

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ 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: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

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: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top _____ Bottom _____
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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OPERATOR

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

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: NANCY # 1
 Location: S2 SE NE NE SEC.25-T14S-R16W
 API: 15-051-26,927-00-00
 Pool: WILDCAT
 State: KANSAS

Field: UNNAMED
 Country: USA



Scale 1:240 Imperial

Well Name: NANCY # 1
 Surface Location: S2 SE NE NE SEC.25-T14S-R16W
 Bottom Location:
 API: 15-051-26,927-00-00
 License Number: 4787
 Spud Date: 9/11/2018 Time: 4:45 PM
 Region: ELLIS COUNTY
 Drilling Completed: 9/17/2018 Time: 3:25 PM
 Surface Coordinates: 1150' FNL & 330' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 1840.00ft
 K.B. Elevation: 1850.00ft
 Logged Interval: 2400.00ft To: 3430.00ft
 Total Depth: 3430.00ft
 Formation: LANSING-KANSAS CITY
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.012168
 Latitude: 38.8097342
 N/S Co-ord: 1150' FNL
 E/W Co-ord: 330' 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 #: 8
 Rig Type: MUD ROTARY
 Spud Date: 9/11/2018 Time: 4:45 PM
 TD Date: 9/17/2018 Time: 3:25 PM

ELEVATIONS

K.B. Elevation: 1850.00ft
K.B. to Ground: 10.00ft

Ground Elevation: 1840.00ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL DUE TO NEGATIVE RESULTS OF DSTS. LOW SHUT IN PRESSURES IN THE "C" ZONE AND SALT WATER FROM THE TORONTO INDICATED DEPLETION WITH ONLY A POSSIBLE MARGINAL OIL WELL AT BEST.

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

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

	NANCY # 1	BAUMRUCKER # 1	JACOBS-SCHRANT # 1
	S2 SE NE NE	SW NW NE	S2 NE NE NW
	SEC.25-14S-16W	SEC.25-14-16W	SEC.30-14-15W
	KB 1850'	KB 1858'	KB 1836'
	LOG TOPS		
Anhydrite top	911 +939	+ 918	+ 944
Anhydrite base	948 +902	+ 881	+ 906
Topeka	2795 -945	- 959	- 940
Heebner Sh.	3017-1167	-1183	-1162
Toronto	3036-1186	-1203	-1182
LKC	3070-1220	-1234	-1216
BKC	3292-1442	-1460	-1436
Arbuckle	3362-1512	-1527	-1484
RTD	3430-1580	-1560	-1549

SUMMARY OF DAILY ACTIVITY

9-11-18 RU, spud 4:45 PM, set 8 5/8" surface casing to 216' w/ 175 sxs
60/40 pos 2%gel 3% CC, plug down 11:00 PM slope 1/2 degree

9-12-18 216', WOC, drill plug at 7:30 AM

9-13-18 1532', drilling

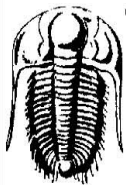
9-14-18 2340', drilling, displaced 2391' to 2423'

9-15-18 2980', drilling, CFS 3050', short trip, CFS 3115', DST # 1 3016' to
3115' Toronto to "C".

9-16-18 3126', finish DST # 1, TIWB, drilling, CFS 3320', DST #2 3284 to 3320'

9-17-18 3320' finish DST # 2, TIWB, drilling, CFS 3340', CFS 3350', CFS 3365',
RTD 3430' @3:25PM, CCH, TOWB, logs

9-18-18 3430', DST # 3 straddle test 3078' to 3102' "C" bench , decision to
plug and abandon well



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays Kansas
67601+9696
ATTN: Herb Deines

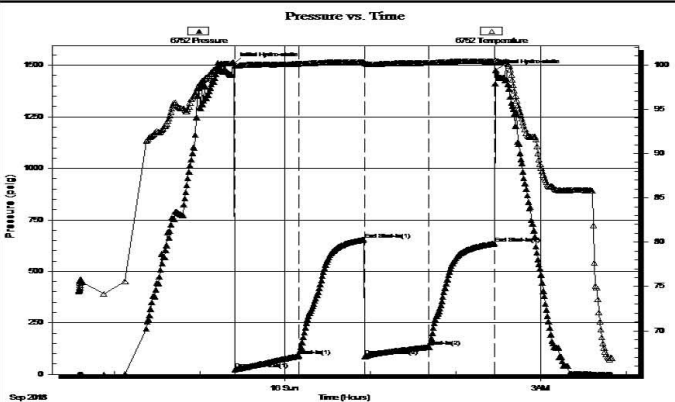
25/14S/16W/ELLIS
Nancy #1
Job Ticket: 63460 **DST#: 1**
Test Start: 2018.09.15 @ 20:32:00

GENERAL INFORMATION:

Formation: **Toronto-Lansing C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:22:02
Time Test Ended: 02:46:02
Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72 Hays/34
Interval: **3016.00 ft (KB) To 3115.00 ft (KB) (TVD)**
Total Depth: 3115.00 ft (KB) (TVD)
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
Hole Diameter: 7.80 inches Hole Condition: Fair
KB to GR/CF: 9.00 ft

Serial #: 6752 Outside
Press@RunDepth: 634.94 psig @ 3018.00 ft (KB) Capacity: psig
Start Date: 2018.09.15 End Date: 2018.09.16 Last Calib.: 2018.09.16
Start Time: 21:35:01 End Time: 03:50:02 Time On Btm: 2018.09.15 @ 23:24:17
Time Off Btm: 2018.09.16 @ 02:28:17

TEST COMMENT: I.F. 45 Minutes/ Blow built to BOB in 3 minutes/ Total build 151 inches
I.S.I. 45 Minutes/ No blow back
F.F. 45 Minutes/ Blow built to BOB in 2 minutes/ Total build 96 inches
F.S.I. 45 Minutes/ Blow back built an additional 10 inches



PRESSURE SUMMARY

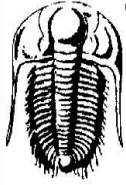
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1507.73	100.19	Initial Hydro-static
1	24.17	99.95	Open To Flow (1)
46	88.95	100.13	Shut-In(1)
92	653.75	100.29	End Shut-In(1)
92	88.24	100.21	Open To Flow (2)
137	133.14	100.22	Shut-In(2)
183	634.94	100.42	End Shut-In(2)
184	1474.19	100.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	Mud w/skim oil/ Mud 100%	0.87
186.00	Oil cut Watery Mud	2.61
0.00	Oil 20% Water 30% Mud 50%	0.00
0.00	806 feet of GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TDI Inc. **25/14S/16W/Ellis**
 1310 Bison Rd **Nancy #1**
 Hays Kansas Job Ticket: 63461 **DST#: 2**
 67601+9696 Test Start: 2018.09.16 @ 23:50:00
 ATTN: Herb Deines

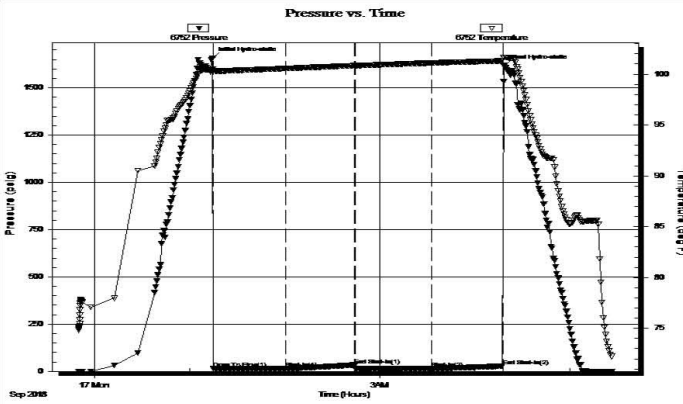
GENERAL INFORMATION:

Formation: **Pleasanton**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:15:02 Tester: Ken Swinney
 Time Test Ended: 05:27:02 Unit No: 72 Hays/34
 Interval: **3284.00 ft (KB) To 3320.00 ft (KB) (TVD)** Reference Elevations: 1850.00 ft (KB)
 Total Depth: 3320.00 ft (KB) (TVD) 1841.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

Serial #: 6752

Press@RunDepth: 15.98 psig @ ft (KB) Capacity: psig
 Start Date: 2018.09.16 End Date: 2018.09.17 Last Calib.: 2018.09.17
 Start Time: 23:50:01 End Time: 05:27:02 Time On Btm: 2018.09.17 @ 01:14:32
 Time Off Btm: 2018.09.17 @ 04:18:47

TEST COMMENT: I.F. 45 Minutes/ Blow built to 1/8 inch died in 17 minutes
 I.S.I. 45 Mintues/ No blow back
 F.F. 45 Minutes/ Dead no blow
 F.S.I. 45 Mintues/ No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1657.45	100.53	Initial Hydro-static
1	14.02	100.34	Open To Flow (1)
47	15.06	100.57	Shut-In(1)
90	33.96	100.84	End Shut-In(1)
91	15.78	100.84	Open To Flow (2)
139	15.98	101.11	Shut-In(2)
184	28.16	101.34	End Shut-In(2)
185	1614.06	101.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w / skim of oil/ Mud 100%	0.01

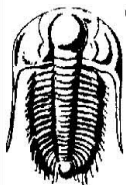
Gas Rates

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

Trilobite Testing, Inc

Ref. No: 63461

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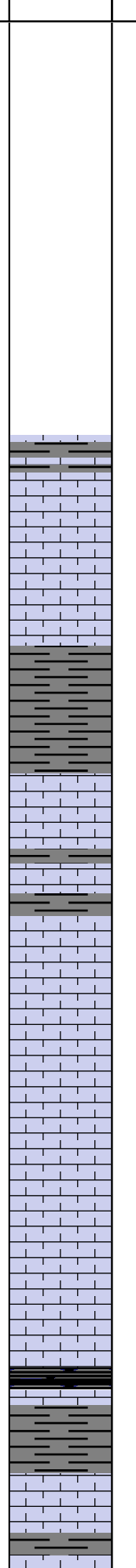
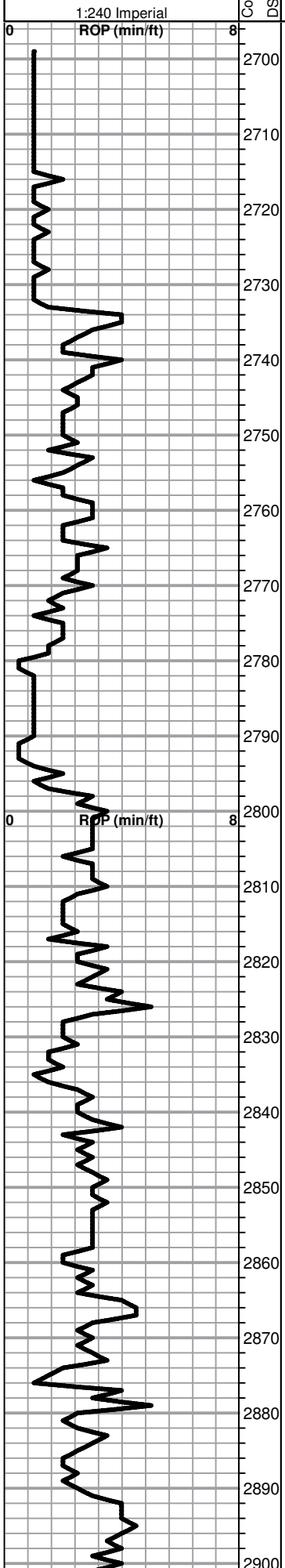


**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TDI Inc. **25/14S/16W/Ellis**
 1310 Bison Rd **Nancy #1**
 Hays Kansas Job Ticket: 63462 **DST#: 3**
 67601+9696 Test Start: 2018.09.17 @ 23:25:00
 ATTN: Herb Deines

GENERAL INFORMATION:



BEGIN 1' DRILL TIME FROM 2700' TO RTD
 BEGIN 10' WET AND DRY SAMPLES FROM 2800' TO RTD

ANHYDRITE TOP 911+939
ANHYDRITE BASE 948+902

Shale, lt gray, soft sticky clumps

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

Lime, lt brn-lt gray, fnxln, sticky chalk in part

Shale, dove gray-lt gray, soft mud-soft blocky

TOPEKA 2795-945

Lime, offwhite-lt brn-lt gray, fnxln, slight bedded chalk, NS

Lime, lt-med brn, fn-micro xln

Lime, lt-med brn-med gray, fn-micro xln, fusulinids

Lime, lt-med brn-med grayish brn, fn-micro xln, pyritic, slightly fossiliferous

Lime, lt-med brn, fn-micro xln

Lime, lt-med brn, fnxln-granular in part, chalk matrix in part, slightly fossiliferous

Lime, med brn-med gray, fnxln-granular

Lime, lt-med brn, granular-fnxln

Shale, black carbonaceous, blocky

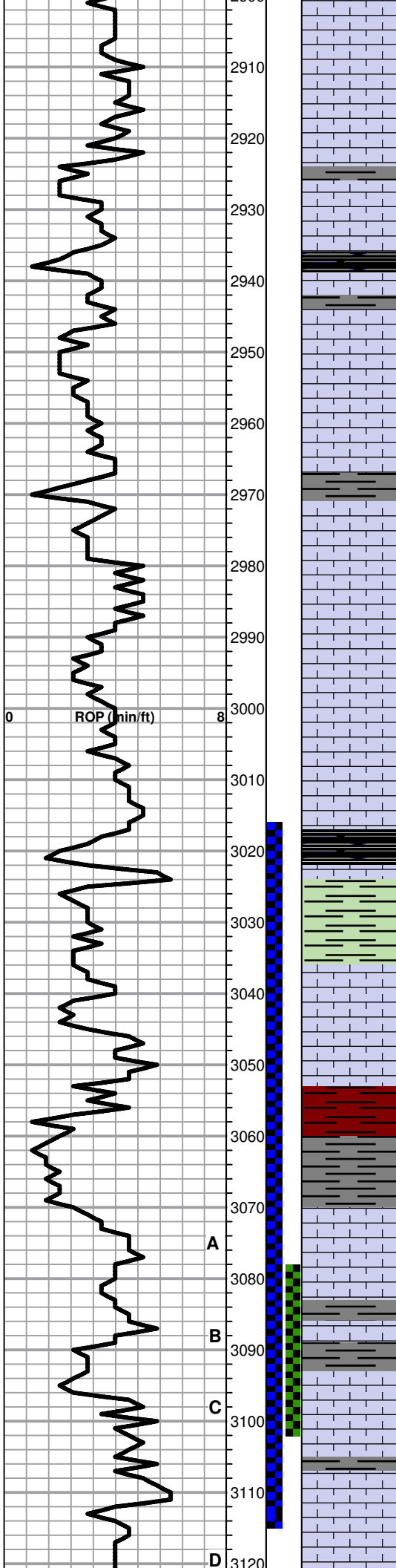
Lime, lt brn, fn-micro xln

Lime, lt-med brn, fn-micro xln , slight bedded chalk in part

1:240 Imperial

8 5/8" SURFACE CASING
 SET TO 216' W/ 175 SXS
 60/40 POS 2 % GEL 3%CC

SLOPE SURVEY 1/2
 DEGREE



Lime, white-crm, fn-micro xln, lighographic

Lime, crm-lt brn, fn-micro xln

Lime, lt brn-med grayish brn, fn-micro xln
Shale, med gray, soft-soft blocky

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

Lime, lt-med brn, fn-micro xln

Lime, lt-med brn, fn-vfxln

Lime, lt-med brn, fn-micro xln, sticky bedded chalk in part

Lime, lt brn, fnxln-granular, microoomoldic with fossil fragments, lt odor, scattered to saturated stain, NFO

Lime, lt brn, fn-micro xln

Lime, tan-lt brn, fnxln, bedded chalk with lt white wash

Lime, tan-lt brn, fnxln, bedded chalk with white wash

Lime lt brn, fn-vfxln

HEEBNER SHALE 3017-1167
Shale, black carbonaceous, fissile, blocky
Lime, lt brn, vfxln, hard on crush

Shale, lime green, soft mud with lt gray shale in part

TORONTO 3036-1186

Lime, crm-lt brn, fnxln-granular, NFO, odor, scattered to saturated dark staining, interxln porosity, slightly fossiliferous

Lime, lt-med brn, fn-micro xln

Shale, red soft mud grading into lt-med gray soft blocky

LANSING-KANSAS CITY 3070-1220
* Lime, lt brn, fnxln, scattered very lt stain with lt odor in scattered fine vugs

Lime, lt brn, fn-micro xln, hard on crush

Shale, lt gray, blocky, pyritic

Lime, white-crm, fnxln-granular with cemented oolitic and fine oomoldic, lt odor, MSFO on crush, fine interxln porosity

Lime, crm, fn-vfxln,

Lime, lt brn, fn-vfxln

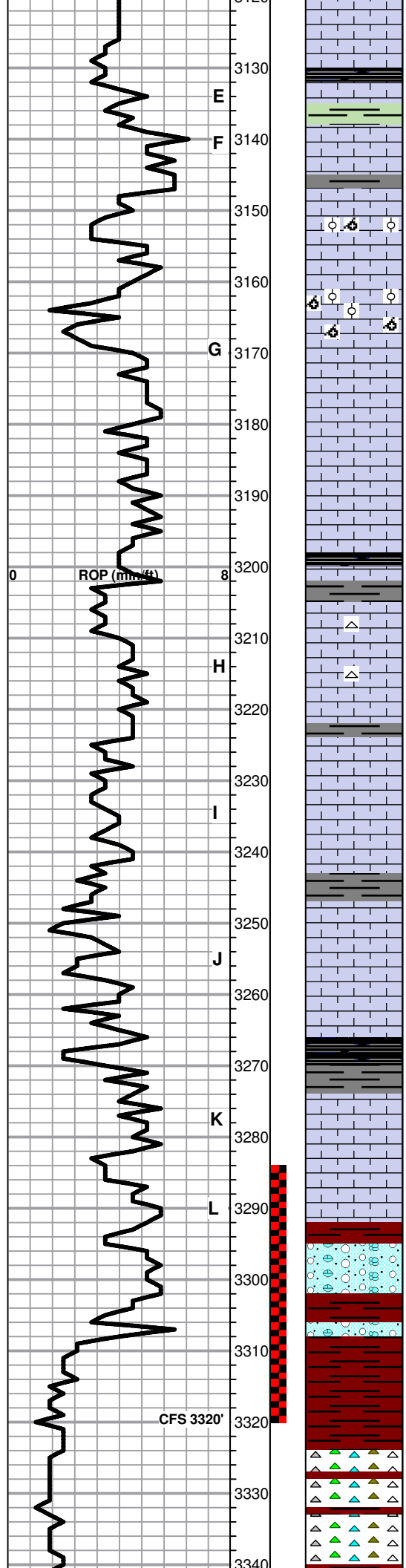
Lime, crm-lt brn, fn-vfxln

CFS 3050', SHORT TRIP @ 3050'

DST # 1 3016' TO 3115' SEE HEADER FOR TEST SUMMARY

DST # 3 STRADDLE TEST 3078' TO 3102' SEE HEADER FOR TEST SUMMARY

A
B
C
D



Shale, black carbonaceous, blocky
Lime, offwhite to lt gray, fnxn

Lime, crm-lt brn, fn-vfxln

Lime, crm, fnxn, oolitic with fossil fragments, lt scattered staining, NFO, no detectable odor

Lime, crm, fn-vfxln

Lime, crm, oolitic/oomoldic, mostly barren with bedded chalk in part with white wash

Lime, crm-tan, fn-vfxln

Lime, crm-lt brn, fn-vfxln

Lime, crm-lt brn, fn-micro xln
Shale, black carbonaceous

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

Lime, crm-lt brn-pale gray, fn-micro xln

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

Lime, crm-lt brn, fn-micro xln

Lime, crm-tan, fnxn-granular in part, very lt odor on crush, trace lt spotty staining, NFO

Lime, crm, fn-micro xln

Shale, black carbonaceous

Lime, crm-lt brn, fn-micro xln

Lime, crm-tan, fn-micro xln

BKC 3292-1442

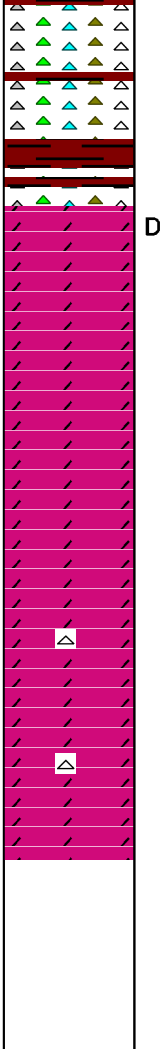
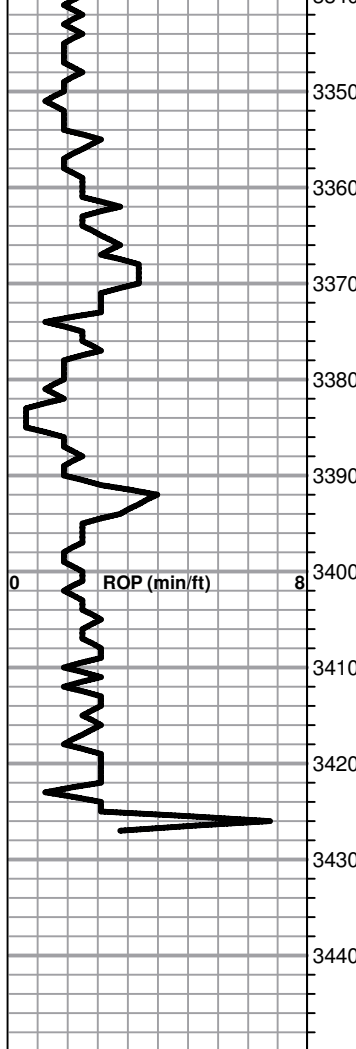
Shale, red-reddish brn, soft to soft blocky
Lime, clastic mix, oomoldic chips with show of lt gassy oil on crush

Shale, red wash, sticky clumping in part

Chert, vary color from white to tans to lt browns with red shale

Chert, vary color from white to tans to lt brown

DST # 2 3284' TO 3320'
SEE HEADER FOR TEST SUMMARY



Chert, vary color from white to tans to lt brown

ARBUCKLE 3362-1512

Dolomite, ivory, fnxln-granular, coarse grain in part with flaky gilsonitic residue and traces of free oil on crush.

Dolomite, ivory, fnxln-granular

Dolomite, white-ivory, fnxln-granular

Dolomite, ivory, cxln, rhombic

Dolomite, ivory, fnxln, pyritic

Dolomite, ivory-buff, fnxln-granular, coarse grained with white chert

Dolomite, ivory-buff, fnxln-granular

RTD 3430-1580 LTD 3430

SLOPE 1 DEGREE

GLOBAL OIL FIELD SERVICES, LLC

0013229

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT:
RUSSELL, KS

DATE 9-11-18	SEC. 25	TWP. 14	RANGE 16W	CALLED OUT	ON LOCATION 7PM	JOB START 9:45 PM	JOB FINISH 11 PM
LEASE Nancy	WELL#. 1	LOCATION GORHAM, KS SOUTH - 4 CORNER			COUNTY ELLIS	STATE KS	
OLD OR <u>NEW</u> (CIRCLE ONE)			1 WEST - 1/4 SOUTH - WEST 1/4				

CONTRACTOR SOUTHWIND DRILLING RIG #8 OWNER _____

TYPE OF JOB SURFACE

HOLE SIZE 12 1/4 T.D. 216'

CASING SIZE 8 5/8 DEPTH 216.27'

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT 41.14

CEMENT LEFT IN CSG. 20

PERFS _____

DISPLACEMENT 12 1/2 BBL

EQUIPMENT _____

PUMP TRUCK CEMENTER BRAD

417 HELPER JASON

BULK TRUCK

379 DRIVER TOM

BULK TRUCK

_____ DRIVER _____

CEMENT AMOUNT ORDERED 175 SX 3% CC 2% CC

COMMON _____ @ _____

POZMIX _____ @ _____

GEL _____ @ _____

CHLORIDE _____ @ _____

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING _____ @ _____

MILEAGE _____ @ _____

TOTAL _____

REMARKS:
RUN IN 5 JTS. 8 5/8 23# PIPE, CIRC MUD, MIX 175 SX, WASH UP & DIS W 12 1/2 BBL H₂O, SHUT IN @ 200 PSI, CEMENT DID CIRCULATE

CHARGE TO: TDI

STREET _____

CITY _____ STATE _____ ZIP _____

Global Oil Field Services, LLC
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 _____

SIGNATURE William D. [Signature]

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE _____ @ _____

MILEAGE _____ @ _____

MANIFOLD _____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

GLOBAL OIL FIELD SERVICES, LLC

0013174

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell KS

DATE <u>9-18-18</u>	SEC. <u>25</u>	TWP. <u>14S</u>	RANGE <u>16W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Nancy</u>	WELL #. <u>1</u>	LOCATION <u>4 south of Graham's</u>			COUNTY <u>Russell</u>	STATE <u>KS</u>	<u>1:30 pm</u>
OLD OR NEW (CIRCLE ONE) <u>NEW</u>			<u>1/2 west Smith Linc</u>				

CONTRACTOR Southwind Drilling Rig # 8

TYPE OF JOB Rotary Plug

HOLE SIZE 7 7/8" T.D. 3430'

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS _____

DISPLACEMENT _____

OWNER TPI INC

CEMENT AMOUNT ORDERED 255 sk 60/40 PCZ
4/8 Gel 1/4" flow seal per

COMMON _____ @ _____

POZMIX _____ @ _____

GEL _____ @ _____

CHLORIDE _____ @ _____

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING _____ @ _____

MILEAGE _____ @ _____

TOTAL _____

EQUIPMENT

PUMP TRUCK _____ CEMENTER Camp

29 HELPER Brian

BULK TRUCK _____

473 DRIVER Kevin

BULK TRUCK _____

_____ DRIVER _____

REMARKS:

50 sk 3337'

50 sk 950'

100 sk 425'

10 sk 40' wiper plug

30 Per

15 mouse

CHARGE TO: TPI INC

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE _____ @ _____

MILEAGE _____ @ _____

MANIFOLD _____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

Global Oil Field Services, LLC

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.

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

PRINTED NAME _____

SIGNATURE William Anderson

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS _____



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601+9696

ATTN: Herb Deines

Nancy #1

25-14S-16W Ellis,KS

Start Date: 2018.09.15 @ 20:32:00

End Date: 2018.09.16 @ 02:46:02

Job Ticket #: 63460 DST #: 1

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

Printed: 2018.09.18 @ 15:55:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

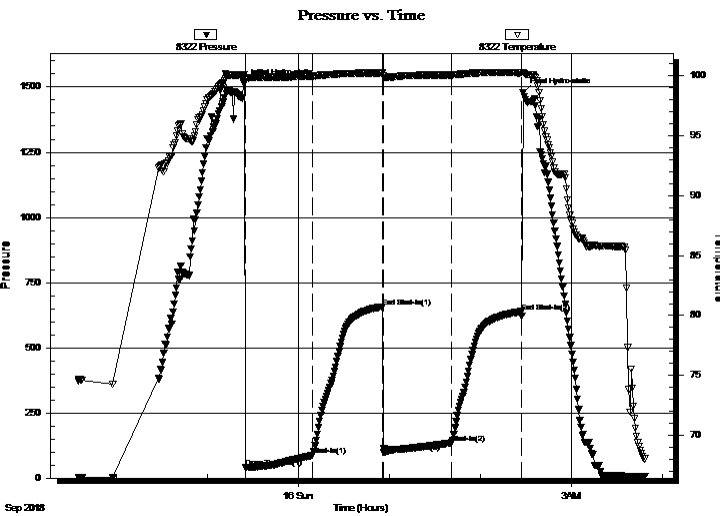
25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63460 **DST#: 1**
Test Start: 2018.09.15 @ 20:32:00

GENERAL INFORMATION:

Formation: **Toronto - LKC C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:22:02
Time Test Ended: 02:46:02
Interval: **3016.00 ft (KB) To 3115.00 ft (KB) (TVD)**
Total Depth: 3115.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8322 Inside
Press@RunDepth: 135.36 psig @ 3017.00 ft (KB) Capacity: psig
Start Date: 2018.09.15 End Date: 2018.09.16 Last Calib.: 2018.09.16
Start Time: 21:35:01 End Time: 03:49:02 Time On Btm: 2018.09.15 @ 23:24:32
Time Off Btm: 2018.09.16 @ 02:28:17

TEST COMMENT: IFP 45 Minutes Blow built to BOB in 3 minutes - Total build 151"
ISI 45 Minutes No blow back
FFP 45 Minutes Blow built to BOB in 2 minutes - Total build 96"
FSI 45 Minutes Blow back built an additional 10"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1513.76	100.08	Initial Hydro-static
1	40.33	99.80	Open To Flow (1)
45	86.82	99.96	Shut-In(1)
91	657.75	100.19	End Shut-In(1)
92	99.32	99.97	Open To Flow (2)
137	135.36	100.05	Shut-In(2)
183	639.31	100.24	End Shut-In(2)
184	1477.52	100.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	Mud w /skim oil/ Mud 100%	0.87
186.00	OCWM Oil 20% Water 30% Mud 50%	2.61
0.00	806' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63460 **DST#: 1**
Test Start: 2018.09.15 @ 20:32:00

GENERAL INFORMATION:

Formation: **Toronto - LKC C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:22:02
Time Test Ended: 02:46:02
Interval: **3016.00 ft (KB) To 3115.00 ft (KB) (TVD)**
Total Depth: 3115.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
KB to GR/CF: 9.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

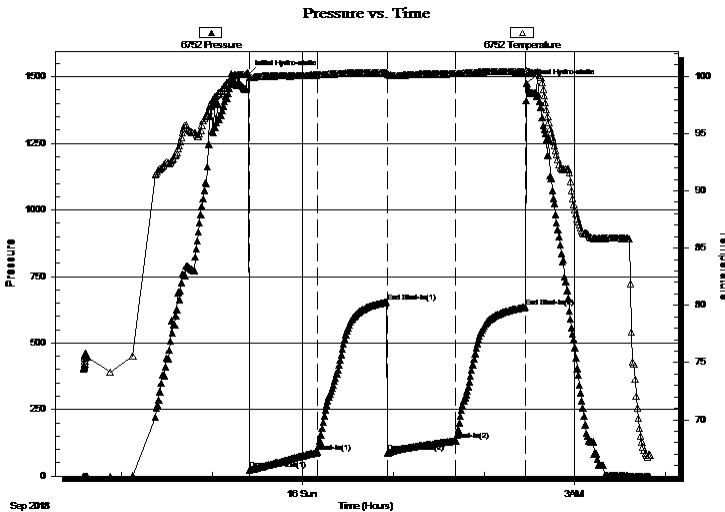
Serial #: 6752

Outside

Press@RunDepth: 634.94 psig @ 3018.00 ft (KB) Capacity: psig
Start Date: 2018.09.15 End Date: 2018.09.16 Last Calib.: 2018.09.16
Start Time: 21:35:01 End Time: 03:50:02 Time On Btm: 2018.09.15 @ 23:24:17
Time Off Btm: 2018.09.16 @ 02:28:17

TEST COMMENT: IFP 45 Minutes Blow built to BOB in 3 minutes - Total build 151"
ISI 45 Minutes No blow back
FFP 45 Minutes Blow built to BOB in 2 minutes - Total build 96"
FSI 45 Minutes Blow back built an additional 10"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1507.73	100.19	Initial Hydro-static
1	24.17	99.95	Open To Flow (1)
46	88.95	100.13	Shut-In(1)
92	653.75	100.29	End Shut-In(1)
92	88.24	100.21	Open To Flow (2)
137	133.14	100.22	Shut-In(2)
183	634.94	100.42	End Shut-In(2)
184	1474.19	100.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	Mud w /skim oil/ Mud 100%	0.87
186.00	OCWM Oil 20% Water 30% Mud 50%	2.61
0.00	806' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63460 **DST#: 1**
Test Start: 2018.09.15 @ 20:32:00

Tool Information

Drill Pipe:	Length: 3020.00 ft	Diameter: 3.80 inches	Volume: 42.36 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 42.36 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3016.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.55 ft			
Tool Length:	118.55 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3001.00	
Hydraulic tool	5.00			3006.00	
Top Packer	5.00			3011.00	
Packer	5.00			3016.00	20.00 Bottom Of Top Packer
Recorder	1.00	8322	Inside	3017.00	
Recorder	1.00	6752	Outside	3018.00	
Anchor	28.00			3046.00	
Change Over Sub	1.00			3047.00	
Drill Pipe	63.55			3110.55	
Change Over Sub	1.00			3111.55	
Bullnose	3.00			3114.55	98.55 Anchor Tool

Total Tool Length: 118.55



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **25-14S-16W Ellis,KS**
 1310 Bison Rd **Nancy #1**
 Hays KS 67601+9696 Job Ticket: 63460 **DST#: 1**
 ATTN: Herb Deines Test Start: 2018.09.15 @ 20:32:00

Mud and Cushion Information

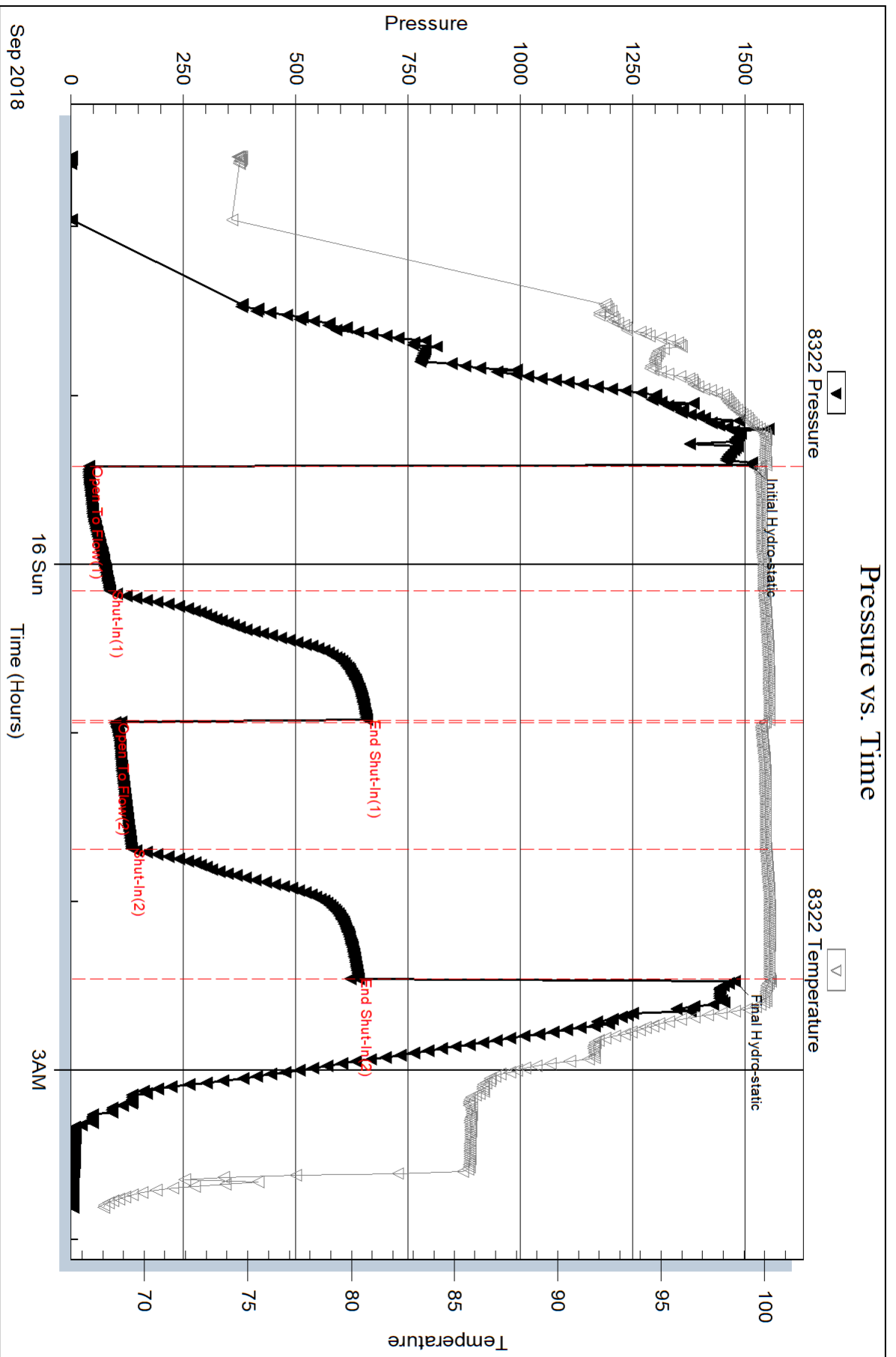
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: lb/gal	Cushion Length: ft	Water Salinity:	17000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2200.00 ppm			
Filter Cake: 1.00 inches			

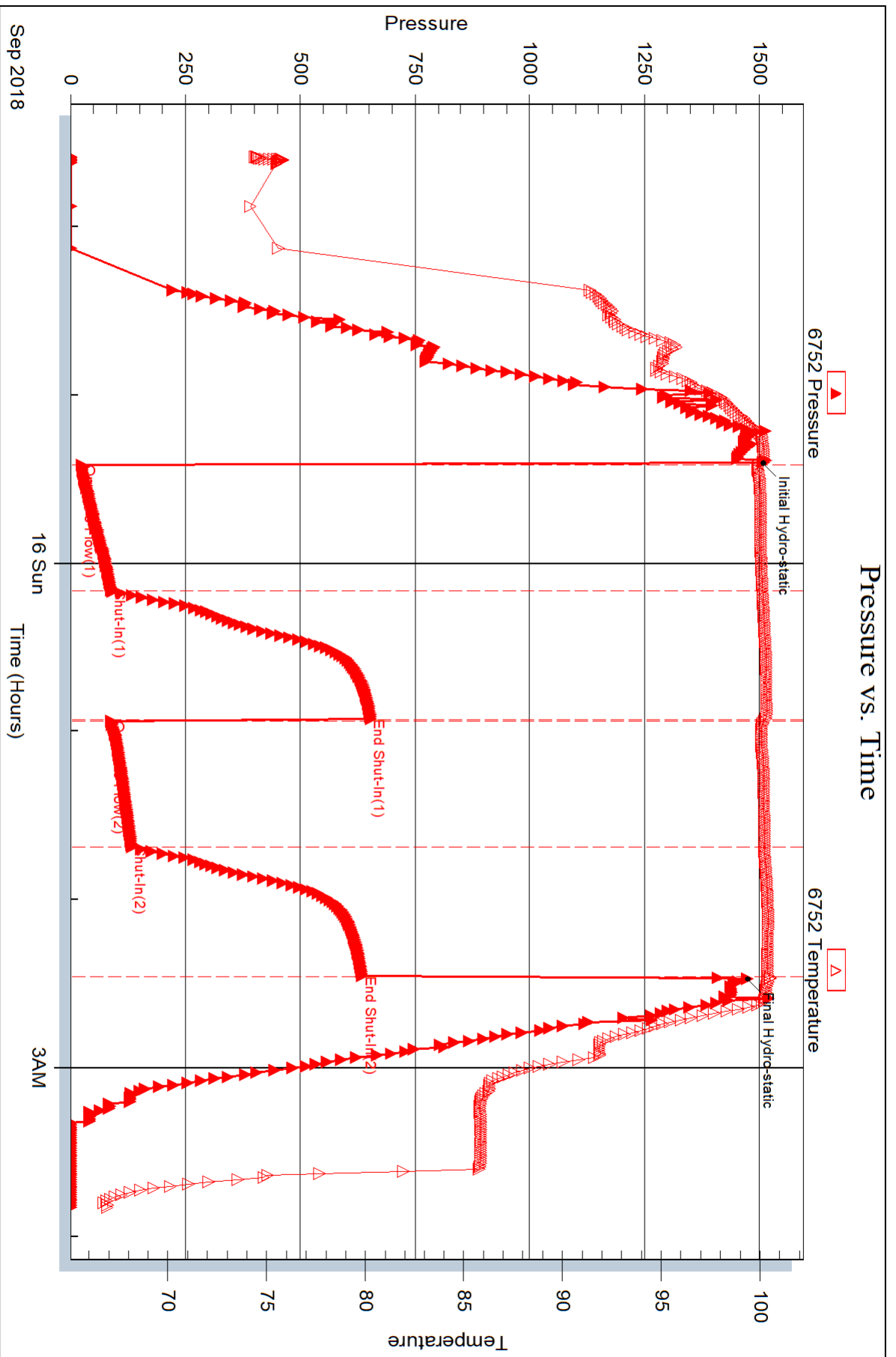
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	Mud w /skim oil/ Mud 100%	0.870
186.00	OCWM Oil 20% Water 30% Mud 50%	2.609
0.00	806' GIP	0.000

Total Length: 248.00 ft Total Volume: 3.479 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: Recovey Resistivity .390 ohms @ 69 deg







DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601+9696

ATTN: Herb Deines

Nancy #1

25-14S-16W Ellis,KS

Start Date: 2018.09.16 @ 23:50:00

End Date: 2018.09.17 @ 05:27:02

Job Ticket #: 63461 DST #: 2

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

Printed: 2018.09.18 @ 15:55:14

TDI Inc.
25-14S-16W Ellis,KS
Nancy #1
DST # 2
Pleasanton
2018.09.16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

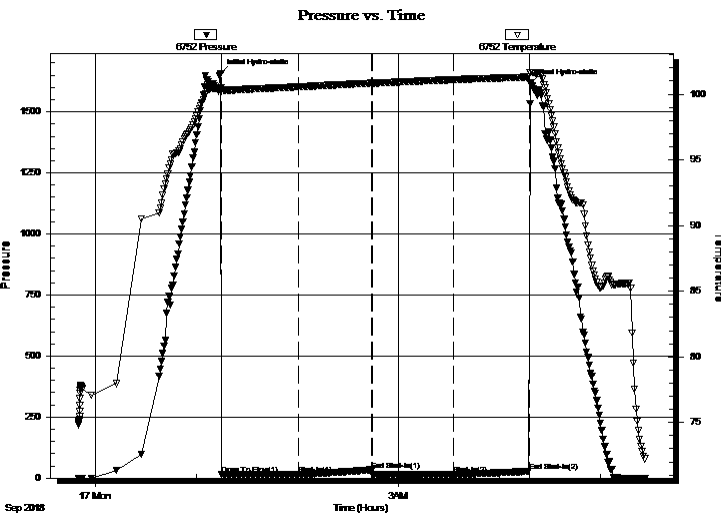
25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63461 **DST#: 2**
Test Start: 2018.09.16 @ 23:50:00

GENERAL INFORMATION:

Formation: **Pleasanton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:15:02
Time Test Ended: 05:27:02
Interval: **3284.00 ft (KB) To 3320.00 ft (KB) (TVD)**
Total Depth: 3320.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 6752 Outside
Press@RunDepth: 15.98 psig @ 3286.00 ft (KB) Capacity: psig
Start Date: 2018.09.16 End Date: 2018.09.17 Last Calib.: 2018.09.17
Start Time: 23:50:01 End Time: 05:27:02 Time On Btm: 2018.09.17 @ 01:14:32
Time Off Btm: 2018.09.17 @ 04:18:47

TEST COMMENT: IFP 45 Minutes Blow built to 1/8" died in 17 minutes
ISI 45 Minutes No blow back
FFP 45 Minutes Dead no blow
FSI 45 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1657.45	100.53	Initial Hydro-static
1	14.02	100.34	Open To Flow (1)
47	15.06	100.57	Shut-In(1)
90	33.96	100.84	End Shut-In(1)
91	15.78	100.84	Open To Flow (2)
139	15.98	101.11	Shut-In(2)
184	28.16	101.34	End Shut-In(2)
185	1614.06	101.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w / skim of oil/ Mud 100%	0.01

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

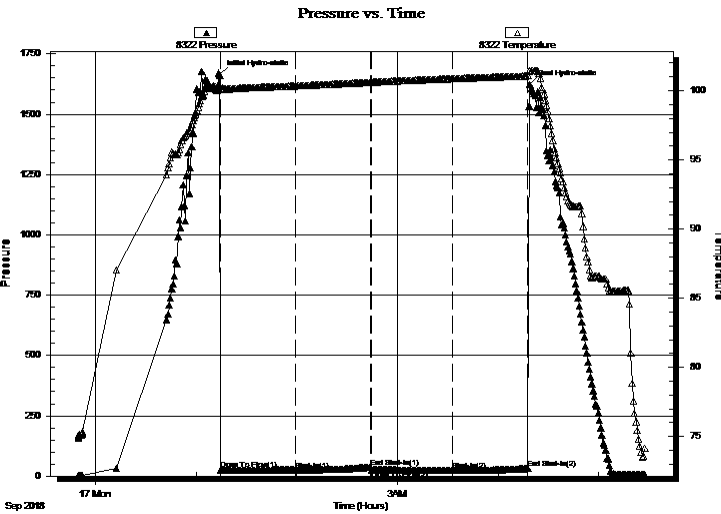
25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63461 **DST#: 2**
Test Start: 2018.09.16 @ 23:50:00

GENERAL INFORMATION:

Formation: **Pleasanton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:15:02
Time Test Ended: 05:27:02
Interval: **3284.00 ft (KB) To 3320.00 ft (KB) (TVD)**
Total Depth: 3320.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8322 Inside
Press@RunDepth: 31.78 psig @ 3285.00 ft (KB) Capacity: psig
Start Date: 2018.09.16 End Date: 2018.09.17 Last Calib.: 2018.09.17
Start Time: 23:50:01 End Time: 05:28:02 Time On Btm: 2018.09.17 @ 01:14:17
Time Off Btm: 2018.09.17 @ 04:19:02

TEST COMMENT: IFP 45 Minutes Blow built to 1/8" died in 17 minutes
ISI 45 Minutes No blow back
FFP 45 Minutes Dead no blow
FSI 45 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1662.19	100.42	Initial Hydro-static
1	26.30	100.12	Open To Flow (1)
46	25.36	100.35	Shut-In(1)
90	37.44	100.60	End Shut-In(1)
91	26.20	100.61	Open To Flow (2)
139	24.20	100.87	Shut-In(2)
184	31.78	101.10	End Shut-In(2)
185	1623.23	101.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w / skim of oil/ Mud 100%	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63461 **DST#: 2**
Test Start: 2018.09.16 @ 23:50:00

Tool Information

Drill Pipe:	Length: 3273.00 ft	Diameter: 3.80 inches	Volume: 45.91 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:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 45.91 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3284.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	56.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut-In Tool	5.00			3269.00	
Hydraulic tool	5.00			3274.00	
Top Packer	5.00			3279.00	
Packer	5.00			3284.00	20.00 Bottom Of Top Packer
Recorder	1.00	8322	Inside	3285.00	
Recorder	1.00	6752	Outside	3286.00	
Anchor	31.00			3317.00	
Bullnose	3.00			3320.00	36.00 Anchor Tool

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.

25-14S-16W Ellis,KS

1310 Bison Rd
Hays KS 67601+9696

Nancy #1

Job Ticket: 63461

DST#: 2

ATTN: Herb Deines

Test Start: 2018.09.16 @ 23:50:00

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud w / skim of oil/ Mud 100%	0.014

Total Length: 1.00 ft Total Volume: 0.014 bbl

Num Fluid Samples: 0

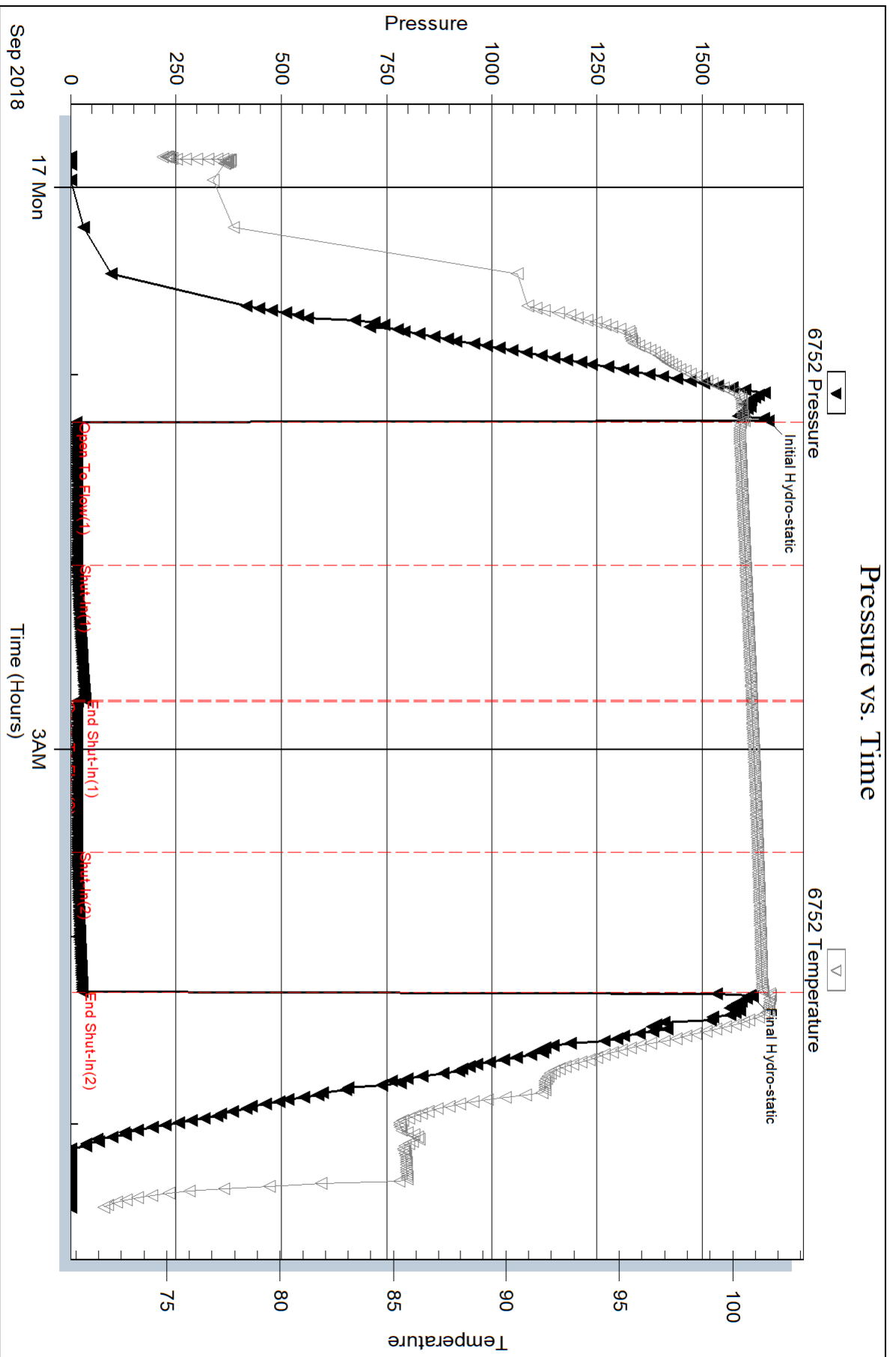
Num Gas Bombs: 0

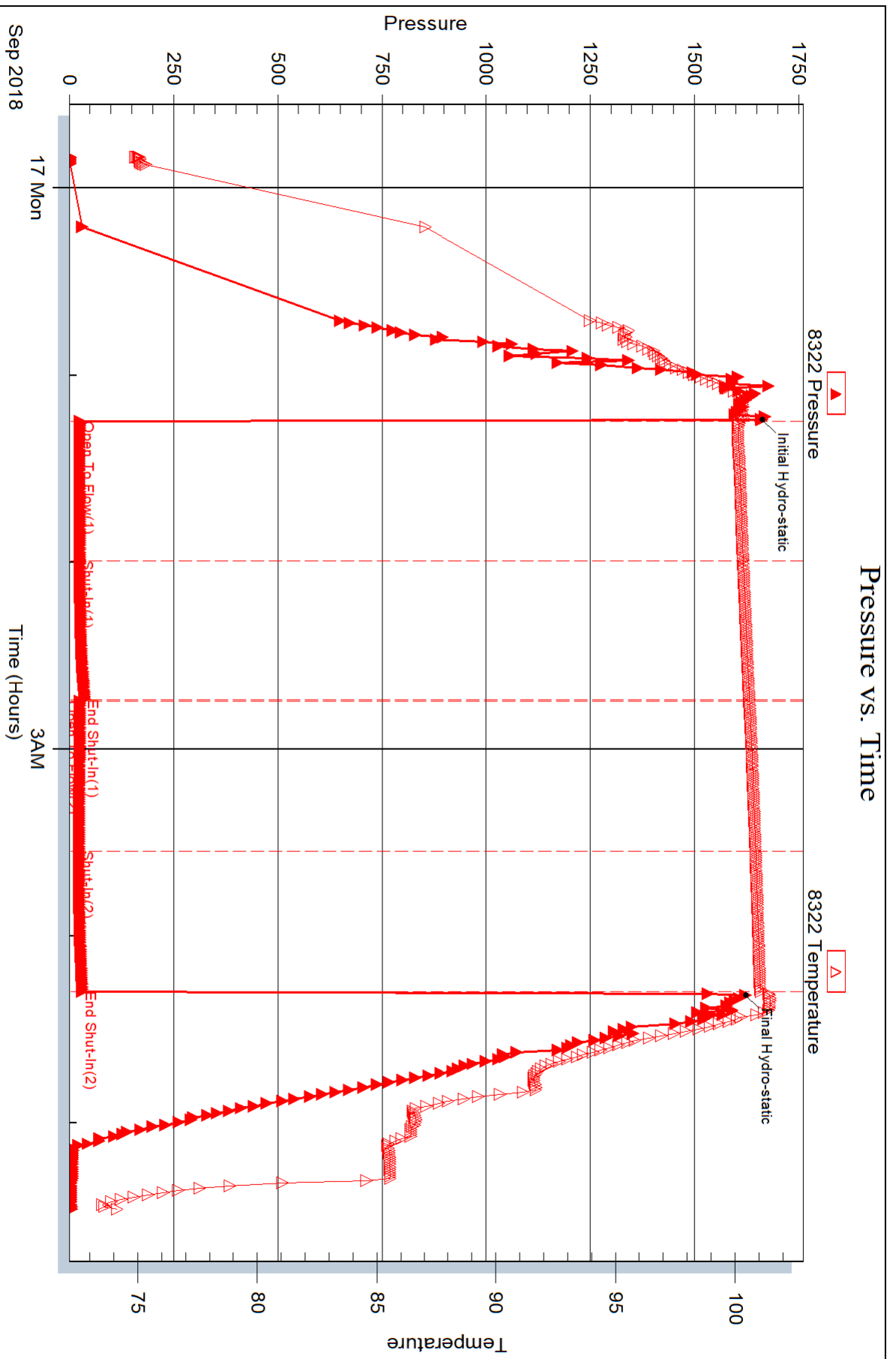
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601+9696

ATTN: Herb Deines

Nancy #1

25-14S-16W Ellis,KS

Start Date: 2018.09.17 @ 23:25:00

End Date: 2018.09.18 @ 04:58:02

Job Ticket #: 63462 DST #: 3

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

Printed: 2018.09.18 @ 15:54:49



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63462 **DST#: 3**
Test Start: 2018.09.17 @ 23:25:00

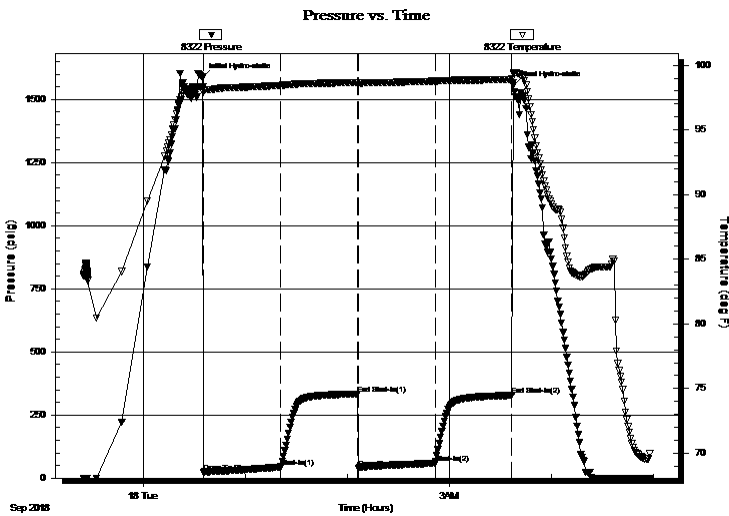
GENERAL INFORMATION:

Formation: **LKC C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:35:32
Time Test Ended: 04:58:02
Interval: **3078.00 ft (KB) To 3102.00 ft (KB) (TVD)**
Total Depth: 3430.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Initial)
Tester: Ken Swinney
Unit No: 72
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8322 Inside
Press@RunDepth: 59.36 psig @ 3078.00 ft (KB) Capacity: psig
Start Date: 2018.09.17 End Date: 2018.09.18 Last Calib.: 2018.09.18
Start Time: 23:25:01 End Time: 04:58:02 Time On Btm: 2018.09.18 @ 00:35:02
Time Off Btm: 2018.09.18 @ 03:37:47

TEST COMMENT: IFP 45 Minutes Blow built to BOB in 9 minutes -Total build 70"
ISI 45 Mintues No blow back
FFP 45 Minutes Blow built to BOB in 1 minute - Total build 101"
FSI 45 Minutes Blow back built an additional 2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1587.75	98.35	Initial Hydro-static
1	24.17	97.89	Open To Flow (1)
46	43.06	98.44	Shut-In(1)
92	332.90	98.63	End Shut-In(1)
92	39.42	98.61	Open To Flow (2)
137	59.36	98.77	Shut-In(2)
182	327.72	98.92	End Shut-In(2)
183	1554.45	99.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	GWOCM w ater 10% oil15% gas20% mud1.26%	
0.00	964' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63462 **DST#: 3**
Test Start: 2018.09.17 @ 23:25:00

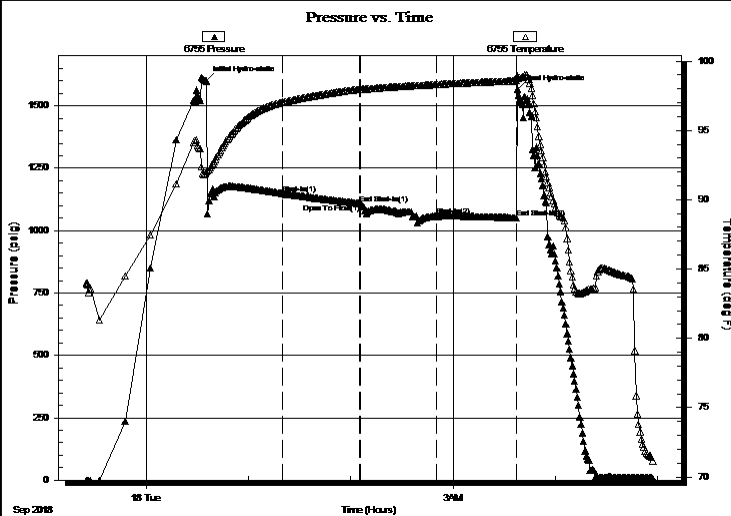
GENERAL INFORMATION:

Formation: **LKC C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:35:32
Time Test Ended: 04:58:02
Interval: **3078.00 ft (KB) To 3102.00 ft (KB) (TVD)**
Total Depth: 3430.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
KB to GR/CF: 9.00 ft
Test Type: Conventional Straddle (Initial)
Tester: Ken Swinney
Unit No: 72

Serial #: 6755 Below (Straddle)

Press@RunDepth: 1051.75 psig @ 3425.18 ft (KB) Capacity: psig
Start Date: 2018.09.17 End Date: 2018.09.18 Last Calib.: 2018.09.18
Start Time: 23:25:01 End Time: 04:57:02 Time On Btm: 2018.09.18 @ 00:35:17
Time Off Btm: 2018.09.18 @ 03:37:47

TEST COMMENT: IFP 45 Minutes Blow built to BOB in 9 minutes -Total build 70"
ISI 45 Minutes No blow back
FFP 45 Minutes Blow built to BOB in 1 minute - Total build 101"
FSI 45 Minutes Blow back built an additional 2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1599.48	92.00	Initial Hydro-static
45	1148.91	97.03	Shut-In(1)
90	1108.68	97.95	End Shut-In(1)
91	1108.46	97.96	Open To Flow (1)
135	1057.71	98.31	Shut-In(2)
182	1051.75	98.61	End Shut-In(2)
183	1566.83	98.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	GWOCM w ater 10% oil15% gas20% mud1.26%	
0.00	964' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63462 **DST#: 3**
Test Start: 2018.09.17 @ 23:25:00

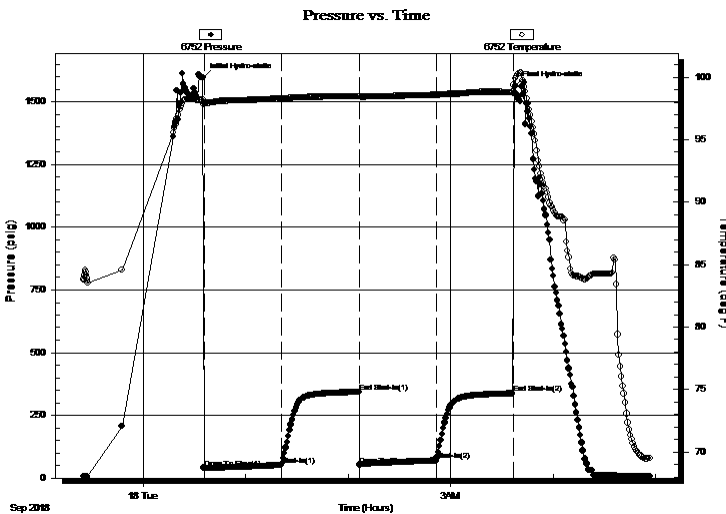
GENERAL INFORMATION:

Formation: **LKC C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:35:32
Time Test Ended: 04:58:02
Interval: **3078.00 ft (KB) To 3102.00 ft (KB) (TVD)**
Total Depth: 3430.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1850.00 ft (KB)
1841.00 ft (CF)
KB to GR/CF: 9.00 ft
Test Type: Conventional Straddle (Initial)
Tester: Ken Swinney
Unit No: 72

Serial #: 6752 Outside
Press@RunDepth: 336.92 psig @ 3078.00 ft (KB) Capacity: psig
Start Date: 2018.09.17 End Date: 2018.09.18 Last Calib.: 2018.09.18
Start Time: 23:25:01 End Time: 04:57:02 Time On Btm: 2018.09.18 @ 00:35:02
Time Off Btm: 2018.09.18 @ 03:37:47

TEST COMMENT: IFP 45 Minutes Blow built to BOB in 9 minutes -Total build 70"
ISI 45 Mintues No blow back
FFP 45 Minutes Blow built to BOB in 1 minute - Total build 101"
FSI 45 Minutes Blow back built an additional 2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1596.53	98.17	Initial Hydro-static
1	39.97	97.94	Open To Flow (1)
46	51.18	98.27	Shut-In(1)
92	342.15	98.46	End Shut-In(1)
92	52.54	98.45	Open To Flow (2)
137	69.23	98.57	Shut-In(2)
182	336.92	98.82	End Shut-In(2)
183	1562.92	99.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	GWOCM w ater 10% oil15% gas20% mud	1.26%
0.00	964' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601+9696
ATTN: Herb Deines

25-14S-16W Ellis,KS
Nancy #1
Job Ticket: 63462 **DST#: 3**
Test Start: 2018.09.17 @ 23:25:00

Tool Information

Drill Pipe:	Length: 3086.00 ft	Diameter: 3.80 inches	Volume: 43.29 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 43.29 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.70 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3078.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	3428.18 ft			
Interval between Packers:	350.18 ft			
Tool Length:	366.88 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-In Tool	5.00			3066.30	
Hydraulic tool	5.00			3071.30	
Top Packer	5.00			3076.30	
Packer	1.70			3078.00	16.70 Bottom Of Top Packer
Recorder	0.00	8322	Inside	3078.00	
Recorder	0.00	6752	Outside	3078.00	
Anchor	18.00			3096.00	
Blank Off Sub	1.00			3097.00	
Packer (Interval Side)	3.10			3100.10	
Packer (Tail Side)	1.60			3101.70	
Perforations	4.00			3105.70	
Change Over Sub	0.85			3106.55	
Drill Pipe	317.60			3424.15	
Change Over Sub	1.03			3425.18	
Recorder	0.00	6755	Below	3425.18	
Bullnose	3.00			3428.18	350.18 Anchor Tool
Total Tool Length:	366.88				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **25-14S-16W Ellis,KS**
 1310 Bison Rd **Nancy #1**
 Hays KS 67601+9696 Job Ticket: 63462 **DST#: 3**
 ATTN: Herb Deines Test Start: 2018.09.17 @ 23:25:00

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: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 10500.00 ppm			
Filter Cake: 1.00 inches			

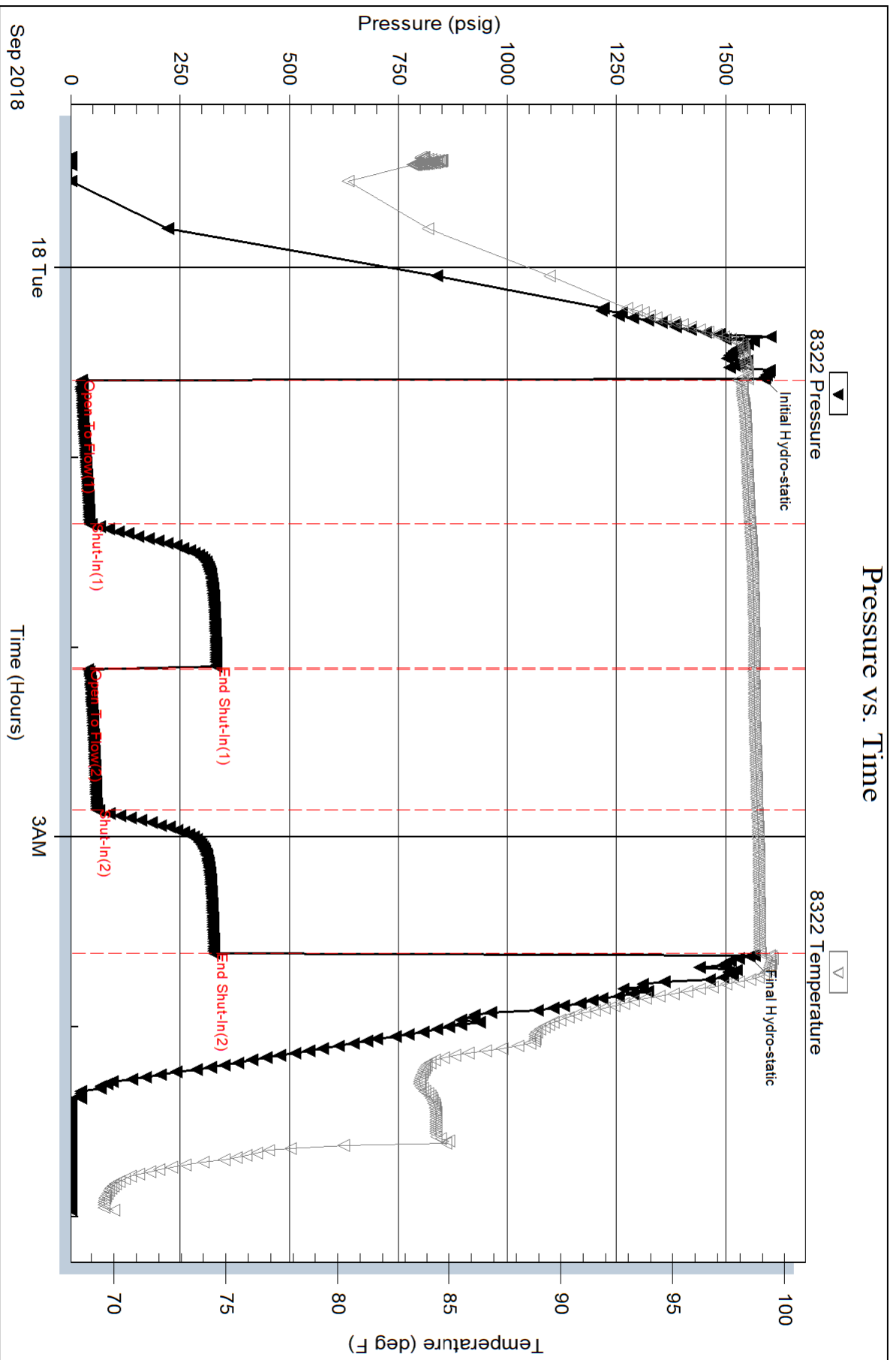
Recovery Information

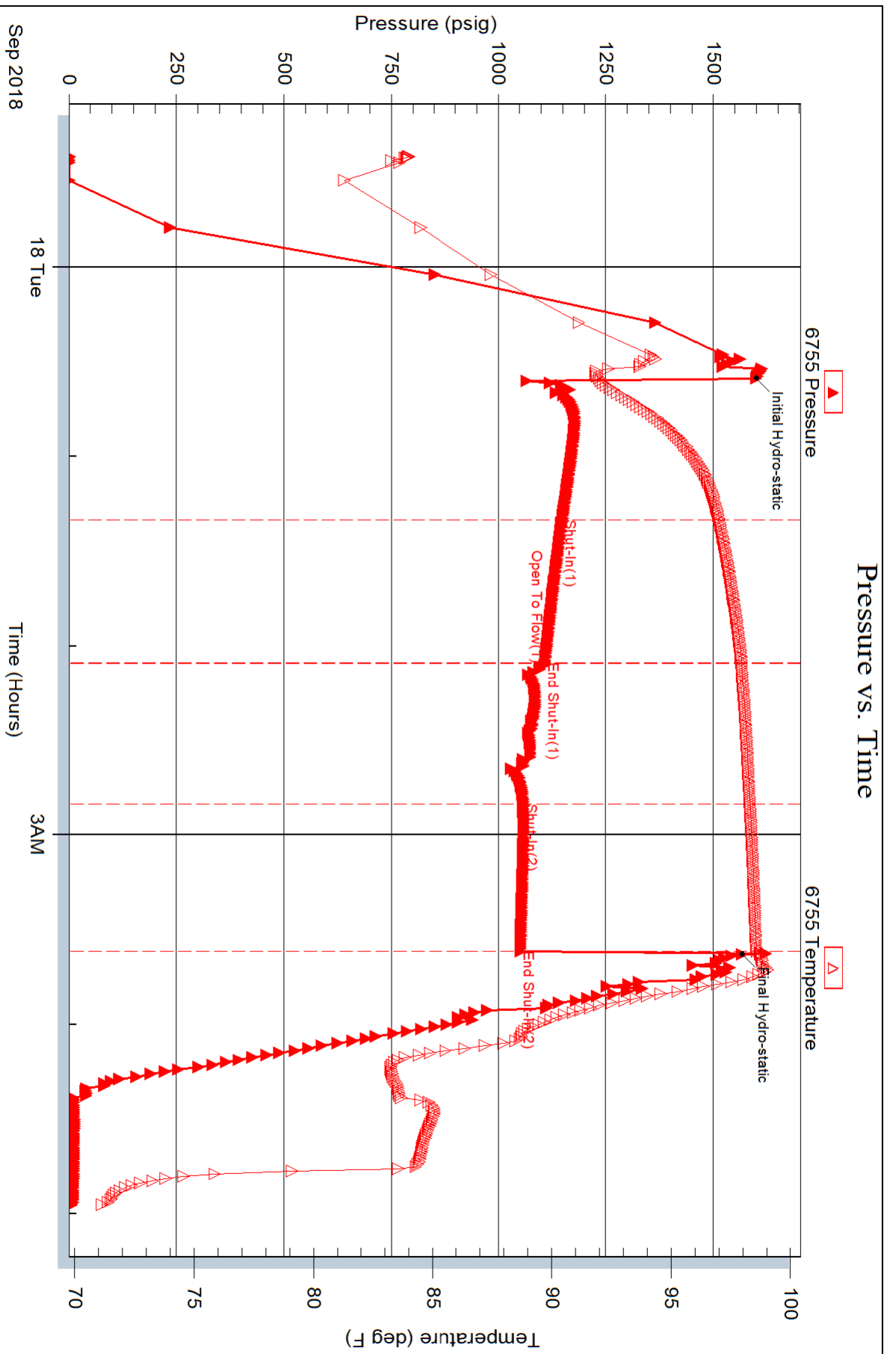
Recovery Table

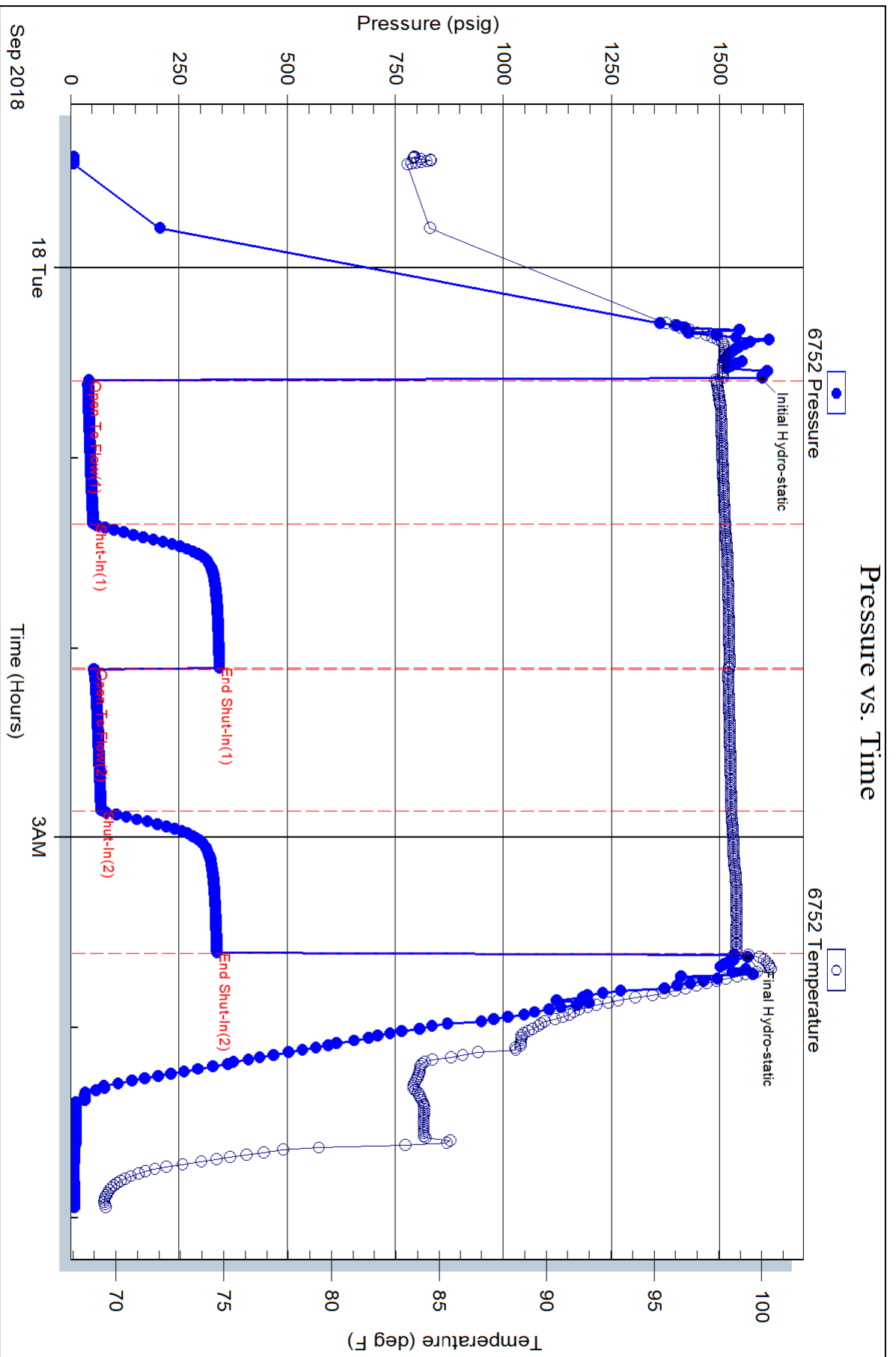
Length ft	Description	Volume bbl
90.00	GWOCM w ater 10% oil15% gas20% mud 55%	1.262
0.00	964' GIP	0.000

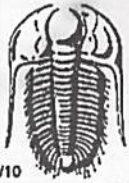
Total Length: 90.00 ft Total Volume: 1.262 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63460

Well Name & No. Nancy #1 Test No. 1 Date 15 Sept 18
 Company TDI Inc Elevation 1850 KB 1841 GL
 Address 1310 Bison Rd Hays Kansas 67601 + 9696
 Co. Rep / Geo. Hub Deines Rig Southwind Rig 8
 Location: Sec. 25 Twp 14S Rge. 16W Co. Ellis State KS

Interval Tested 3016-3115 Zone Tested Toronto - Lansing C
 Anchor Length 99 Drill Pipe Run _____ Mud Wt. 9.2
 Top Packer Depth 3011 Drill Collars Run — Vls 51
 Bottom Packer Depth 3016 Wt. Pipe Run — WL 6.0
 Total Depth 3115 Chlorides 2200 ppm System LCM 2#

Blow Description I.F. Blow built to BOB in 3 minutes Total build 151 inches
I.S.I. No blow back
F.F. Blow built to BOB in 2 minutes Total build 96 inches
F.S.I. Blow built ~~to BOB~~ an additional 10 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>Mud w/skim oil</u>				<u>100% mud</u>
<u>186</u>	<u>Oil cut Watery Mud</u>		<u>20%</u>	<u>30%</u>	<u>50% mud</u>
<u>806</u>	<u>GIP</u>	<u>100%</u>			
____	____	%gas	%oil	%water	%mud
____	____	%gas	%oil	%water	%mud

Rec Total _____ BHT 100 Gravity _____ API RW .390 @ 69 °F Chlorides 17000 ppm
 (A) Initial Hydrostatic 1513 Test 1050 T-On Location 8:32 pm
 (B) First Initial Flow 40 Jars _____ T-Started 9:35 pm
 (C) First Final Flow 86 Safety Joint _____ T-Open 11:24 pm
 (D) Initial Shut-In 657 Circ Sub _____ T-Pulled 2:24 am
 (E) Second Initial Flow 99 Hourly Standby _____ T-Out 3:50 am
 (F) Second Final Flow 135 Mileage 34 34 Comments _____
 (G) Final Shut-In 639 Sampler _____
 (H) Final Hydrostatic 1477 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1084
 Total 1084
 MP/DST Disc't _____

Approved By Hub Deines Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63461

Well Name & No. Nancy #1 Test No. 2 Date 16 Sept 18
 Company TDI Inc Elevation 1850 KB 1841 GL
 Address 1310 Bison Rd Hays Kansas 67601+9696
 Co. Rep / Geo. Herb Deines Rig Southwind Rig 8
 Location: Sec. 25 Twp 14S Rge. 16W Co. Ellis State KS

Interval Tested 3284-3320 Zone Tested Pleasanton
 Anchor Length 36 Drill Pipe Run 3273 Mud Wt. 9.3
 Top Packer Depth 3279 Drill Collars Run - Vls 57
 Bottom Packer Depth 3284 Wt. Pipe Run - WL 6.8
 Total Depth 3320 Chlorides 7400 ppm System LCM 2#

Blow Description I.F. Blow built to 1/8" died in 17 minutes
I.S.I No blow back
F.F. Dead no blow
F.S.I No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>mud w/skim oil</u>			<u>100</u>	
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 1 BHT 100 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1657 Test 1050 T-On Location 11:00 pm
 (B) First Initial Flow 14 Jars _____ T-Started 11:50 pm
 (C) First Final Flow 15 Safety Joint _____ T-Open 1:13 am
 (D) Initial Shut-In 33 Circ Sub _____ T-Pulled 4:13 am
 (E) Second Initial Flow 15 Hourly Standby _____ T-Out 5:28 am
 (F) Second Final Flow 15 Mileage 34 34 Comments _____
 (G) Final Shut-In 28 Sampler _____
 (H) Final Hydrostatic 1614 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45

Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1084

Sub Total _____
 Total 1084
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63462

Well Name & No. Nancy #1 Test No. 3 Date 17 Sep 18
 Company TDI Inc Elevation 1850 KB 1841 GL
 Address 1310 Bison Rd Hays Kansas 67601 + 9696
 Co. Rep / Geo. Herb Deines Rig Southwind Rig 8
 Location: Sec. 25 Twp 14S Rge. 16W Co. Ellis State KS

Interval Tested 3078-3102 Zone Tested Lansing C
 Anchor Length 24 Drill Pipe Run 3086 Mud Wt. 9.4
 Top Packer Depth 3073 Drill Collars Run - Vis 60
 Bottom Packer Depth 3078 Wt. Pipe Run - WL 10.0
 Total Depth 3430 Chlorides 10,500 ppm System LCM 2#

Blow Description I.F. Blow built to BOB in 9 minutes / Total build 70 inches
I.S.I. No blow back
F.F. Blow built to BOB in 1 minute / Total build 101 inches
F.S.I. Blow back built additional 2 inches

Rec	Feet of	%gas	%oil	%water	%mud
70	Watercut Gassy Oil Mud				
<u>964</u>	<u>GIP</u>	<u>100</u>			
<u>90</u>	<u>Watercut Gassy Oil Mud</u>	<u>20</u>	<u>15</u>	<u>10</u>	<u>55</u>
	<u>Emulsified Oil</u>				

Rec Total _____ BHT 99 Gravity 1050 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1587 Test _____ T-On Location 10:56 pm
 (B) First Initial Flow 24 Jars _____ T-Started 11:25 pm
 (C) First Final Flow 43 Safety Joint _____ T-Open 12:34 am
 (D) Initial Shut-In 332 Circ Sub _____ T-Pulled 3:34 am
 (E) Second Initial Flow 39 Hourly Standby _____ T-Out 4:57 am
 (F) Second Final Flow 59 Mileage 34 34 Comments _____
 (G) Final Shut-In 327 Sampler _____
 (H) Final Hydrostatic 1554 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1684
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1684

Approved By [Signature] Our Representative [Signature]

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