume: | 0.00 | bbl | |
| | | | | | | Total Volume: | - | bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 4.00 ft |
| Depth to Top Packer: | 3258.00 ft |
| Depth to Bottom Packer: | ft |
| Interval betw een Packers: | 52.00 ft |
| Tool Length: | 72.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | | |
|---|---|---|
| Tool Weight: | | 2000.00 lb |
| Weight set on Packer: | | 25000.00 lb |
| Weight to Pull Loose: | | 48000.00 lb |
| Tool Chased | | 0.00 ft |
| String Weight: | Initial | 36000.00 lb |
| | Final | 36000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 3239.00 | | |
| Shut In Tool | 5.00 | | | 3244.00 | | |
| Hydraulic tool | 5.00 | | | 3249.00 | | |
| Packer | 5.00 | | | 3254.00 | 20.00 | Bottom Of Top Packer |
| Packer | 4.00 | | | 3258.00 | | |
| Stubb | 1.00 | | | 3259.00 | | |
| Recorder | 0.00 | 8651 | Inside | 3259.00 | | |
| Recorder | 0.00 | 8655 | Outside | 3259.00 | | |
| Perforations | 15.00 | | | 3274.00 | | |
| Change Over Sub | 1.00 | | | 3275.00 | | |
| Drill Pipe | 31.00 | | | 3306.00 | | |
| Change Over Sub | 1.00 | | | 3307.00 | | |
| Bullnose | 3.00 | | | 3310.00 | 52.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **72.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI

1310 Bison Rd
Hays, KS 67601

ATTN: Herb Deines

**30-14s-17w Ellis,KS**

**Munjor East #1**

Job Ticket: 58405 **DST#: 1**

Test Start: 2014.11.05 @ 17:21:53

## 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: | 53.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 7.19 in³ | Gas Cushion Type: | | | |
| Resistivity: | ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 2100.00 ppm | | | | |
| Filter Cake: | inches | | | | |

## Recovery Information

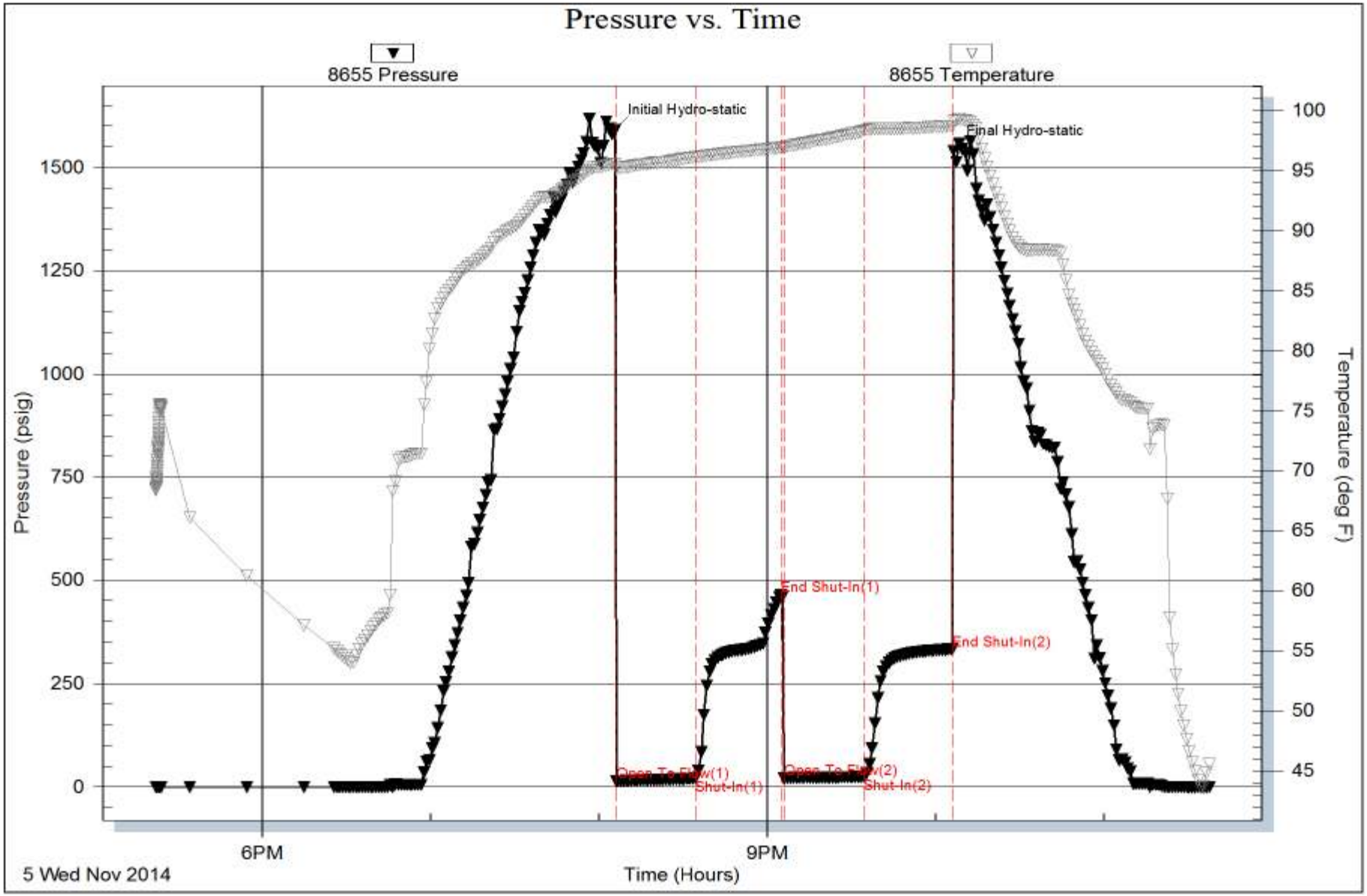
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 30.00 | M | 0.410 |

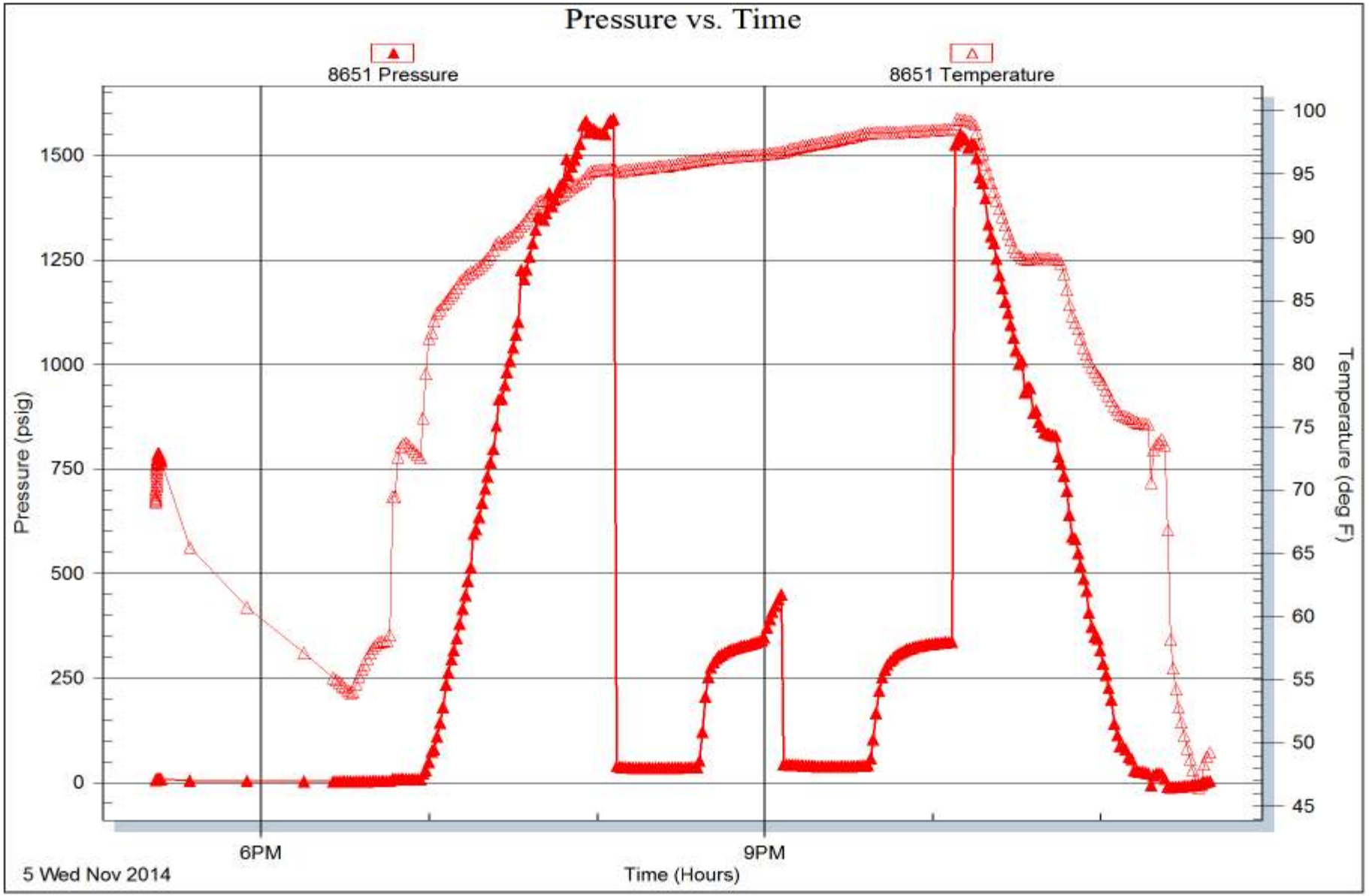
Total Length: 30.00 ft Total Volume: 0.410 bbl

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

Serial #: 8655 **Outside** TDI Munjor East #1 DST Test Number: 1



Serial #: 8651 **Inside** TDI Munjor East #1 DST Test Number: 1




Trilobite Testing, Inc Ref. No: 58405 Printed: 2014.11.08 @ 11:08:34

# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

## Test Ticket

NO. 58405

Well Name & No. ~~TDI~~ Munjor East #1 Test No. 1 Date 10/5/14

Company TDI Elevation 1947 KB 1937 GL

Address 1310 Bison Rd. Hays, KS 67601

Co. Rep / Geo. Herb Deines Rig Southwind #1

Location: Sec. 30 Twp. 14 S Rge. 17 W Co. Ellis State KS

Interval Tested 3238-3310 Zone Tested LKC "C+D"

Anchor Length 52' Drill Pipe Run 3242 Mud Wt. 8.9

Top Packer Depth 3253 Drill Collars Run — Vis 53

Bottom Packer Depth 3258 Wt. Pipe Run — WL 7.2

Total Depth 3310 Chlorides 3100 ppm System LCM 2#

Blow Description IF- Slowly built to 1"

ISI - No Blow

FF - No Blow

FSI - No Blow

| | | | | | |
|---|---|---|---|---|---|
| Rec 30 | Feet of M | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 30' BHT 99° Gravity — API RW — @ — °F Chlorides — ppm

| | | | |
|---|---|---|---|
| (A) Initial Hydrostatic 1590 | ☒ Test 1150 | T-On Location 1703 | |
| (B) First Initial Flow 13 | ☐ Jars | T-Started 1722 | |
| (C) First Final Flow 20 | ☐ Safety Joint | T-Open 2006 | |
| (D) Initial Shut-In 464 | ☐ Circ Sub | T-Pulled 2206 | |
| (E) Second Initial Flow 20 | ☐ Hourly Standby | T-Out 2339 | |
| (F) Second Final Flow 24 | ☒ Mileage 14 RT x2 21.70 | Comments Loaded 11/1 @ 545 | |
| (G) Final Shut-In 332 | ☐ Sampler | 21.70 | |
| (H) Final Hydrostatic 1539 | ☐ Straddle | ☐ Ruined Shale Packer | |
| | ☐ Shale Packer | ☐ Ruined Packer | |
| Initial Open 30 | ☐ Extra Packer | ☐ Extra Copies | |
| Initial Shut-In 30 | ☐ Extra Recorder | Sub Total 0 | |
| Final Flow 30 | ☐ Day Standby | Total 1193.40 | |
| Final Shut-In 30 | ☐ Accessibility | MP/DST Disc't | |
| | Sub Total 1193.40 | | |

Approved By _____ Our Representative Brannan Lonsdale