

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

**ORIGINAL**

Form ACO-1  
June 2009

Form Must Be Typed  
Form must be Signed  
All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # 33335  
Name: IA Operating, Inc  
Address 1: 9915 W 21st Street, Ste B  
Address 2: \_\_\_\_\_  
City: Wichita State: KS Zip: 67205 + \_\_\_\_\_  
Contact Person: Robert Swann  
Phone: ( 316 ) 721-0036  
CONTRACTOR: License # 34233  
Name: Maverick Drilling, LLC  
Wellsite Geologist: Steve Miller  
Purchaser: None

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  
 Conv. to GSW  
 Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled    Permit #: \_\_\_\_\_  
 Dual Completion    Permit #: \_\_\_\_\_  
 SWD    Permit #: \_\_\_\_\_  
 ENHR    Permit #: \_\_\_\_\_  
 GSW    Permit #: \_\_\_\_\_

<u>12/26/10</u>	<u>1/2/11</u>	<u>1/2/11</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 051-26068-0-000  
Spot Description: \_\_\_\_\_  
SE NE NE Sec. 12 Twp. 14 S. R. 20  East  West  
1,270 Feet from  North /  South Line of Section  
330 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE     NW     SE     SW  
County: Ellis  
Lease Name: Orth/Augustine Unit Well #: 12-1  
Field Name: Sunnydale  
Producing Formation: None  
Elevation: Ground: 2231 Kelly Bushing: 2239  
Total Depth: 3948 Plug Back Total Depth: 3948  
Amount of Surface Pipe Set and Cemented at: 222' 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: 33,000 ppm Fluid volume: 500 bbls  
Dewatering method used: Evaporation, then backfill  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**INSTRUCTIONS:** An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

**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.

Signature: Robert D Swann  
Title: Vice President Date: 3-9-2011

**KCC Office Use ONLY**

Letter of Confidentiality Received  
Date: \_\_\_\_\_  
 Confidential Release Date: \_\_\_\_\_ **RECEIVED**  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: P&A **MAR 14 2011**  
3/11/11  
**KCC WICHITA**

Operator Name: IA Operating, Inc Lease Name: Orth/Augustine Unit Well #: 12-1  
 Sec. 12 Twp. 14 S. R. 20  East  West County: Ellis

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run: <b>Geologist's Report, Compensated Density/Neutron Log, Micro Log, Sonic Log, Dual Induction Log</b>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Datum</th> </tr> </thead> <tbody> <tr> <td>Anhydrite</td> <td>1532'</td> <td>+707</td> </tr> <tr> <td>Toronto</td> <td>3250'</td> <td>-1011</td> </tr> <tr> <td>Heebner Shale</td> <td>3494'</td> <td>-1255</td> </tr> <tr> <td>Lansing</td> <td>3539'</td> <td>-1300</td> </tr> <tr> <td>Arbuckle</td> <td>3994'</td> <td>-1655</td> </tr> <tr> <td>Total Depth</td> <td>3947'</td> <td>-1708</td> </tr> </tbody> </table>	Name	Top	Datum	Anhydrite	1532'	+707	Toronto	3250'	-1011	Heebner Shale	3494'	-1255	Lansing	3539'	-1300	Arbuckle	3994'	-1655	Total Depth	3947'	-1708
Name	Top	Datum																				
Anhydrite	1532'	+707																				
Toronto	3250'	-1011																				
Heebner Shale	3494'	-1255																				
Lansing	3539'	-1300																				
Arbuckle	3994'	-1655																				
Total Depth	3947'	-1708																				

CASING RECORD <input checked="" 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
Surface	12 1/4"	8 5/8"	23#	222'	Common	150	3% CC, 2% Cal

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 checked="" type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone		60/40 Poz	245	4%gel, 1/4 # flo-seal

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

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. _____		Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. 0	Gas Mcf 0	Water Bbls. 0
		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> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <div style="text-align: right; font-weight: bold; font-size: 1.2em;">RECEIVED</div> <div style="text-align: right; font-weight: bold; font-size: 1.2em;">MAR 14 2011</div>
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# QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025  
Cell 785-324-1041

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

No. 5079

Date	12-2-10	Sec.	12	Twp.	14	Range	20	County	Ellis	State	Ks	On Location		Finish	6:30 PM
Lease	Well No.		12-1		Location										
Hay's KS - Golf Course Rd, W 1/2 Q 10															
Contractor											maverick 108				
Type Job											Surface				
Hole Size											12 1/4"				
Csg.											8 5/8"				
Tbg. Size															
Tool															
Cement Left in Csg.											15'				
Meas Line											Displace 13 Bbs				
Owner											KCS				
To Quality Oilwell Cementing, Inc.											You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.				
Charge To											I H Operating				
Street															
City											State				
The above was done to satisfaction and supervision of owner agent or contractor.															
Cement Amount Ordered											150 SK Common 39000 2 1/2				

### EQUIPMENT

Pumptrk	No.	Cementor	Helper	Common
5		Beaman		150
Bulktrk	No.	Driver		Poz. Mix
10		Donny		
Bulktrk p.u.	No.	Driver		Gel.
		Rick		3

### JOB SERVICES & REMARKS

Remarks:	Cement did Circulate.	Calcium	5
Rat Hole		Hulls	
Mouse Hole		Salt	
Centralizers		Flowseal	
Baskets		Kol-Seal	
D/V or Port Collar		Mud CLR 48	
		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	158
		Mileage	

### FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	2.7
Mileage	9

RECEIVED  
MAR 14 2011  
Discount  
Total Charge  
KCC WICHITA

Signature: *[Handwritten Signature]*

# QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025  
Cell 785-324-1041

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

No. 4509

Date	1/2/11	Sec.	12	Twp.	14	Range	20	County	Ellis	State	KS	On Location	Finish
Lease	Orth - Augustine			Well No.	12-1			Location	Hays, Golf Course Rd, 7 W, 1/2 S, W into				
Contractor	Maverick Drilling			Rig #	108								
Type Job	PTA			Owner To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.									
Hole Size	7 7/8"			T.D.	Charge To IA Operating, Inc								
Csg.				Depth	Street								
Tbg. Size				Depth	City								
Tool				Depth	State								
Cement Left in Csg.				Shoe Joint	The above was done to satisfaction and supervision of owner agent or contractor.								
Meas Line				Displace	Cement Amount Ordered 245 sx 60/40 4 1/0 gal								

**EQUIPMENT**

Pumptrk	1	No.	Cement Helper	Paul	Common	147
Bulktrk	3	No.	Driver	Nate	Poz. Mix	98
Bulktrk	PU	No.	Driver	Corey	Gel.	9

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal 60#
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
3875' - 25 sx	Sand
1540' - 25 sx	Handling 254
750' - 100 sx	Mileage

**FLOAT EQUIPMENT**

Rathole - 30 sx	Guide Shoe
Mousehole - 15 sx	Centralizer
40' - 10 sx	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

4 5/8" Dry Hole Plug

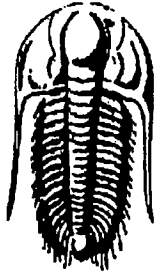
Pumptrk Charge 8 plug  
Mileage 8

Thank You!  
  
Signature: *[Handwritten Signature]*

Tax  
Discount  
Total Charge

**RECEIVED**  
MAR 14 2011

**KCC WICHITA**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **IA Operating Inc.**

9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205

ATTN: Steve Miller

**12-14-20 Ellis KS**

**Orth-Augustine Unit 12-1**

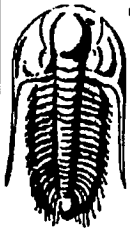
Start Date: 2010.12.30 @ 12:32:02

End Date: 2010.12.30 @ 20:45:31

Job Ticket #: 41406                      DST #: 1

**RECEIVED  
MAR 14 2011  
KCC WICHITA**

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

IA Operating Inc.  
9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205  
ATTN: Steve Miller

**Orth-Augustine Unit 12-1**  
**12-14-20 Ellis KS**  
Job Ticket: 41406      **DST#: 1**  
Test Start: 2010.12.30 @ 12:32:02

## GENERAL INFORMATION:

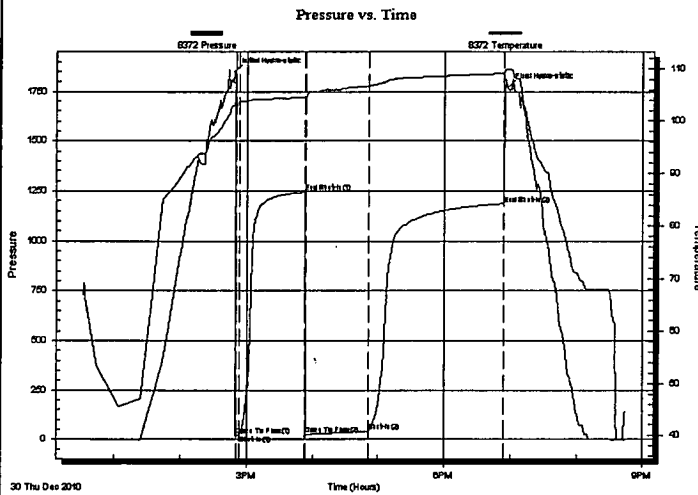
Formation: **LKC "H"**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 14:50:01  
Time Test Ended: 20:45:31  
Interval: **3657.00 ft (KB) To 3693.00 ft (KB) (TVD)**  
Total Depth: **3693.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches**      Hole Condition:  
Test Type: **Conventional Bottom Hole**  
Tester: **Brian Fairbank**  
Unit No: **41**  
Reference Elevations: **2239.00 ft (KB)**  
**2231.00 ft (CF)**  
KB to GR/CF: **8.00 ft**

## Serial #: 8372

Inside

Press@RunDepth: **41.78 psig @ 3665.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.12.30**      End Date: **2010.12.30**      Last Calib.: **2010.12.30**  
Start Time: **12:32:02**      End Time: **20:45:31**      Time On Btm: **2010.12.30 @ 14:49:01**  
Time Off Btm: **2010.12.30 @ 18:57:01**

TEST COMMENT: IFP - no blow - turn tool 3"  
ISI - no blow back  
FFP - BOB 2 min  
FSI - 1/4" blow back - died 8 min



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1849.43	103.31	Initial Hydro-static
1	20.48	102.86	Open To Flow (1)
4	21.17	103.69	Shut-In(1)
64	1244.62	104.59	End Shut-In(1)
64	27.01	104.19	Open To Flow (2)
122	41.78	106.78	Shut-In(2)
245	1183.66	109.06	End Shut-In(2)
248	1773.29	109.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GHOCM 25%G, 35%O, 40%M	0.84
15.00	OCM 20%O, 80%M	0.21
0.00	695' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

IA Operating Inc.

Orth-Augustine Unit 12-1

9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205  
ATTN: Steve Miller

**12-14-20 Ellis KS**  
Job Ticket: 41406      DST#: 1  
Test Start: 2010.12.30 @ 12:32:02

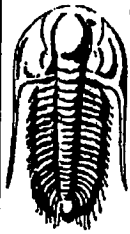
**Tool Information**

Drill Pipe:	Length: 3646.00 ft	Diameter: 3.80 inches	Volume: 51.14 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<b>Total Volume: 51.14 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3657.00 ft			Final 53000.00 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**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3642.00	
Hydraulic tool	5.00			3647.00	
Packer	5.00			3652.00	20.00      Bottom Of Top Packer
Packer	5.00			3657.00	
Stubb	1.00			3658.00	
Perforations	7.00			3665.00	
Recorder	0.00	8372	Inside	3665.00	
Recorder	0.00	8365	Outside	3665.00	
Perforations	25.00			3690.00	
Bullnose	3.00			3693.00	36.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>56.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

IA Operating Inc.  
9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205  
ATTN: Steve Miller

**Orth-Augustine Unit 12-1**  
**12-14-20 Ellis KS**  
Job Ticket: 41406      DST#: 1  
Test Start: 2010.12.30 @ 12:32:02

**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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2800.00 ppm			
Filter Cake: inches			

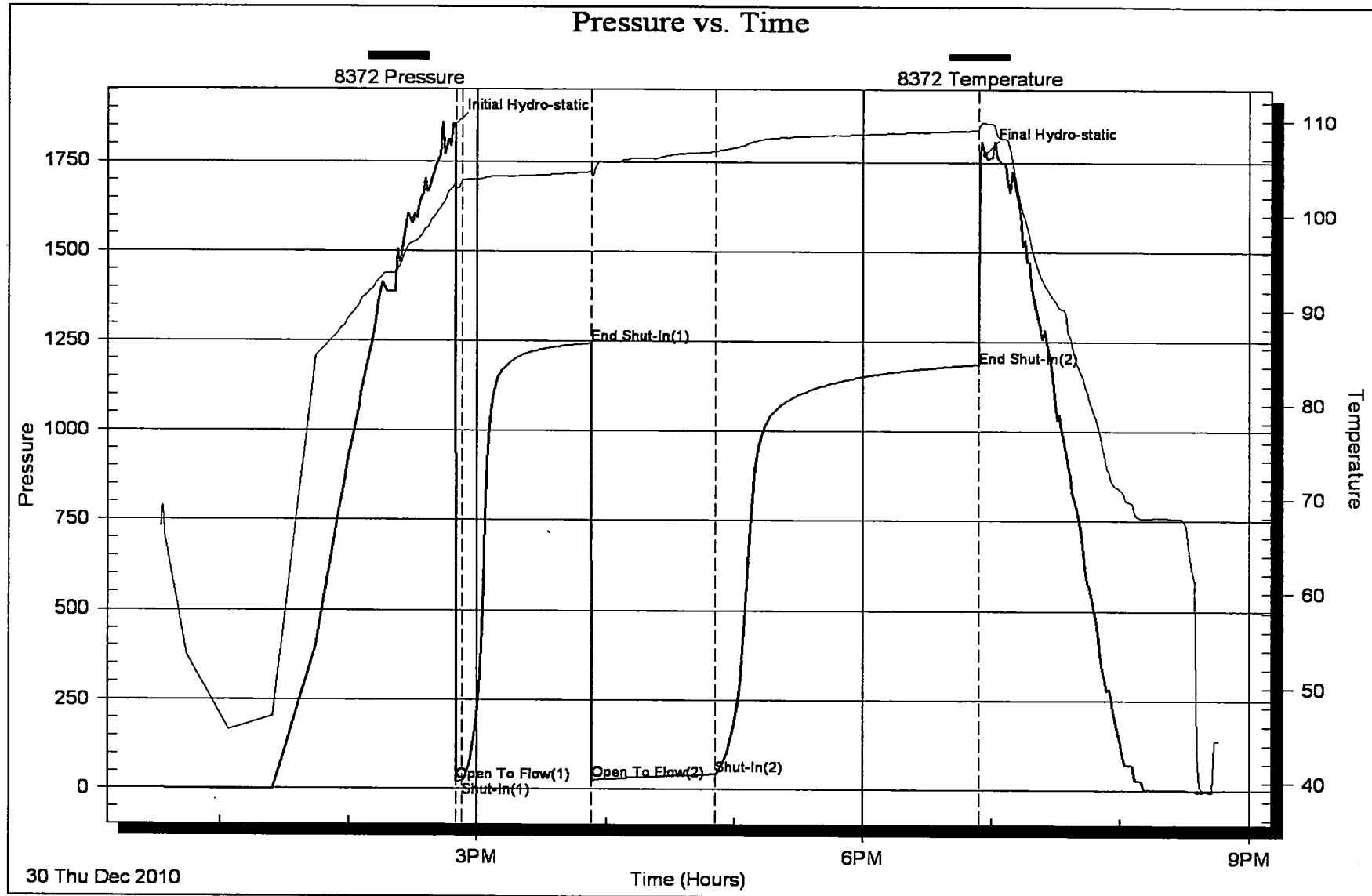
**Recovery Information**

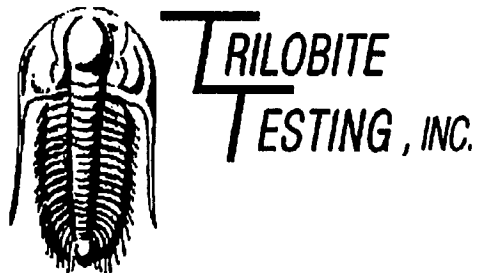
Recovery Table

Length ft	Description	Volume bbl
60.00	GHOCM 25%G, 35%O, 40%M	0.842
15.00	OCM 20%O, 80%M	0.210
0.00	695' GIP	0.000

Total Length: 75.00 ft      Total Volume: 1.052 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc.**

9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205

ATTN: Steve Miller

**12-14-20 Ellis KS**

**Orth-Augustine Unit 12-1**

Start Date: 2010.12.31 @ 03:40:27

End Date: 2010.12.31 @ 10:45:27

Job Ticket #: 41321                      DST #: 2

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

IA Operating Inc.

**Orth-Augustine Unit 12-1**

9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205  
ATTN: Steve Miller

**12-14-20 Ellis KS**

Job Ticket: 41321

DST#: 2

Test Start: 2010.12.31 @ 03:40:27

### GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:52:57

Time Test Ended: 10:45:27

Test Type: Conventional Bottom Hole

Tester: Dustin Rash

Unit No: 41

Interval: **3692.00 ft (KB) To 3710.00 ft (KB) (TVD)**

Total Depth: 3710.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2239.00 ft (KB)

2231.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8372**

Inside

Press@RunDepth: 15.76 psig @ 3695.00 ft (KB)

Start Date: 2010.12.31

End Date:

2010.12.31

Capacity: 8000.00 psig

Last Calib.: 2010.12.31

Start Time: 03:40:28

End Time:

10:45:27

Time On Btm: 2010.12.31 @ 05:51:27

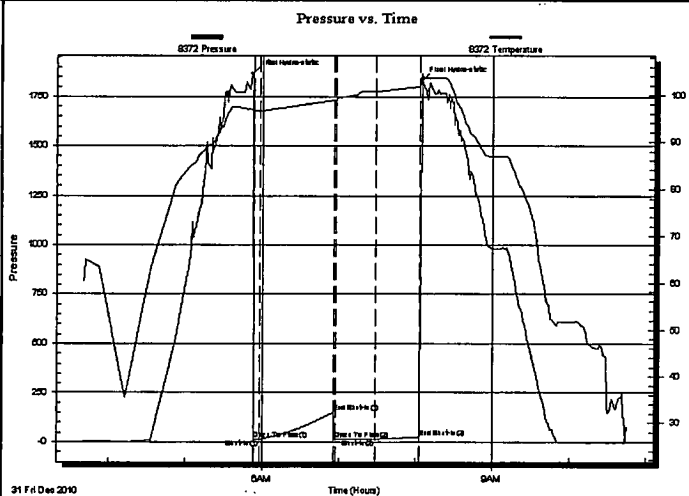
Time Off Btm: 2010.12.31 @ 08:04:27

TEST COMMENT: IF-Weak building blow . Built to 1/2 inch.

IS-No Return.

FF-No Blow .

FSI-No Return.



### PRESSURE SUMMARY

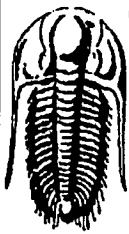
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1865.51	96.76	Initial Hydro-static
2	16.49	96.67	Open To Flow (1)
7	15.19	96.48	Shut-In(1)
64	151.75	98.78	End Shut-In(1)
65	16.55	98.86	Open To Flow (2)
97	15.76	100.77	Shut-In(2)
132	25.19	101.88	End Shut-In(2)
133	1831.82	103.96	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
3.00	99%Mud/1%Oil	0.04

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

IA Operating Inc.

**Orth-Augustine Unit 12-1**

9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205  
ATTN: Steve Miller

**12-14-20 Ellis KS**

Job Ticket: 41321

**DST#: 2**

Test Start: 2010.12.31 @ 03:40:27

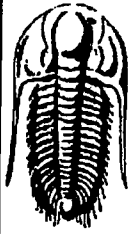
**Tool Information**

Drill Pipe:	Length: 3677.00 ft	Diameter: 3.80 inches	Volume: 51.58 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 5000.00 lb
		Total Volume: 51.58 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3692.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3677.00	
Hydraulic tool	5.00			3682.00	
Packer	5.00			3687.00	20.00 Bottom Of Top Packer
Packer	5.00			3692.00	
Stubb	1.00			3693.00	
Perforations	2.00			3695.00	
Recorder	0.00	8372	Inside	3695.00	
Recorder	0.00	8365	Outside	3695.00	
Perforations	12.00			3707.00	
Bullnose	3.00			3710.00	18.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>38.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

IA Operating Inc.

**Orth-Augustine Unit 12-1**

9915 W. 21st. St. North

**12-14-20 Ellis KS**

Suite B

Job Ticket: 41321

**DST#: 2**

Wichita, KS 67205

Test Start: 2010.12.31 @ 03:40:27

ATTN: Steve Miller

**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: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
3.00	99%Mud/1%Oil	0.042

Total Length: 3.00 ft

Total Volume: 0.042 bbl

Num Fluid Samples: 0

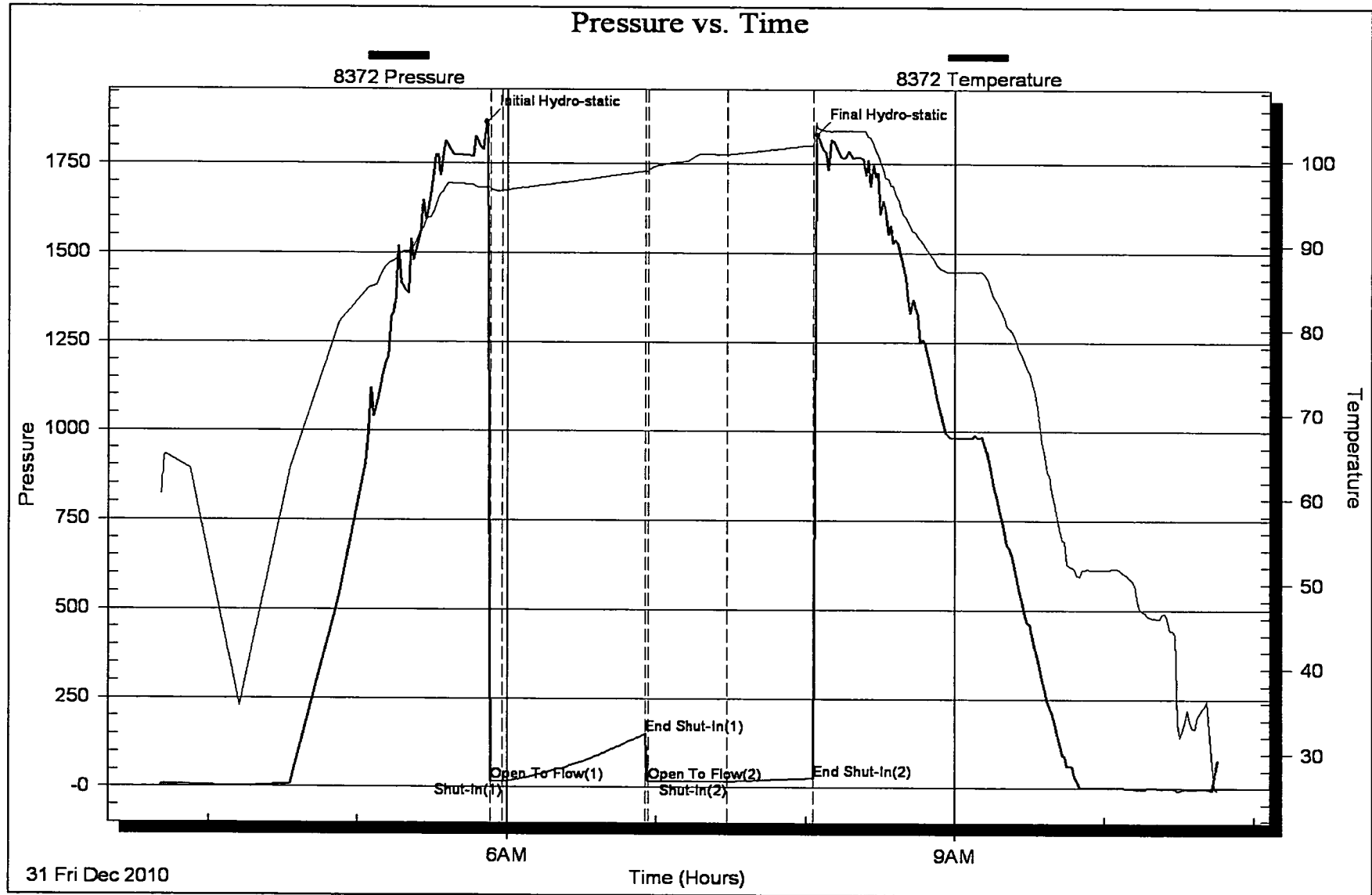
Num Gas Bombs: 0

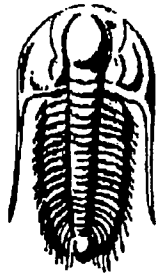
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **IA Operating Inc.**  
9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205

ATTN: Steve Miller

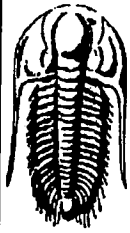
**12-14-20 Ellis KS**

**Orth-Augustine Unit 12-1**

Start Date: 2010.12.31 @ 20:23:53  
End Date: 2011.01.01 @ 06:05:53  
Job Ticket #: 41322                      DST #: 3

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

IA Operating Inc.  
Orth-Augustine Unit 12-1  
12-14-20 Ellis KS  
DST # 3  
LKC J  
2010.12.31



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

IA Operating Inc.  
9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205  
ATTN: Steve Miller

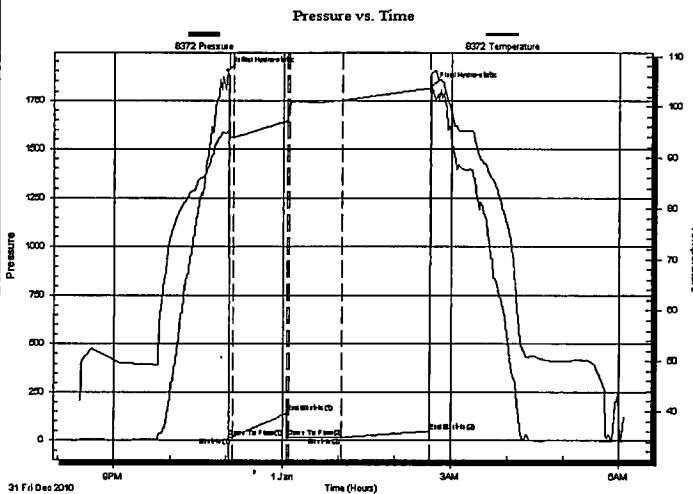
**Orth-Augustine Unit 12-1**  
**12-14-20 Ellis KS**  
Job Ticket: 41322      DST#: 3  
Test Start: 2010.12.31 @ 20:23:53

**GENERAL INFORMATION:**

Formation: **LKC J**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 23:02:23  
Time Test Ended: 06:05:53  
Interval: **3712.00 ft (KB) To 3734.00 ft (KB) (TVD)**  
Total Depth: **3734.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Poor**  
Test Type: **Conventional Bottom Hole**  
Tester: **Dustin Rash**  
Unit No: **41**  
Reference Elevations: **2239.00 ft (KB)**  
**2231.00 ft (CF)**  
KB to GR/CF: **8.00 ft**

**Serial #: 8372**      Inside  
Press@RunDepth: **15.08 psig @ 3715.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.12.31**      End Date: **2011.01.01**      Last Calib.: **2011.01.01**  
Start Time: **20:23:54**      End Time: **06:05:53**      Time On Btm: **2010.12.31 @ 23:00:23**  
Time Off Btm: **2011.01.01 @ 02:38:53**

**TEST COMMENT:** IF-Fair building blow . Built to 1&1/2 inches.  
IS-Return @ 36 minutes. Built to surface. Died after 6 minutes.  
FF-Fair building blow . Built to 1&1/2 inches. Died off to 1/2 inch.  
FSI-No Return.



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1902.80	95.33	Initial Hydro-static
2	17.72	93.64	Open To Flow (1)
6	16.44	94.02	Shut-In(1)
65	146.29	97.23	End Shut-In(1)
66	16.03	99.23	Open To Flow (2)
123	15.08	101.30	Shut-In(2)
217	48.85	103.76	End Shut-In(2)
219	1820.75	106.51	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
15.00	98%Mud/2%Oil	0.21
0.00	60' G.I.P.	0.00

**Gas Rates**

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

IA Operating Inc.  
9915 W. 21st. St. North  
Suite B  
Wichita, KS 67205  
ATTN: Steve Miller

**Orth-Augustine Unit 12-1**  
**12-14-20 Ellis KS**  
Job Ticket: 41322      DST#: 3  
Test Start: 2010.12.31 @ 20:23:53

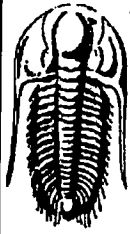
### Tool Information

Drill Pipe:	Length: 3708.00 ft	Diameter: 3.80 inches	Volume: 52.01 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 5000.00 lb
		Total Volume: 52.01 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3712.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3697.00	
Hydraulic tool	5.00			3702.00	
Packer	5.00			3707.00	20.00      Bottom Of Top Packer
Packer	5.00			3712.00	
Stubb	1.00			3713.00	
Perforations	2.00			3715.00	
Recorder	0.00	8372	Inside	3715.00	
Recorder	0.00	8365	Outside	3715.00	
Perforations	16.00			3731.00	
Bullnose	3.00			3734.00	22.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

IA Operating Inc.

**Orth-Augustine Unit 12-1**

9915 W. 21st. St. North

**12-14-20 Ellis KS**

Suite B

Job Ticket: 41322

**DST#: 3**

Wichita, KS 67205

Test Start: 2010.12.31 @ 20:23:53

ATTN: Steve Miller

**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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2900.00 ppm			
Filter Cake: inches			

**Recovery Information**

**Recovery Table**

Length ft	Description	Volume bbl
15.00	98%Mud/2%Oil	0.210
0.00	60' G.I.P.	0.000

Total Length: 15.00 ft      Total Volume: 0.210 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

