

Confidentiality Requested:

Yes No

#### Kansas Corporation Commission Oil & Gas Conservation Division

1088641

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 #			_ API No. 15				
Name:			Spot Description:				
Address 1:			SecTwpS. R East Wes				
Address 2:			Feet from North / South Line of Section				
City: State: Zip:+			Fe	eet from East / W	lest Line of Section		
Contact Person:			Footages Calculated from	Nearest Outside Section Cor	rner:		
Phone: ()			□ NE □ NW	V □SE □SW			
CONTRACTOR: License #			GPS Location: Lat:	, Long:			
Name:				(e.g. xx.xxxxx)	(e.gxxx.xxxxxx)		
Wellsite Geologist:			Datum: NAD27	NAD83 WGS84			
Purchaser:			County:				
Designate Type of Completion:			Lease Name:	Well	l #:		
	e-Entry	Workover	Field Name:				
	_	_	Producing Formation:				
☐ Oil ☐ WSW ☐ D&A	☐ SWD	□ SIOW □ SIGW	Elevation: Ground:	Kelly Bushing: _			
OG	GSW	Temp. Abd.	Total Vertical Depth:	Plug Back Total Dep	oth:		
CM (Coal Bed Methane)	_ dow	тетір. дай.	Amount of Surface Pipe Se	et and Cemented at:	Feet		
Cathodic Other (Con	re, Expl., etc.):		Multiple Stage Cementing	Collar Used? Yes N	No		
If Workover/Re-entry: Old Well In			If yes, show depth set:		Feet		
Operator:			If Alternate II completion, of	cement circulated from:			
Well Name:			feet depth to:	w/	sx cmt.		
Original Comp. Date:	Original T	otal Depth:					
Deepening Re-perf.	Conv. to E	NHR Conv. to SWD	Drilling Fluid Managemer	nt Plan			
☐ Plug Back	Conv. to G	SW Conv. to Producer	(Data must be collected from t				
Commingled	Dormit #		Chloride content:	ppm Fluid volume: _	bbls		
Dual Completion			Dewatering method used:				
SWD			Location of fluid disposal if	i hauled offsite:			
☐ ENHR			Loodiion of haid disposal in	nation office.			
GSW	Permit #:		Operator Name:				
_ <del>_</del>				License #:			
Spud Date or Date Re	ached TD	Completion Date or	Quarter Sec	TwpS. R	East _ West		
Recompletion Date		Recompletion Date	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
Geologist Report Received
UIC Distribution
ALT I II III Approved by: Date:

Page Two



Operator Name:				Lease N	Name: _			Well #:		
Sec Twp	S. R	East	West	County	:					
INSTRUCTIONS: Shopen and closed, flow and flow rates if gas to	ring and shut-in pres o surface test, along	sures, whethe with final cha	er shut-in pre art(s). Attach	essure reac n extra shee	hed stati t if more	c level, hydrosta space is neede	itic pressures, bot d.	tom hole temp	erature, fluid re	ecovery,
Final Radioactivity Lo files must be submitte						ogs must be ema	ailed to kcc-well-lo	gs@kcc.ks.go	v. Digital electr	ronic log
Drill Stem Tests Taker (Attach Additional		Yes	☐ No				on (Top), Depth ar		Sampl	
Samples Sent to Geo	logical Survey	Yes	□No		Nam	е		Тор	Datum	1
Cores Taken         ☐ Yes         ☐ No           Electric Log Run         ☐ Yes         ☐ No										
List All E. Logs Run:										
				RECORD	Ne					
	2	1				ermediate, product		T	I	
Purpose of String	Size Hole Drilled		Casing n O.D.)	Weig Lbs. /		Setting Depth	Type of Cement	# Sacks Used	Type and Pe Additive	
			ADDITIONAL	CEMENTIN	NG / SQL	JEEZE RECORD				
Purpose:	Depth Top Bottom	Type of	Cement	# Sacks	Used		Type and F	ercent Additives		
Perforate Protect Casing	100 20111111									
Plug Back TD Plug Off Zone										
1 lug 011 20110										
Did you perform a hydrau	ulic fracturing treatment	on this well?				Yes	No (If No, ski	ip questions 2 ar	nd 3)	
Does the volume of the t							= :	p question 3)		
Was the hydraulic fractur	ring treatment information	on submitted to	the chemical	disclosure re	gistry?	Yes	No (If No, fill	out Page Three	of the ACO-1)	
Shots Per Foot		ION RECORD Footage of Eac					cture, Shot, Cement			epth
	open,					,,				
TUBING RECORD:	Size:	Set At:		Packer A	t:	Liner Run:				
							Yes No			
Date of First, Resumed	Production, SWD or Ef	NHR.   F	Producing Met	hod: Pumpin	a	Gas Lift 0	Other (Explain)			
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Wat			Gas-Oil Ratio	Gra	avity
	1									
	ON OF GAS:		en Hole	METHOD OF			mmingled	PRODUCTION	ON INTERVAL:	ļ
Vented Solo	I Used on Lease bmit ACO-18.)		en noie _	Perf.	(Submit		mmingled mit ACO-4)			



Prepared For: TDI Inc.

1310 Bison Rd Hays KS 67601-9696

ATTN: Herb Deines

## Augustine #1

## 15-13s-17w Ellis,KS

Start Date: 2012.05.23 @ 07:43:05 End Date: 2012.05.23 @ 14:22:39 Job Ticket #: 47332 DST #: 1

Trilobite Testing, Inc PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



TDI Inc.

15-13s-17w Ellis, KS

1310 Bison Rd Hays KS 67601-9696 Augustine #1

Job Ticket: 47332

DST#: 1

ATTN: Herb Deines

End Date:

End Time:

Test Start: 2012.05.23 @ 07:43:05

#### **GENERAL INFORMATION:**

Formation: **Arbuckle** 

Test Type: Conventional Straddle (Initial) Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:22:10

Unit No: 39

Andy Carreira

Time Test Ended: 14:22:39

Tester:

2018.00 ft (KB)

Total Depth: 3732.00 ft (KB) (TVD) Reference Elevations: 2011.00 ft (CF)

KB to GR/CF: 7.00 ft

Hole Diameter: 7.88 inches Hole Condition: Fair

Serial #: 8372 Press@RunDepth:

Interval:

Outside

3539.00 ft (KB) 44.08 psig @

3536.00 ft (KB) To 3596.00 ft (KB) (TVD)

Capacity: Last Calib.: 8000.00 psig

Start Date: 2012.05.23 Start Time: 07:43:05

2012.05.23 14:22:40

Time On Btm:

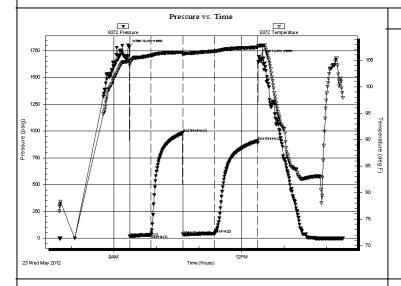
2012.05.23 @ 09:20:50

2012.05.23

Time Off Btm: 2012.05.23 @ 12:24:20

TEST COMMENT: IF:(30min) Fair 3" blow

ISI:(45min) No Return FF:(45min) 1" blow FSI:(60min) No Return



#### PRESSURE SUMMARY

Time	Pressure	Temp	Annotation
(Min.)	(psig)	(deg F)	
0	1788.17	104.93	Initial Hydro-static
2	17.24	104.05	Open To Flow (1)
32	31.25	105.88	Shut-In(1)
77	981.82	106.53	End Shut-In(1)
77	35.89	106.06	Open To Flow (2)
121	44.08	106.71	Shut-In(2)
182	908.81	107.44	End Shut-In(2)
184	1691.78	107.74	Final Hydro-static

#### Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM o=5% m=95%	0.84
10.00	CO o=100%	0.14
1		

#### Gas Rates

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

Trilobite Testing, Inc. Ref. No: 47332 Printed: 2012.05.24 @ 09:29:02



TDI Inc.

15-13s-17w Ellis, KS

1310 Bison Rd Hays KS 67601-9696 Augustine #1

Job Ticket: 47332

DST#: 1

ATTN: Herb Deines

Test Start: 2012.05.23 @ 07:43:05

#### **GENERAL INFORMATION:**

Formation: **Arbuckle** 

Test Type: Conventional Straddle (Initial) Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:22:10 Time Test Ended: 14:22:39

Andy Carreira

Unit No:

Tester:

39

2018.00 ft (KB)

3536.00 ft (KB) To 3596.00 ft (KB) (TVD) 3732.00 ft (KB) (TVD)

Reference Elevations:

2011.00 ft (CF)

Total Depth: Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF:

7.00 ft

Serial #: 8017 Inside

Press@RunDepth:

psig @

3539.00 ft (KB)

Capacity: Last Calib.: 8000.00 psig

Start Date:

2012.05.23

End Date:

2012.05.23 14:22:50

Time On Btm:

2012.05.23

Start Time:

Interval:

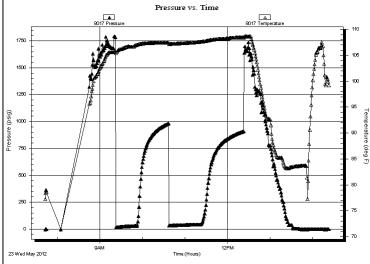
07:43:05

End Time:

Time Off Btm:

TEST COMMENT: IF:(30min) Fair 3" blow

ISI:(45min) No Return FF:(45min) 1" blow FSI:(60min) No Return



#### PRESSURE SUMMARY

_				
	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
er				
Temperature (deg F)				
ature.				
(dea				
J				
	1	i .		

#### Recovery

Description	Volume (bbl)
OCM o=5% m=95%	0.84
CO o=100%	0.14
	OCM o=5% m=95%

#### Gas Rates

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

Trilobite Testing, Inc. Ref. No: 47332 Printed: 2012.05.24 @ 09:29:02



TDI Inc.

15-13s-17w Ellis, KS

1310 Bison Rd Hays KS 67601-9696 Augustine #1

Job Ticket: 47332

DST#: 1

ATTN: Herb Deines

Test Start: 2012.05.23 @ 07:43:05

#### **GENERAL INFORMATION:**

Formation: **Arbuckle** 

Test Type: Conventional Straddle (Initial) Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:22:10 Time Test Ended: 14:22:39

Unit No: 39

Tester:

Andy Carreira

2018.00 ft (KB)

Reference Elevations:

2011.00 ft (CF)

3732.00 ft (KB) (TVD)

KB to GR/CF:

7.00 ft

7.88 inches Hole Condition: Fair

Serial #: 8647 Below (Straddle)

psig @

3536.00 ft (KB) To 3596.00 ft (KB) (TVD)

3605.00 ft (KB)

Capacity: 2012.05.23 Last Calib.: 8000.00 psig

Start Date: Start Time:

Press@RunDepth:

Interval:

Total Depth:

Hole Diameter:

2012.05.23 07:43:05

End Date: End Time:

14:21:10

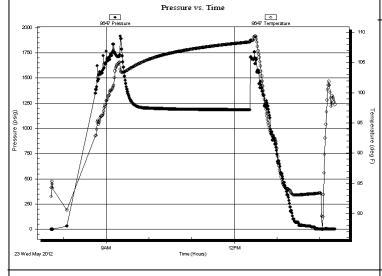
Time On Btm:

2012.05.23

Time Off Btm:

TEST COMMENT: IF:(30min) Fair 3" blow

ISI:(45min) No Return FF:(45min) 1" blow FSI:(60min) No Return



#### PRESSURE SUMMARY

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

#### Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM o=5% m=95%	0.84
10.00	CO o=100%	0.14
<del></del>		

#### Gas Rates

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

Trilobite Testing, Inc. Ref. No: 47332 Printed: 2012.05.24 @ 09:29:02



**TOOL DIAGRAM** 

TDI Inc.

15-13s-17w Ellis, KS

1310 Bison Rd Hays KS 67601-9696 Augustine #1

Job Ticket: 47332

DST#:1

ATTN: Herb Deines

Test Start: 2012.05.23 @ 07:43:05

**Tool Information** 

Drill Pipe: Length: 3540.00 ft Diameter:
Heavy Wt. Pipe: Length: 0.00 ft Diameter:
Drill Collar: Length: 0.00 ft Diameter:

 40.00 ft
 Diameter:
 3.80 inches Volume:
 49.66 bbl

 0.00 ft
 Diameter:
 2.70 inches Volume:
 0.00 bbl

 0.00 ft
 Diameter:
 2.25 inches Volume:
 0.00 bbl

Total Volume:

49.66 bbl

Tool Weight: 3000.00 lb Weight set on Packer: 24000.00 lb Weight to Pull Loose: 48000.00 lb

Drill Pipe Above KB: 24.00 ft
Depth to Top Packer: 3536.00 ft
Depth to Bottom Packer: 3596.00 ft

Tool Chased 0.00 ft
String Weight: Initial 38000.00 lb

Interval between Packers: 60.00 ft
Tool Length: 220.00 ft

Final 39000.00 lb

Tool Length: 220.00 ft Number of Packers: 2

2 Diameter: 6.75 inches

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3517.00		
Shut In Tool	5.00			3522.00		
Hydraulic tool	5.00			3527.00		
Packer	5.00			3532.00	20.00	Bottom Of Top Packer
Packer	4.00			3536.00		
Stubb	1.00			3537.00		
Perforations	1.00			3538.00		
Change Over Sub	1.00			3539.00		
Recorder	0.00	8017	Inside	3539.00		
Recorder	0.00	8372	Outside	3539.00		
Drill Pipe	31.00			3570.00		
Change Over Sub	1.00			3571.00		
Perforations	20.00			3591.00		
Blank Spacing	4.00			3595.00		
Blank Off Sub	1.00			3596.00	60.00	Tool Interval
Packer	4.00			3600.00		
Stubb	1.00			3601.00		
Perforations	3.00			3604.00		
Change Over Sub	1.00			3605.00		
Recorder	0.00	8647	Below	3605.00		
Drill Pipe	126.00			3731.00		
Change Over Sub	1.00			3732.00		
Perforations	2.00			3734.00		
Bullnose	2.00			3736.00	140.00	Bottom Packers & Anchor
Total Tool Length	220.00					

Trilobite Testing, Inc Ref. No: 47332 Printed: 2012.05.24 @ 09:29:03



**FLUID SUMMARY** 

TDI Inc.

15-13s-17w Ellis, KS

1310 Bison Rd Hays KS 67601-9696 Augustine #1

Job Ticket: 47332

DST#:1

ATTN: Herb Deines

Test Start: 2012.05.23 @ 07:43:05

#### **Mud and Cushion Information**

Mud Type:Gel ChemCushion Type:Oil A Pl:deg A PlMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Mud Weight:9.00 lb/galCushion Length:ftViscosity:57.00 sec/qtCushion Volume:bbl

Water Loss: 6.79 in<sup>3</sup> Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 6500.00 ppm Filter Cake: inches

#### **Recovery Information**

#### Recovery Table

Length ft	Description	Volume bbl	
60.00	OCM o=5% m=95%	0.842	
10.00	CO o=100%	0.140	

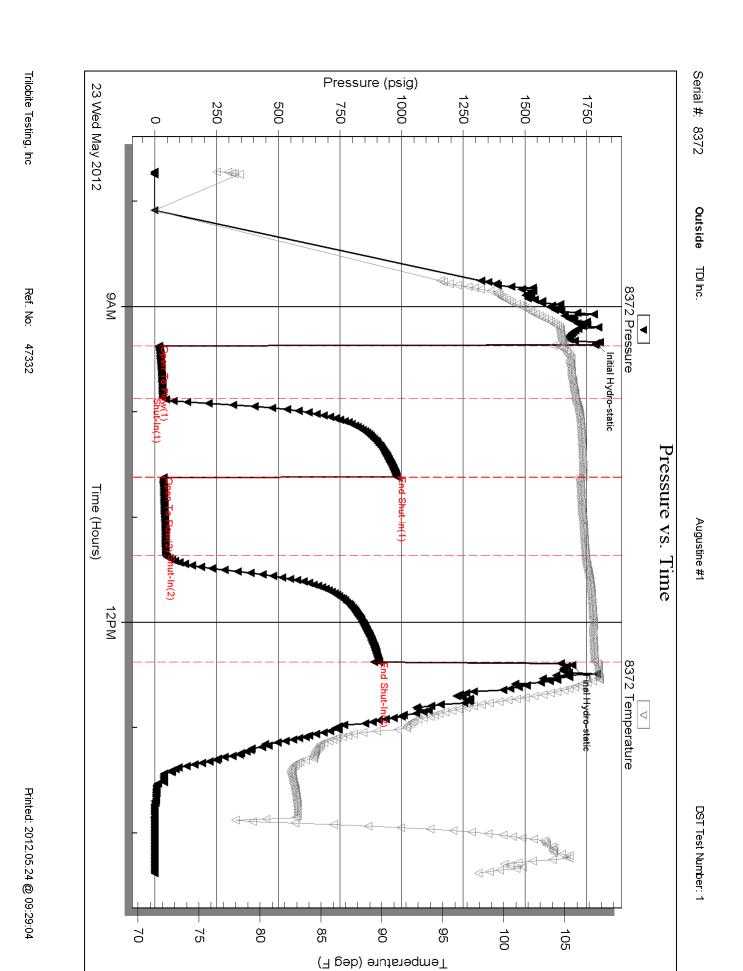
Total Length: 70.00 ft Total Volume: 0.982 bbl

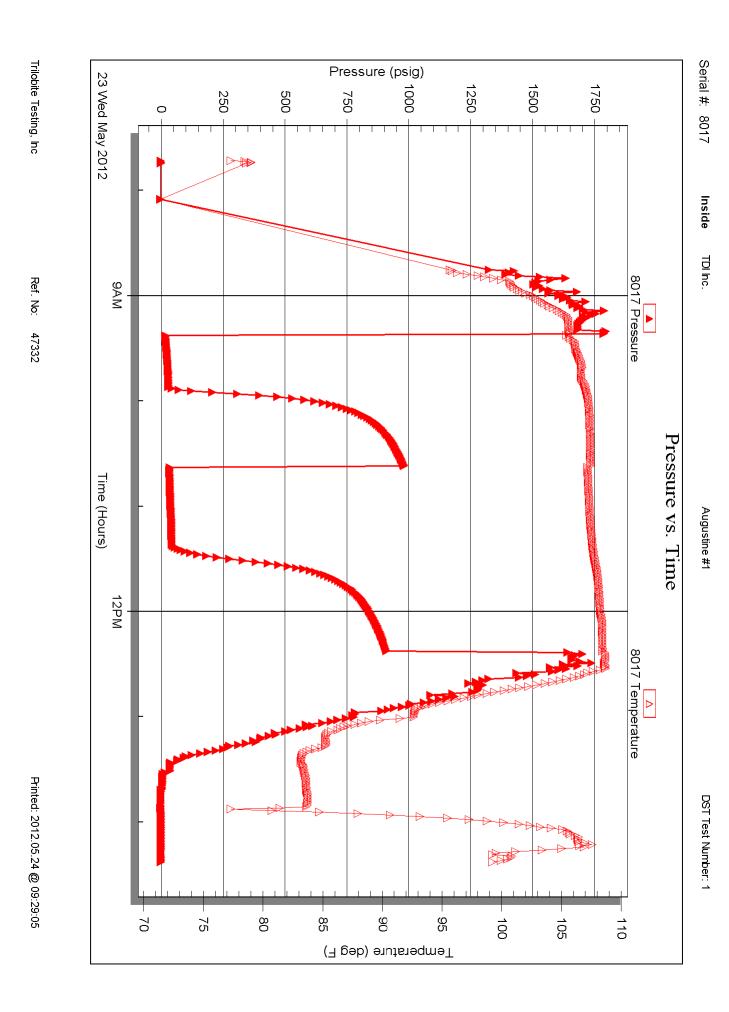
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

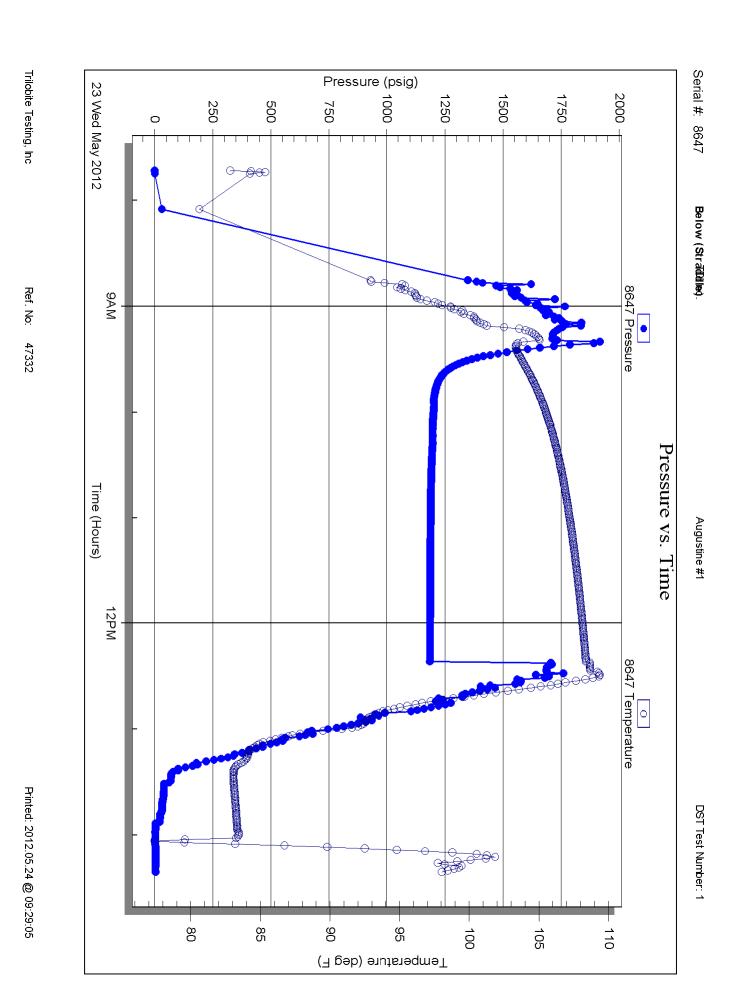
Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 47332 Printed: 2012.05.24 @ 09:29:04









# RILOBITE ESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## **Test Ticket**

NO. 47332

4/10					
Well Name & No. Augustine #1		Test No.	1	Date 5-2	3-12
Company TDI INC		Elevation	2018	кв 201	GL
Address 1310 BISON RJ	Hays, Ks.	67601+	9696	-0	
Co. Rep/Geo. WERD DEINES	1	Rig	uthwind	# /	
Location: Sec. 15 Twp. 135	Rge. 17W	_co E/1	lis	State /	5
Interval Tested 3536 - 3596	Zone Tested	Debuckle			
Anchor Length	Drill Pipe Run	3540	Mu	ud Wt 2. /	
Top Packer Depth 3536	Drill Collars Run	0	Vis	57	
Bottom Packer Depth 3596	Wt. Pipe Run	0	WI	6.8	
Total Depth 3732	Chlorides 65	700 ppr	m System LC	м 2	
Blow Description IF: FAIR 3" blo	1	- 10-10-10-10-10-10-10-10-10-10-10-10-10-1	7 ( ) - <b>8</b> ( ) ( ) ( ) ( )		
ISI: NO RETURN					
FF: I" HOW					
FSI NO RETURN					
Rec/O Feet ofCO	- 3	%gas	10 0/oil	%water	%mud
Rec_ 60 Feet of 0Cm		%gas	5 %oil	%water	95 %mud
RecFeet of		%gas	%oil	%water	%mud
RecFeet of		%gas	%oil	%water	%mud
Rec Feet of		%gas	%oil	%water	%mud
Rec Total 70' BHT	Gravity, ### 24		a °FC	nlorides	ppm
(A) Initial Hydrostatic 1788	Test 1150		T-On Local		
(B) First Initial Flow/7	☐ Jars		T-Started _	0714	3
(C) First Final Flow3	☐ Safety Joint		T-Open	09:22	2
(D) Initial Shut-In	☐ Circ Sub		T-Pulled	12:22	
(E) Second Initial Flow 35	☐ Hourly Standby	ter i gr	T-Out	14:23	22
(F) Second Final Flow	Mileage < 19	eT 29.45	Comments	/	
(G) Final Shut-In 908	□ Sampler_	<u> </u>	_		
(H) Final Hydrostatic /69/		600		- 32	
				Shale Packer_	
nitial Open 30	☐ Shale Packer			Packer	
nitial Shut-In	☐ Extra Packer			Copies	
Final Flow 45	☐ Extra Recorder _		_ odo rotar_		
Final Shut-In 60	☐ Day Standby	164	Total177		
mai onut-iii	Accessibility	F 197	MP/DST I	Disc't	
	Sub Total 1779.4	:5	111	(.)	
Approved By			4 1/1		

Approved By

Our Representative

Our Representative

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

**OPERATOR** 

Company: TDI, INC.

Address: 1310 BISON ROAD HAYS, KANSAS 67601

Contact Geologist: TOM DENNING Contact Phone Nbr: 785-259-3141 **AUGUSTINE #1** Well Name:

NW NW SE SW Location: API: 15-051-26,290-00-00 Pool: **INFIELD** Field: **CATHERINE SOUTH** 

State: USA Kansas Country:



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

Scale 1:240 Imperial

Well Name: AUGUSTINE #1 NW NW SE SW Surface Location:

**Bottom Location:** API:

15-051-26,290-00-00

License Number: 4787 Spud Date: 5/18/2012 Region: **ELLIS COUNTY** Drilling Completed: 5/22/2012

Surface Coordinates:

1200' FSL & 1400' FWL

**Bottom Hole Coordinates:** Ground Elevation:

2008.00ft K.B. Elevation: 2018.00ft

2900.00ft Logged Interval: To: 3732.00ft

3735.00ft Total Depth: Formation: **ARBUCKLE** 

Drilling Fluid Type: Chemical/Fresh Water Gel

#### SURFACE CO-ORDINATES

Well Type: Vertical

Longitude:

N/S Co-ord: 1200' FSL E/W Co-ord: 1400' FWL Latitude:

3:30 PM

8:14 PM

Time:

Time:

### **LOGGED BY**



**SOLUTIONS CONSULTING** Company:

108 W 35TH Address:

HAYS, KS 67601

Phone Nbr: (785) 639-1337

Logged By: Geologist HERB DEINES Name:

CONTRACTOR

SOUTHWIND DRILLING, INC. Contractor:

Rig #:

MUD ROTARY Rig Type: Spud Date: 5/18/2012 TD Date: 5/22/2012

Time: 3:30 PM 8:14 PM Time: 5/24/2012 2:00 AM Rig Release: Time:

**ELEVATIONS** 

2018.00ft Ground Elevation: 2008.00ft K.B. Elevation:

K.B. to Ground: 10.00ft

## **NOTES**

RECOMMENDATION TO RUN 5 1/2' PRODUCTION CASING TO TEST ARBUCKLE BASED ON FAVORABLE STRUCTURE AND POSITIVE RESULTS OF DST # 1.

## FORMATION TOPS AND DAILY ACTIVITY REPORT

## NW NW SE SW 1200' FSL & 1400' FWL, SW/4

Sec.15-13s-17w

2008' GL		
<u>FORMATION</u>	SAMPLE TOP	LOG TOP
Anhydrite	1242+ 776	1240+ 778
B-Anhydrite	1277+ 741	1275+ 743
Topeka	3033-1015	3028-1010
Heebner Shale	3273-1255	3268-1250
Toronto	3294-1276	3289-1271
LKC	3319-1301	3314-1296
ВКС	3544-1526	3540-1522
Arbuckle	3563-1545	3558-1540
RTD	3735-1717	

5-18-12 RU, Spud, set surface casing to 215' w/150 sxs. Common, 2%gel,

3%CC, Slope survey ¼ degree, WOC 8 hrs. Plug down 7:15PM.

3732-1714

5-19-12 446' drilling 5-20-12 1955' drilling 5-21-12 2864' drilling 5-22-12 3405' drilling

LTD

5-23-12 3735' RTD, Logs, DST#1 Straddle test, run production casing

5-24-12 3735' finish cementing DV tool, RD

## DST #1 STRADDLE TEST - ARBUCKLE



## DRILL STEM TEST REPORT

TDI Inc. 15-13s-17w Ellis,KS

 1310 Bison Rd.
 Augustine #1

 Hays KS 67601+9696
 Job Ticket: 47332
 DST#:1

 ATTN: Herb Deines
 Test Start: 2012.05.23 @ 07:43:05

GENERAL INFORMATION:

Formation: Arbuckle

Deviated: No Whipstock: ft

b Whipstock: ft (KB) Test Type: Conventional Straddle (Initial) 222:10 Tester: Andy Carreira

 Time Tool Opened: 09:22:10
 Tester:
 Andy Carreira

 Time Test Ended: 14:22:39
 Unit No:
 39

 Interval:
 3536.00 ft (KB) To
 3596.00 ft (KB) (TVD)
 Reference Elevations:
 2018.00 ft (KB)
 ft (KB)

 Total Depth:
 3732.00 ft (KB) (TVD)
 2011.00 ft (CF)

 Total Depth:
 3732.00 ft (KB) (TVD)
 2011.00 ft (CF)

 Hole Diameter:
 7.88 inchesHole Condition: Fair
 KB to GR/CF:
 7.00 ft

 Serial #: 8372
 Outside

3539.00 ft (KB) Press@RunDepth: 44.08 psig @ 8000.00 psig Capacity: 2012.05.23 Start Date: 2012.05.23 End Date: Last Calib.: 2012.05.23 07:43:05 2012.05.23 @ 09:20:50 Start Time: End Time: 14:22:40 Time On Btm: 2012.05.23 @ 12:24:20 Time Off Btm:

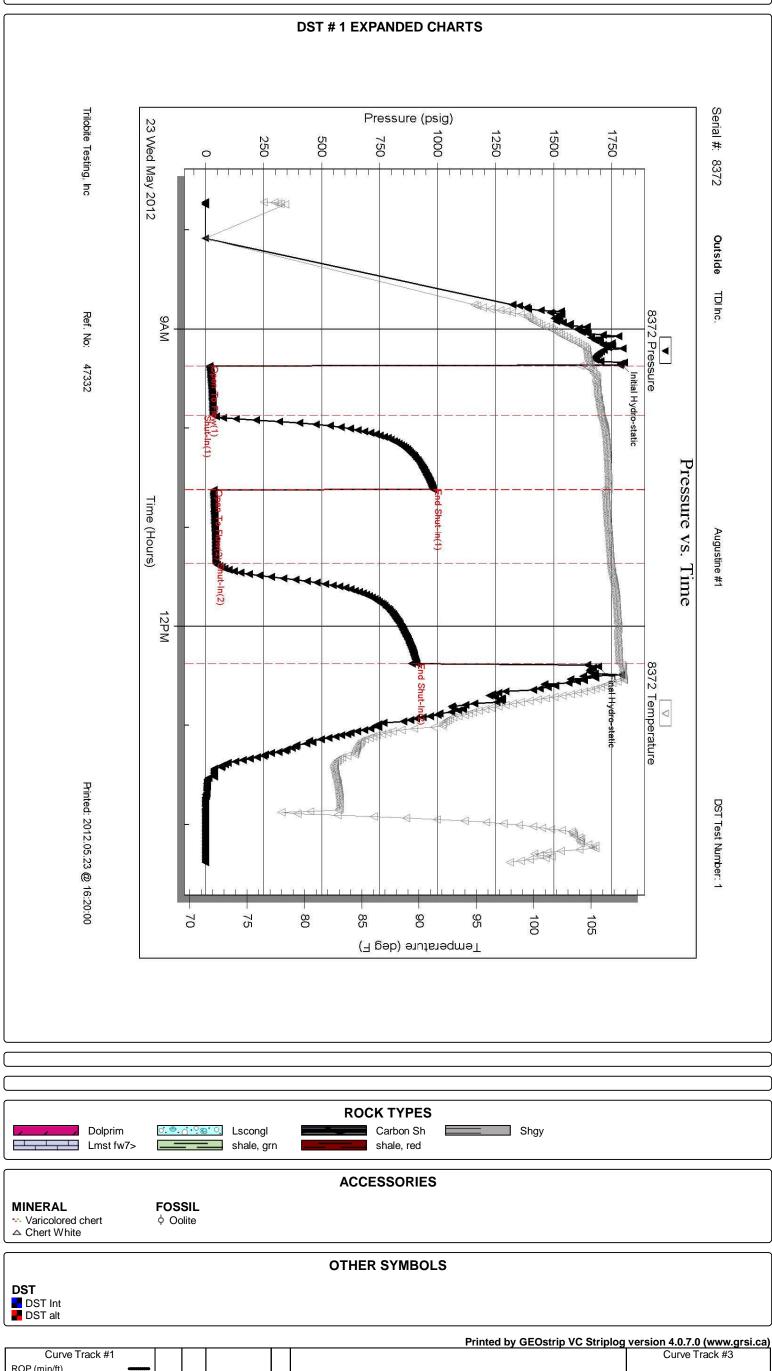
TEST COMMENT: IF:(30min) Fair 3" blow ISI:(45min) No Return

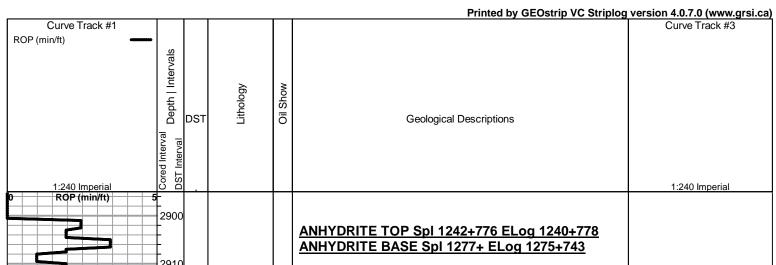
ISI:(45min) No Return FF:(45min) 1" blow FSI:(60min) No Return

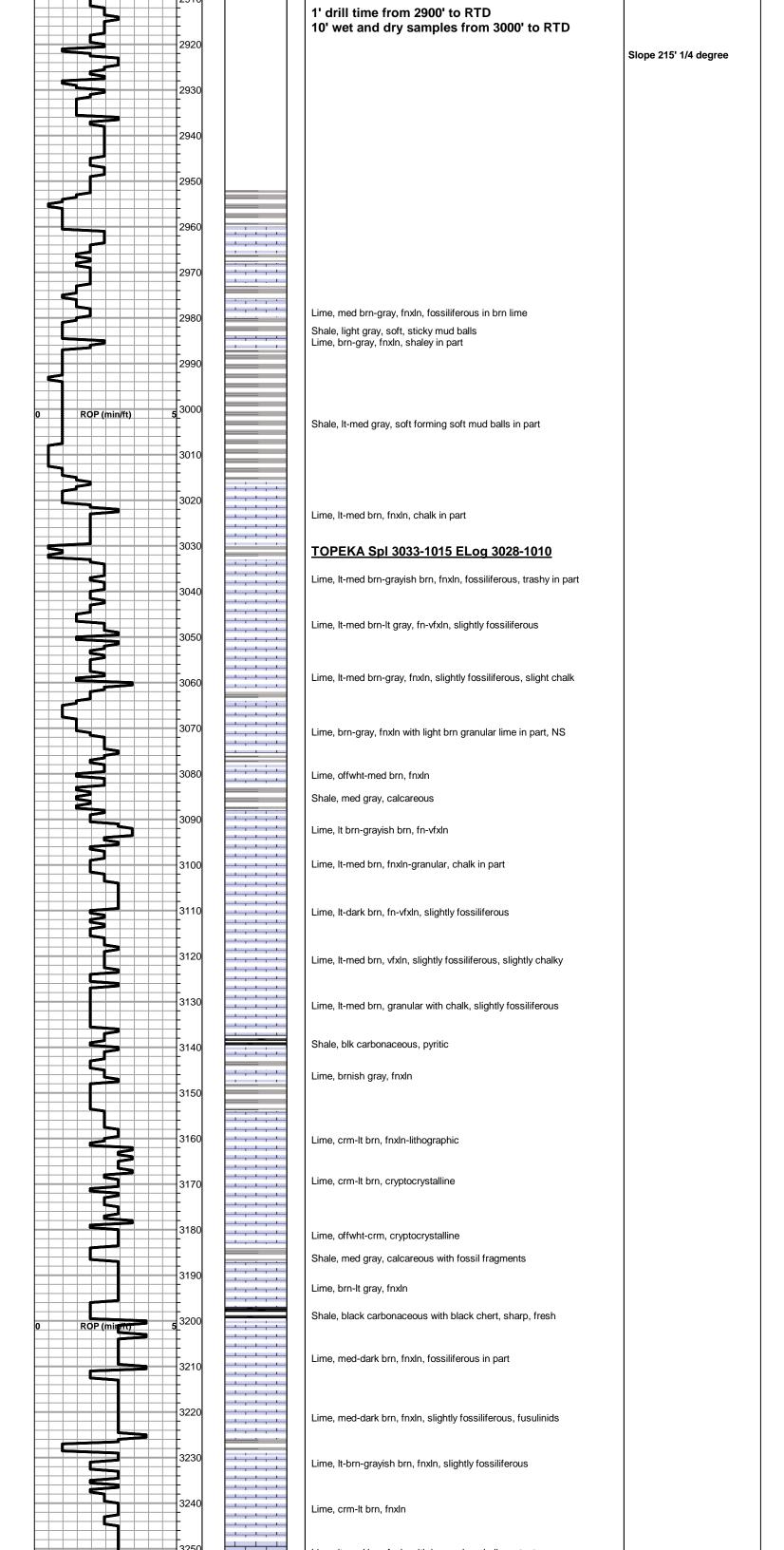
Pressure vs. Time				PRESSURE SUMMARY			
	0072 Pressure	9072 Temperature	Time	Pressure	Temp	Annotation	
1750 -	<u> </u>		(Min.)	(psig)	(deg F)		
	30	M A 1"	0	1788.17	104.93	Initial Hydro-static	
1900 -	<u> </u>	<b>1</b>	2	17.24	104.05	Open To Flow (1)	
1250 -	#   i i i	1 2	32	31.25	105.88	Shut-In(1)	
	· /#   ! ! !	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	77	981.82	106.53	End Shut-In(1)	
1000 -	//		77	35.89	106.06	Open To Flow (2)	
		→ ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	121	44.08	106.71	Shut-In(2)	
760 -		1 1 2	182	908.81	107.44	End Shut-In(2)	
600 -			184	1691.78	107.74	Final Hydro-static	
	- / J J	<b>4</b>					
250 -		*					
	[ \	1 1 1 1 1 1 1 1					
0 -	i i i i i i i i i i i i i i i i i i i	70					
3 Wed Ma	QAM Time (Hours)	12FM					
o well Mi	y and Ime (Hous)						

Recovery				
Length (ft)	Description	Volume (bbl)		
60.00	OCM o=5% m=95%	0.84		
10.00	∞ o=100%	0.14		

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



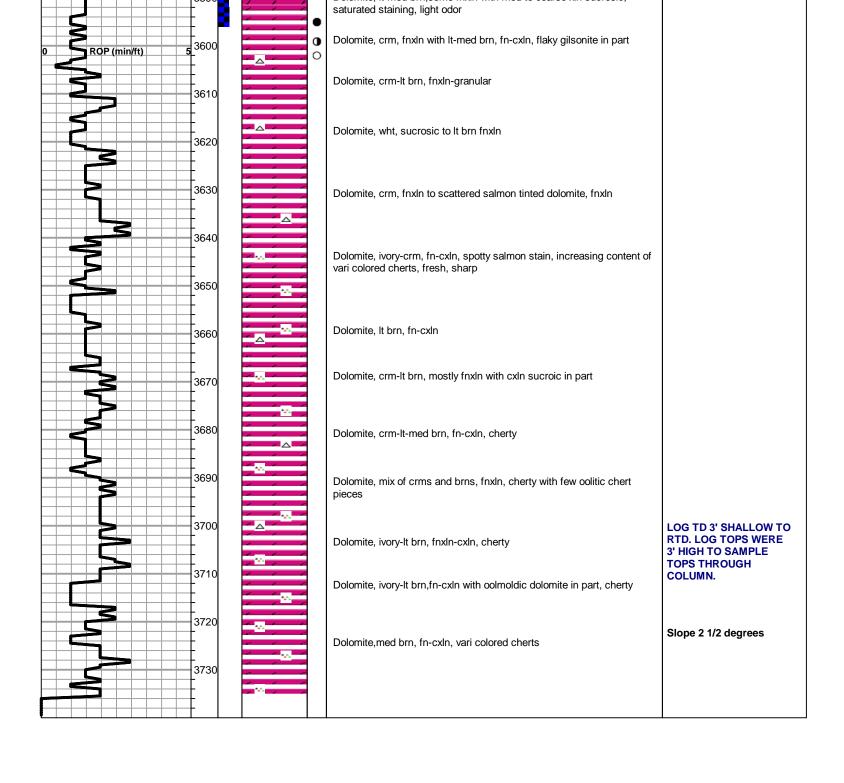




3260 Lime, It-med brn, fnxln, chalk in part with gray mottling in part 3270 HEEBNER SHALE Spl 3273-1255 ELog 3268-1250 Shale, black carbonaceous 3280 Lime, brn, fnxln Shale, lime green-dove gray, soft 3290 TORONTO Spl 3294-1276 ELog 3289-1271 Lime, It-med brn, fnxln, chalk in part,few chips with pinpoint vuggy porosity, VMSFO on break, No Odor 3300 Lime, crm-wht, fn-vfxln, NS 3310 Shale, red, soft forming mud balls LKC Spl 3319-1301 ELog 3314-1296 3320 Lime, It-med brn, fnxln 3330 Shale, red wash Lime, crm-lt-med brn, fnxln, chalk in part, NS В 3340 Lime, It-med brn-It gray in part, fn-vfxln 3350 C Lime, It-med brn-It gray, fn-vfxln 3360 Lime, crm-lt brn, vfxln, very clean in appearance, slight chalk in part Ð 3370 Shale, gray-black carbonaceous 3380 Lime, It brn, fnxln Shale, lime green, soft 3390 Lime, crm-tan, mostly fnxln, few chips with vuggy porosity with minor \_\_\_\_ SFO on break with light odor 3400 Lime, crm-tan, fn-vfxln, very clean 3410 Lime, crm-tan, fn-vfxln, slight chalk in part 3420 G Lime, crm-tan, fn-vfxln 3430 Lime, It brn, shaley, fnxln Shale, blk carbonaceous with black chert 3440 G Shale, gray, calcareous 3450 Lime, crm-gray, fnxln, slightly fossiliferous, light scattered stain in fine pinpoint porosity NFO, No Odor Н 3460 Lime, crm-lt brn, fn-vfxln 3470 3480 Lime, It-med brn, fn-vfxln 3490 Lime, crm-lt brn, few oolmolic with scattered stain, NFO, No Odor Lime, It-med brn, fnxln 3510 ·· • • • Lime, crm-lt brn, mostly fnxln, oolmoldic in part with light odor on crush, spreading stain as sample heated up. -- ¢ ---3520 \_\_\_\_ K Lime, crm-med brn, fn-vfxln, bedded chalk in part \_\_\_\_ 3530 \_\_\_ \_\_\_\_ Lime, It-med brn, fn-vfxln, chalk in part 3540 -3550 -3560 -3570 -3580 \_\_\_\_ Lime, It brn, fn-vfxln BKC Spl 3544-1526 ELog 3540-1522 Shale, reddish brn, blocky Lime, clastic mix with red shale staining Shale, It brnish red, soft, vari color cherts **DST #1 STRADDLE TEST** ARBUCKLE Spl 3563-1545 ELog 3558-1540 3536-3596 LOG INTERVAL SEE HEADER FOR TEST DETAILS AND CHART Dolomite, It-med brn, fn-med granular, sucrosic, saturated stain with light odor and MSFO as sample warmed up Dolomite, It-med brn, fn-med granular, saturated staining, light odor

Dolomite, It-med bro some foxlo with med to coarse xlo sucrosic

Lime, it-med brn, fixin with increasing chalk content



## QUALITY OILWELL CEMENTING, INC. Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 662

Cell 785-324-1041		e des comme	distant in the fact				T	<del> </del>	
of the merchand sa. For	Sec.	Twp.	Range		County	State	On Location	Finish	
Date 5-19-12	15	13	17	P	115	K3	a TABMOTELET a	1.15pm	
Lease Avaystine Well No./ Locatio					on Catherine 12 = 15 1/2 EVinto				
Contractor Southward #				Owner	to appred revioluti	Sarrana Vaconani,	ua est fierte loentrelo		
Type Job Surface			To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish						
Hole Size 121/4		T.D. 7	1.5		cementer and helper to assist owner or contractor to do work as listed.				
Csg. 85/8		Depth	215	A COLUMN	Charge To	DI	a legal yna i'r ddiol a Daell yn ar yn ac yn ar	YSMHOTER-	
Tbg. Size		Depth			Street Street				
Tool	Depth			City State					
Cement Left in Csg. 15	besoup	Shoe Joint			The above was done to satisfaction and supervision of owner agent or contractor.				
Meas Line		Displac	e/21/230		Cement Amo	ount Ordered 150	com 3%/L	20/0601	
	EQUIP	MENT			attioned back	01 - 11 - 10 - 10 - 10 - 10 - 10 - 10 -	In any made a second	J - 70 - 10 - 771 - 17 - 17	
Pumptrk 9 No. Ceme		raig			Common /	50	y with most to of Jac	o Inen quice pallue	
Bulktrk No. Driver	mar	††		1107 E	Poz. Mix	Losa son son son	LATERNICATION	HAT POSSES	
Bulktrk /4 No. Driver	Linn	e	3 107 000 3 300 40		Gel. 3	TUALID YOU DAY FEE	WOYELD tehatem	u rito so nolados liso	
JOB SE	RVICES	& REMA	RKS		Calcium S				
Remarks:	SRATE S	95/F/F0.1/	sagorq becards	resil balol	Hulls 19 Williams of Restrictions of Amortische Dagwerss -				
Rat Hole				er Landin. Oroson sel	Salt Salt				
Mouse Hole	arikalo lis	acy and a	Faritiga (* 14. c	ich jage	Flowseal Done See See See See See See See See See S				
Centralizers	M 10) cons	Marie as			Kol-Seal				
Baskets					Mud CLR 48				
D/V or Port Collar				year, year	CFL-117 or CD110 CAF 38				
85/800 hote	m.F	34/	a colution		Sand seep at the same that the				
MX1505K4	5:50	lace			Handling 15 B				
estames and					Mileage			rented has PERSO	
-voicins was all sallo		411			FLOAT EQUIPMENT				
alesmus ni notus leum		9 9 9	list etalo estatos i		Guide Shoe				
					Centralizer	95/0	Sisant	named by container	
naturika SampleUS	ebnaki	ar reon s lane bess			Baskets	0/0			
				AFU Inserts					
				Float Shoe					
					Latch Down				
			THE WALLS SH				to follow I hemeda	in to flader ord ec	
			Ta a				Programme with the second	Mora sceni	
Aut to annot but to the second of the second				Pumptrk Charge Syrtace					
nation, or data furnished.	tear st	tial engl	n earfachean n	o gaen s	Mileage / 3	OMERICAN BERNOO	a toerence sin	t e cointol/ (8)	
-LIAUCY of ecian anenul		ani io a	Chages to sev	dans ne	Ismohi bed	n znomen komu.	Tax	( Is to YTLIAUD ye	
- X20 bins nown to go the	1	-1	regree YM (All)	Orgel ers	is mode (S)	es se conservay an Arventina or galla.	Discoun	t	
X Signature Del	fe	//	Cy inebreides	00 08 08	oo, orti diskon		Total Charge	of or the Outsile	
					_			MINUTEUU MINK	

SWIFT Services, Inc. DATE 35-23-12 PAGE NO. JOB LOG JOB TYPE 2-57A4E TICKET NO. WELL NO. CUSTOMER AUGISTINE PRESSURE (PSI) PUMPS RATE (BPM) VOLUME (BBL) (GAL) CHART DESCRIPTION OF OPERATION AND MATERIALS TIME TUBING CASING NO. EN LOCATION 2030 CMT: BUTEN 1505550 EA-2 700 200 50 Sma RTD 3735 SET PIPER 3728 SJ42.53 ZNSELT 3785 5/2 H // D.V. on Tap #60, 125 FT CENT: 1.3.5,6,8,10, 12,59 BADIERS: 4,14,60,82 RUN 38 JOINTS, JOINSSOUT 2,40,91 2215 START CSUAFIDATEDY TAGBETTEN - DROPBALL 2345 BREMICIAL & ROMATEPIDE 2350 500 GAZS MUDFLISH 5.0 200 0050 206615 Na Fush 20 1508B EA-2 DROD L.D. PLUK &WASTOUT P.L. START DISP. W/ HD 0105 6.5 20 1. " W/MED 15bb/s " WHA 15665 600 77 85 700 LAND PLUS 0120 901 RELEASER, DET DEOD DU OPENING DARY PLUS RH30, MH20 0125 7.5 OPEN DIV. 4/5 bb/succ 0133 5.0 1100 20 START SMOOM 0/35 5.7 0 200 END 85 0150 DROP DIV. CLOSING PLYG 0153 START DIOP 500 200 CIRCONY TO PIT!! 20 SKS 90 400 25 500 LZOU LAND & CLOSE DIV. 0000 30,1

0245

Conservation Division Finney State Office Building 130 S. Market, Rm. 2078 Wichita, KS 67202-3802



Phone: 316-337-6200 Fax: 316-337-6211 http://kcc.ks.gov/

Mark Sievers, Chairman Thomas E. Wright, Commissioner Sam Brownback, Governor

July 25, 2012

Tom Denning TDI, Inc. 1310 BISON RD HAYS, KS 67601-9696

Re: ACO1 API 15-051-26290-00-00 Augustine 1 SW/4 Sec.15-13S-17W Ellis County, Kansas

#### **Dear Production Department:**

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully, Tom Denning