



KANSAS CORPORATION COMMISSION 1071200  
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: \_\_\_\_\_



1071200

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
---	---

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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ 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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Gra Ex, LLC
Well Name	Violet 1
Doc ID	1071200

All Electric Logs Run

Sonic
Micro
Bond
CNL/CDL
DIL



PAGE 1 of 1	CUST NO 1001703	INVOICE DATE 11/30/2011
INVOICE NUMBER 1718 - 90765285		

Pratt (620) 672-1201  
 B GRA-EX LLC  
 I PO Box: 32  
 L KINGMAN  
 L KS US 67068  
 T  
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Violet 1  
 O LOCATION  
 B COUNTY Stafford  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 T  
 E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.		TERMS	DUE DATE
40401437	20920			Cash Sale	11/30/2011
		QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 11/27/2011 to 11/27/2011</i>					
0040401437					
171805479A Cement-New Well Casing/Pi 11/27/2011 8 5/8" Surface					
60/40 POZ		205.00	EA	9.24	1,894.21 T
Cello-flake		52.00	EA	2.85	148.15 T
Calcium Chloride		531.00	EA	0.81	429.31 T
Wooden Cement Plug 8 5/8"		1.00	EA	123.20	123.20
Unit Mileage Charge-Pickups, Vans & Cars		20.00	HR	3.27	65.45
Heavy Equipment Mileage		40.00	MI	5.39	215.60
Proppant and Bulk Delivery Charges		177.00	MI	1.23	218.06
Depth Charge; 0-500'		1.00	HR	770.00	770.00
Blending & Mixing Service Charge		205.00	MI	1.08	220.99
Plug Container Utilization Charge		1.00	EA	192.50	192.50
Supervisor		1.00	HR	134.75	134.75

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	4,412.22
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	180.43
PO BOX 841903	PO BOX 10460	INVOICE TOTAL	4,592.65
DALLAS, TX 75284-1903	MIDLAND, TX 79702		



PAGE	CUST NO	INVOICE DATE
1 of 1	1001703	12/13/2011
<b>INVOICE NUMBER</b>		
<b>1718 - 90776101</b>		

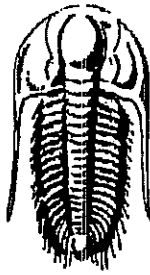
Pratt (620) 672-1201  
 B GRA-EX LLC  
 I PO Box: 32  
 L KINGMAN  
 L KS US 67068  
 T  
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Violet 1  
 O LOCATION  
 B COUNTY Stafford  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 T  
 E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.		TERMS	DUE DATE
40406047	19905			Cash Sale	12/13/2011
<b>For Service Dates: 12/07/2011 to 12/07/2011</b>					
0040406047					
171805501A Cement-New Well Casing/Pi 12/07/2011 5 1/2" Longstring					
AA2 Cement		125.00	EA	13.09	1,636.25 T
60/40 POZ		75.00	EA	9.24	693.00 T
De-foamer (Powder)		30.00	EA	3.08	92.40 T
Salt (Fine)		623.00	EA	0.39	239.86 T
Cement Friction Reducer		36.00	EA	4.62	166.32 T
Gas-Blok		89.00	EA	3.97	352.93 T
FLA-322		36.00	EA	5.78	207.90 T
Gilsonite		625.00	EA	0.52	322.44 T
Super Flush II		500.00	EA	1.18	589.05 T
Latch Down Plug & Baffle 5 1/2" (Blue)		1.00	EA	308.00	308.00
Auto Fill Float Shoe 5 1/2" (Blue)		1.00	EA	277.20	277.20
Turbolizer 5 1/2" (Blue)		6.00	EA	84.70	508.20
5 1/2" Basket		1.00	EA	223.30	223.30
Unit Mileage Charge-Pickups, Vans & Cars		20.00	HR	3.27	65.45
Heavy Equipment Mileage		40.00	MI	5.39	215.60
Proppant and Bulk Delivery Charges		183.00	MI	1.23	225.46
Depth Charge; 4001-5000'		1.00	HR	1,940.39	1,940.39
Blending & Mixing Service Charge		200.00	MI	1.08	215.60
Casing Swivel Rental		1.00	EA	154.00	154.00
Plug Container Utilization Charge		1.00	EA	192.50	192.50
Supervisor		1.00	HR	134.75	134.75

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	8,760.60
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	313.91
PO BOX 841903	PO BOX 10460	INVOICE TOTAL	9,074.51
DALLAS, TX 75284-1903	MIDLAND, TX 79702		

CK 4113



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Gra Ex LLC**

PO Box 32  
Kingman, KS 67068

ATTN: Jeff Burk

**Violet #1**

**31-24s-13w Stafford,KS**

Start Date: 2011.12.01 @ 04:40:20

End Date: 2011.12.01 @ 13:52:35

Job Ticket #: 42313                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.14 @ 14:17:03

Gra Ex LLC

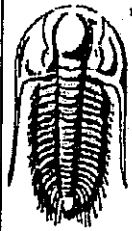
31-24s-13w Stafford,KS

Violet #1

DST # 1

Lansing D,F

2011.12.01



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Gra Ex LLC

31-24s-13w Stafford,KS

PO Box 32  
Kingman, KS 67068

Violet #1

Job Ticket: 42313 DST#: 1

ATTN: Jeff Burk

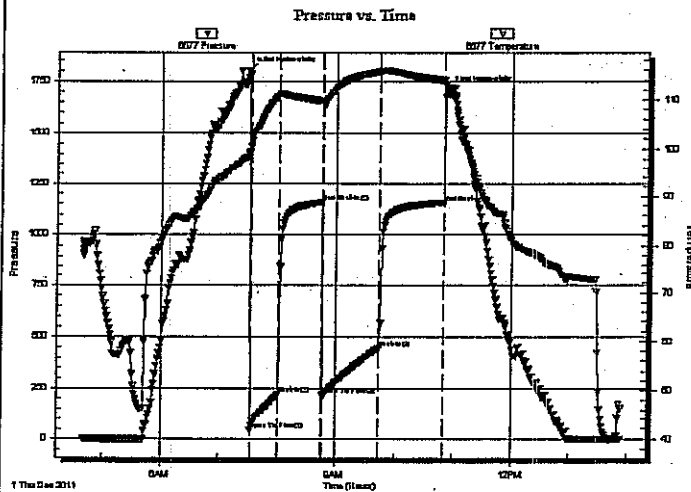
Test Start: 2011.12.01 @ 04:40:20

**GENERAL INFORMATION:**

Formation: **Lansing D,F**  
 Deviated: **No Whipstock** ft (KB)  
 Time Tool Opened: **07:32:35**  
 Time Test Ended: **13:52:35**  
 Interval: **3687.00 ft (KB) To 3744.00 ft (KB) (TVD)**  
 Total Depth: **3744.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Good**  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Tester: **Mike Slemp**  
 Unit No: **53**  
 Reference Elevations: **1953.00 ft (KB)**  
**1943.00 ft (CF)**  
**KB to GR/CF: 10.00 ft**

**Serial #: 8677** Inside  
 Press@RunDepth: **445.92 psig @ 3689.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2011.12.01** End Date: **2011.12.01** Last Calib.: **2011.12.01**  
 Start Time: **04:40:21** End Time: **13:52:35** Time On Btm: **2011.12.01 @ 07:30:05**  
 Time Off Btm: **2011.12.01 @ 10:52:35**

**TEST COMMENT:** IF- BOB in 5 min  
 IS- No blow back  
 FF- BOB in 7 min  
 FS- No blow back



**PRESSURE SUMMARY**

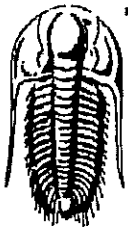
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1799.89	98.96	Initial Hydro-static
3	44.52	100.47	Open To Flow (1)
32	220.74	111.02	Shut-In(1)
75	1158.37	109.72	End Shut-In(1)
77	214.85	109.17	Open To Flow (2)
134	445.92	115.68	Shut-In(2)
200	1154.32	113.91	End Shut-In(2)
203	1705.95	111.53	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
248.00	MCW 50% mu 50% w ater skim of oil	3.48
682.00	MCW 95% w ater 5% mud	9.57

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Gra Ex LLC  
 PO Box 32  
 Kingman, KS 67068  
 ATTN: Jeff Burk

**31-24s-13w Stafford,KS**  
**Violet #1**  
 Job Ticket: 42313      DST#: 1  
 Test Start: 2011.12.01 @ 04:40:20

**Tool Information**

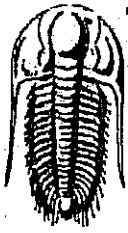
Drill Pipe:	Length: 3668.00 ft	Diameter: 3.80 inches	Volume: 51.45 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 51.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3687.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	83.00 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			3666.00	
Hydraulic tool	5.00			3671.00	
Jars	5.00			3676.00	
Safety Joint	2.00			3678.00	
Packer	5.00			3683.00	26.00      Bottom Of Top Packer
Packer	4.00			3687.00	
Stubb	1.00			3688.00	
Perforations	1.00			3689.00	
Recorder	0.00	8676	Inside	3689.00	
Recorder	0.00	8522	Inside	3689.00	
Perforations	19.00			3708.00	
Change Over Sub	1.00			3709.00	
Drill Pipe	31.00			3740.00	
Change Over Sub	1.00			3741.00	
Bullnose	3.00			3744.00	57.00      Bottom Packers & Anchor

**Total Tool Length: 83.00**





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

**31-24s-13w Stafford, KS**  
**Violet #1**  
Job Ticket: 42313      **DST#: 1**  
Test Start: 2011.12.01 @ 04:40:20

**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:	68000 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.74 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
248.00	MCW 50%mu50%w ater skim of oil	3.479
682.00	MCW95%w ater5%mud	9.567

Total Length: 930.00 ft      Total Volume: 13.046 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 8677

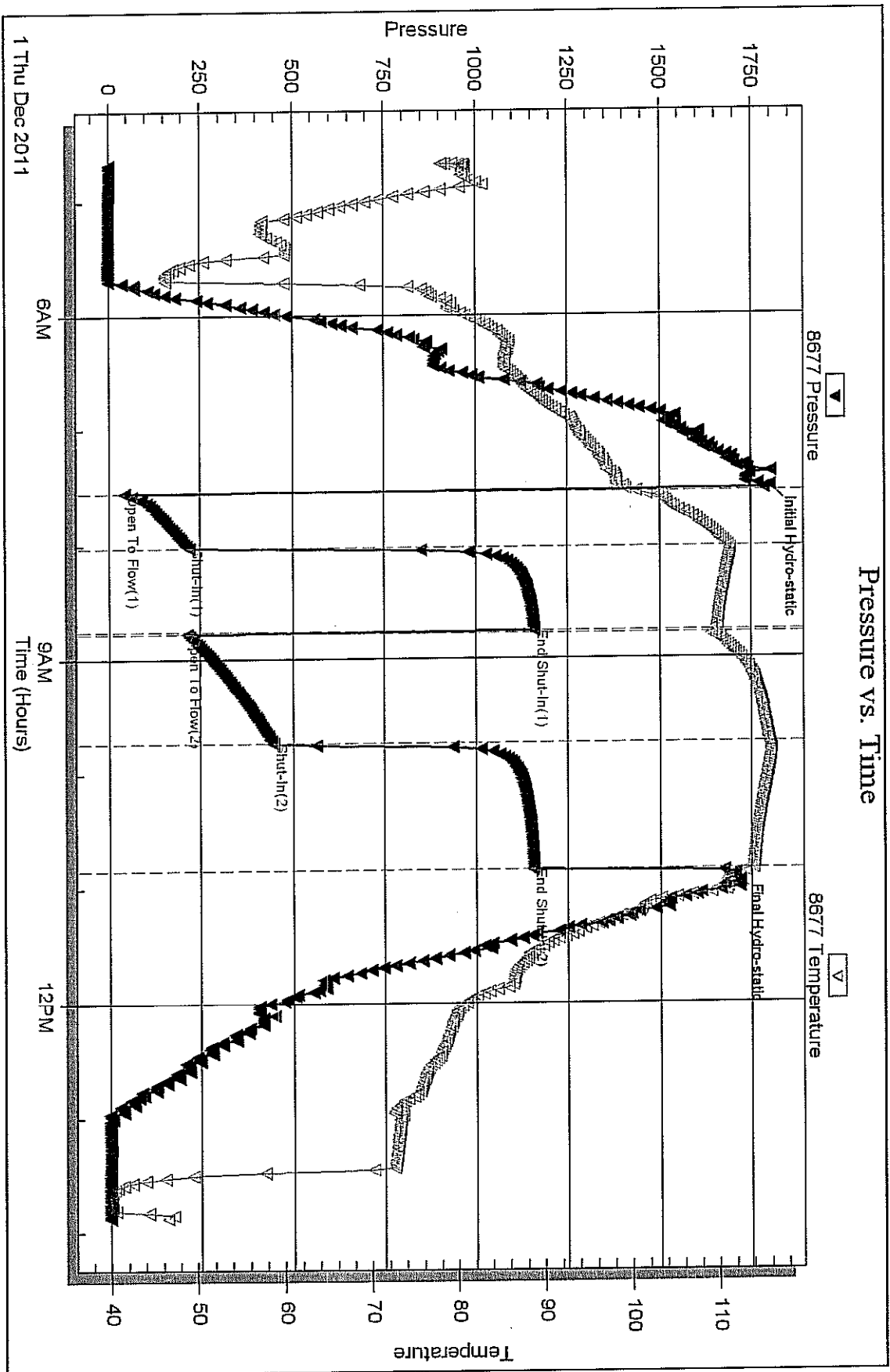
Inside

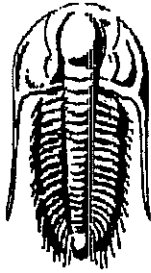
Gra Ex LLC

Violet #1

DST Test Number: 1

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Gra Ex LLC**

PO Box 32  
Kingman, KS 67068

ATTN: Jeff Burk

**Violet #1**

**31-24s-13w Stafford,KS**

Start Date: 2011.12.02 @ 01:40:26

End Date: 2011.12.02 @ 12:19:41

Job Ticket #: 42314                      DST #: 2

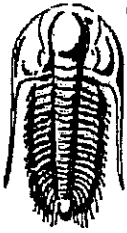
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.14 @ 14:17:21

Gra Ex LLC    31-24s-13w Stafford,KS    Violet #1    DST # 2    Lansing I, J    2011.12.02



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

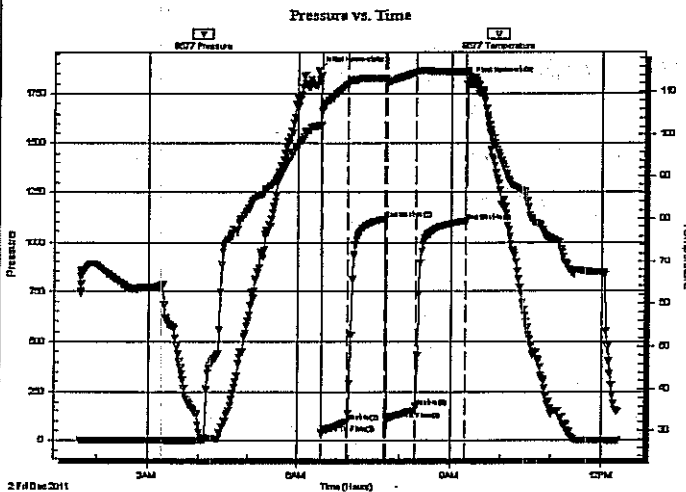
**31-24s-13w Stafford, KS**  
**Violet #1**  
Job Ticket: 42314      DST#: 2  
Test Start: 2011.12.02 @ 01:40:26

## GENERAL INFORMATION:

Formation: **Lansing I, J**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: **06:27:41**  
Time Test Ended: **12:19:41**  
Test Type: **Conventional Bottom Hole (Initial)**  
Tester: **Mke Slemp**  
Unit No: **53**  
Interval: **3787.00 ft (KB) To 3834.00 ft (KB) (TVD)**  
Reference Elevations: **1953.00 ft (KB)**  
Total Depth: **3834.00 ft (KB) (TVD)**      **1943.00 ft (CF)**  
Hole Diameter: **7.88 inches**      Hole Condition: **Good**      KB to GR/CF: **10.00 ft**

**Serial #: 8677**      **Inside**  
Press@RunDepth: **178.06 psig @ 3789.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2011.12.02**      End Date: **2011.12.02**      Last Calib.: **2011.12.02**  
Start Time: **01:40:27**      End Time: **12:19:41**      Time On Btm: **2011.12.02 @ 06:23:11**  
Time Off Btm: **2011.12.02 @ 09:20:11**

TEST COMMENT: IF- BOB in 1 min  
IS- No blow back  
FF- BOB ASAO GTS in 15 TSTM  
FS- No blow back



## PRESSURE SUMMARY

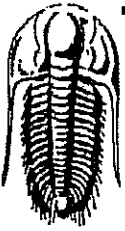
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1866.24	102.07	Initial Hydro-static
5	37.76	105.50	Open To Flow (1)
35	95.07	111.80	Shut-In(1)
80	1114.69	113.19	End Shut-In(1)
81	105.87	112.07	Open To Flow (2)
116	178.06	114.60	Shut-In(2)
174	1103.42	114.70	End Shut-In(2)
177	1813.96	114.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	OGCM10%gas20%oil10%water60% mud	0.87
376.00	GOC60%oil30gas5%water5% mud	5.27
62.00	100%water	0.87

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

**31-24s-13w Stafford,KS**  
**Violet #1**  
Job Ticket: 42314      DST#: 2  
Test Start: 2011.12.02 @ 01:40:26

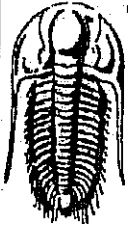
**Tool Information**

Drill Pipe:	Length: 3790.00 ft	Diameter: 3.80 inches	Volume: 53.16 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
		Total Volume: 53.16 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3787.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	73.00 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			3766.00	
Hydraulic tool	5.00			3771.00	
Jars	5.00			3776.00	
Safety Joint	2.00			3778.00	
Packer	5.00			3783.00	26.00      Bottom Of Top Packer
Packer	4.00			3787.00	
Stubb	1.00			3788.00	
Perforations	1.00			3789.00	
Recorder	0.00	8677	Inside	3789.00	
Recorder	0.00	8522	Inside	3789.00	
Perforations	9.00			3798.00	
Change Over Sub	1.00			3799.00	
Drill Pipe	31.00			3830.00	
Change Over Sub	1.00			3831.00	
Bullnose	3.00			3834.00	47.00      Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

**31-24s-13w Stafford, KS**  
**Violet #1**  
Job Ticket: 42314      **DST#: 2**  
Test Start: 2011.12.02 @ 01:40:26

**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:	58000 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
62.00	OGCM10%gas20%oil10%water60%mud	0.870
376.00	GOC60%oil30gas5%water5%mud	5.274
62.00	100%water	0.870

Total Length: 500.00 ft      Total Volume: 7.014 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

Serial #: 8677

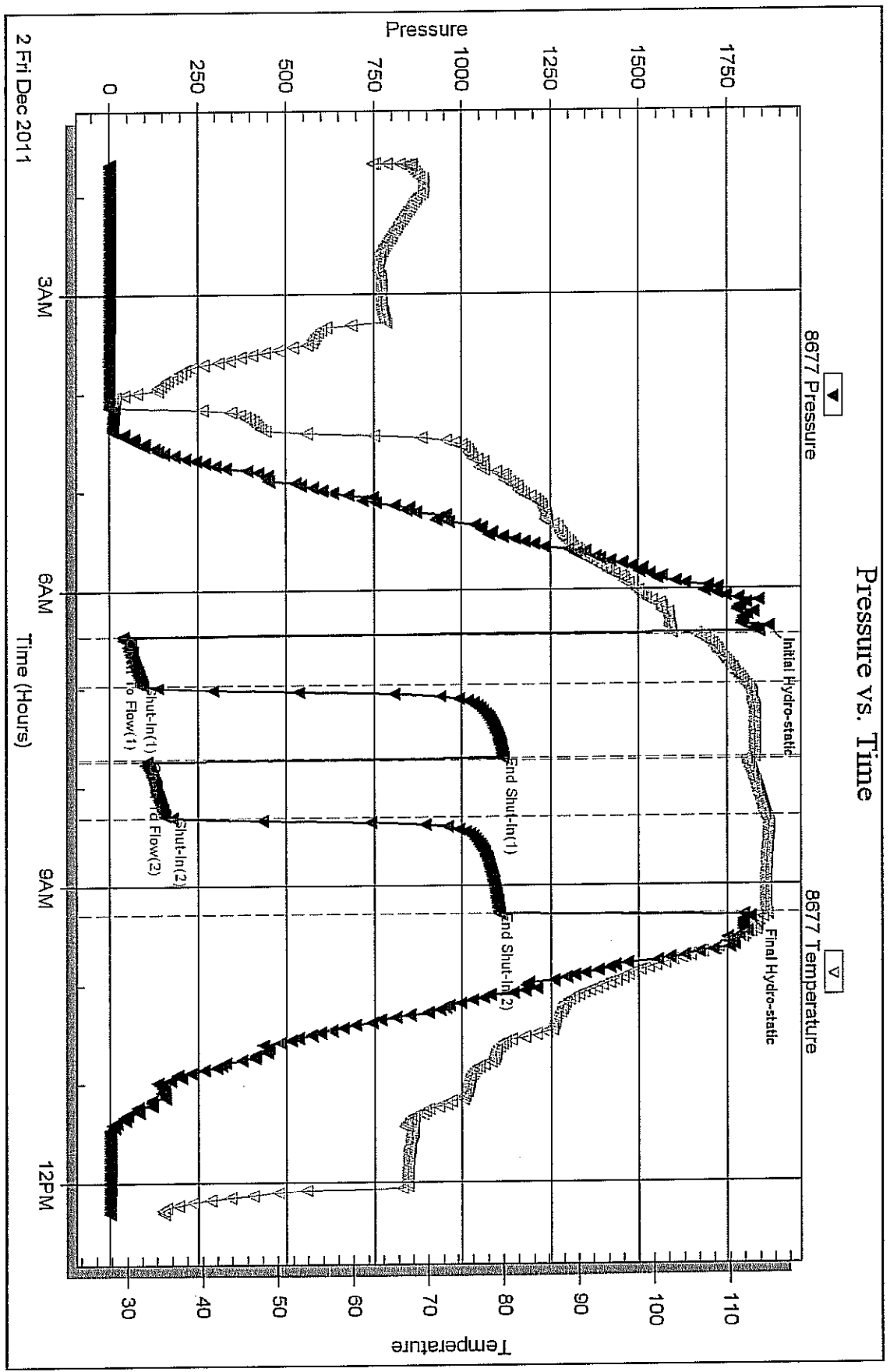
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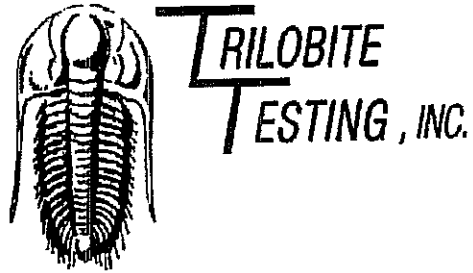
Gra Ex LLC

Violet #1

DST Test Number: 2

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Gra Ex LLC**  
PO Box 32  
Kingman, KS 67068

ATTN: Jeff Burk

### **Violet #1**

#### **31-24s-13w Stafford,KS**

Start Date: 2011.12.02 @ 22:00:34

End Date: 2011.12.03 @ 08:00:34

Job Ticket #: 42315                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2011.12.14 @ 14:18:50

Gra Ex LLC

31-24s-13w Stafford,KS

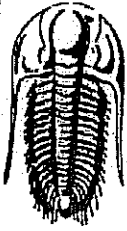
Violet #1

DST # 3

Lansing L

2011.12.02





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

**31-24s-13w Stafford, KS**  
**Violet #1**  
Job Ticket: 42315      DST#: 3  
Test Start: 2011.12.02 @ 22:00:34

## GENERAL INFORMATION:

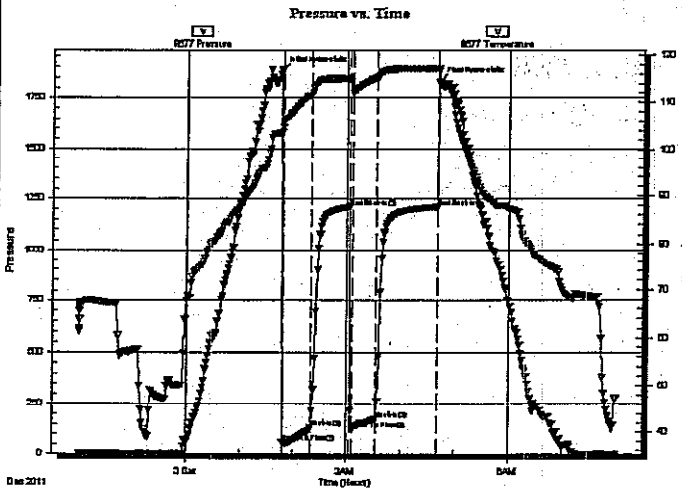
Formation: **Lansing L**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: 01:47:49  
Time Test Ended: 08:00:34  
Interval: **3869.00 ft (KB) To 3903.00 ft (KB) (TVD)**  
Total Depth: **3903.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**

Test Type: **Conventional Bottom Hole (Initial)**  
Tester: **Mike Slemp**  
Unit No: **53**  
Reference Elevations: **1953.00 ft (KB)**  
**1943.00 ft (CF)**  
KB to GR/CF: **10.00 ft**

**Serial #: 8677**      **Inside**  
Press@RunDepth: **173.63 psig @ 3871.00 ft (KB)**  
Start Date: **2011.12.02**      End Date:  
Start Time: **22:00:35**      End Time:

Capacity: **8000.00 psig**  
2011.12.03      Last Calib.: **2011.12.03**  
08:00:34      Time On Btm: **2011.12.03 @ 01:46:19**  
Time Off Btm: **2011.12.03 @ 04:41:34**

TEST COMMENT: IF- BOB in 1 min  
IS- 4 inch blow back  
FF- BOB ASAO GTS ASAO TSTM  
FS- BOB blow back



## PRESSURE SUMMARY

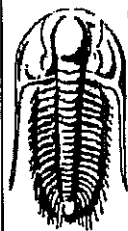
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1883.96	103.74	Initial Hydro-static
2	57.91	104.79	Open To Flow (1)
33	129.15	111.52	Shut-In(1)
77	1211.19	115.06	End Shut-In(1)
80	120.19	112.06	Open To Flow (2)
107	173.63	115.22	Shut-In(2)
174	1211.15	117.16	End Shut-In(2)
176	1831.37	117.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
315.00	MCO 95%oil5%mud	4.42
215.00	MVCOG40%gas50%oil5%water5%mud	3.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Gra Ex LLC  
 PO Box 32  
 Kingman, KS 67068  
 ATTN: Jeff Burk

**31-24s-13w Stafford,KS**  
**Violet #1**  
 Job Ticket: 42315      DST#: 3  
 Test Start: 2011.12.02 @ 22:00:34

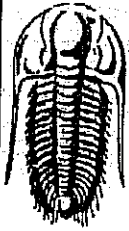
**Tool Information**

Drill Pipe:	Length: 3852.00 ft	Diameter: 3.80 inches	Volume: 54.03 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: 25000.00 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: 54.03 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3869.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	60.00 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			3848.00	
Hydraulic tool	5.00			3853.00	
Jars	5.00			3858.00	
Safety Joint	2.00			3860.00	
Packer	5.00			3865.00	26.00      Bottom Of Top Packer
Packer	4.00			3869.00	
Stubb	1.00			3870.00	
Perforations	1.00			3871.00	
Recorder	0.00	8677	Inside	3871.00	
Recorder	0.00	8522	Inside	3871.00	
Perforations	29.00			3900.00	
Bullnose	3.00			3903.00	34.00      Bottom Packers & Anchor

**Total Tool Length: 60.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Gra Ex LLC  
PO Box 32  
Kingman, KS 67088  
ATTN: Jeff Burk

**31-24s-13w Stafford,KS**  
**Violet #1**  
Job Ticket: 42315      **DST#:3**  
Test Start: 2011.12.02 @ 22:00:34

**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: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.86 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
315.00	MCO 95%oil5%mud	4.419
215.00	MMCGO40%gas50%oil5%water5%mud	3.016

Total Length: 530.00 ft      Total Volume: 7.435 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

Serial #: 8677

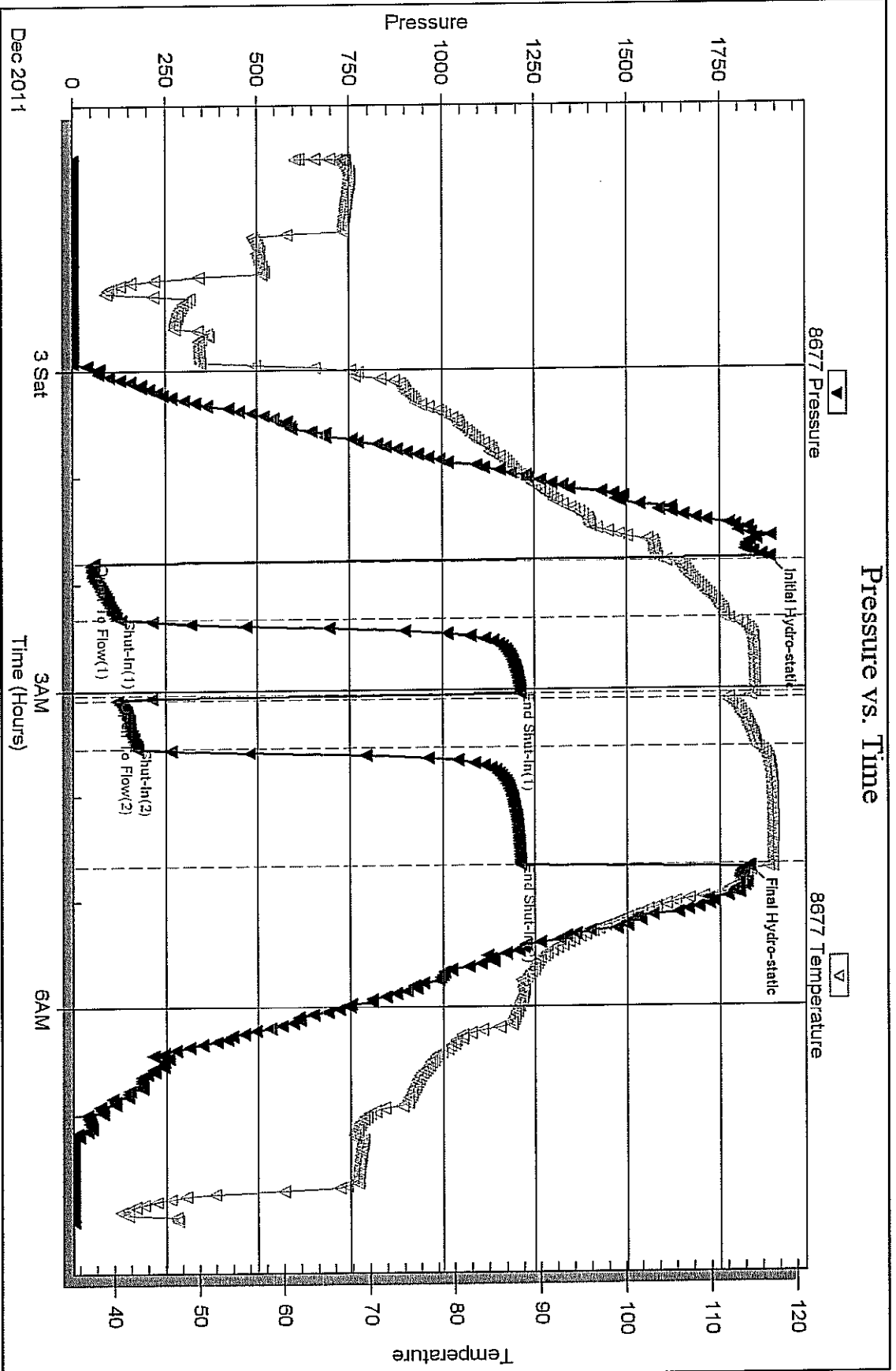
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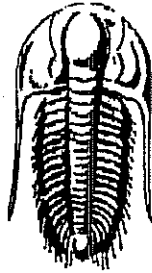
Gra Ex LLC

Voidel #1

DST Test Number: 3

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Gra Ex LLC**

PO Box 32  
Kingman, KS 67068

ATTN: Jeff Burk

### **Violet #1**

#### **31-24s-13w Stafford,KS**

Start Date: 2011.12.03 @ 21:13:31

End Date: 2011.12.04 @ 05:58:16

Job Ticket #: 44047                      DST #: 4

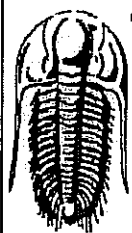
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.14 @ 14:19:06

Gra Ex LLC      31-24s-13w Stafford,KS      Violet #1      DST # 4      Mississippi      2011.12.03



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Gra Ex LLC  
 PO Box 32  
 Kingman, KS 67068  
 ATTN: Jeff Burk

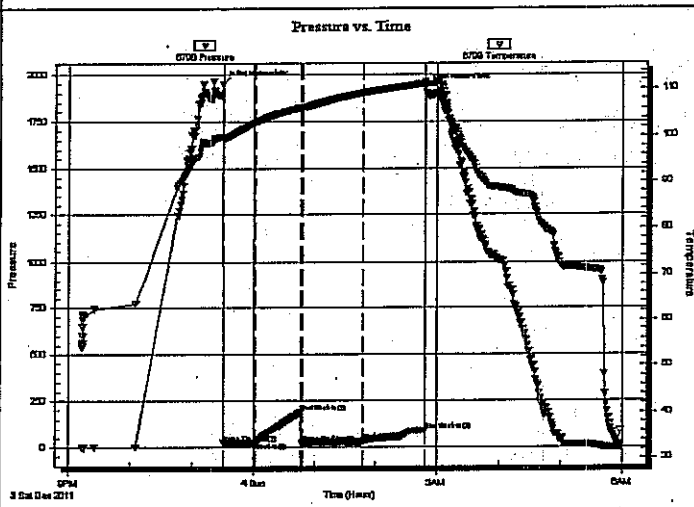
**31-24s-13w Stafford,KS**  
**Violet #1**  
 Job Ticket: 44047      DST#: 4  
 Test Start: 2011.12.03 @ 21:13:31

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock      ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 23:30:31  
 Tester: Leal Cason  
 Time Test Ended: 05:58:16  
 Unit No: 45  
 Interval: 3969.00 ft (KB) To 4020.00 ft (KB) (TVD)  
 Reference Elevations: 1953.00 ft (KB)  
 Total Depth: 4020.00 ft (KB) (TVD)  
 1943.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 10.00 ft

**Serial #: 6798**      Inside  
 Press@RunDepth: 31.99 psig @ 3970.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2011.12.03      End Date: 2011.12.04      Last Calib.: 2011.12.04  
 Start Time: 21:13:32      End Time: 05:58:16      Time On Btmr: 2011.12.03 @ 23:29:31  
 Time Off Btmr: 2011.12.04 @ 02:48:31

**TEST COMMENT:** IF: Fair Blow, 7 inches  
 IS: No Blow back  
 FF: Weak Blow, BOB in 54 minutes  
 FS: No Blow back

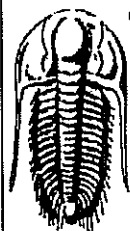


Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1948.30	99.80	Initial Hydro-static
.1	25.23	99.40	Open To Flow (1)
33	28.81	102.90	Shut-In(1)
77	192.07	106.06	End Shut-In(1)
79	23.21	106.03	Open To Flow (2)
138	31.99	109.14	Shut-In(2)
199	95.19	111.16	End Shut-In(2)
199	1929.81	111.48	Final Hydro-static

Length (ft)	Description	Volume (bbl)
30.00	SGCM 2%G 98%M	0.42

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Gra Ex LLC

31-24s-13w Stafford, KS

PO Box 32  
Kingman, KS 67068

Violet #1

Job Ticket: 44047

DST#: 4

ATTN: Jeff Burk

Test Start: 2011.12.03 @ 21:13:31

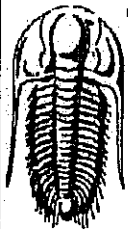
### Tool Information

Drill Pipe:	Length: 3972.00 ft	Diameter: 3.80 inches	Volume: 55.72 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: 25000.00 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: 55.72 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3969.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Bottom Packer is a shale packer

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3947.00	
Hydraulic tool	5.00			3952.00	
Jars	5.00			3957.00	
Safety Joint	2.00			3959.00	
Packer	5.00			3964.00	27.00 Bottom Of Top Packer
Packer	5.00			3969.00	
Stubb	1.00			3970.00	
Recorder	0.00	6798	Inside	3970.00	
Recorder	0.00	8367	Outside	3970.00	
Perforations	10.00			3980.00	
Change Over Sub	1.00			3981.00	
Drill Pipe	32.00			4013.00	
Change Over Sub	1.00			4014.00	
Perforations	3.00			4017.00	
Bullnose	3.00			4020.00	51.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

**31-24s-13w Stafford,KS**  
**Violet #1**  
Job Ticket: 44047      DST#: 4  
Test Start: 2011.12.03 @ 21:13:31

**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: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 13.17 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 9000.00 ppm			
Filter Cake: 0.20 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
30.00	SGCM 2%G 98%M	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



Serial #: 6798

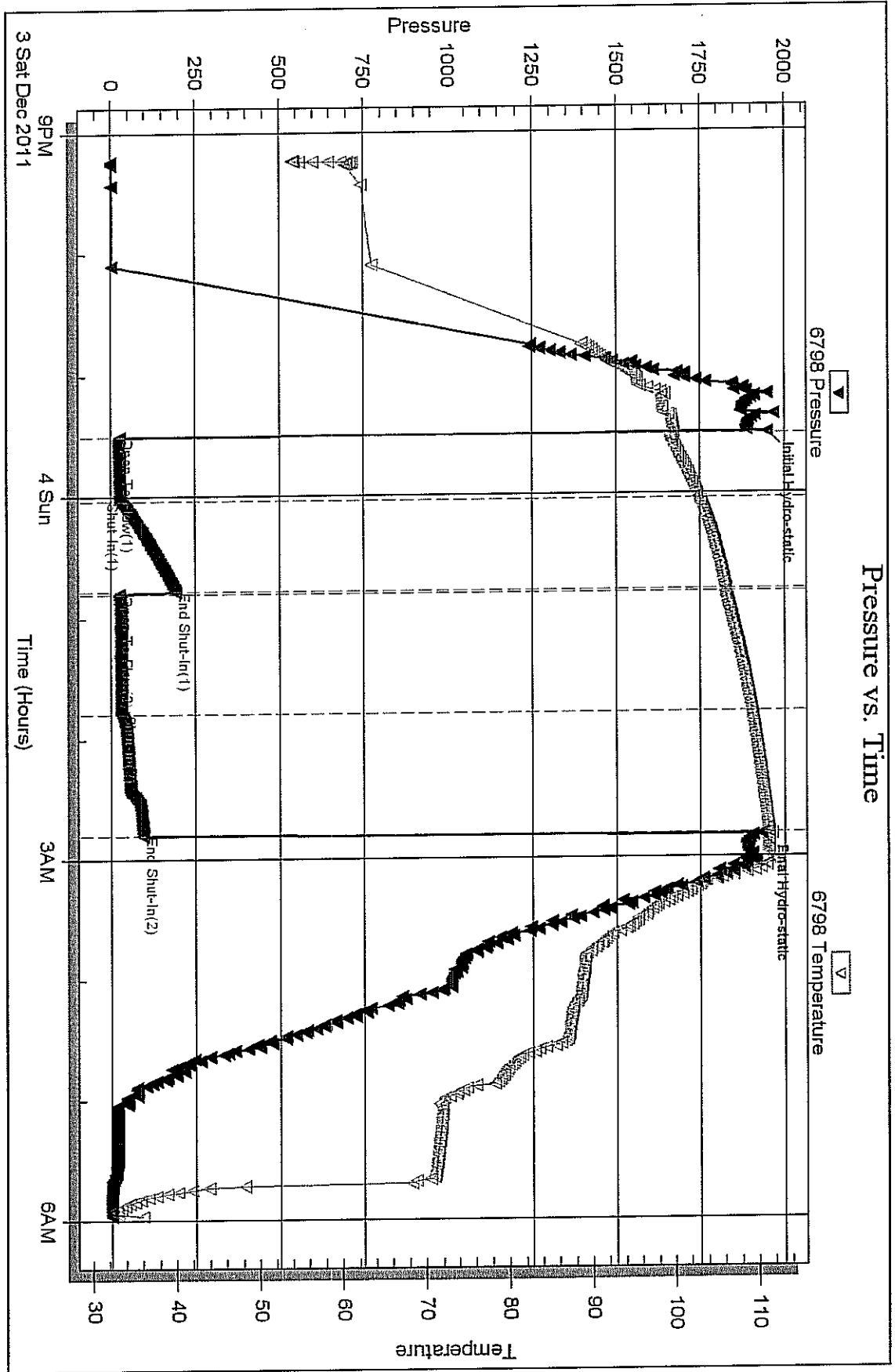
Inside

Gra Bx LLC

Violet #1

DST Test Number: 4

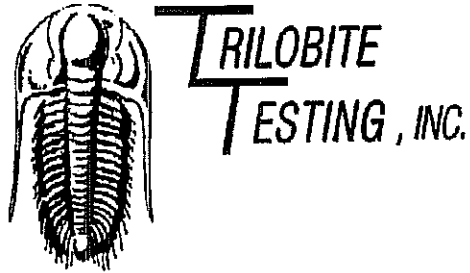
### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 44047

Printed: 2011.12.14 @ 14:19:08



## DRILL STEM TEST REPORT

Prepared For: **Gra Ex LLC**

PO Box 32  
Kingman, KS 67068

ATTN: Jeff Burk

**Violet #1**

**31-24s-13w Stafford,KS**

Start Date: 2011.12.05 @ 06:50:33

End Date: 2011.12.05 @ 16:44:03

Job Ticket #: 44048                      DST #: 5

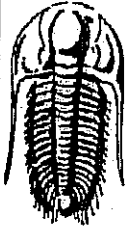
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.14 @ 14:19:22

Gra Ex LLC    31-24s-13w Stafford,KS    Violet #1    DST # 5    Arduckie    2011.12.05



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

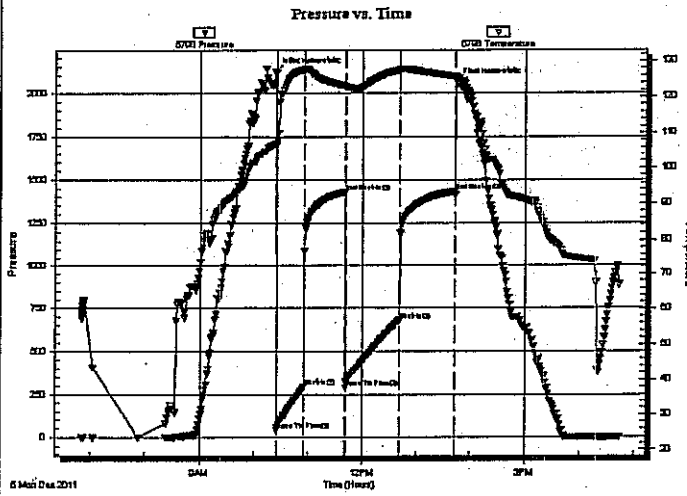
**31-24s-13w Stafford,KS**  
**Violet #1**  
Job Ticket: 44048      **DST#: 5**  
Test Start: 2011.12.05 @ 06:50:33

## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock      ft (KB)  
Time Tool Opened: 10:24:48  
Time Test Ended: 16:44:03  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Leal Cason  
Unit No: 45  
Interval: **4193.00 ft (KB) To 4265.00 ft (KB) (TVD)**  
Reference Elevations: 1953.00 ft (KB)  
Total Depth: 4265.00 ft (KB) (TVD)      1943.00 ft (CF)  
Hole Diameter: 7.88 Inches Hole Condition: Good      KB to GRVCF: 10.00 ft

**Serial #: 6798**      Inside  
Press@RunDepth: 682.80 psig @ 4194.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.12.05      End Date: 2011.12.05      Last Calib.: 2011.12.05  
Start Time: 06:50:34      End Time: 16:44:03      Time On Btm: 2011.12.05 @ 10:23:03  
Time Off Btm: 2011.12.05 @ 13:44:18

**TEST COMMENT:** IF: Strong Blow, BOB in 8 minutes  
IS: No Blow back  
FF: Strong Blow, BOB in 8 minutes  
FS: No Blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2123.43	107.03	Initial Hydro-static
2	41.65	106.40	Open To Flow (1)
32	297.04	127.61	Shut-In(1)
78	1429.79	123.10	End Shut-In(1)
79	291.29	122.95	Open To Flow (2)
138	682.80	127.49	Shut-In(2)
200	1433.46	125.77	End Shut-In(2)
202	2065.57	125.61	Final Hydro-static

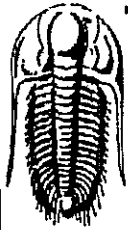
## Recovery

Length (ft)	Description	Volume (bbl)
1364.00	Water	19.13
372.00	GWCM 5%G 35%W 60%M	5.22
30.00	SOSGCM 1%O 2%G 97%M	0.42

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
  
ATTN: Jeff Burk

**31-24s-13w Stafford,KS**  
  
**Violet #1**  
Job Ticket: 44048      DST#: 5  
Test Start: 2011.12.05 @ 06:50:33

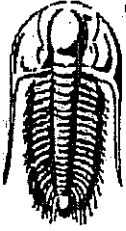
**Tool Information**

Drill Pipe:	Length: 4190.00 ft	Diameter: 3.80 inches	Volume: 58.77 bbl	Tool Weight: 2100.00 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: 70000.00 lb
		<u>Total Volume:</u>	<u>58.77 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4193.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Shale Packer On Bottom

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4171.00	
Hydraulic tool	5.00			4176.00	
Jars	5.00			4181.00	
Safety Joint	2.00			4183.00	
Packer	5.00			4188.00	27.00      Bottom Of Top Packer
Packer	5.00			4193.00	
Stubb	1.00			4194.00	
Recorder	0.00	6798	Inside	4194.00	
Recorder	0.00	8367	Outside	4194.00	
Perforations	5.00			4199.00	
Change Over Sub	1.00			4200.00	
Drill Pipe	61.00			4261.00	
Change Over Sub	1.00			4262.00	
Bulinose	3.00			4265.00	72.00      Bottom Packers & Anchor

**Total Tool Length: 99.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Gra Ex LLC  
PO Box 32  
Kingman, KS 67068  
ATTN: Jeff Burk

31-24s-13w Stafford, KS  
**Violet #1**  
Job Ticket: 44048      DST#: 5  
Test Start: 2011.12.05 @ 06:50:33

**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:	45000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.77 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 10000.00 ppm			
Filter Cake: 0.20 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
1364.00	Water	19.133
372.00	GWCM 5%G 35%W 60%M	5.218
30.00	SOSCOM 1%O 2%G 97%M	0.421

Total Length: 1766.00 ft	Total Volume: 24.772 bbl	
Num Fluid Samples: 0	Num Gas Borris: 0	Serial #:
Laboratory Name:	Laboratory Location:	
Recovery Comments: RW was .38 @ 30 degrees		

Serial #: 6798

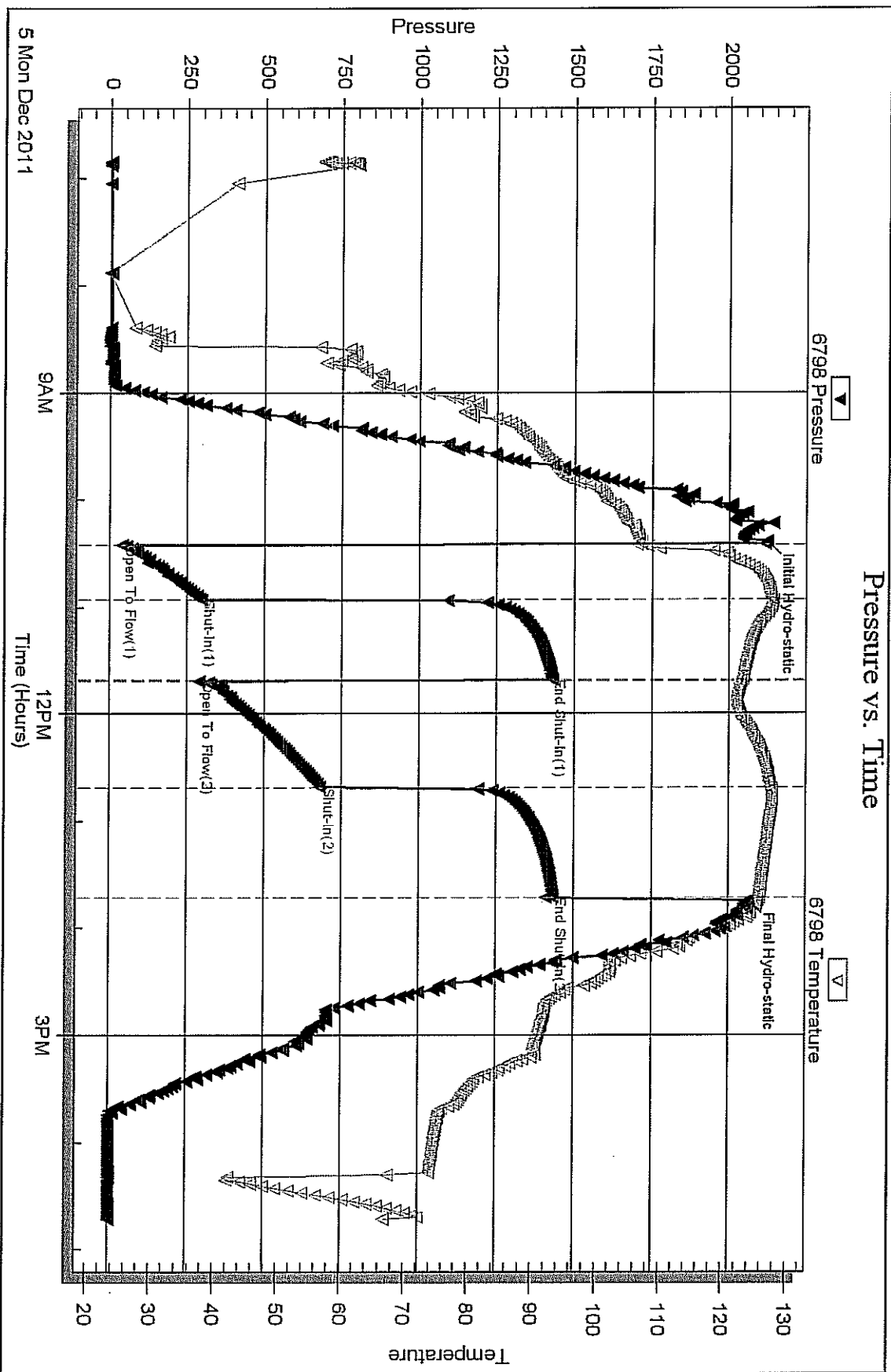
Inside

Gra Ek LLC

Violet #1

DST Test Number: 5

### Pressure vs. Time



Triobble Testing, Inc

Ref. No: 44048

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