



KANSAS CORPORATION COMMISSION 1141818
OIL & GAS CONSERVATION DIVISION

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 # _____

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 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 #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

API No. 15 - _____

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

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total 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

- Letter of Confidentiality Received
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1141818

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

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

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 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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> 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				

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: Yes No

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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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> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 6389

Cell 785-324-1041

3-1-13

Date	Sec.	Twp.	Range	County	State	On Location	Finish
3-1-13	1	24	14	Stafford	Ks		2:30 AM

Location St. John Ks - Southside of town to 1st

Lease	<u>Bookstore</u>	Well No.	<u>2RD</u>	Owner	<u>Street, 4W to 40 Rd, 3/8 S, E/Into</u>
Contractor	<u>Royal #2</u>	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.			
Type Job	<u>Surface</u>				
Hole Size	<u>12 1/4"</u>	T.D.	<u>238'</u>	Charge To	<u>Gra Ex LLC,</u>
Csg.	<u>8 5/8"</u>	Depth	<u>238'</u>	Street	<u>2435 N. Marquette</u>
Tbg. Size		Depth		City	<u>Kingman</u> State <u>Ks</u> <u>67068</u>
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	<u>15'</u>	Shoe Joint	<u>15'</u>	Cement Amount Ordered	<u>250 sx Common 3% cc</u>

Meas Line Displace 14 BLS 2% Gel 1/2# Flo - seal

EQUIPMENT			Common
Pumptrk	<u>16</u>	No. Cementer Helper <u>Travis</u>	<u>250</u>
Bulktrk	<u>14</u>	No. Driver <u>Doug</u>	Poz. Mix
Bulktrk	<u>14</u>	No. Driver <u>Rick</u>	Gel. <u>5</u>
			Calcium <u>9</u>

JOB SERVICES & REMARKS		Hulls
Remarks	<u>Cement did Circulate.</u>	Salt
Rat Hole		Flowseal <u>#125#</u>
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
	<u>Cut 150' of sand.</u>	Handling <u>264</u>
	<u>Lost Circulation @ 100'</u>	Mileage

FLOAT EQUIPMENT	
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Pumptrk Charge	<u>Surface</u>
Mileage	<u>31</u>

	Tax
	Discount
	Total Charge

X Signature

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 6457

Date	3-9-13	Sec.	Twp.	Range	County	State	On Location	Finish
					Stafford	KS		6:30 am
Location					St. John 4W 1/4 S Pinto			

Lease	Beck store	Well No.	2	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.
Contractor	Royal #2				
Type Job	Production String				
Hole Size	7 7/8	T.D.	4251	Charge To	CRA EX LLC
Csg.	5 1/2 15.50	Depth	4250	Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	

Cement Left in Csg.	14.58	Shoe Joint	14.58	Cement Amount Ordered	200 com 10% Salt to 200 lb 500 gal mud clear
Meas Line		Displace	100 7/8 ABC	CD 110	

EQUIPMENT				Common	200
Pumptrk	9	No.	Cement Helper	Poz. Mix	
Bulktrk		No.	Driver	Gel.	
Bulktrk	14	No.	Driver	Calcium	

JOB SERVICES & REMARKS				Hulls	
Remarks:				Salt	16
Rat Hole	30			Flowseal	
Mouse Hole	1.5			Kol-Seal	950#
Centralizers				Mud CLR 48	500 gal
Baskets				CFL-117 or CD110 CAF 38	110#
D/V or Port Collar				sand Defoamer	50#
5 1/2 size @ 4250 - Susend @ 4235 Est. Circulation Pump 500 gal mud FLUSH with 10 BL spacer Plug Rathole + Mouse hole Cement 5 1/2 with 15.5 sk. Clear Vines Displace Plug Plug landed @ 1500 ft. HD. Release Person Dr.				Handling	225
				Mileage	

				FLOAT EQUIPMENT	
				Guide Shoe	
				Centralizer	7 Turbulizers
				Baskets	1
				AFU Inserts	
				Float Shoe	1
				Latch Down	1 (Rotator)

				Pumptrk Charge	prod long string
				Mileage	31
				Tax	
				Discount	
				Total Charge	

X Signature Tom Blake



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Gra Ex LLC.
2435 N.Marquette
Kingman Ks.67068
ATTN: Jeff A. Burk

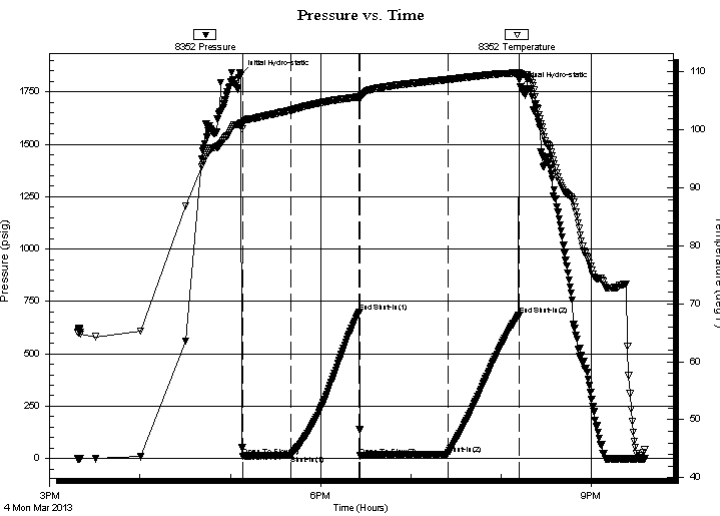
1-24s-14w Stafford Ks.
Bookstore #2 RD
Job Ticket: 50845 **DST#: 1**
Test Start: 2013.03.04 @ 15:18:22

GENERAL INFORMATION:

Formation: **Lansing B**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:08:22
Time Test Ended: 21:35:52
Interval: **3631.00 ft (KB) To 3650.00 ft (KB) (TVD)**
Total Depth: 3650.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Gary Pevoteaux
Unit No: 56
Reference Elevations: 1949.00 ft (KB)
1942.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8352 Outside
Press @ Run Depth: 22.05 psig @ 3632.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.03.04 End Date: 2013.03.04 Last Calib.: 2013.03.04
Start Time: 15:18:27 End Time: 21:35:51 Time On Btm: 2013.03.04 @ 17:06:52
Time Off Btm: 2013.03.04 @ 20:12:52

TEST COMMENT: IF: Fair blow . Slow increase to 11".
IS: No blow .
FF: Fair to strong blow . B.O.B. in 46 mins.
FS: Weak blow . 1/4". Died in 15 mins.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1832.79	101.20	Initial Hydro-static
2	11.25	101.14	Open To Flow (1)
34	16.41	103.42	Shut-In(1)
79	697.41	105.70	End Shut-In(1)
80	12.80	105.47	Open To Flow (2)
138	22.05	108.70	Shut-In(2)
185	682.94	109.82	End Shut-In(2)
186	1777.16	109.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	390 ft.of GIP	0.00
15.00	Drig.mud	0.21

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex LLC.
2435 N.Marquette
Kingman Ks.67068
ATTN: Jeff A. Burk

1-24s-14w Stafford Ks.
Bookstore #2 RD
Job Ticket: 50845 **DST#: 1**
Test Start: 2013.03.04 @ 15:18:22

Mud and Cushion Information

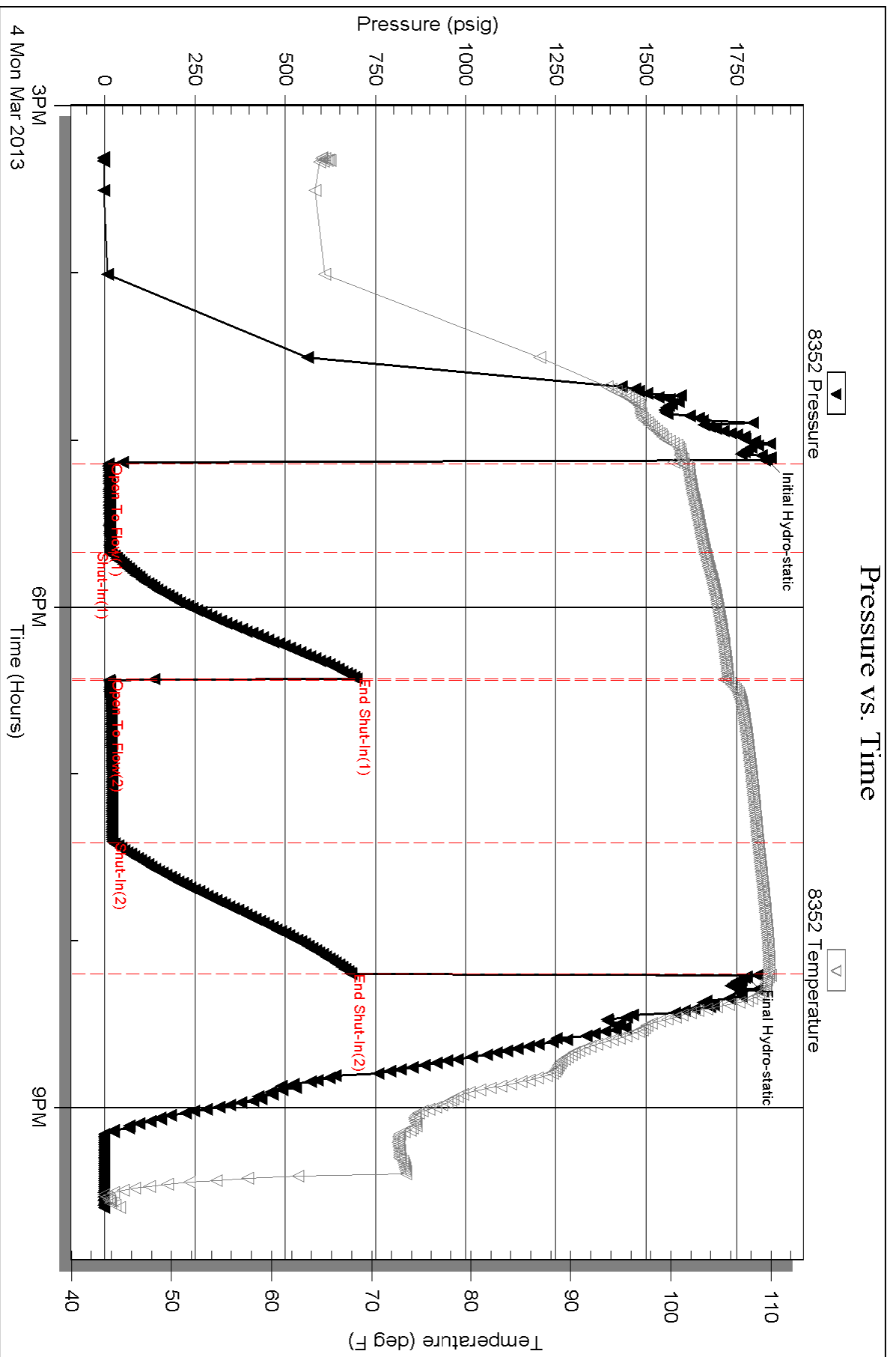
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	6800 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.39 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 6800.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	390 ft.of GIP	0.000
15.00	Drig.mud	0.210

Total Length: 15.00 ft Total Volume: 0.210 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none
 Laboratory Name: Laboratory Location:
 Recovery Comments:





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Gra Ex LLC.
 2435 N.Marquette
 Kingman Ks.67068
 ATTN: Jeff A. Burk

1-24s-14w Stafford Ks.
Bookstore #2 RD
 Job Ticket: 50846 **DST#: 2**
 Test Start: 2013.03.05 @ 05:27:32

GENERAL INFORMATION:

Formation: **Lansing**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:18:32
 Time Test Ended: 12:34:47
 Interval: **3676.00 ft (KB) To 3689.00 ft (KB) (TVD)**
 Total Depth: 3689.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Gary Pevoteaux
 Unit No: 56
 Reference Elevations: 1949.00 ft (KB)
 1942.00 ft (CF)
 KB to GR/CF: 7.00 ft

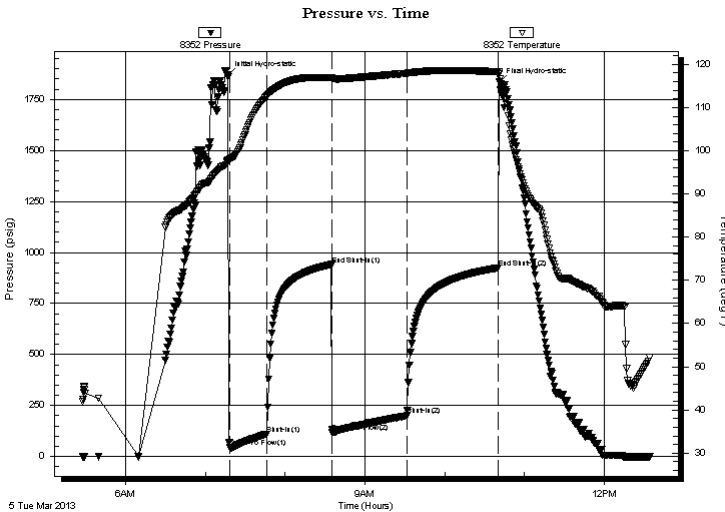
Serial #: 8352

Outside

Press @ Run Depth: 200.17 psig @ 3677.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.05 End Date: 2013.03.05 Last Calib.: 2013.03.05
 Start Time: 05:27:37 End Time: 12:34:46 Time On Btm: 2013.03.05 @ 07:16:32
 Time Off Btm: 2013.03.05 @ 10:41:17

TEST COMMENT: IF: Strong blow . B.O.B. in 6 secs.
 IS: GTS in 30 secs. Weak blow . 1 - 4".
 FF: Strong blow . (see gas flow report) TSTM @ 40 mins.
 FS: Fair to strong blow . B.O.B.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1865.51	97.54	Initial Hydro-static
2	44.31	98.08	Open To Flow (1)
30	110.41	112.63	Shut-In(1)
79	941.34	116.96	End Shut-In(1)
79	120.57	116.70	Open To Flow (2)
136	200.17	117.91	Shut-In(2)
204	924.40	118.33	End Shut-In(2)
205	1834.09	117.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
280.00	CGO 31%g 69%o	3.93
62.00	OCMW 15%o 35%m 50%w	0.87
123.00	SW /Rw .13 ohms @45deg	1.73

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	2.00	26.02
Last Gas Rate	0.25	0.30	23.32
Max. Gas Rate	0.25	2.00	26.02



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex LLC.
2435 N.Marquette
Kingman Ks.67068
ATTN: Jeff A. Burk

1-24s-14w Stafford Ks.
Bookstore #2 RD
Job Ticket: 50846 **DST#: 2**
Test Start: 2013.03.05 @ 05:27:32

Mud and Cushion Information

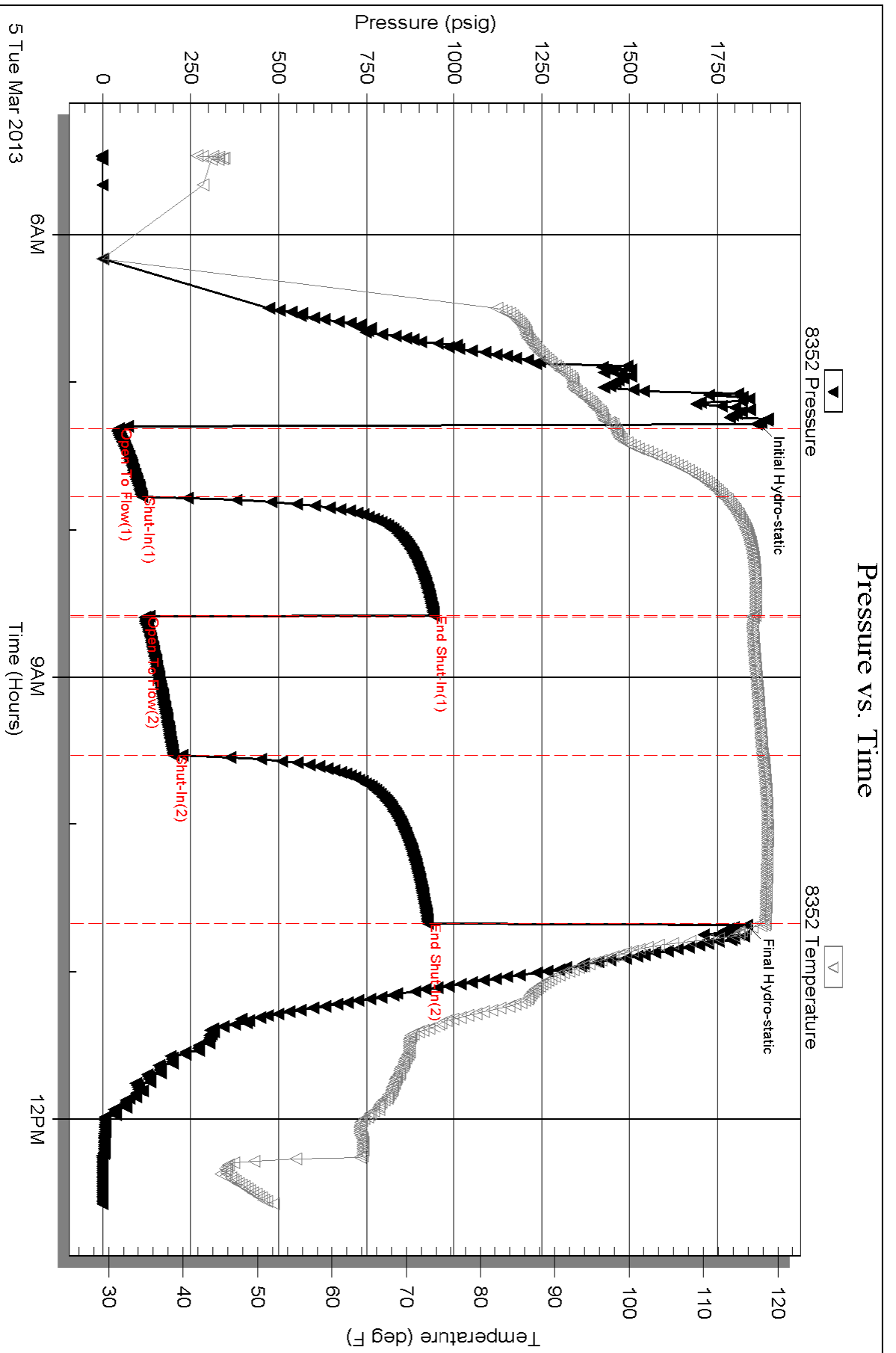
Mud Type: Gel Chem	Cushion Type:	Oil API: 28.6 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 94000 ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl	
Water Loss: 20.79 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 22000.00 ppm		
Filter Cake: 0.20 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
280.00	CGO 31%g 69%o	3.928
62.00	OCMW 15%o 35%m 50%w	0.870
123.00	SW /Rw .13 ohms @45deg	1.725

Total Length: 465.00 ft Total Volume: 6.523 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none
Laboratory Name: Laboratory Location:
Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Gra Ex LLC.
2435 N.Marquette
Kingman Ks.67068
ATTN: Jeff A. Burk

1-24s-14w Stafford Ks.
Bookstore #2 RD
Job Ticket: 50847 **DST#: 3**
Test Start: 2013.03.05 @ 21:09:18

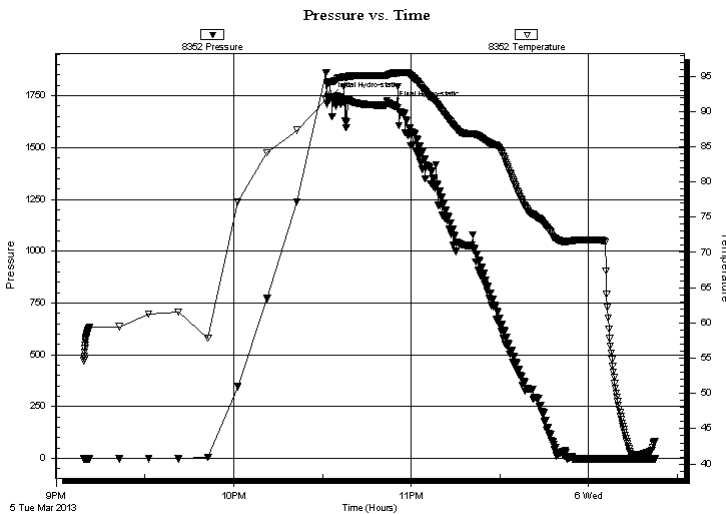
GENERAL INFORMATION:

Formation: **Lansing H**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:00:00
Time Test Ended: 00:22:33
Interval: **3725.00 ft (KB) To 3750.00 ft (KB) (TVD)**
Total Depth: 3750.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition:
Test Type: Conventional Bottom Hole (Reset)
Tester: Gary Pevoteaux
Unit No: 56
Reference Elevations: 1949.00 ft (KB)
1942.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8352 Outside

Press @ RunDepth: psig @ 3726.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.03.05 End Date: 2013.03.06 Last Calib.: 2013.03.06
Start Time: 21:09:23 End Time: 00:22:33 Time On Btm: 2013.03.05 @ 22:32:48
Time Off Btm: 2013.03.05 @ 22:53:33

TEST COMMENT: Solid bridge 160 - 170 ft. off btm. Hit bridge several times using full string w.t. Could not get through bridge. Aborted test. MISRUN!



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1747.09	94.19	Initial Hydro-static
21	1702.06	95.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	Drig.mud	1.54

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex LLC.
2435 N.Marquette
Kingman Ks.67068
ATTN: Jeff A. Burk

1-24s-14w Stafford Ks.
Bookstore #2 RD
Job Ticket: 50847 **DST#: 3**
Test Start: 2013.03.05 @ 21:09:18

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:	22000 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 20.78 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 22000.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	Drig.mud	1.543

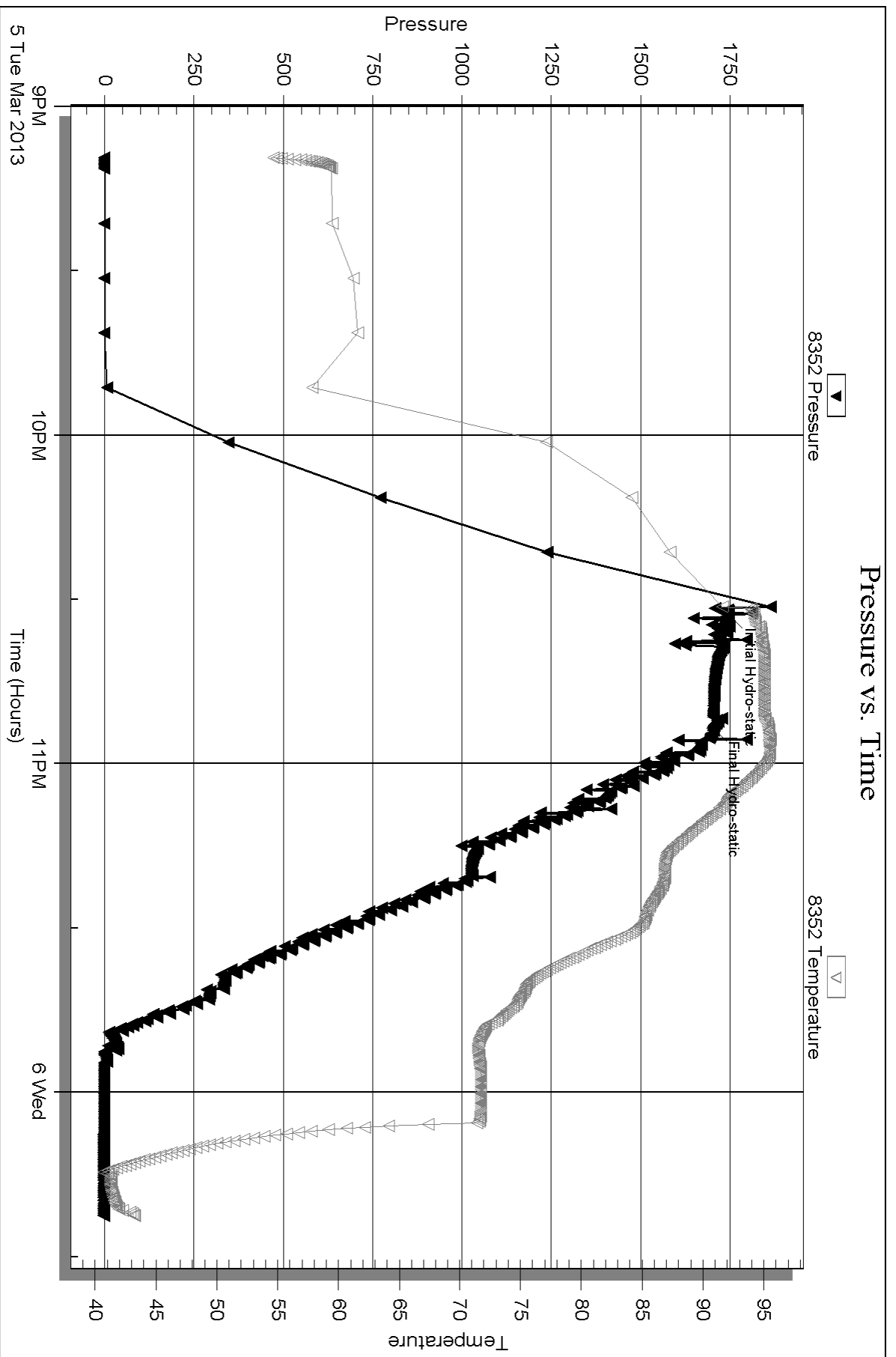
Total Length: 110.00 ft Total Volume: 1.543 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none
 Laboratory Name: Laboratory Location:
 Recovery Comments: Misrun

Serial #: 8352

Outside Gra Ex LLC

Bookstore #2 RD

DST Test Number: 3





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Gra Ex LLC.
2435 N.Marquette
Kingman Ks.67068
ATTN: Jeff A. Burk

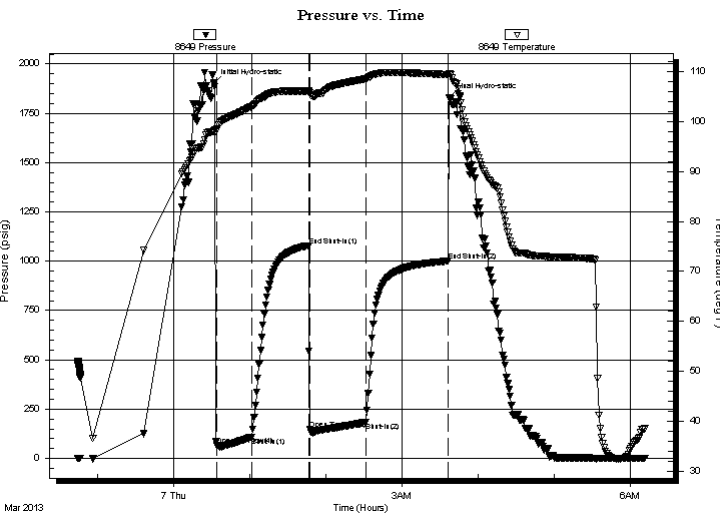
1-24s-14w Stafford Ks.
Bookstore #2 RD
Job Ticket: 50848 **DST#: 4**
Test Start: 2013.03.06 @ 22:43:55

GENERAL INFORMATION:

Formation: **Lans. H&I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:33:40
Time Test Ended: 06:11:55
Interval: **3725.00 ft (KB) To 3761.00 ft (KB) (TVD)**
Total Depth: 3858.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Straddle (Reset)
Tester: Gary Pevoteaux
Unit No: 56
Reference Elevations: 1949.00 ft (KB)
1942.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8649 Outside
Press @ Run Depth: 184.20 psig @ 3726.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.03.06 End Date: 2013.03.07 Last Calib.: 2013.03.07
Start Time: 22:43:56 End Time: 06:11:55 Time On Btm: 2013.03.07 @ 00:31:25
Time Off Btm: 2013.03.07 @ 03:37:10

TEST COMMENT: IF: Strong blow . B.O.B. in 35 secs. GTS in 20 mins. (see gas flow report)
IS: Weak blow . 1/4".
FF: Strong blow . (see gas flow report)
FS: Strong blow . B.O.B.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1900.48	98.19	Initial Hydro-static
3	68.19	98.32	Open To Flow (1)
30	108.80	103.08	Shut-In(1)
75	1079.43	106.11	End Shut-In(1)
76	149.48	105.89	Open To Flow (2)
120	184.20	108.61	Shut-In(2)
185	1000.60	109.46	End Shut-In(2)
186	1826.96	109.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	GMCO 43%g 28%m 29%o	1.54
125.00	GMCO 49%g 10%m 41%o	1.75
185.00	CGO 36%g 64%o	2.60

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	2.50	26.81
Last Gas Rate	0.25	3.50	28.40
Max. Gas Rate	0.25	5.00	30.78



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Gra Ex LLC.
 2435 N.Marquette
 Kingman Ks.67068
 ATTN: Jeff A. Burk

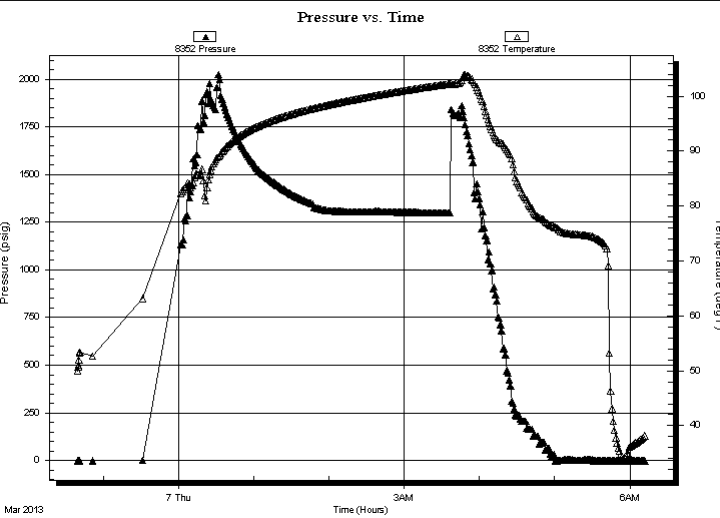
1-24s-14w Stafford Ks.
Bookstore #2 RD
 Job Ticket: 50848 **DST#: 4**
 Test Start: 2013.03.06 @ 22:43:55

GENERAL INFORMATION:

Formation: **Lans. H&I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:33:40
 Time Test Ended: 06:11:55
 Interval: **3725.00 ft (KB) To 3761.00 ft (KB) (TVD)**
 Total Depth: 3858.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Straddle (Reset)
 Tester: Gary Pevoteaux
 Unit No: 56
 Reference Elevations: 1949.00 ft (KB)
 1942.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8352 Below (Straddle)
 Press @ Run Depth: psig @ 3762.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.06 End Date: 2013.03.07 Last Calib.: 2013.03.07
 Start Time: 22:39:34 End Time: 06:11:58 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong blow . B.O.B. in 35 secs. GTS in 20 mins. (see gas flow report)
 IS: Weak blow . 1/4".
 FF: Strong blow . (see gas flow report)
 FS: Strong blow . B.O.B.



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

Recovery		
Length (ft)	Description	Volume (bbl)
110.00	GMCO 43%g 28%m 29%o	1.54
125.00	GMCO 49%g 10%m 41%o	1.75
185.00	CGO 36%g 64%o	2.60

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	2.50	26.81
Last Gas Rate	0.25	3.50	28.40
Max. Gas Rate	0.25	5.00	30.78

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex LLC.
2435 N.Marquette
Kingman Ks.67068
ATTN: Jeff A. Burk

1-24s-14w Stafford Ks.
Bookstore #2 RD
Job Ticket: 50848 **DST#: 4**
Test Start: 2013.03.06 @ 22:43:55

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 30.9 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 12000 ppm
Viscosity: 73.00 sec/qt	Cushion Volume: bbl	
Water Loss: 10.79 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 12000.00 ppm		
Filter Cake: 0.20 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	GMCO 43%g 28%m 29%o	1.543
125.00	GMCO 49%g 10%m 41%o	1.753
185.00	CGO 36%g 64%o	2.595

Total Length: 420.00 ft Total Volume: 5.891 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none
Laboratory Name: Laboratory Location:
Recovery Comments:

