



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1076884  
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: \_\_\_\_\_

1076884

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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	FIML Natural Resources, LLC
Well Name	Frank 1A-20-1831
Doc ID	1076884

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
	DV tool @ 3003'	Cmtd w/ 415 sxs lightweight cmt w/ 5 pps flo & 5 pps gil	3003-0'
	Cmtd mouse and rat hole	Cmtd w/ 50 sxs lightweight w/ 0.5 pps flo & 5 pps gil	Mouse and rat hole
4	4349-52'	Acidized w/ 750 gal 15% MCA & 1500 gal 15% N-E	4349-52'
	CIBP @ 4383'		4383'
4	4526-29'	Acidize w/ 750 gal 7- 1/2% INS	4526-29'
	CIBP @ 4535'		4535'
4	4552-56'	Acidize w/ 1000 gal 15% MCA & 1500 gal 15% MCA DS	4552-56'

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  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

March 20, 2012

Cassie Parks  
FIML Natural Resources, LLC  
410 17TH ST STE 900  
DENVER, CO 80202-4420

Re: ACO1  
API 15-171-20842-00-00  
Frank 1A-20-1831  
NE/4 Sec.20-18S-31W  
Scott 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,  
Cassie Parks

# ALLIED

OIL & GAS SERVICES, LLC

Lincoln Street  
 P.O. Box 31  
 Russell, KS 67665-2906  
 Voice: (817) 546-7282  
 Fax: (817) 246-3361

RECEIVED  
 DEC 05 2011  
 By 2347

# INVOICE

Invoice Number: 129486  
 Invoice Date: Nov 27, 2011  
 Page: 1

**Bill To:**

FIML Natural Resources LLC  
 410 17th St., Suite 900  
 Denver, CO 80202

Federal Tax I.D.#: 20-5975804

Frank 1A-20-1831

Customer ID	Well Name# or Customer P.O.	Payment Terms	
FIML	Frank #1-A	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Nov 27, 2011	12/27/11

Quantity	Item	Description	Unit Price	Amount
240.00	MAT	Class A Common		
5.00	MAT	Gel	16.25	3,900.00
9.00	MAT	Chloride	21.25	106.25
60.00	MAT	FloSeal	58.20	523.80
254.00	SER	Handling	2.70	162.00
55.00	SER	Mileage	2.25	571.50
1.00	SER	Surface	27.94	1,536.70
75.00	SER	Extra Footage	1,125.00	1,125.00
55.00	SER	Heavy Vehicle Mileage	0.95	71.25
1.00	SER	Manifold Head Rental	7.00	385.00
55.00	SER	Light Vehicle Mileage	200.00	200.00
1.00	EQP	8 5/8 Fiber Baffle Plate	4.00	220.00
3.00	EQP	8 5/8 Centralizers	175.00	175.00
1.00	EQP	8 5/8 Wooden Plug	64.00	192.00
1.00	CEMENTER	Alan Ryan	92.00	92.00
1.00	CEMENTER	Terry Heinrich		
1.00	OPER ASSIST	Ethan Glassman		

D11215

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

\$ 1852.10

ONLY IF PAID ON OR BEFORE  
 Dec 22, 2011

Subtotal	9,260.50
Sales Tax	376.03
Total Invoice Amount	9,636.53
Payment/Credit Applied	
<b>TOTAL</b>	<b>9,636.53</b>

8100.145  
 Adam D. Bl

1852.10  
 7784.43

# ALLIED CEMENTING CO., LLC. 036042

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:

*Osage*

DATE <i>Mo 1/11</i>	SEC <i>20</i>	TWP <i>18</i>	RANGE <i>31</i>	CALLED OUT	ON LOCATION <i>5:00pm</i>	JOB START <i>9:30am</i>	JOB FINISH <i>10:00am</i>
LEASE <i>Frank</i>	WELL # <i>1-A</i>	LOCATION <i>Scott City ETO Twp 5 &amp; W</i>			COUNTY <i>Scott</i>	STATE <i>Ks</i>	
OLD OR NEW (Circle one)				<i>into</i>			

CONTRACTOR *#2 #1*  
 TYPE OF JOB *Surface*  
 HOLE SIZE *12 1/4* T.D. *328*  
 CASING SIZE *8 3/8* DEPTH *375.05*  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT *40,37*  
 CEMENT LEFT IN CSG. *40.37*  
 PERFS.  
 DISPLACEMENT *21,319*

OWNER *Game*  
 CEMENT  
 AMOUNT ORDERED *240 SK, Com 390cc*  
*2 Royal 44 Flo Seal*

COMMON	<i>240</i>	@ <i>16.25</i>	<i>3900.00</i>
POZMIX		@	
GEL	<i>5</i>	@ <i>21.25</i>	<i>106.25</i>
CHLORIDE	<i>9</i>	@ <i>58.00</i>	<i>523.00</i>
ASC		@	
<i>Flo Seal</i>	<i>6016</i>	@ <i>2.70</i>	<i>162.00</i>
HANDLING <i>254 SK</i>		@ <i>2.25</i>	<i>571.50</i>
MILEAGE <i>14 SK/mile</i>			<i>1536.70</i>
TOTAL			<i>6800.25</i>

REMARKS:

*Racey, Circulate, Pump 5 bbl H<sub>2</sub>O Ahead,  
 Mix Cement, Displace Plug in Baffle  
 w/ 21,319 bbl H<sub>2</sub>O, Seal Baffle Bid  
 Not Land*

*Cement Bore Circulate*

*Thank you  
 Alan, Terry, Ethann*

CHARGE TO: *FJML*  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB	<i>375.05</i>		
PUMP TRUCK CHARGE			<i>1125</i>
EXTRA FOOTAGE <i>75 FT</i>	@ <i>.95</i>		<i>71.25</i>
MILEAGE <i>55 miles</i>	@ <i>7.00</i>		<i>385.00</i>
MANIFOLD <i>Head</i>	@		<i>200.00</i>
<i>Lite Vehicle 55 miles</i>	@ <i>4.00</i>		<i>220.00</i>
TOTAL			<i>2606.25</i>

PLUG & FLOAT EQUIPMENT

<i>Fiber Baffle Plate</i>	@		<i>175.00</i>
<i>Control rec - 3</i>	@ <i>64.00</i>		<i>192.00</i>
<i>Wooden Plug</i>	@		<i>92.00</i>
TOTAL			<i>459.00</i>

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 *Gary D. Dille*  
 SIGNATURE *[Signature]*

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





24 S. Lincoln Street  
 P.O. Box 31  
 Russell, KS 67665-2906  
 Voice: (817) 546-7282  
 Fax: (817) 246-3361



# INVOICE

Invoice Number: 129579  
 Invoice Date: Dec 7, 2011  
 Page: 1

**Bill To:**

FIML Natural Resources LLC  
 410 17th St, Suite 900  
 Denver, CO 80202

Federal Tax I.D.#: 20-5975804

Customer ID	Well Name# or Customer P.O.	Payment Terms	
FIML	Frank #1A-20-1831	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Dec 7, 2011	1/6/12

Quantity	Item	Description	Unit Price	Amount
465.00	MAT	Class A Lightweight	14.50	6,742.50
233.00	MAT	FloSeal	2.70	629.10
554.00	SER	Handling	2.25	1,246.50
55.00	SER	Mileage	60.94	3,351.70
1.00	SER	Production Top Stage	2,125.00	2,125.00
1.00	CEMENTER	LaRene Wentz		
1.00	EQUIP OPER	Darren Racette		
1.00	OPER ASSIST	Ethan Glassman		
1.00	OPER ASSIST	Dane Retzloff		

8200-118  
 D11215  
 [Signature]

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

**\$2818.96**

ONLY IF PAID ON OR BEFORE  
 Jan 1, 2012

Subtotal	14,094.80
Sales Tax	538.13
Total Invoice Amount	14,632.93
Payment/Credit Applied	
<b>TOTAL</b>	<b>14,632.93</b>

✓ 11813.97

# ALLIED CEMENTING CO., LLC. 036134

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Oakley, KS  
12-6-11

DATE <u>12-7-11</u>	SEC. <u>20</u>	TWP. <u>18</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>6:00pm</u>	JOB START <u>8:30am</u>	JOB FINISH <u>9:30am</u>
LEASE <u>Frank</u>	WELL # <u>1A</u>	LOCATION <u>Scott City 8E, S winds</u>			COUNTY <u>Scott</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one)							

CONTRACTOR <u>H<sub>2</sub> Rig #1</u>	OWNER <u>same</u>
TYPE OF JOB <u>production topstage</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>4800'</u>
CASING SIZE <u>5 1/2</u>	DEPTH
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL <u>DU</u>	DEPTH <u>3003.30</u>
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT <u>21.97 bbl</u>	

CEMENT AMOUNT ORDERED <u>469 lbs Life</u>	
<u>12 # flo-seal</u>	
COMMON @	
POZMIX @	
GEL @	
CHLORIDE @	
ASC @	
<u>Life (Type II) 465 lbs @ 14.95</u>	<u>6942.50</u>
<u>flo-seal 233 # @ 2.70</u>	<u>629.10</u>
HANDLING <u>554.5 lbs @ 2.25</u>	<u>1246.50</u>
MILEAGE <u>114 sk/mile</u>	<u>5551.70</u>
TOTAL	<u>11769.80</u>

REMARKS:

plug mousehole 20sk  
plug resthole 30sk  
mit 415 lbs down casing  
release plug. displace with water  
land plug at 2500' per Gary  
cement circulates 40 bbl to pit

Thank you

SERVICE

DEPTH OF JOB <u>3003.30</u>	
PUMP TRUCK CHARGE	<u>2125.00</u>
EXTRA FOOTAGE @	
MILEAGE <u>55 @ 2.05</u>	<u>NC</u>
MANIFOLD <u>hood @ 200.00</u>	<u>NC</u>
<u>L.C. mileage @ 4.00</u>	<u>NC</u>

TOTAL 2125.00

CHARGE TO: FINAL

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
TOTAL		

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 Gary Doyle

SIGNATURE Gary Doyle

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS





24 S. Lincoln Street  
 P.O. Box 31  
 Russell, KS 67665-2906  
 Voice: (817) 546-7282  
 Fax: (817) 246-3361



# INVOICE

Invoice Number: 129578  
 Invoice Date: Dec 6, 2011  
 Page: 1

**Bill To:**

FIML Natural Resources LLC  
 410 17th St., Suite 900  
 Denver, CO 80202

Federal Tax I.D.#: 20-5975804

Customer ID	Well Name# or Customer P.O.	Payment Terms	
FIML	Frank #1A-20-1831	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Dec 6, 2011	1/5/12

Quantity	Item	Description	Unit Price	Amount
5.00	MAT	Gel	21.25	106.25
275.00	MAT	ASC	19.00	5,225.00
26.00	MAT	Salt	23.95	622.70
1,375.00	MAT	Gilsonite	0.89	1,223.75
138.00	MAT	FloSeal	2.70	372.60
356.00	SER	Handling	2.25	801.00
55.00	SER	Heavy Vehicle Mileage	39.16	2,153.80
1.00	SER	Production Bottom Stage	2,405.00	2,405.00
55.00	SER	Heavy Vehicle Mileage	7.00	385.00
1.00	SER	Manifold Head Rental	200.00	200.00
55.00	SER	Light Vehicle Mileage	4.00	220.00
1.00	EQP	5 1/2 DV Tool	4,921.00	4,921.00
1.00	EQP	5 1/2 Sureseal Float Shoe	520.00	520.00
1.00	EQP	5 1/2 Sureseal Float Collar	620.00	620.00
25.00	EQP	5 1/2 Centralizers	49.00	1,225.00
2.00	EQP	5 1/2 Baskets	337.00	674.00
1.00	EQP	5 1/2 Lock Ring	42.00	42.00
1.00	CEMENTER	LaRene Wentz		
1.00	EQUIP OPER	Darren Racette		
1.00	EQUIP OPER	Ruben Chaves		
1.00	OPER ASSIST	Ethan Glassman		

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1.12% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

**\$4343<sup>72</sup>**

ONLY IF PAID ON OR BEFORE  
 Dec 31, 2011

Subtotal	Continued
Sales Tax	Continued
Total Invoice Amount	Continued
Payment/Credit Applied	
<b>TOTAL</b>	<b>Continued</b>

D11215



24 S. Lincoln Street  
 P.O. Box 31  
 Russell, KS 67665-2906  
 Voice: (817) 546-7282  
 Fax: (817) 246-3361

# INVOICE

Invoice Number: 129578  
 Invoice Date: Dec 6, 2011  
 Page: 2

**Bill To:**  
 FIML Natural Resources LLC  
 410 17th St., Suite 900  
 Denver, CO 80202

Federal Tax I.D.#: 20-5975804

Customer ID	Well Name# or Customer P.O.	Payment Terms	
FIML	Frank #1A	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Dec 6, 2011	1/5/12

Quantity	Item	Description	Unit Price	Amount
1.00	OPER ASSIST	Dane Retzloff		

*8200-118*  
*Adrian B.*

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

**\$4343.72**

ONLY IF PAID ON OR BEFORE  
 Dec 31, 2011

Subtotal	21,717.10
Sales Tax	1,135.32
Total Invoice Amount	22,852.42
Payment/Credit Applied	
<b>TOTAL</b>	<b>22,852.42</b>

✓ **519508.10**

# ALLIED CEMENTING CO., LLC. 036133

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
Oakley, KS

DATE <u>12-11</u>	SEC <u>20</u>	TWP. <u>18</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>6:00pm</u>	JOB START	JOB FINISH
LEASE <u>Frank</u>	WELL # <u>1A</u>	LOCATION <u>Scott Co, SE, Swinto</u>			COUNTY <u>Scott</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR H2 Rig #1  
 TYPE OF JOB production Bottom Stage  
 HOLE SIZE 7 7/8" T.D. 4800'  
 CASING SIZE 5 1/2" DEPTH 4793'  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DW DEPTH 3003.30  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT 42.10  
 CEMENT LEFT IN CSG. 42.10  
 PERFS.  
 DISPLACEMENT 113.07661

OWNER same  
 CEMENT  
 AMOUNT ORDERED 275 sks ASC 109.50 skt  
5# gilsonite, 2 7/8 gel, 1/2# flo seal  
 COMMON @  
 POZMIX @  
 GEL 5 sks @ 21.25 106.25  
 CHLORIDE @  
 ASC 275 sks @ 19.00 5225.00

EQUIPMENT  
 PUMP TRUCK CEMENTER halene  
 # 431 HELPER Darren  
 BULK TRUCK  
 # 457/251 DRIVER Rueben (K)  
 BULK TRUCK  
 # 396/306 DRIVER Ethan / Dane

Salt 26 skt @ 23.95 622.70  
gilsonite 1375 # @ .89 1223.75  
flo seal 138 # @ 2.70 372.60  
 HANDLING 356 sks @ 2.25 801.00  
 MILEAGE 1145K/mile 2153.80  
 TOTAL 10505.10

REMARKS:  
Run casing, circulate 1 hr on bottom  
mix 275 skt cement down casing,  
wash up pump & lines, release plug  
Displace with water mud,  
land plug at #. float held.  
Drop opening tool. Open DW  
circulate thru on bottom.  
Thank you.

SERVICE  
 DEPTH OF JOB 4793'  
 PUMP TRUCK CHARGE 2405.00  
 EXTRA FOOTAGE @  
 MILEAGE 55 @ 7.00 385.00  
 MANIFOLD head @ 200.00  
L.U. mileage @ 4.00 220.00

CHARGE TO: FINAL  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TOTAL 3210.00  
 5 1/2" PLUG & FLOAT EQUIPMENT  
DW Tool #4921.00  
Suresal float shoe @ 520.00  
Suresal float collar @ 620.00  
Centralizers 25 @ 49.00 1225.00  
Baskets 2 @ 337.00 674.00  
Locking 1 @ 420.00  
 TOTAL 8002.00

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.

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

PRINTED NAME Gary Dake  
 SIGNATURE Gary Dake



## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources LLC**

410 17th St Ste900  
Denver, CO 80202-4420

ATTN: Gary Doke

**Frank #1A**

**20-18s-31w Scott,KS**

Start Date: 2011.12.02 @ 01:00:30

End Date: 2011.12.02 @ 09:35:15

Job Ticket #: 44928                      DST #: 1

FIML Natural Resources LLC  
20-18s-31w Scott,KS  
Frank #1A  
DST # 1  
KC  
2011.12.02

Trilobite Testing, Inc

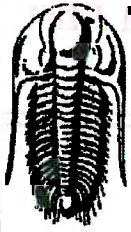
PO Box 362 Hays, KS 67601

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

**ORIGINAL**

Printed: 2011.12.12 @ 12:44:41





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44928

**DST#: 1**

ATTN: Gary Doke

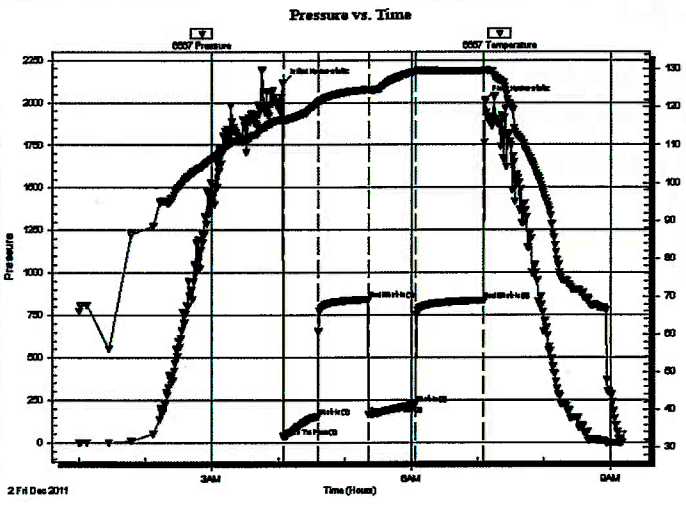
Test Start: 2011.12.02 @ 01:00:30

## GENERAL INFORMATION:

Formation: **KC**  
 Deviated: **No** Whipstock: **0.00 ft (KB)**  
 Time Tool Opened: **04:04:30**  
 Time Test Ended: **09:35:15**  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Tester: **Shane McBride**  
 Unit No: **55**  
 Interval: **4144.00 ft (KB) To 4192.00 ft (KB) (TVD)**  
 Reference Elevations: **2954.00 ft (KB)**  
**2944.00 ft (CF)**  
 Total Depth: **4192.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 KB to GR/CF: **10.00 ft**

**Serial #: 6667** **Outside**  
 Press@RunDepth: **226.07 psig @ 4145.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2011.12.02** End Date: **2011.12.02** Last Calib.: **2011.12.02**  
 Start Time: **01:00:30** End Time: **09:10:15** Time On Btrrt: **2011.12.02 @ 04:04:15**  
 Time Off Btrrt: **2011.12.02 @ 07:06:45**

TEST COMMENT: 6 1/4" blow  
 No return  
 5 3/4" blow  
 No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2115.98	116.93	Initial Hydro-static
1	32.85	116.46	Open To Flow (1)
32	152.64	121.06	Shut-In(1)
77	842.62	124.71	End Shut-In(1)
78	163.83	124.42	Open To Flow (2)
120	226.07	129.40	Shut-In(2)
182	837.92	129.61	End Shut-In(2)
183	2016.56	129.88	Final Hydro-static

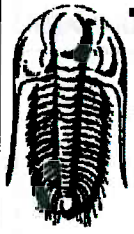
## Recovery

Length (ft)	Description	Volume (bbl)
270.00	s m c w 5% m 95% w	1.33
90.00	m c w 20% m 80% w	1.19
90.00	w c m w / oil spots	1.26
0.00	6" in free oil on top	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44928

**DST#: 1**

ATTN: Gary Duke

Test Start: 2011.12.02 @ 01:00:30

### Tool Information

Drill Pipe:	Length: 3872.00 ft	Diameter: 3.80 inches	Volume: 54.31 bbl	Tool Weight: 1500.00 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: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 80000.00 lb
		<b>Total Volume:</b>	<b>55.68 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4144.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4125.00	
Shut In Tool	5.00			4130.00	
Hydraulic tool	5.00			4135.00	
Packer	5.00			4140.00	20.00 Bottom Of Top Packer
Packer	4.00			4144.00	
Stubb	1.00			4145.00	
Recorder	0.00	6771	Inside	4145.00	
Recorder	0.00	6667	Outside	4145.00	
Perforations	9.00			4154.00	
Change Over Sub	1.00			4155.00	
Drill Pipe	31.00			4186.00	
Change Over Sub	1.00			4187.00	
Bullnose	5.00			4192.00	48.00 Bottom Packers & Anchor

**Total Tool Length: 68.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44928

**DST#: 1**

ATTN: Gary Doke

Test Start: 2011.12.02 @ 01:00:30

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 47.00 sec/qt  
Water Loss: 4.77 in<sup>3</sup>  
Resistivity: 0.00 ohm.m  
Salinity: 1500.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 0 deg API  
Water Salinity: 36500 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	s m c w 5% m 95% w	1.328
90.00	m c w 20% m 80% w	1.190
90.00	w c m w /oil spots	1.262
0.00	6" in free oil on top	0.000

Total Length: 450.00 ft      Total Volume: 3.780 bbl

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

Laboratory Name:      Laboratory Location:

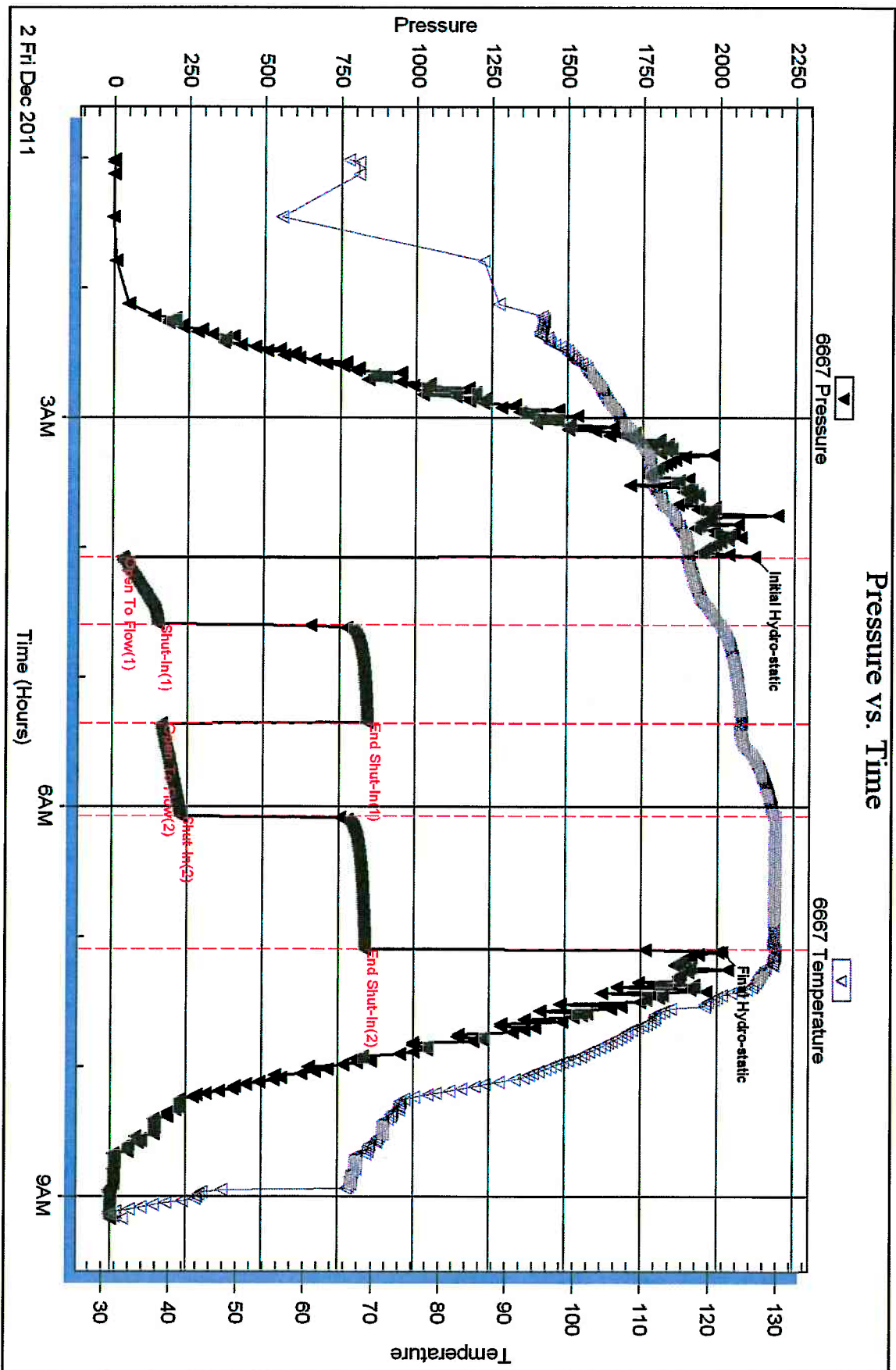
Recovery Comments: rw .258 @ 55°f =36,500 chlor

Serial #: 6667

Outside FIML Natural Resources LLC

Frank #1A

DST Test Number: 1







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources LLC**

410 17th St Ste900  
Denver, CO 80202-4420

ATTN: Gary Doke

**Frank #1A**

**20-18s-31w Scott,KS**

Start Date: 2011.12.02 @ 17:30:21

End Date: 2011.12.03 @ 01:00:51

Job Ticket #: 44929                      DST #: 2

Trilobite Testing, Inc

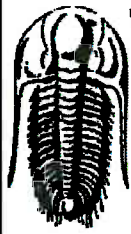
PO Box 362 Hays, KS 67601

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

Printed: 2011.12.12 @ 12:44:56

FIML Natural Resources LLC    20-18s-31w Scott,KS    Frank #1A    DST # 2    KC    2011.12.02





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44929

**DST#: 2**

ATTN: Gary Doke

Test Start: 2011.12.02 @ 17:30:21

## GENERAL INFORMATION:

Formation: **KC**

Deviated: **No** Whipstock: **0.00 ft (KB)**

Time Tool Opened: 19:41:21

Time Test Ended: 01:00:51

Test Type: **Conventional Bottom Hole (Reset)**

Tester: **Shane McBride**

Unit No: **55**

Interval: **4190.00 ft (KB) To 4221.00 ft (KB) (TVD)**

Total Depth: **4221.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2954.00 ft (KB)**

**2944.00 ft (CF)**

KB to GR/CF: **10.00 ft**

**Serial #: 6667**

**Outside**

Press@RunDepth: **690.12 psig @ 4191.00 ft (KB)**

Start Date: **2011.12.02**

End Date: **2011.12.03**

Capacity: **8000.00 psig**

Last Calib.: **2011.12.03**

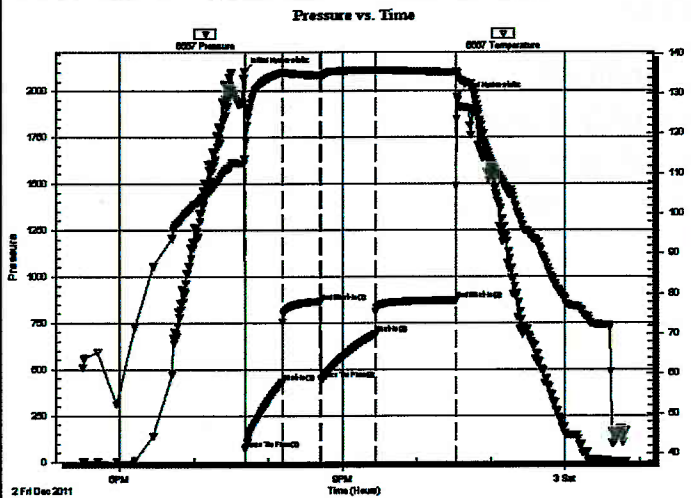
Start Time: **17:30:21**

End Time: **00:48:51**

Time On Btrm: **2011.12.02 @ 19:40:36**

Time Off Btrm: **2011.12.02 @ 22:32:36**

TEST COMMENT: B.O.B. in 4 min.  
No return  
B.O.B. in 8 min.  
No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2106.20	113.69	Initial Hydro-static
1	71.43	113.81	Open To Flow (1)
31	431.66	135.18	Shut-In(1)
62	866.40	134.55	End Shut-In(1)
62	446.12	134.25	Open To Flow (2)
106	690.12	135.83	Shut-In(2)
171	873.07	135.33	End Shut-In(2)
172	1968.15	135.04	Final Hydro-static

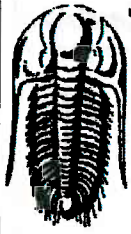
## Recovery

Length (ft)	Description	Volume (bbl)
1170.00	water 100%w	13.88
180.00	m c w 25%m 75%w	2.52
100.00	w c m 35%w 65%m	1.40

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44929

**DST#: 2**

ATTN: Gary Duke

Test Start: 2011.12.02 @ 17:30:21

## Tool Information

Drill Pipe:	Length: 3898.00 ft	Diameter: 3.80 inches	Volume: 54.68 bbl	Tool Weight: 1500.00 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: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 80000.00 lb
		<u>Total Volume:</u>	<u>56.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4190.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4171.00	
Shut In Tool	5.00			4176.00	
Hydraulic tool	5.00			4181.00	
Packer	5.00			4186.00	20.00 Bottom Of Top Packer
Packer	4.00			4190.00	
Stubb	1.00			4191.00	
Recorder	0.00	6771	Inside	4191.00	
Recorder	0.00	6667	Outside	4191.00	
Perforations	25.00			4216.00	
Bullnose	5.00			4221.00	31.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>51.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44929

**DST#: 2**

ATTN: Gary Doke

Test Start: 2011.12.02 @ 17:30:21

**Mud and Cushion Information**

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 57.00 sec/qt  
Water Loss: 5.58 in<sup>3</sup>  
Resistivity: 0.00 ohm.m  
Salinity: 2200.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 0 deg API  
Water Salinity: 27000 ppm

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
1170.00	water 100%w	13.880
180.00	m c w 25% m 75% w	2.525
100.00	w c m 35% w 65% m	1.403

Total Length: 1450.00 ft      Total Volume: 17.808 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .280 @ 66\*f =27,000 chlor

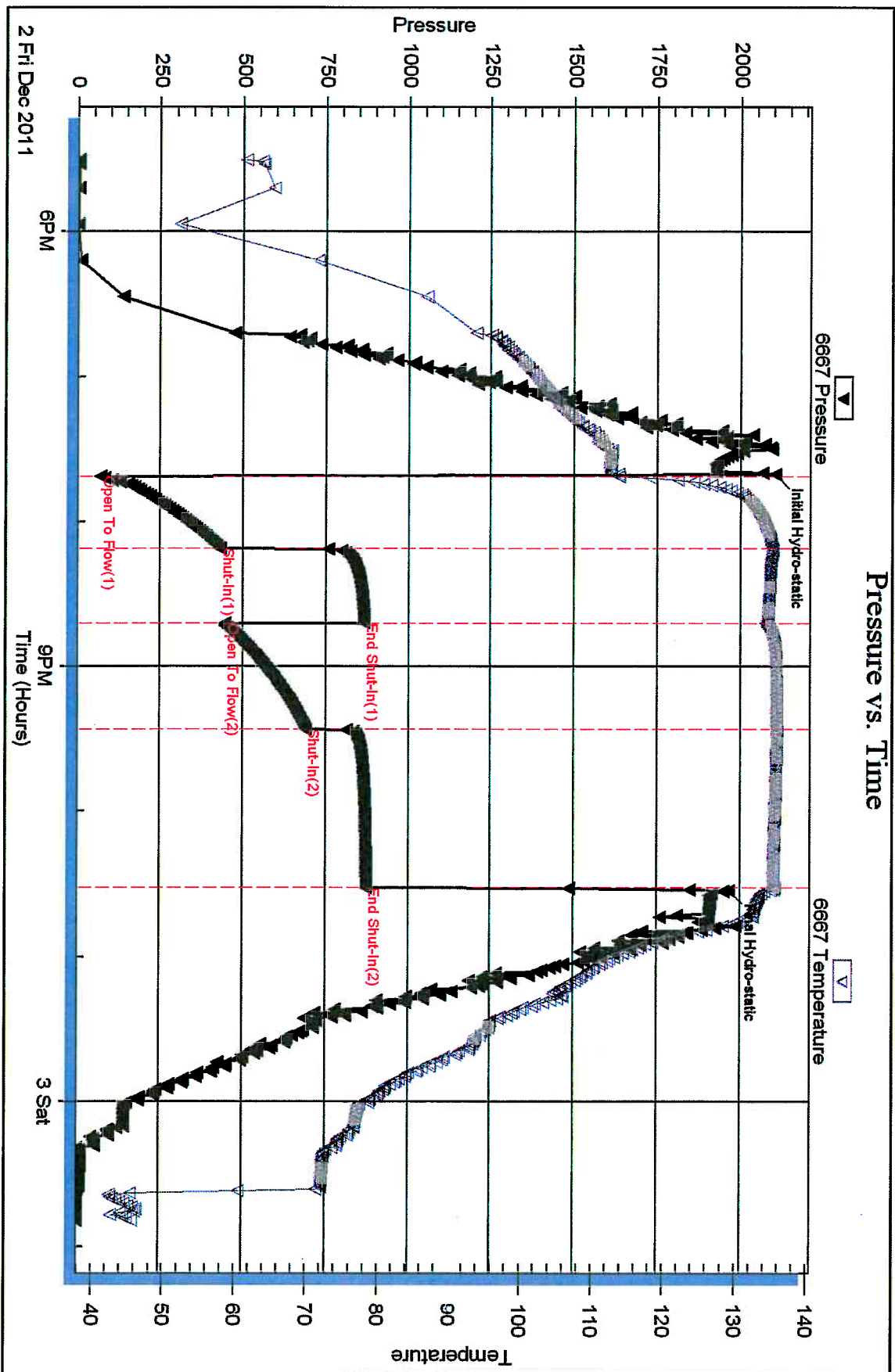
Serial #: 6667

Outside FML Natural Resources LLC

Frank #1A

DST Test Number: 2

### Pressure vs. Time



TriLobite Testing, Inc

Ref. No: 44929

Printed: 2011.12.12 @ 12:44:58







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources LLC**

410 17th St Ste900  
Denver, CO 80202-4420

ATTN: Gary Doke

**Frank #1A**

**20-18s-31w Scott,KS**

Start Date: 2011.12.03 @ 13:30:32

End Date: 2011.12.03 @ 21:20:17

Job Ticket #: 44930                      DST #: 3

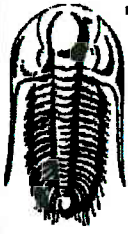
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.12 @ 12:45:11

FIML Natural Resources LLC    20-18s-31w Scott,KS    Frank #1A    DST # 3    K-L    2011.12.03



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44930

**DST#: 3**

ATTN: Gary Doke

Test Start: 2011.12.03 @ 13:30:32

## GENERAL INFORMATION:

Formation: **K-L**  
 Deviated: **No** Whipstock: **0.00 ft (KB)**  
 Time Tool Opened: **15:35:02**  
 Time Test Ended: **21:20:17**

Test Type: **Conventional Bottom Hole (Reset)**  
 Tester: **Shane McBride**  
 Unit No: **55**

Interval: **4254.00 ft (KB) To 4300.00 ft (KB) (TVD)**  
 Total Depth: **4300.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2954.00 ft (KB)**  
**2944.00 ft (CF)**  
 KB to GR/CF: **10.00 ft**

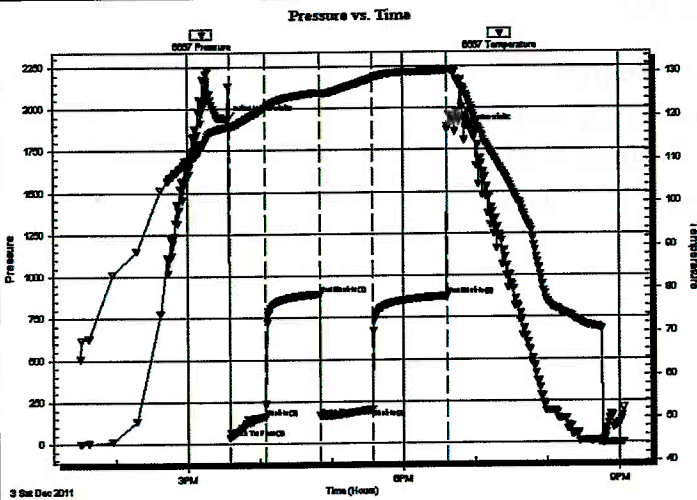
## Serial #: 6667

**Outside**

Press@RunDepth: **202.88 psig @ 4255.00 ft (KB)**  
 Start Date: **2011.12.03** End Date: **2011.12.03**  
 Start Time: **13:30:32** End Time: **21:03:17**

Capacity: **8000.00 psig**  
 Last Calib.: **2011.12.03**  
 Time On Btm: **2011.12.03 @ 15:33:47**  
 Time Off Btm: **2011.12.03 @ 18:36:47**

TEST COMMENT: **6 1/2" blow  
 No return  
 6 3/4" blow  
 No return**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1939.53	117.55	Initial Hydro-static
2	36.01	117.26	Open To Flow (1)
31	159.55	121.91	Shut-In(1)
77	891.99	125.45	End Shut-In(1)
77	165.43	125.21	Open To Flow (2)
121	202.88	128.68	Shut-In(2)
183	877.56	130.32	End Shut-In(2)
183	1872.99	130.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
278.00	mc w w/oil scum 15% m 85% w	1.37
104.00	s o c w m 3% o 40% w 57% m	1.46
1.00	free oil 100% o	0.01

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44930

**DST#: 3**

ATTN: Gary Duke

Test Start: 2011.12.03 @ 13:30:32

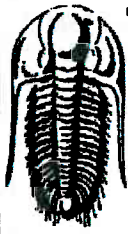
### Tool Information

Drill Pipe:	Length: 3962.00 ft	Diameter: 3.80 inches	Volume: 55.58 bbl	Tool Weight: 1500.00 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: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 85000.00 lb
		<u>Total Volume:</u>	<u>56.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4254.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	66.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4235.00	
Shut In Tool	5.00			4240.00	
Hydraulic tool	5.00			4245.00	
Packer	5.00			4250.00	20.00 Bottom Of Top Packer
Packer	4.00			4254.00	
Stubb	1.00			4255.00	
Recorder	0.00	6771	Inside	4255.00	
Recorder	0.00	6667	Outside	4255.00	
Perforations	7.00			4262.00	
Change Over Sub	1.00			4263.00	
Drill Pipe	31.00			4294.00	
Change Over Sub	1.00			4295.00	
Bullnose	5.00			4300.00	46.00 Bottom Packers & Anchor

**Total Tool Length: 66.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44930

**DST#: 3**

ATTN: Gary Doke

Test Start: 2011.12.03 @ 13:30:32

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 57.00 sec/qt  
Water Loss: 7.18 in<sup>3</sup>  
Resistivity: 0.00 ohm.m  
Salinity: 2400.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 0 deg API  
Water Salinity: 29500 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
278.00	m c w w/oil scum 15% m 85% w	1.367
104.00	s o c w m 3% o 40% w 57% m	1.459
1.00	free oil 100% o	0.014

Total Length: 383.00 ft      Total Volume: 2.840 bbl

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

Laboratory Name:      Laboratory Location:

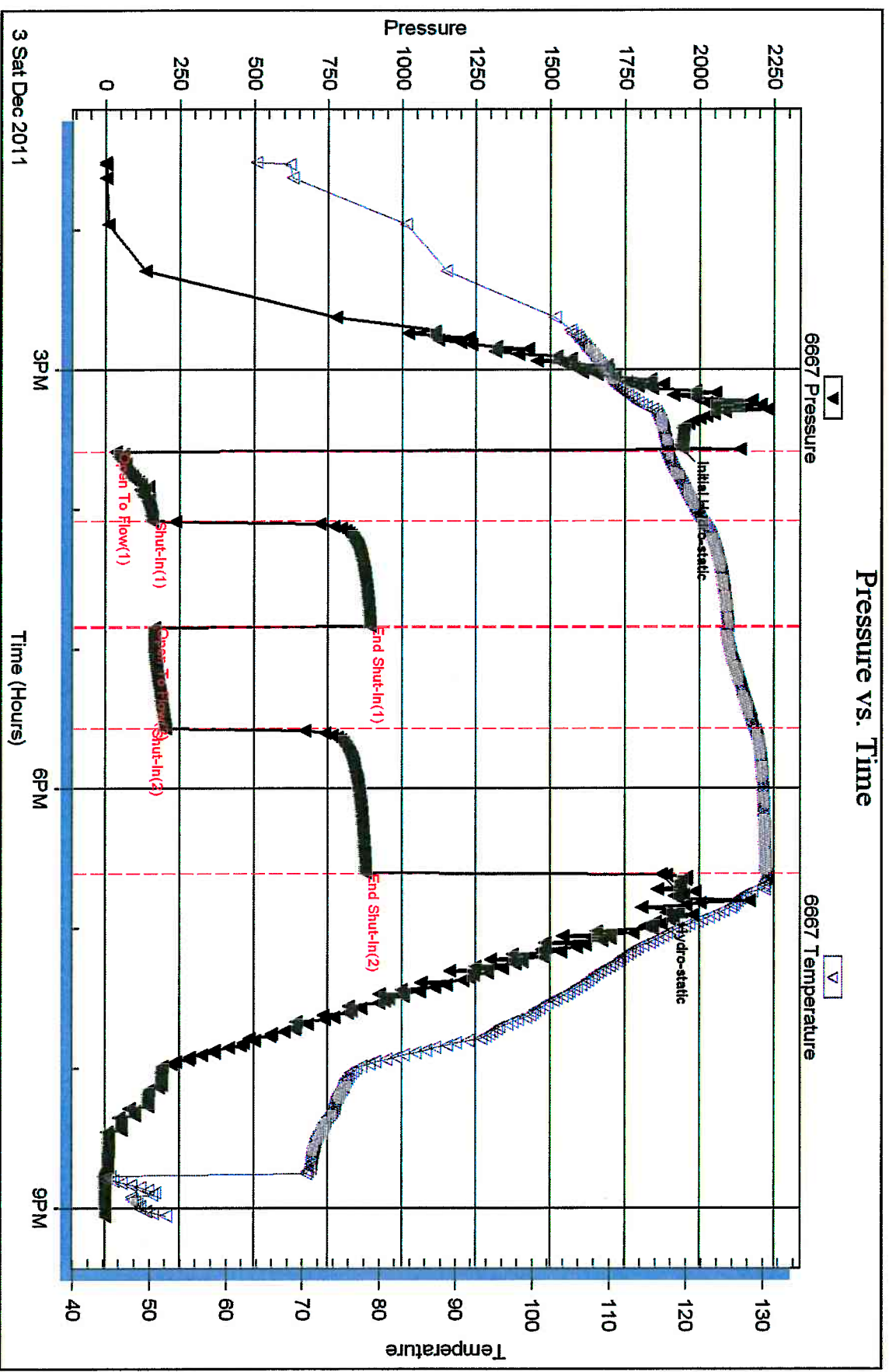
Recovery Comments: rw .322 @ 50\*f = 29,500 chlor

Serial #: 6667

Outside FML Natural Resources LLC

Frank #1A

DST Test Number: 3



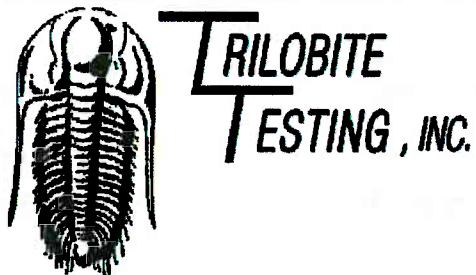
Triobite Testing, Inc

Ref. No: 44930

Printed: 2011.12.12 @ 12:45:13







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources LLC**

410 17th St Ste900  
Denver, CO 80202-4420

ATTN: Gary Duke

**Frank #1A**

**20-18s-31w Scott,KS**

Start Date: 2011.12.04 @ 10:07:35

End Date: 2011.12.04 @ 19:15:20

Job Ticket #: 44931                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.12 @ 12:45:36

FIML Natural Resources LLC  
20-18s-31w Scott,KS  
Frank #1A  
DST # 4  
Pleasanton-Marmaton  
2011.12.04



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

FIML Natural Resources LLC

20-18s-31w Scott,KS

410 17th St Ste900  
Denver, CO 80202-4420

Frank #1A

Job Ticket: 44931

DST#: 4

ATTN: Gary Duke

Test Start: 2011.12.04 @ 10:07:35

## GENERAL INFORMATION:

Formation: **Pleasanton-Marmaton**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 12:22:20

Time Test Ended: 19:15:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

Interval: **4293.00 ft (KB) To 4380.00 ft (KB) (TVD)**

Total Depth: 4380.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2954.00 ft (KB)

2944.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: **6771**

Inside

Press@RunDepth: 137.26 psig @ 4294.00 ft (KB)

Start Date: 2011.12.04

End Date: 2011.12.04

Start Time: 10:07:35

End Time: 18:51:20

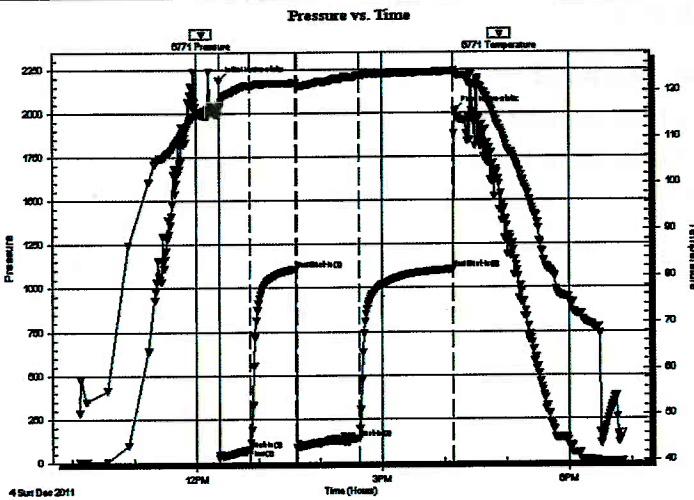
Capacity: 8000.00 psig

Last Calib.: 2011.12.04

Time On Btm: 2011.12.04 @ 12:22:05

Time Off Btm: 2011.12.04 @ 16:10:05

TEST COMMENT: B.O.B. in 17 min.  
1/4" return blow, died in 30 min.  
B.O.B. in 20 min.  
3/4" return, died in 40 min.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2190.87	117.06	Initial Hydro-static
1	26.20	116.48	Open To Flow (1)
30	75.82	121.01	Shut-In(1)
75	1109.33	121.72	End Shut-In(1)
75	85.60	121.21	Open To Flow (2)
135	137.26	123.29	Shut-In(2)
227	1106.17	124.14	End Shut-In(2)
228	2013.24	123.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	o c g m 20%o 20%g 60%m	0.44
45.00	h o c g m 15%g 35%o 50%m	0.22
165.00	c g o 10%g 90%o	1.01
0.00	600' gas in pipe	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources LLC

**20-18s-31w Scott,KS**

410 17th St Ste900  
Denver, CO 80202-4420

**Frank #1A**

Job Ticket: 44931

**DST#: 4**

ATTN: Gary Duke

Test Start: 2011.12.04 @ 10:07:35

## Tool Information

Drill Pipe:	Length: 4027.00 ft	Diameter: 3.80 inches	Volume: 56.49 bbl	Tool Weight: 1500.00 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: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Full Loose: 85000.00 lb
		<u>Total Volume:</u>	<u>57.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4293.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	107.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4274.00	
Shut In Tool	5.00			4279.00	
Hydraulic tool	5.00			4284.00	
Packer	5.00			4289.00	20.00 Bottom Of Top Packer
Packer	4.00			4293.00	
Stubb	1.00			4294.00	
Recorder	0.00	6771	Inside	4294.00	
Recorder	0.00	6667	Outside	4294.00	
Perforations	16.00			4310.00	
Change Over Sub	1.00			4311.00	
Drill Pipe	63.00			4374.00	
Change Over Sub	1.00			4375.00	
Bullnose	5.00			4380.00	87.00 Bottom Packers & Anchor

**Total Tool Length: 107.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

FIML Natural Resources LLC

20-18s-31w Scott,KS

410 17th St Ste900  
Denver, CO 80202-4420

Frank #1A

Job Ticket: 44931

DST#: 4

ATTN: Gary Doke

Test Start: 2011.12.04 @ 10:07:35

**Mud and Cushion Information**

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 54.00 sec/qt  
Water Loss: 9.57 in<sup>3</sup>  
Resistivity: 0.00 ohm.m  
Salinity: 3000.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 30 deg API  
Water Salinity: 0 ppm

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
90.00	o c g m 20%o 20%g 60%m	0.443
45.00	h o c g m 15%g 35%o 50%m	0.221
165.00	c g o 10%g 90%o	1.012
0.00	600' gas in pipe	0.000

Total Length: 300.00 ft      Total Volume: 1.676 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 6771

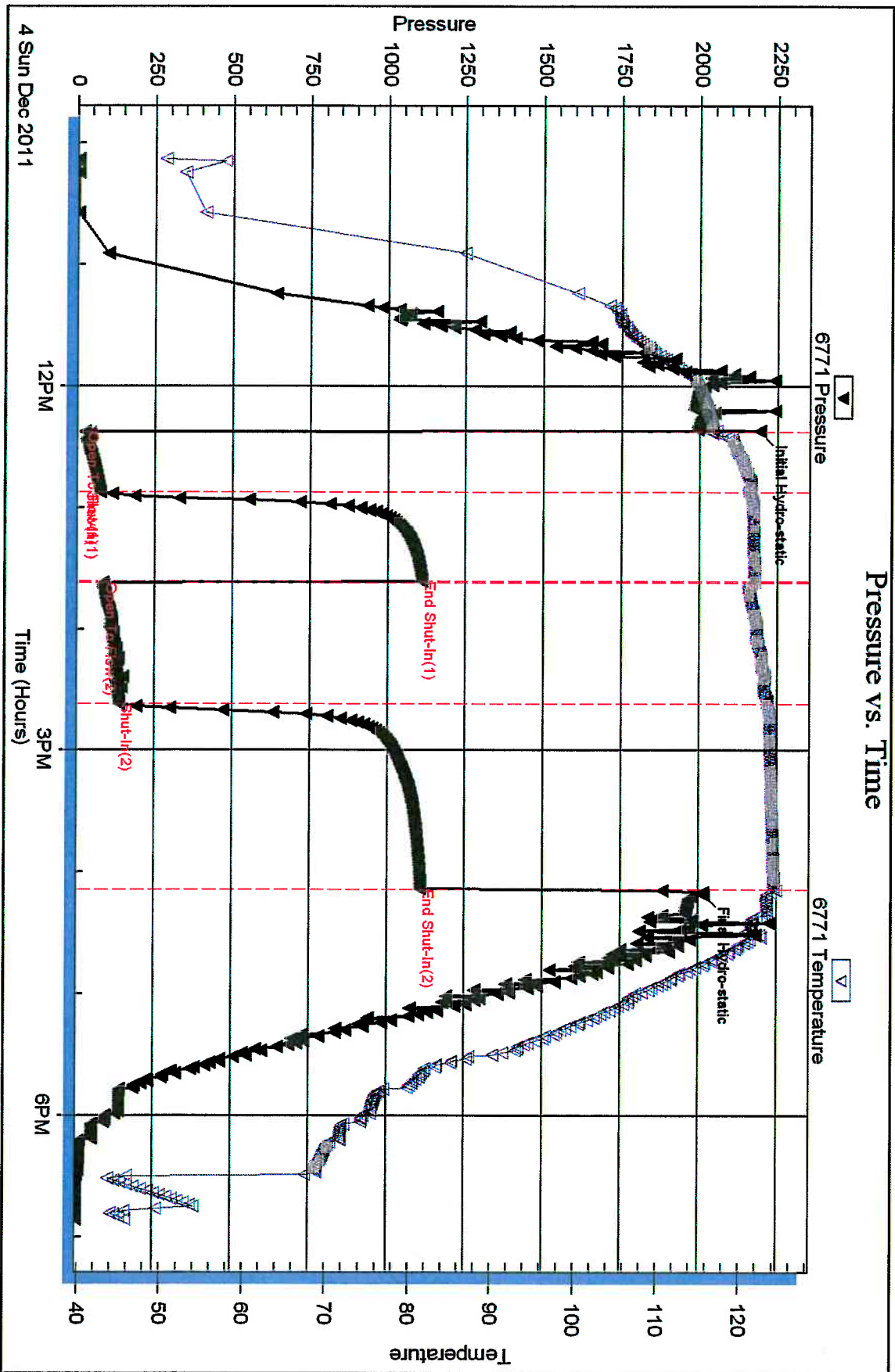
Inside

FIML Natural Resources LLC

Frank #1A

DST Test Number: 4

### Pressure vs. Time



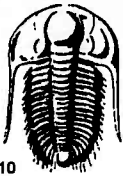
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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

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DEC 07 2011

## Test Ticket

NO. 44928

Well Name & No. Frank #1 A Test No. #1 Date 12/2/11  
 Company FIMB Natural Resources LLC Elevation \_\_\_\_\_ KB \_\_\_\_\_ GL \_\_\_\_\_  
 Address 410 17th St. Denver Colo 80202-4420  
 Co. Rep / Geo. Greg Dale Rig H2#1  
 Location: Sec. 20 Twp. 18S Rge. 3W Co. Scott State Ks

Interval Tested 4144 4192 Zone Tested KC  
 Anchor Length \_\_\_\_\_ Drill Pipe Run 3872' Mud Wt. 8.4  
 Top Packer Depth 4139 Drill Collars Run 278' XH Vis 47  
 Bottom Packer Depth 4144 Wt. Pipe Run \_\_\_\_\_ WL 4.8  
 Total Depth 4192 Chlorides 1500 ppm System LCM #12

Blow Description 6 1/4" in blow  
No return  
5 3/4" in blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
90	6" in hole on top				
90	WCM w/ oil spots	5%	4%	60%	35%
90	MCM		80%	20%	
270	SMCW		95%	5%	

Rec Total 450' BHT 130° Gravity \_\_\_\_\_ API RW 250 @ 55° F Chlorides 36,500 ppm

(A) Initial Hydrostatic 2115  Test 1225' T-On Location 23:35  
 (B) First Initial Flow 32  Jars \_\_\_\_\_ T-Started 01:00  
 (C) First Final Flow 132  Safety Joint \_\_\_\_\_ T-Open 04:05  
 (D) Initial Shut-In 842  Circ Sub n/c T-Pulled 07:05  
 (E) Second Initial Flow 163  Hourly Standby \_\_\_\_\_ T-Out 09:35  
 (F) Second Final Flow 226  Mileage 16.4 22.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 837  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2016  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_

Initial Open 30  Day Standby \_\_\_\_\_ Sub Total 150-  
 Initial Shut-In 45  Accessibility 150 Total 1397.40  
 Final Flow 45  Sub Total 1247.40 MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 600

Approved By [Signature] Our Representative [Signature]

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.

TEST TICKET

NO. 114

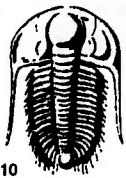
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TRILORITE

TEST FIVE



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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

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DEC 07 2011  
BY: \_\_\_\_\_

## Test Ticket

NO. 44929

Well Name & No. Frank #1 AP Test No. #2 Date 12/2/11  
 Company ETM Natural Resources LLC Elevation \_\_\_\_\_ KB \_\_\_\_\_ GL \_\_\_\_\_  
 Address 410 17th St SE Denver, CO 80202-4120  
 Co. Rep / Geo. Gary Lake Rig Frank #1  
 Location: Sec. 20 Twp. 18 Rge. 31 Co. Scott State KS

Interval Tested 4190 4221 Zone Tested RC  
 Anchor Length \_\_\_\_\_ Drill Pipe Run 3898 Mud Wt. 9.1  
 Top Packer Depth 4185 Drill Collars Run 278' XH Vis 57  
 Bottom Packer Depth 4190 Wt. Pipe Run \_\_\_\_\_ WL 5.6  
 Total Depth 4221 Chlorides 2200 ppm System LCM #12  
 Blow Description B.O.B. in 4' mud  
No return  
B.O.B. in 8' mud  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>100</u>	<u>WCM</u>		<u>35</u>	<u>65</u>	
<u>180</u>	<u>MW</u>		<u>75</u>	<u>25</u>	
<u>1170</u>	<u>Water</u>		<u>100</u>		
_____	_____				
_____	_____				

Rec Total 1450' BHT 136° Gravity \_\_\_\_\_ API RW .280 @ 66° F Chlorides 27000 ppm  
 (A) Initial Hydrostatic 2106  Test 1225' T-On Location 17:00  
 (B) First Initial Flow 71  Jars \_\_\_\_\_ T-Started 17:30  
 (C) First Final Flow 431  Safety Joint \_\_\_\_\_ T-Open 19:37  
 (D) Initial Shut-In 866  Circ Sub N/C T-Pulled 22:22  
 (E) Second Initial Flow 446  Hourly Standby \_\_\_\_\_ T-Out 01:00  
 (F) Second Final Flow 690  Mileage 16 @ 22.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 873  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1968  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 150  
 Day Standby \_\_\_\_\_ Total 1397.40  
 Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1247.40

Approved By [Signature] Our Representative [Signature]

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100

TRIP DATE

TESTING BY

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Town of...

...

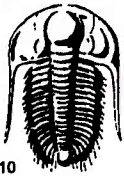
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# TRILOBITE TESTING INC.

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DEC 07 2011  
BY: \_\_\_\_\_

## Test Ticket

NO. 44930

Well Name & No. Frank #1 A Test No. #3 Date 12/3/11  
 Company ETMR Natural Resources LLC Elevation \_\_\_\_\_ KB \_\_\_\_\_ GL \_\_\_\_\_  
 Address 410 17th St Ste. 900 Denver Colo 80202-4420  
 Co. Rep / Geo. Gary Duke Rig H2 #1  
 Location: Sec. 20 Twp. 18s Rge. 31w Co. Scott State KS

Interval Tested 4254 4300 Zone Tested K-L  
 Anchor Length \_\_\_\_\_ 46 Drill Pipe Run 3962 Mud Wt. 9.2  
 Top Packer Depth \_\_\_\_\_ 4249 Drill Collars Run 278' XH Vis 57  
 Bottom Packer Depth \_\_\_\_\_ 4254 Wt. Pipe Run \_\_\_\_\_ WL 7.2  
 Total Depth \_\_\_\_\_ 4300 Chlorides 2400 ppm System LCM #8  
 Blow Description 6 1/2" in blow  
No return  
6 3/4" in blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>1'</u>	<u>Free oil</u>	<u>100</u>			
<u>104'</u>	<u>SOC WM</u>	<u>3</u>	<u>40</u>	<u>57</u>	
<u>278</u>	<u>mcw w/oil scum</u>	<u>SCUM</u>	<u>85</u>	<u>15</u>	
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 383' BHT 131° Gravity \_\_\_\_\_ API RW .322 @ 50° F Chlorides 29500 ppm  
 (A) Initial Hydrostatic 1939  Test 1225' T-On Location 12:15  
 (B) First Initial Flow 36  Jars \_\_\_\_\_ T-Started 13:30  
 (C) First Final Flow 159  Safety Joint \_\_\_\_\_ T-Open 15:30  
 (D) Initial Shut-In 891  Circ Sub NK T-Pulled 18:30  
 (E) Second Initial Flow 165  Hourly Standby \_\_\_\_\_ T-Out 21:20  
 (F) Second Final Flow 202  Mileage 16.5 22.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 877  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1872  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 150  
 Day Standby \_\_\_\_\_ Total 1397.40  
 Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1247.40

Approved By [Signature] Operator Representative [Signature]

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Test Ticket

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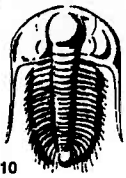


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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
DEC 07 2011  
BY: \_\_\_\_\_

## Test Ticket

NO. 44931

Well Name & No. Frank #1 A Test No. #4 Date 12/4/11  
 Company FIML Natural Resources LLC Elevation \_\_\_\_\_ KB \_\_\_\_\_ GL \_\_\_\_\_  
 Address 410 17th St Ste 900 Denver, Colo, 80202  
 Co. Rep / Geo. Gary Duke Rig H2 #1  
 Location: Sec. 20 Twp. 18 Rge. 31 Co. Scott State Ks

Interval Tested 4293 4380 Zone Tested Pleasanton - Marston  
 Anchor Length \_\_\_\_\_ 87 Drill Pipe Run 4027' Mud Wt. 9.3  
 Top Packer Depth \_\_\_\_\_ 4288 Drill Collars Run 278' x H Vis 54  
 Bottom Packer Depth \_\_\_\_\_ 4293 Wt. Pipe Run \_\_\_\_\_ WL 9.4  
 Total Depth \_\_\_\_\_ 4380 Chlorides 3000 ppm System LCM #8

Blow Description B.O.B. in 17 min  
1/4" in Return, died in 30 min  
B.O.B. in 28 min  
3/4" in Return, died in 40 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>165'</u>	<u>C90</u>	<u>10</u>	<u>90</u>		
<u>45'</u>	<u>OCGM</u>	<u>15</u>	<u>35</u>	<u>50</u>	
<u>90</u>	<u>OCGM</u>	<u>20</u>	<u>20</u>	<u>60</u>	
<u>600'</u>	<u>Gas in Pipe</u>				

Rec Total 300' BHT 124° Gravity 30 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2190  Test 1225' T-On Location 09:45  
 (B) First Initial Flow 26  Jars \_\_\_\_\_ T-Started 10:07  
 (C) First Final Flow 75  Safety Joint \_\_\_\_\_ T-Open 12:22  
 (D) Initial Shut-In 1109  Circ Sub N/C T-Pulled 16:07  
 (E) Second Initial Flow 85  Hourly Standby \_\_\_\_\_ T-Out 19:15  
 (F) Second Final Flow 137  Mileage 16.15 22.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 1106  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2013  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 150'  
 Total 1397.40  
 Accessibility 150  
 Sub Total 1247.40  
 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] OR Representative [Signature]

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