



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1155390  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

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
- Plug Back       Conv. to GSW       Conv. to Producer
- 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

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

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1155390

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
--	---	---

# ALLIED OIL & GAS SERVICES, LLC 059747

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Medicine Lodge KS.

DATE <u>6-19-13</u>	SEC.	TWP.	RANGE	CALLED OUT <u>10:00 AM</u>	ON LOCATION <u>11:00 AM</u>	JOB START <u>12:30 PM</u>	JOB FINISH <u>12:50 PM</u>
LEASE <u>Bar</u>	WELL #	LOCATION <u>Cottage Creek + Astina Rd.</u>			COUNTY <u>Barber</u>	STATE <u>Kansas</u>	
OLD OR <u>NEW</u> (Circle one)		LOCATION <u>East of top of Hill south into</u>					

CONTRACTOR <u>Big Buckets</u>	OWNER <u>M+M Exploration</u>
TYPE OF JOB <u>Contractor</u>	
HOLE SIZE <u>30</u> T.D.	CEMENT
CASING SIZE <u>20"</u> DEPTH	AMOUNT ORDERED
TUBING SIZE DEPTH	<u>100 sx 6S:3S:6 7.6eL + 3 7.6e + 14 Flex</u>
DRILL PIPE DEPTH	<u>50 sx Class A + 3 7.6e</u>
TOOL DEPTH	
PRES. MAX <u>100</u> MINIMUM	COMMON <u>A 50 sx @ 17.90 895.00</u>
MEAS. LINE SHOE JOINT	POZMIX @
CEMENT LEFT IN CSG.	GEL @
PERFS.	CHLORIDE <u>5 sx @ 64.00 320.00</u>
DISPLACEMENT <u>Freshwater (14 Bbls)</u>	ASC @
EQUIPMENT	<u>FloSeal 25 @ 2.97 74.25</u>
	<u>ALW 100 sx @ 15.00 1500.00</u>
	@
	@
	@
	@
	@
	HANDLING <u>167.3 @ 2.48 414.90</u>
	MILEAGE <u>7.17/25/2.60 466.34</u>
	TOTAL <u>3670.49</u>

PUMP TRUCK CEMENTER <u>Carl Balding</u>
# <u>360-302</u> HELPER <u>Jake Heard</u>
BULK TRUCK
# <u>364</u> DRIVER <u>Justin Bower</u>
BULK TRUCK
# DRIVER

REMARKS:

Thank you

CHARGE TO: M+M Exploration  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**SERVICE**

DEPTH OF JOB <u>50</u>	
PUMP TRUCK CHARGE <u>1512.25</u>	
EXTRA FOOTAGE @	
MILEAGE <u>25 @ 7.70 192.50</u>	
MANIFOLD @	
<u>LU 25 @ 4.40 110.00</u>	
@	
TOTAL <u>1814.75</u>	

**PLUG & FLOAT EQUIPMENT**

_____ @ _____
_____ @ _____
_____ @ _____
_____ @ _____
_____ @ _____
TOTAL _____

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME John Vrazell  
SIGNATURE John Vrazell

SALES TAX (If Any) \_\_\_\_\_  
TOTAL CHARGES 5485.24  
DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS  
(NET) 3839.66

# ALLIED OIL & GAS SERVICES, LLC 059547

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:  
Medicine Lodge, KS

DATE <u>7-2-2013</u>	SEC. <u>22</u>	TWP. <u>34S</u>	RANGE <u>15W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>3:06pm</u>
LEASE <u>2 Bgr</u>		WELL # <u>22-4</u>		LOCATION <u>Axns &amp; Cottage Creek Rd, Leas</u>		COUNTY <u>Barber</u>	STATE <u>KS</u>
OLD OR <u>NEW</u> (Circle one)				<u>South into</u>			

CONTRACTOR Herst #1  
 TYPE OF JOB Surpge  
 HOLE SIZE 12 1/4 T.D. 934'  
 CASING SIZE 8 5/8 2 1/2 DEPTH 934'  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT 42'  
 CEMENT LEFT IN CSG. 42'  
 PERFS.  
 DISPLACEMENT 58 bbls of Fresh water

OWNER Mem Exploration

CEMENT  
 AMOUNT ORDERED 28.55x65.35.690.01  
3%GCC + 1/4 # Plosac, 1.50x CLASS A  
3%GCC + 2%GCC

EQUIPMENT  
 PUMP TRUCK CEMENTER Darin F  
#358-555 HELPER Scott P  
 BULK TRUCK  
#561-553 DRIVER James P.  
 BULK TRUCK  
 # DRIVER

COMMON <u>A 150</u> SK @ <u>17.90</u>	<u>2685.00</u>
POZMIX @	
GEL <u>15</u> @ <u>28.40</u>	<u>351.00</u>
CHLORIDE <u>13</u> @ <u>64.00</u>	<u>832.00</u>
ASC @	
<u>ALW 285</u> SK @ <u>15.00</u>	<u>4275.00</u>
<u>Plosac 71</u> @ <u>2.97</u>	<u>210.87</u>
HANDLING <u>482.05</u> @ <u>2.48</u>	<u>484.53</u>
MILEAGE <u>25/2.60/20,731</u>	<u>1348.03</u>
TOTAL <u>10,186.43</u>	

**REMARKS:**

See cement log  
Cement did circulate

**SERVICE**

DEPTH OF JOB <u>934'</u>	
PUMP TRUCK CHARGE <u>2058.50</u>	
EXTRA FOOTAGE @	
MILEAGE <u>25</u> @ <u>7.70</u>	<u>192.50</u>
MANIFOLD <u>Hess rents</u> @	<u>275.00</u>
<u>LU 25</u> @ <u>4.40</u>	<u>110.00</u>
TOTAL <u>2636.00</u>	

CHARGE TO: Mem Exploration  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

<u>8 5/8</u>	
1-Rubber Plug @	<u>76.25</u>
1-Fiber Baffle Plate @	<u>67.50</u>
1-Basket @	<u>70.00</u>
TOTAL <u>363.75</u>	

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 13,186.18  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS  
(NET) 9230.32

PRINTED NAME x Alan Vanku  
 SIGNATURE x Alan Vanku

Thank you!!!

# ALLIED CEMENTING CO., LLC. 040107

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Medicine Lodge KS

DATE <u>7-9-13</u>	SEC. <u>22</u>	TWP. <u>34S</u>	RANGE <u>15W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Z-Bar 22-4</u>		WELL # <u>22-4</u>		LOCATION <u>Cottage Creek + Alena Rd 16 East</u>		COUNTY <u>Barber</u>	STATE <u>KS</u>
OLD OR NEW (Circle one)				South into			

CONTRACTOR Hardt #1 OWNER M+M Exploration

TYPE OF JOB Production Casing  
 HOLE SIZE 7 7/8 I.D. 5050  
 CASING SIZE 5 1/2 # 15.5 DEPTH SDST  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT 42ft  
 CEMENT LEFT IN CSG. 42ft  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT 120 1/4 BBLs 2% KCL water

CEMENT  
 AMOUNT ORDERED 30s x 60:40:4% Gel  
150s x Class H + 10% gyp 10% Salt 6# 161 Seal  
5% Fl-160 + 1/4# Fl-Seal + 1/2 gal Clap pro

COMMON <u>Class A</u>	<u>185x @</u>	<u>17.70</u>	<u>322.20</u>
POZMIX	<u>12x @</u>	<u>9.35</u>	<u>112.20</u>
GEL	<u>1x @</u>	<u>23.40</u>	<u>23.40</u>
CHLORIDE	@		
ASC	@		
<u>Class H</u>	<u>150x @</u>	<u>21.20</u>	<u>3180.00</u>
<u>Salt</u>	<u>85x @</u>	<u>26.35</u>	<u>2239.25</u>
<u>Kolseal</u>	<u>900 # @</u>	<u>.98</u>	<u>882.00</u>
<u>FL-160</u>	<u>70 # @</u>	<u>18.90</u>	<u>1323.00</u>
<u>Fl-Seal</u>	<u>37 # @</u>	<u>2.97</u>	<u>109.89</u>
<u>Clap pro</u>	<u>12 gal @</u>	<u>34.40</u>	<u>412.80</u>
	@		
	@		
HANDLING <u>233.38 ft<sup>3</sup></u>	@ <u>2.48</u>		<u>578.78</u>
MILEAGE <u>10 for 25</u>	<u>2.60</u>		<u>650.00</u>
TOTAL			<u>7745.07</u>

EQUIPMENT

PUMP TRUCK	CEMENTER <u>JAKE HENAO / David Feld</u>
# <u>558/555</u>	HELPER <u>Scott Priddy</u>
BULK TRUCK	
# <u>561/553</u>	DRIVER <u>James Bowen</u>
BULK TRUCK	
#	DRIVER

REMARKS:  
See Job log

Bump plug float didnt hold  
Repressured 3 times still didnt hold  
Pressured up 1000 psi per Company man  
Shut in

SERVICE

DEPTH OF JOB <u>5051 ft</u>		<u>3099.25</u>
PUMP TRUCK CHARGE		
EXTRA FOOTAGE	@	
MILEAGE <u>25</u>	@ <u>7.70</u>	<u>192.50</u>
MANIFOLD <u>HEAD Rental</u>	@	<u>275.00</u>
<u>light vehicle</u>	<u>25 @</u>	<u>4.40</u>
	@	
TOTAL		
		<u>3676.25</u>

CHARGE TO: M+M Exploration  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

<u>8 Turbolizers</u>	@ <u>48.30</u>	<u>386.40</u>
<u>1 CMT Basket</u>	@	<u>159.40</u>
<u>1 AFU Float Shoe</u>	@	<u>339.30</u>
<u>1 Latch Down Plug Asymb.</u>	@	<u>398.75</u>
	@	
TOTAL		
		<u>1283.85</u>

To Allied Cementing Co., LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Alan Vradic  
 SIGNATURE [Signature]

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS  
9279.12

5 1/2" w-6

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  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

October 07, 2013

Michael Austin  
M & M Exploration, Inc.  
4257 MAIN ST., #230  
WESTMINSTER, CO 80031

Re: ACO1  
API 15-007-24035-00-00  
Z Bar 22-4  
NW/4 Sec.22-34S-15W  
Barber 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,  
Michael Austin



## DRILL STEM TEST REPORT

Prepared For: **M & M Exploration Inc.**

4257 Main St., #230  
Westminster, CO. 80031

ATTN: Beth Brock

**Z-Bar #22-4**

**22-34s.-15w. Barber Co.**

Start Date: 2013.07.08 @ 06:53:26

End Date: 2013.07.08 @ 17:06:56

Job Ticket #: 52338                      DST #: 1

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

Printed: 2013.07.10 @ 10:14:29



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

M & M Exploration Inc.

**22-34s.-15w. Barber Co.**

4257 Main St., #230  
Westminster, CO. 80031

**Z-Bar #22-4**

Job Ticket: 52338

**DST#: 1**

ATTN: Beth Brock

Test Start: 2013.07.08 @ 06:53:26

## GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:44:41

Time Test Ended: 17:06:56

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Reynolds

Unit No: 48

**Interval: 4699.00 ft (KB) To 4727.00 ft (KB) (TVD)**

Reference Elevations: 1604.00 ft (KB)

Total Depth: 4727.00 ft (KB) (TVD)

1594.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8790**

**Inside**

Press @ Run Depth: 92.01 psig @ 4700.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.08

End Date:

2013.07.08

Last Calib.:

2013.07.08

Start Time: 06:53:31

End Time:

17:06:56

Time On Btm:

2013.07.08 @ 08:41:26

Time Off Btm:

2013.07.08 @ 14:16:26

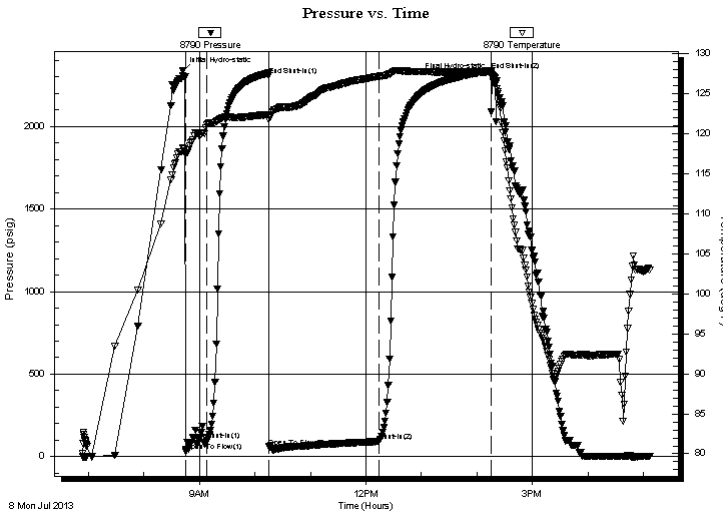
TEST COMMENT: IF: Weak blow . Surf. - 2"

IS: No blow

FF: Strong blow . BOB @ 45 min.

FS: No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2335.31	118.30	Initial Hydro-static
4	29.11	117.43	Open To Flow (1)
27	96.93	121.12	Shut-In(1)
93	2310.69	122.41	End Shut-In(1)
94	59.20	121.77	Open To Flow (2)
213	92.01	127.19	Shut-In(2)
334	2340.16	127.75	End Shut-In(2)
335	2299.01	127.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	SLI OCMW 4%oil, 30% mud, 66%w tr	0.30
60.00	OWCM 25%oil, 25%w tr, 50% mud	0.31
45.00	OCM 17%oil, 83% mud	0.63
0.00	370' GIP	0.00

## Gas Rates

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





# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

M & M Exploration Inc.  
4257 Main St., #230  
Westminster, CO. 80031  
ATTN: Beth Brock

**22-34s.-15w. Barber Co.**

**Z-Bar #22-4**

Job Ticket: 52338

**DST#: 1**

Test Start: 2013.07.08 @ 06:53:26

### GENERAL INFORMATION:

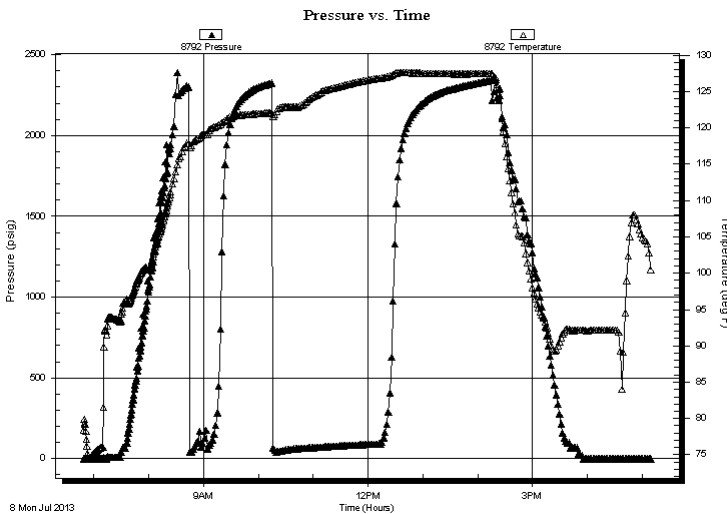
Formation: **Ft. Scott**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 08:44:41 Tester: Ryan Reynolds  
 Time Test Ended: 17:06:56 Unit No: 48  
 Interval: **4699.00 ft (KB) To 4727.00 ft (KB) (TVD)** Reference Elevations: 1604.00 ft (KB)  
 Total Depth: 4727.00 ft (KB) (TVD) 1594.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

### Serial #: 8792 Outside

Press @ Run Depth: psig @ 4700.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.08 End Date: 2013.07.08 Last Calib.: 2013.07.08  
 Start Time: 06:48:45 End Time: 17:09:25 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF: Weak blow . Surf. - 2"  
 IS: No blow  
 FF: Strong blow . BOB @ 45 min.  
 FS: No blow .

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
60.00	SLI OCMW 4%oil, 30%mud, 66%w tr	0.30
60.00	OWCM 25%oil, 25%w tr, 50%mud	0.31
45.00	OCM 17%oil, 83%mud	0.63
0.00	370' GIP	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

M & M Exploration Inc.

**22-34s.-15w. Barber Co.**

4257 Main St., #230  
Westminster, CO. 80031

**Z-Bar #22-4**

Job Ticket: 52338

**DST#: 1**

ATTN: Beth Brock

Test Start: 2013.07.08 @ 06:53:26

## Tool Information

Drill Pipe:	Length: 4577.00 ft	Diameter: 3.80 inches	Volume: 64.20 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 110000.0 lb
			<u>Total Volume: 64.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4699.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4676.00	
Sampler	2.00			4678.00	
Hydraulic tool	5.00			4683.00	
Jars	5.00			4688.00	
Safety Joint	2.00			4690.00	
Packer	5.00			4695.00	28.00 Bottom Of Top Packer
Packer	4.00			4699.00	
Stubb	1.00			4700.00	
Recorder	0.00	8790	Inside	4700.00	
Recorder	0.00	8792	Outside	4700.00	
Perforations	24.00			4724.00	
Bullnose	3.00			4727.00	28.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

M & M Exploration Inc.

**22-34s.-15w. Barber Co.**

4257 Main St., #230  
Westminster, CO. 80031

**Z-Bar #22-4**

Job Ticket: 52338

**DST#: 1**

ATTN: Beth Brock

Test Start: 2013.07.08 @ 06:53:26

## 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: 225000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	SLI OCMW 4%oil, 30%mud, 66%w tr	0.295
60.00	OWCM 25%oil, 25%w tr, 50%mud	0.313
45.00	OCM 17%oil, 83%mud	0.631
0.00	370' GIP	0.000

Total Length: 165.00 ft

Total Volume: 1.239 bbl

Num Fluid Samples: 0

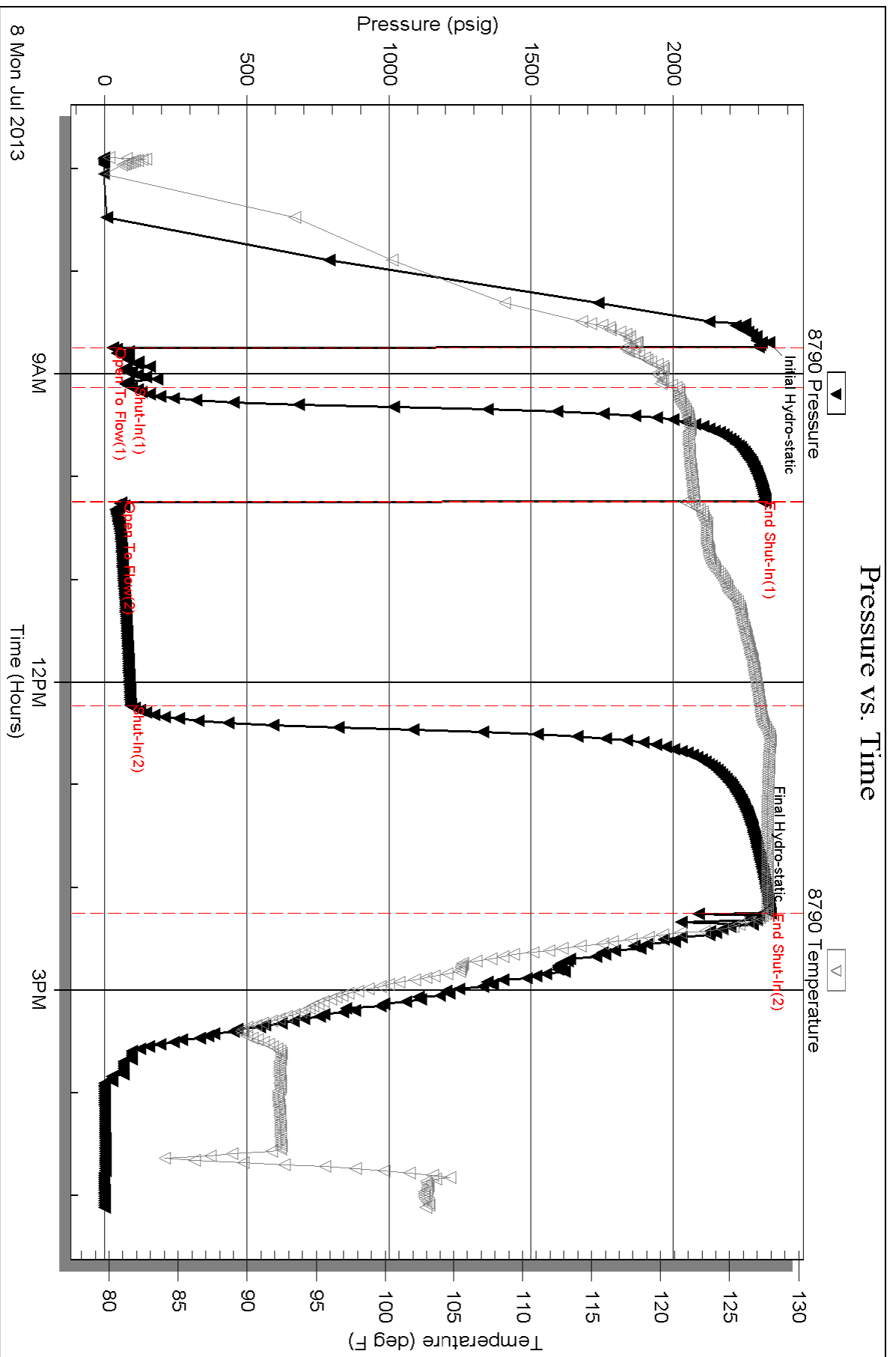
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

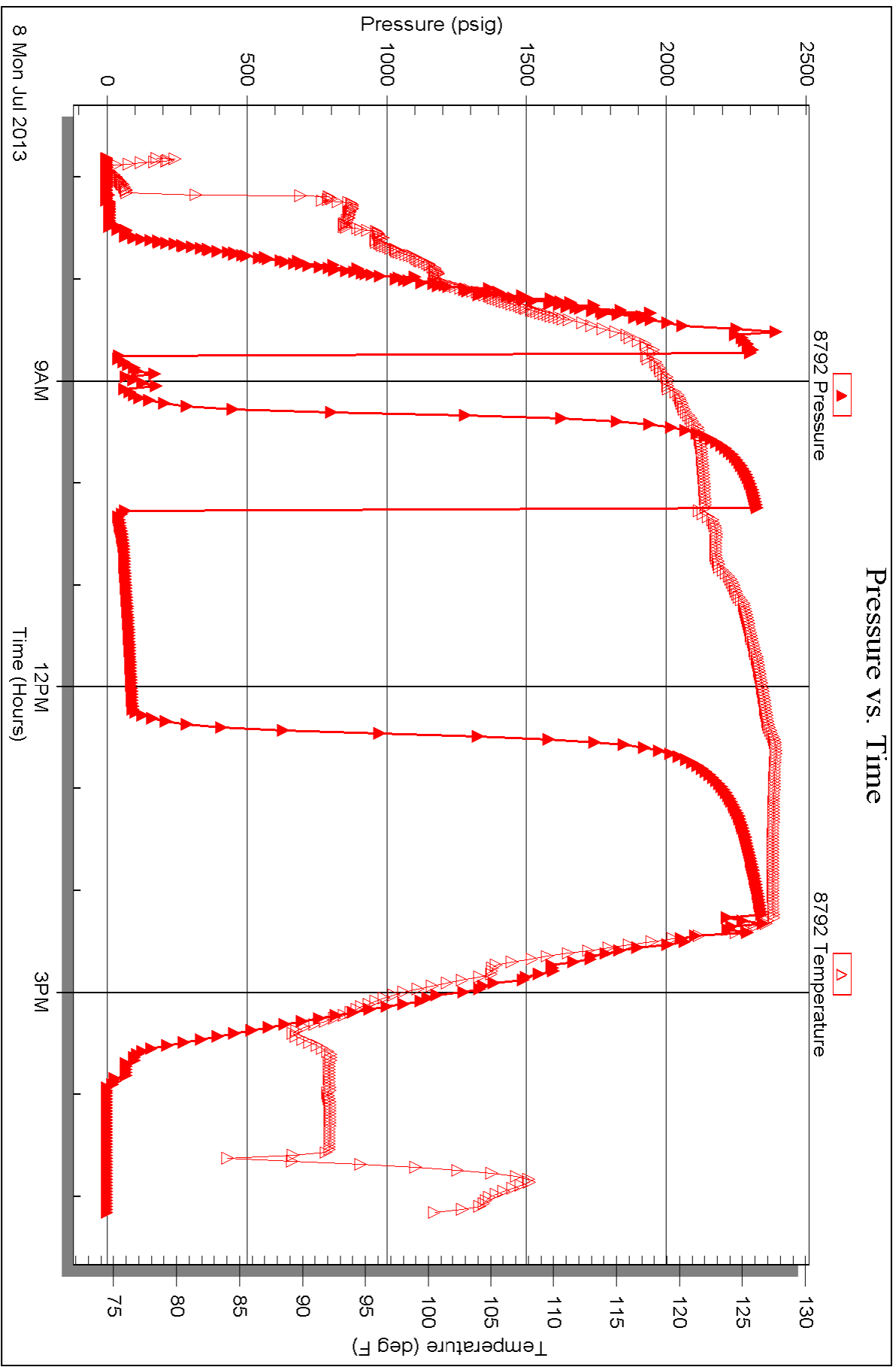


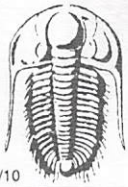
Serial #: 8792

Outside M & M Exploration Inc.

Z-Bar #22-4

DST Test Number: 1





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52338

Well Name & No. Z-Bar 22-4 Test No. 1 Date 7-8-13  
 Company M & M Expl., Inc. Elevation 1604 KB 1594 GL  
 Address 4257 Main St., #230 Westminster Co. 80031  
 Co. Rep / Geo. Beth Brock Rig Hardt #1  
 Location: Sec. 22 Twp. 34s. Rge. 15w. Co. Barber State KS

Interval Tested 4699-4727 Zone Tested Ft. Scott  
 Anchor Length 28' Drill Pipe Run 4577 Mud Wt. 9.2  
 Top Packer Depth 4694 Drill Collars Run 118 Vis 49  
 Bottom Packer Depth 4699 Wt. Pipe Run ∅ WL 9.8  
 Total Depth 4727 Chlorides 2800 ppm System LCM ∅  
 Blow Description IF: Weak blow. surf. - 2" ISI: No blow

FF: Strong blow. BOB @ 45min  
FST: No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>370</u>	<u>GIP</u>	<u>100</u>			
<u>45</u>	<u>OLM</u>		<u>17</u>		<u>83</u>
<u>60</u>	<u>DWLM</u>		<u>25</u>	<u>25</u>	<u>50</u>
<u>60</u>	<u>SLI OLMW</u>		<u>4</u>	<u>66</u>	<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 535 BHT \_\_\_\_\_ Gravity N/C API RW 203 @ 105° F Chlorides 22500 ppm

(A) Initial Hydrostatic <u>2335</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>0545</u>
(B) First Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0653</u>
(C) First Final Flow <u>97</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0845</u>
(D) Initial Shut-In <u>2311</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1415</u>
(E) Second Initial Flow <u>59</u>	<input checked="" type="checkbox"/> Hourly Standby <u>1 1/4</u> <u>125</u>	T-Out <u>1707</u>
(F) Second Final Flow <u>92</u>	<input checked="" type="checkbox"/> Mileage <u>120</u> <u>186</u>	Comments _____
(G) Final Shut-In <u>2340</u>	<input checked="" type="checkbox"/> Sampler <u>Do Not charge</u>	_____
(H) Final Hydrostatic <u>2299</u>	<input type="checkbox"/> Straddle _____	_____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>120</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>120</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>1886</u>
	Sub Total <u>1886</u>	MP/DST Disc't _____

Approved By Beth Brock Our Representative Ryan Reynolds  
 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.