



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1169224  
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
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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: \_\_\_\_\_

1169224

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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> _____ _____
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Form	ACO1 - Well Completion
Operator	M & M Exploration, Inc.
Well Name	Z Bar 21-8
Doc ID	1169224

All Electric Logs Run

Induction
Density-Neutron/Microlog
Mudlog
Drill Stem



P.O. # \_\_\_\_\_

# BIG BUCKETS RATHOLE DRILLING

No 5324

ORDERED BY

P.O. Box 5252  
Enid, Oklahoma 73702  
Phone (580) 233-9850  
Fax (580) 233-4588

Date 9/12/13

*John Vatriel*

Bill To *M&M Resources EXPLORATION*

Lease *Z Bar #21-8*

Address \_\_\_\_\_

Legal *NE/4 Sec 21-34S-15W*

County *Barber Ks.*

Rig \_\_\_\_\_

DESCRIPTION	AMOUNT
Furnish Men & Equipment To <i>Drill 4' of 60" casing &amp; 93 ft. of 30" hole &amp; run 20" pipe &amp; remove dirt off loc.</i>	
Materials Furnished <i>93 ft. of 20" pipe - 4' of 60" timber Welder &amp; materials &amp; Ks trip permits (2 titles)</i>	#9500 <sup>00</sup>
	}
Operator <i>Bean W. Hittington</i> Approved By _____	Total #9500 <sup>00</sup>

# ALLIED OIL & GAS SERVICES, LLC 059956

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
*Medicine Lodgeks,*

DATE <u>10-16-13</u>	SEC. <u>24</u>	TWP. <u>34s</u>	RANGE <u>15W</u>	CALLED OUT <u>2:00</u>	ON LOCATION <u>2:00</u>	JOB START <u>2:45 AM</u>	JOB FINISH <u>3:45 AM</u>
LEASE <u>Z-Bar</u>	WELL # <u>24-8</u>	LOCATION <u>Dear Head # Cottage Creek Rd</u>			COUNTY <u>Barber</u>	STATE <u>Ks</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)		East S/N					

CONTRACTOR Hardt  
 TYPE OF JOB Surface  
 HOLE SIZE 12 1/4 T.D. 921  
 CASING SIZE 8 5/8 DEPTH 926.87  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX 600 MINIMUM \_\_\_\_\_  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT 41.79  
 CEMENT LEFT IN CSG. \_\_\_\_\_  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT 5.8 Bbls

OWNER M&M Exploration  
 CEMENT  
 AMOUNT ORDERED 150sx 4" + 3% cc  
300sx 6.5:35:6% gel + 3% cc + 1/4# flo seal  
 COMMON A 150 sx @ 17.80 2685.00  
 POZMIX @ \_\_\_\_\_  
 GEL 19 sx @ 23.40 444.60  
 CHLORIDE 15 sx @ 64.00 960.00  
 ASC @ \_\_\_\_\_  
ALW 300 sx @ 16.50 4950.00  
Flo seal 75# @ 2.97 222.75  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 HANDLING 567.18 @ 2.48 1257.80  
 MILEAGE 21.52 / 25 / 2.60 @ \_\_\_\_\_ 1399.02  
 TOTAL 11,919.17

EQUIPMENT  
 PUMP TRUCK CEMENTER Ron Gilley  
 # 548-545 HELPER Jake Heard  
 BULK TRUCK  
 # 561-553 DRIVER Justin Bower  
 BULK TRUCK  
 # \_\_\_\_\_ DRIVER \_\_\_\_\_

REMARKS:  
Pipe On Bottom Break Circulation  
Pump 3 Bbls Fresh H<sub>2</sub>O Ahead  
Mix 300sx Load Cement  
Mix 150sx Tail Cement  
Stop Release Plug  
Start Disp. Slow @ 10 Bbls left to 3  
B&M Land Plug 300# over Release  
pressure float did hold  
Cement did Circulate

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

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 X  
 SIGNATURE X Scott C Adellhaw

SERVICE  
 DEPTH OF JOB 921'  
 PUMP TRUCK CHARGE 2058.50  
 EXTRA FOOTAGE @ \_\_\_\_\_  
 MILEAGE 25 @ 7.70 192.50  
 MANIFOLD @ \_\_\_\_\_  
Light Veh. 25 @ 4.40 110.00  
 @ \_\_\_\_\_  
 TOTAL 2636.00

8 5/8 PLUG & FLOAT EQUIPMENT  
 1-AFU Insert @ 329.00  
 1-Rubber Plug @ 76.25  
 1-Basket @ 226.50  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL 631.75

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 15,186.92  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS  
 NET 10,965.92



**BASIC**<sup>SM</sup>  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61  
P.O. Box 8613  
Pratt, Kansas 67124  
Phone 620-672-1201

FIELD SERVICE TICKET

1718 09384 A

21-345-15W

DATE \_\_\_\_\_ TICKET NO. \_\_\_\_\_

DATE OF JOB: 10-24-13		DISTRICT		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/>		PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:	
CUSTOMER: Mand M Exploration, Inc.				LEASE: Z Bar				WELL NO. 218	
ADDRESS				COUNTY: Barber		STATE: Kansas			
CITY				STATE		SERVICE CREW: C. Messick, M. McGraw, D. Phye			
AUTHORIZED BY				JOB TYPE: C.N.W. - Longstring					
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM/PM	TIME
37216	.75						10-24-13	AM	10:00
						ARRIVED AT JOB		AM	4:30
77686-19,905	.75					START OPERATION		AM	8:00
						FINISH OPERATION		AM	8:45
19959-19,918	.75					RELEASED	10-24-13	AM	9:00
						MILES FROM STATION TO WELL			65

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: [Signature]  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
P CP105	AA 2 Blend Cement	Sh	175	\$	2975.00
P CP103	60/40 Poz Blend Cement	Sh	30	\$	360.00
P CC102	Cell plate	Lb	44	\$	162.80
P CC111	Salt	Lb	954	\$	477.00
P CC113	Gypsum	Lb	825	\$	618.75
P CC129	Fluid Loss	Lb	133	\$	990.00
P CC201	Gilsonite	Lb	1050	\$	703.50
P CF607	Latch Down Plug and Baffle, 5 1/2"	ea	1	\$	400.00
P CF1251	Auto Fill Float Shoe, 5 1/2"	ea	1	\$	360.00
P CF1651	Fortiz Turbolizer, 5 1/2"	ea	8	\$	880.00
P CF1901	Basket, 5 1/2"	ea	1	\$	290.00
P C704	Claymax	Gal	5	\$	175.00

CHEMICAL / ACID DATA:			

SUB TOTAL		
SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		<u>[Signature]</u>

SERVICE REPRESENTATIVE: [Signature] THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: [Signature]

FIELD SERVICE ORDER NO.

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)



**BASIC**<sup>SM</sup>  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61  
P.O. Box 8613  
Pratt, Kansas 67124  
Phone 620-672-1201

FIELD SERVICE TICKET

1718 ~~09385~~ A

continuation

21-345-15

DATE TICKET NO. 9.3.84

DATE OF JOB: 10-24-13	DISTRICT: Pratt, Kansas	NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.:			
CUSTOMER: Mand M Exploration, Inc		LEASE: Z Bar				WELL NO: 21-8				
ADDRESS:		COUNTY: Barber		STATE: Kansas						
CITY:		STATE:		SERVICE CREW: C. Messick; M. McGraw; D. Phye						
AUTHORIZED BY:		JOB TYPE: C.N.W. - Longstring								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
						ARRIVED AT JOB				
						START OPERATION				
						FINISH OPERATION				
						RELEASED				
						MILES FROM STATION TO WELL				

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: *[Signature]*  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
P E100	Pickup Mileage	Mi	65	\$ 276	25
P E101	Heavy Equipment Mileage	Mi	130	\$ 910	00
P E113	Bulk Delivery	tm	621	\$ 993	20
P CE206	Cement Pump: 5,000 Feet To 6,000 Feet	hrs	4	\$ 2,880	00
P CE240	Blending and Mixing Service	St	205	\$ 287	00
P CE504	Plug Container	Job	1	\$ 250	00
P S003	Service Supervisor	hrs	8	\$ 175	00

CHEMICAL / ACID DATA:			

SUB TOTAL	169 \$ 8,498 10
SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
TOTAL	

SERVICE REPRESENTATIVE: *R. M. [Signature]* THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: *[Signature]*

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.



Customer M and M Exploration, Inc.	Lease No.	Date 10-24-13			
Lease Z Bar	Well # 21-8				
Field Order # 9384	Station Pratt, Kansas	Casing 5 1/2 15.5 lb	Depth 5,030 feet	County Barber	State Kansas
Type Job C.N.W. - Longstring	Formation	Legal Description 21-345-15W			

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 5 1/2 15.5 lb/ft	Tubing Size	Shots/Ft	175 sacks	Acid	AA 2 with	RATE	PRESS	ISIP
Depth 5,030 feet	Depth	From	To	Pre Pad	6 lb/ft Cellflap	Max	6 lb/ft	5 Min.
Volume 119.7 Bbl.	Volume	From	To	Pad	6.52 Gal/ft	Min	1.54 CU.F	10 Min.
Max Press 1,500 P.S.I.	Max Press	From	To	Frac		Avg		15 Min.
Well Connection Plug Container	Annulus Vol.	From	To	Flush	30 sacks 60/40 cement	HHP Used	For Plug Rat Hole	Annulus Pressure
Plug Depth 5,010 feet	Packer Depth	From	To			Gas Volume		Total Load

Customer Representative Alan Kratil	Station Manager Kevin Gordley	Treater Clarence R. Messick
--	----------------------------------	--------------------------------

Service Units	37,216	77,686	19,905	19,959	19,918				
Driver Names	Messick	McGraw	Phye						

Time P.M.	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
4:30					Trucks on location and hold safety meeting.
4:45					Hardt Drilling start to run Auto Fill Float Shoe, Shoe Joint with Latch Down Baffle screwed into collar and a total of 120 Joints new 15.5 lb/ft 5 1/2" casing. A Basset was installed above collar #9. A Turbolizer was installed on collars #1, 3, 5, 6, 10, 12, 14, 16.
7:15					Casing in well. Circulate for 30 minutes.
7:50		2,000			Shut in well. Pressure Test Open Well.
7:52	300			5	Start mixing 175 sacks AA 2 cement.
	-0-		48		Stop pumping. Shut in well. Wash pump and lines. Release Latch Down Plug. Open Well.
8:05	150			6.5	Start 28 HCL Displacement.
			70	5	Start to lift cement.
8:16	1,100		119		Plug down.
	1,500				Pressure up.
					Release pressure. Float Shoe held.
			7	3	Plug Rat Hole.
					Wash up pump truck.
9:00					Job Complete.
					Thank You
					Clarence, Mitc, Dale



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

M & M Exploration  
4257 Main St Ste 230  
Westminster, CO 80031  
ATTN: Bill Busch

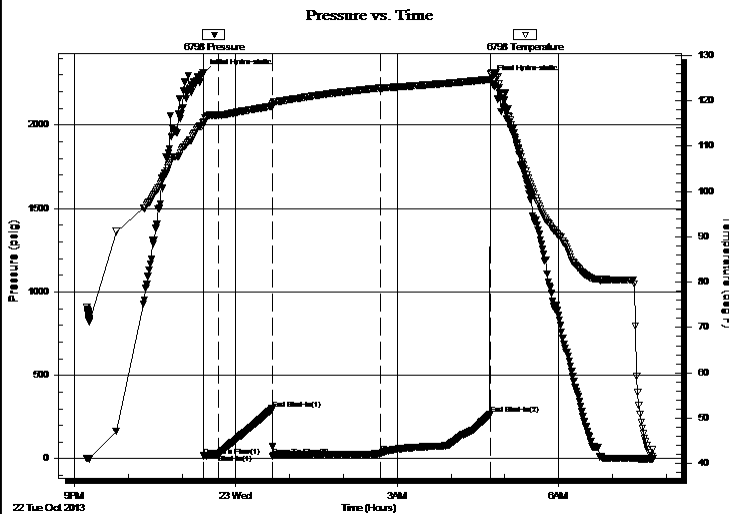
**21-34S-15W Barber**  
**Z-Bar 21-8**  
Job Ticket: 52514 **DST#: 1**  
Test Start: 2013.10.22 @ 21:13:40

## GENERAL INFORMATION:

Formation: **Ft. Scott**  
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 23:24:21 Tester: Leal Cason  
Time Test Ended: 07:44:55 Unit No: 45  
Interval: **4676.00 ft (KB) To 4695.00 ft (KB) (TVD)** Reference Elevations: 1567.00 ft (KB)  
Total Depth: 4695.00 ft (KB) (TVD) 1557.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 10.00 ft

**Serial #: 6798 Inside**  
Press @ Run Depth: 31.62 psig @ 4677.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.10.22 End Date: 2013.10.23 Last Calib.: 2013.10.23  
Start Time: 21:13:41 End Time: 07:44:55 Time On Btm: 2013.10.22 @ 23:23:21  
Time Off Btm: 2013.10.23 @ 04:44:20

TEST COMMENT: IF: Weak 3 inch Blow  
IS: No Blow Back  
FF: Fair Blow, BOB in 25 minutes  
FS: No Blow Back



## PRESSURE SUMMARY

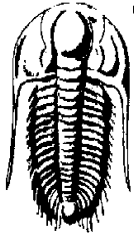
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2310.94	115.13	Initial Hydro-static
1	18.30	115.05	Open To Flow (1)
17	23.85	116.96	Shut-In(1)
78	299.52	118.86	End Shut-In(1)
78	17.04	119.26	Open To Flow (2)
198	31.62	122.82	Shut-In(2)
321	266.77	124.73	End Shut-In(2)
321	2273.89	125.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	180 GIP	0.00
20.00	OCM	0.10

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

M & M Exploration  
4257 Main St Ste 230  
Westminster, CO 80031  
ATTN: Bill Busch

**21-34S-15W Barber**  
**Z-Bar 21-8**  
Job Ticket: 52514      **DST#: 1**  
Test Start: 2013.10.22 @ 21:13:40

### 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:	bbbl		
Water Loss:	8.69 in <sup>3</sup>	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2200.00 ppm				
Filter Cake:	0.02 inches				

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	180 GIP	0.000
20.00	OCM	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

