

Confidentiality Requested:

Yes  No

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

**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

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No.: \_\_\_\_\_

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  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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](mailto: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 Geologist Report / Mud Logs <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
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Suemar Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

ATTN: Larry Nicholson

Job Ticket: 65317

**DST#: 1**

Test Start: 2016.05.10 @ 13:20:00

## GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:48:00

Time Test Ended: 22:00:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 3944.00 ft (KB) To 3969.00 ft (KB) (TVD)**

Reference Elevations: 2736.00 ft (KB)

Total Depth: 3969.00 ft (KB) (TVD)

2731.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**

Press@RunDepth: 51.28 psig @ 3945.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.05.10

End Date:

2016.05.10

Last Calib.: 2016.05.10

Start Time: 13:21:00

End Time:

22:00:30

Time On Btm: 2016.05.10 @ 16:47:30

Time Off Btm: 2016.05.10 @ 19:55:30

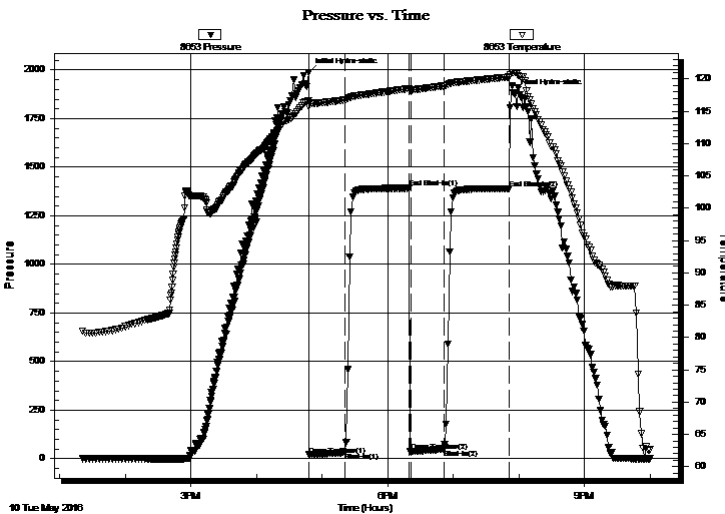
TEST COMMENT: 30 - IF- Weak Surface Blow built to 1/8"

60 - ISI - No Return

30 - FF- No Blow

60 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1987.78	116.66	Initial Hydro-static
1	20.85	115.72	Open To Flow (1)
33	33.40	116.75	Shut-In(1)
92	1392.49	118.52	End Shut-In(1)
94	37.94	118.30	Open To Flow (2)
124	51.28	118.92	Shut-In(2)
184	1390.71	120.30	End Shut-In(2)
188	1877.46	121.02	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MW 20M 80W	0.30

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Suemar Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

Job Ticket: 65317

**DST#: 1**

ATTN: Larry Nicholson

Test Start: 2016.05.10 @ 13:20:00

### 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:

60000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MW 20M 80W	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .13 @ 67 deg = 60,000pm

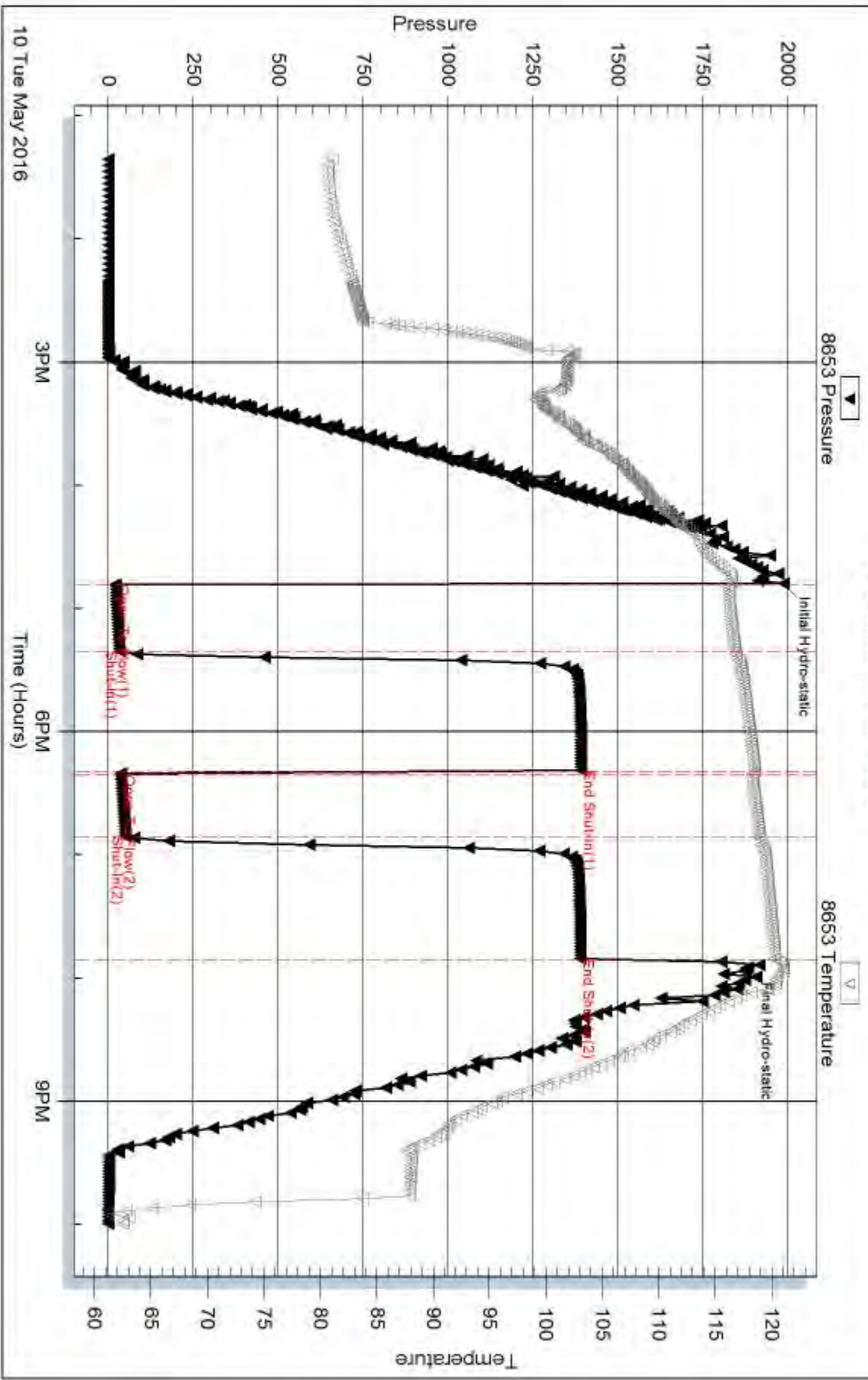
Serial #: 8653

Outside Suemar Exploration & Production, LLC

Muirhead Farms #1-12

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 65317

Printed: 2016.05.11 @ 16:33:55



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Suemar Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

ATTN: Larry Nicholson

Job Ticket: 65318

**DST#: 2**

Test Start: 2016.05.11 @ 07:28:00

## GENERAL INFORMATION:

Formation: **LKC "D,E,F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:21:50

Time Test Ended: 15:29:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 3946.00 ft (KB) To 4015.00 ft (KB) (TVD)**

Reference Elevations: 2736.00 ft (KB)

Total Depth: 4015.00 ft (KB) (TVD)

2731.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8653 Outside**

Press@RunDepth: 30.01 psig @ 3947.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.05.11

End Date:

2016.05.11

Last Calib.:

2016.05.11

Start Time: 07:29:00

End Time:

15:29:30

Time On Btm:

2016.05.11 @ 10:21:30

Time Off Btm:

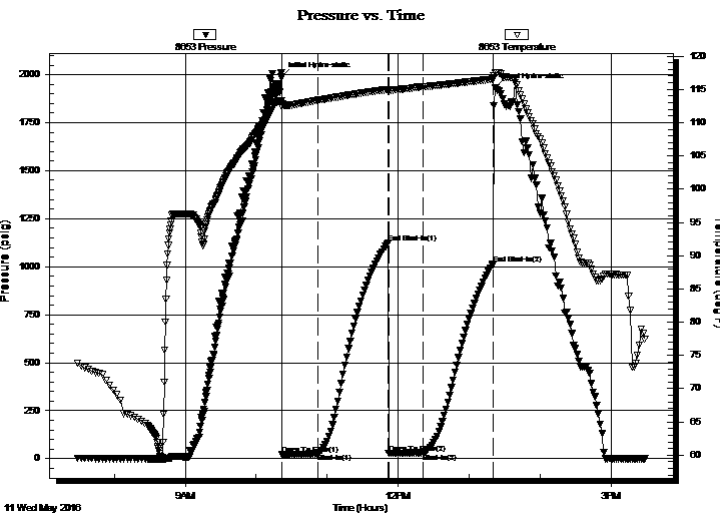
2016.05.11 @ 13:22:30

TEST COMMENT: 30 - IF- 1/4" Blow built to 1"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1991.60	113.30	Initial Hydro-static
1	21.02	112.41	Open To Flow (1)
31	25.65	113.36	Shut-In(1)
90	1123.03	114.98	End Shut-In(1)
91	28.15	114.83	Open To Flow (2)
120	30.01	115.39	Shut-In(2)
179	1012.76	116.52	End Shut-In(2)
181	1932.28	117.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	OSM 100M (oil spots)	0.10

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Suemar Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

Job Ticket: 65318

**DST#: 2**

ATTN: Larry Nicholson

Test Start: 2016.05.11 @ 07:28:00

### 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: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	OSM 100M (oil spots)	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

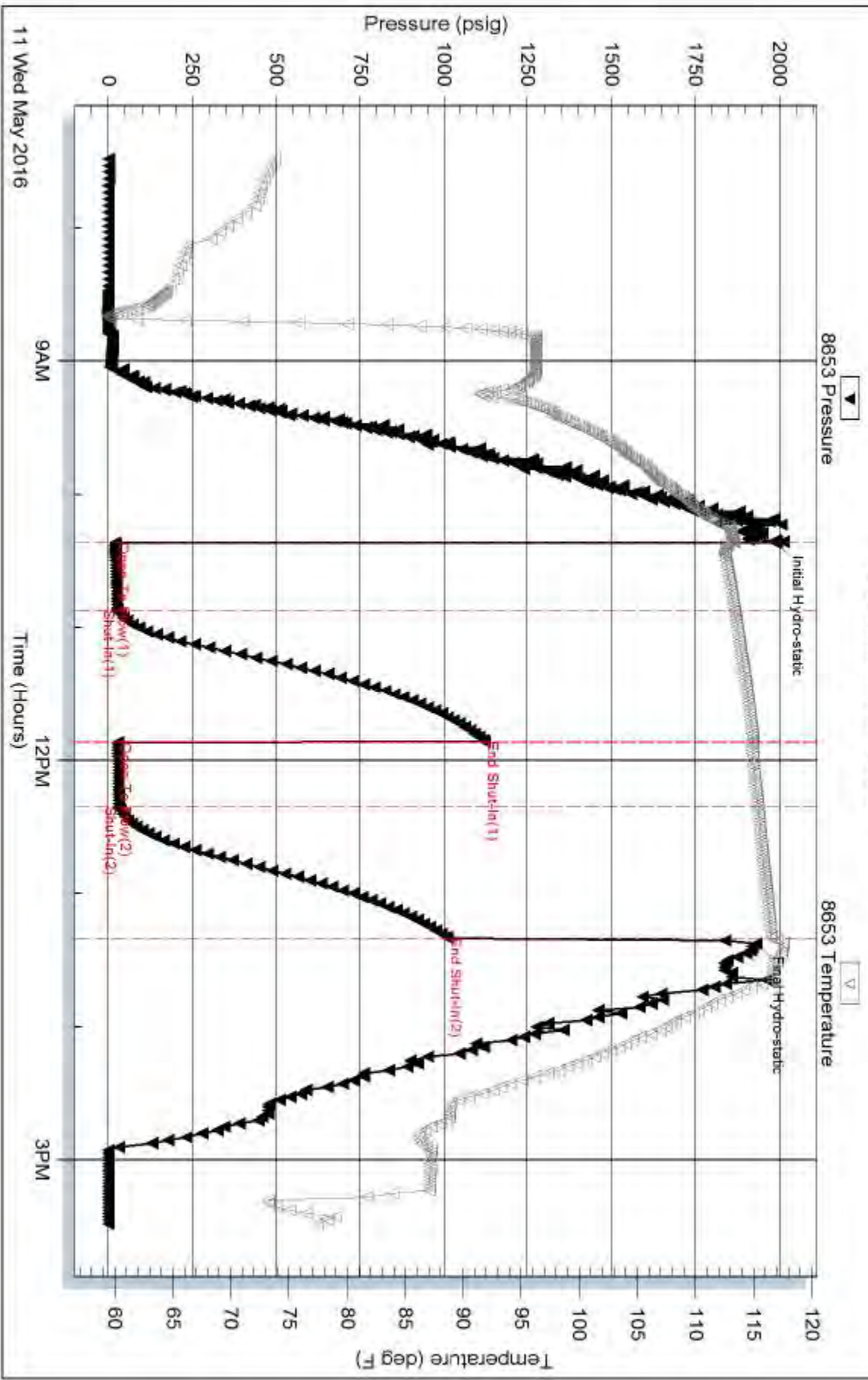
Laboratory Name:

Laboratory Location:

Recovery Comments:



### Pressure vs. Time



11 Wed May 2016

9AM

12PM

3PM



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Suemar Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

ATTN: Larry Nicholson

Job Ticket: 65319

**DST#: 3**

Test Start: 2016.05.12 @ 07:05:00

## GENERAL INFORMATION:

Formation: **LKC "H,I,J,K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:26:00

Time Test Ended: 14:27:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 4034.00 ft (KB) To 4125.00 ft (KB) (TVD)**

Reference Elevations: 2736.00 ft (KB)

Total Depth: 4125.00 ft (KB) (TVD)

2731.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8520**

**Inside**

Press@RunDepth: 90.69 psig @ 4035.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.05.12

End Date:

2016.05.12

Last Calib.:

2016.05.12

Start Time: 07:06:00

End Time:

14:27:30

Time On Btm:

2016.05.12 @ 09:25:30

Time Off Btm:

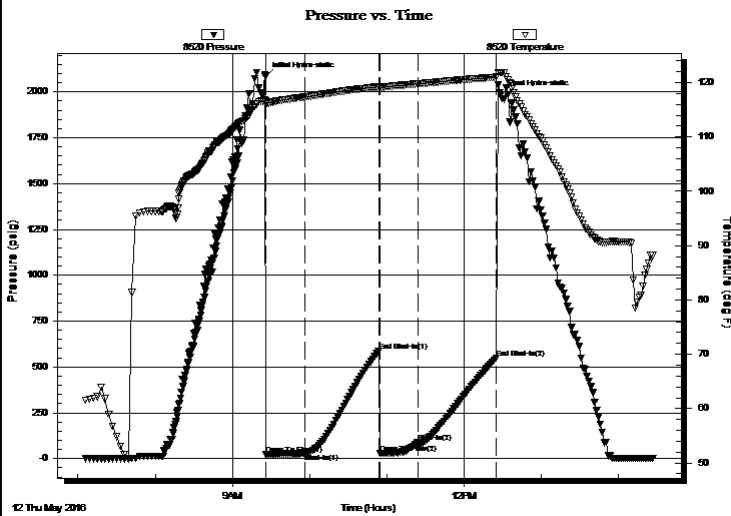
2016.05.12 @ 12:28:30

TEST COMMENT: 30 - IF- 1/4" Blow built to 1"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2081.98	116.62	Initial Hydro-static
1	24.08	116.14	Open To Flow (1)
31	26.15	117.32	Shut-In(1)
88	586.26	119.25	End Shut-In(1)
89	28.94	119.08	Open To Flow (2)
119	90.69	119.80	Shut-In(2)
180	546.44	121.02	End Shut-In(2)
183	1983.79	121.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100M	0.05

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Suemar Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

Job Ticket: 65319

**DST#: 3**

ATTN: Larry Nicholson

Test Start: 2016.05.12 @ 07:05:00

## 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: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100M	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

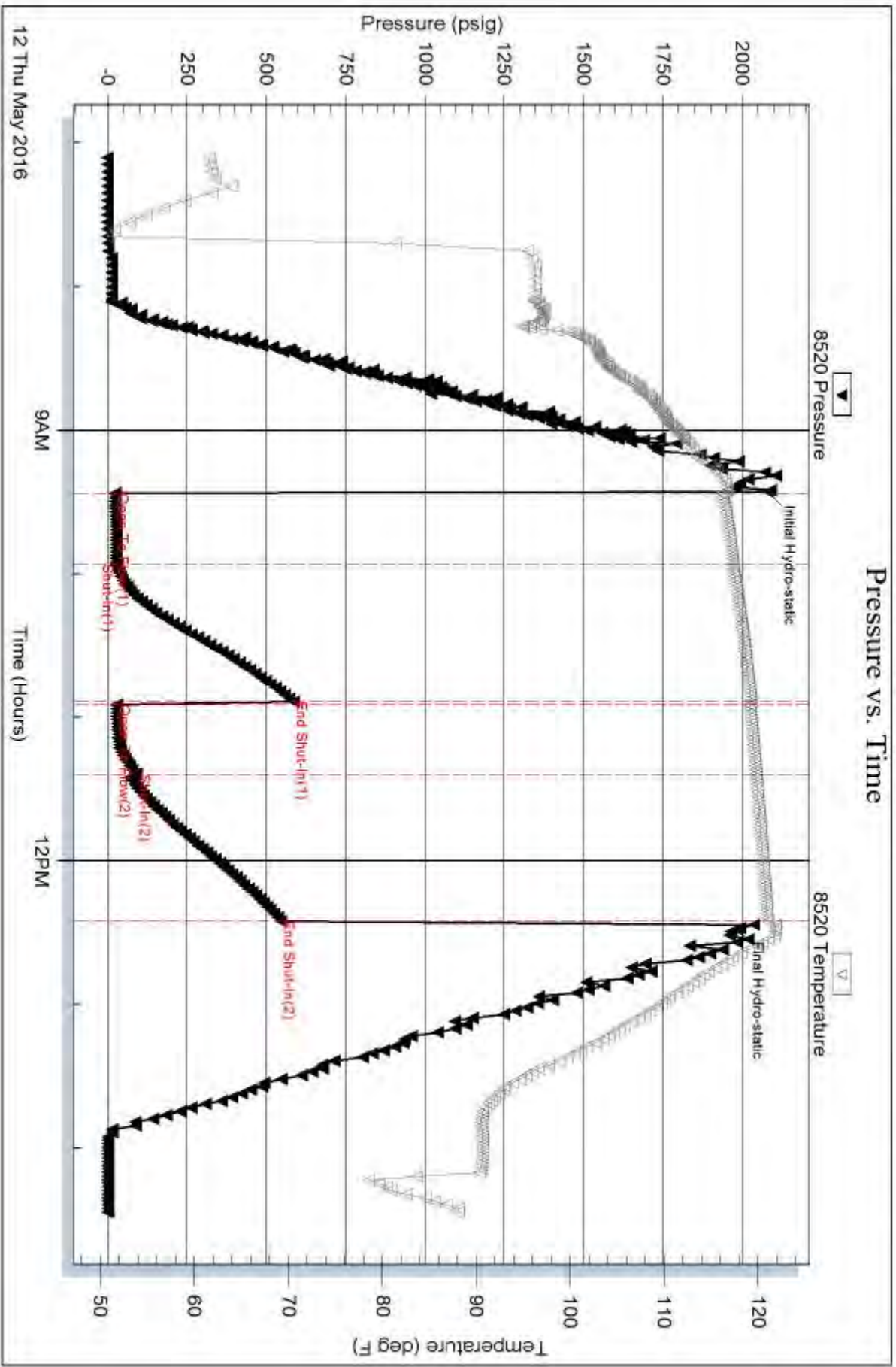
Serial #: 8520

Inside

Suener Exploration & Production, LLC

Muirhead Farms #1-12

DST Test Number: 3





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Suemaur Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

ATTN: Larry Nicholson

Job Ticket: 65320

**DST#: 4**

Test Start: 2016.05.13 @ 15:25:00

## GENERAL INFORMATION:

Formation: **Lower Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:22:00

Time Test Ended: 00:20:00

Test Type: Conventional Straddle (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 4242.00 ft (KB) To 4260.00 ft (KB) (TVD)**

Reference Elevations: 2736.00 ft (KB)

Total Depth: 4485.00 ft (KB) (TVD)

2731.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8520 Inside**

Press@RunDepth: 99.93 psig @ 4243.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.05.13

End Date:

2016.05.14

Last Calib.:

2016.05.14

Start Time: 15:26:00

End Time:

00:20:00

Time On Btm:

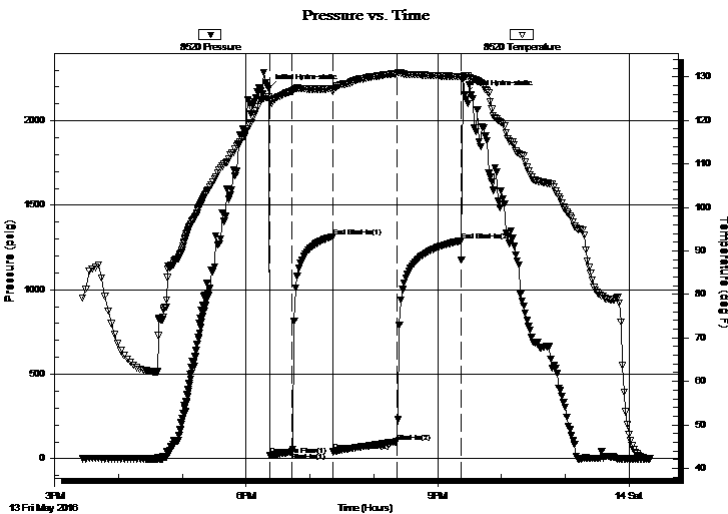
2016.05.13 @ 18:21:00

Time Off Btm:

2016.05.13 @ 21:25:30

TEST COMMENT: 20 - IF- 1/8" Blow built to 2"  
40 - IS- No Return  
60 - FF- Weak Surface Blow started at 3 min. Built to 3"  
60 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2189.25	125.32	Initial Hydro-static
1	19.67	124.65	Open to Flow (1)
22	40.21	126.70	Shut-In(1)
60	1314.10	127.27	End Shut-In(1)
61	43.21	126.62	Open To Flow (2)
121	99.93	130.77	Shut-In(2)
181	1288.55	130.10	End Shut-In(2)
185	2154.73	130.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW 10M 90W	0.59
30.00	MW 50M 50W	0.15

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Suemaer Exploration & Production, LLC  
802 N. Carancahua  
Corpus Christi, TX 78401  
ATTN: Larry Nicholson

**12-5S-28W Decatur, KS**

**Muirhead Farms #1-12**

Job Ticket: 65320      **DST#: 4**

Test Start: 2016.05.13 @ 15:25:00

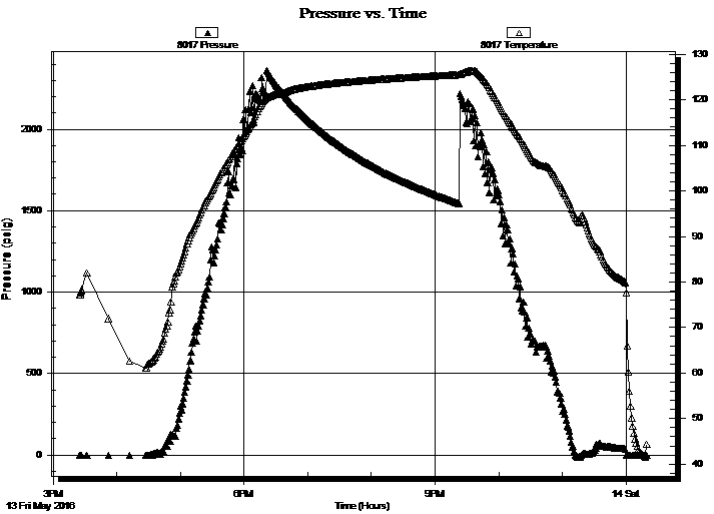
## GENERAL INFORMATION:

Formation: <b>Lower Pawnee</b>		Test Type: Conventional Straddle (Initial)
Deviated: No Whipstock: ft (KB)		Tester: Kevin Mack
Time Tool Opened: 18:22:00		Unit No: 82
Time Test Ended: 00:20:00		
<b>Interval: 4242.00 ft (KB) To 4260.00 ft (KB) (TVD)</b>	Reference Elevations: 2736.00 ft (KB)	
Total Depth: 4485.00 ft (KB) (TVD)	2731.00 ft (CF)	
Hole Diameter: 7.88 inches Hole Condition: Good	KB to GR/CF: 5.00 ft	

## Serial #: 8017 Below (Straddle)

Press@RunDepth: psig @ 4262.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2016.05.13 End Date: 2016.05.14	Last Calib.: 2016.05.14
Start Time: 15:25:05 End Time: 00:19:45	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** 20 - IF- 1/8" Blow built to 2"  
40 - IS- No Return  
60 - FF- Weak Surface Blow started at 3 min. Built to 3"  
60 - FS- No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW 10M 90W	0.59
30.00	MW 50M 50W	0.15

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Suemaour Exploration & Production, LLC

**12-5S-28W Decatur, KS**

802 N. Carancahua  
Corpus Christi, TX 78401

**Muirhead Farms #1-12**

Job Ticket: 65320

**DST#: 4**

ATTN: Larry Nicholson

Test Start: 2016.05.13 @ 15:25:00

### 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:

34000 ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	MW 10M 90W	0.590
30.00	MW 50M 50W	0.148

Total Length: 150.00 ft      Total Volume: 0.738 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .23 @ 63 deg = 34,000ppm

Serial #: 8520

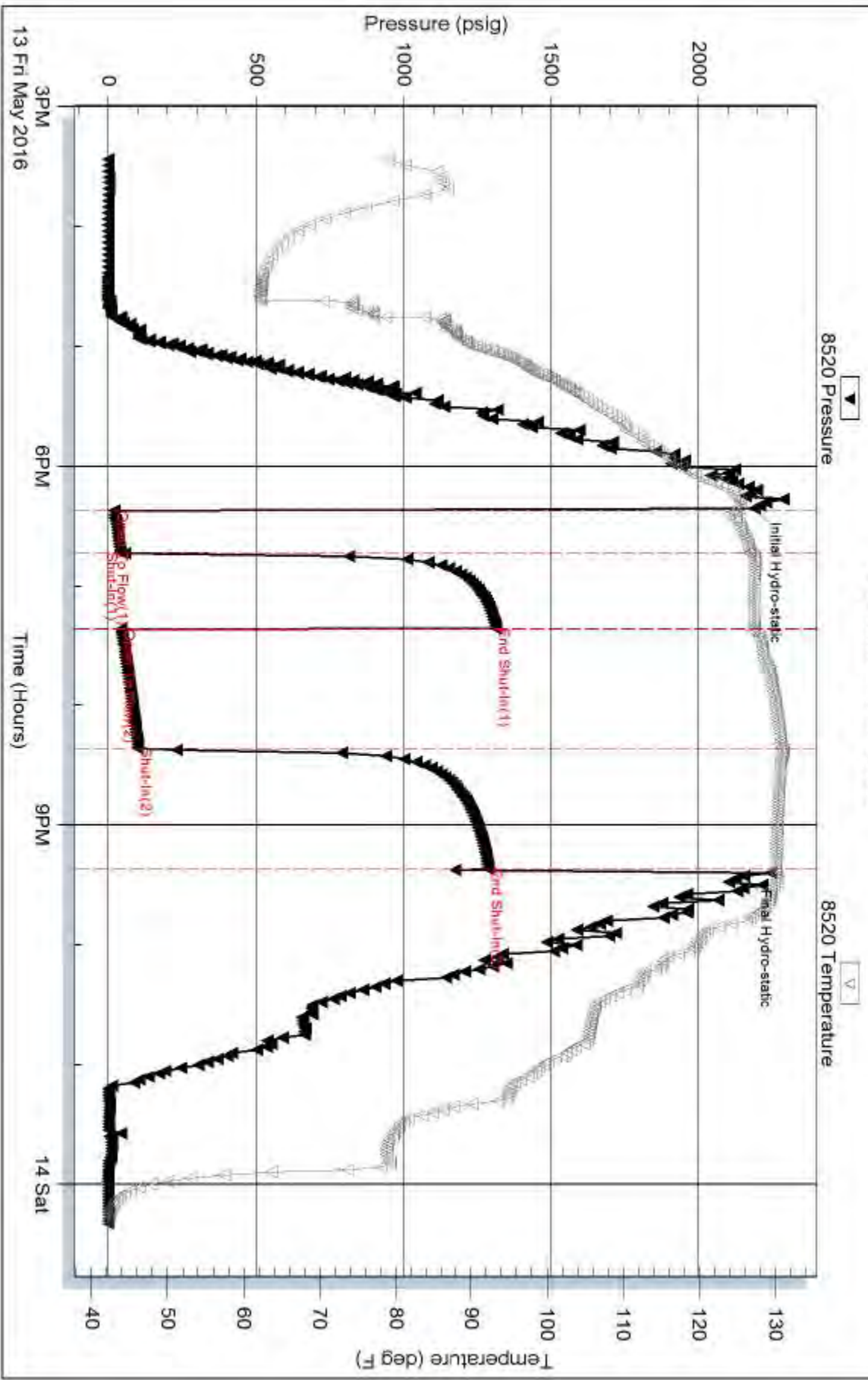
Inside

Suenor Exploration & Production, LLC

Muirhead Farms #1-12

DST Test Number: 4

### Pressure vs. Time



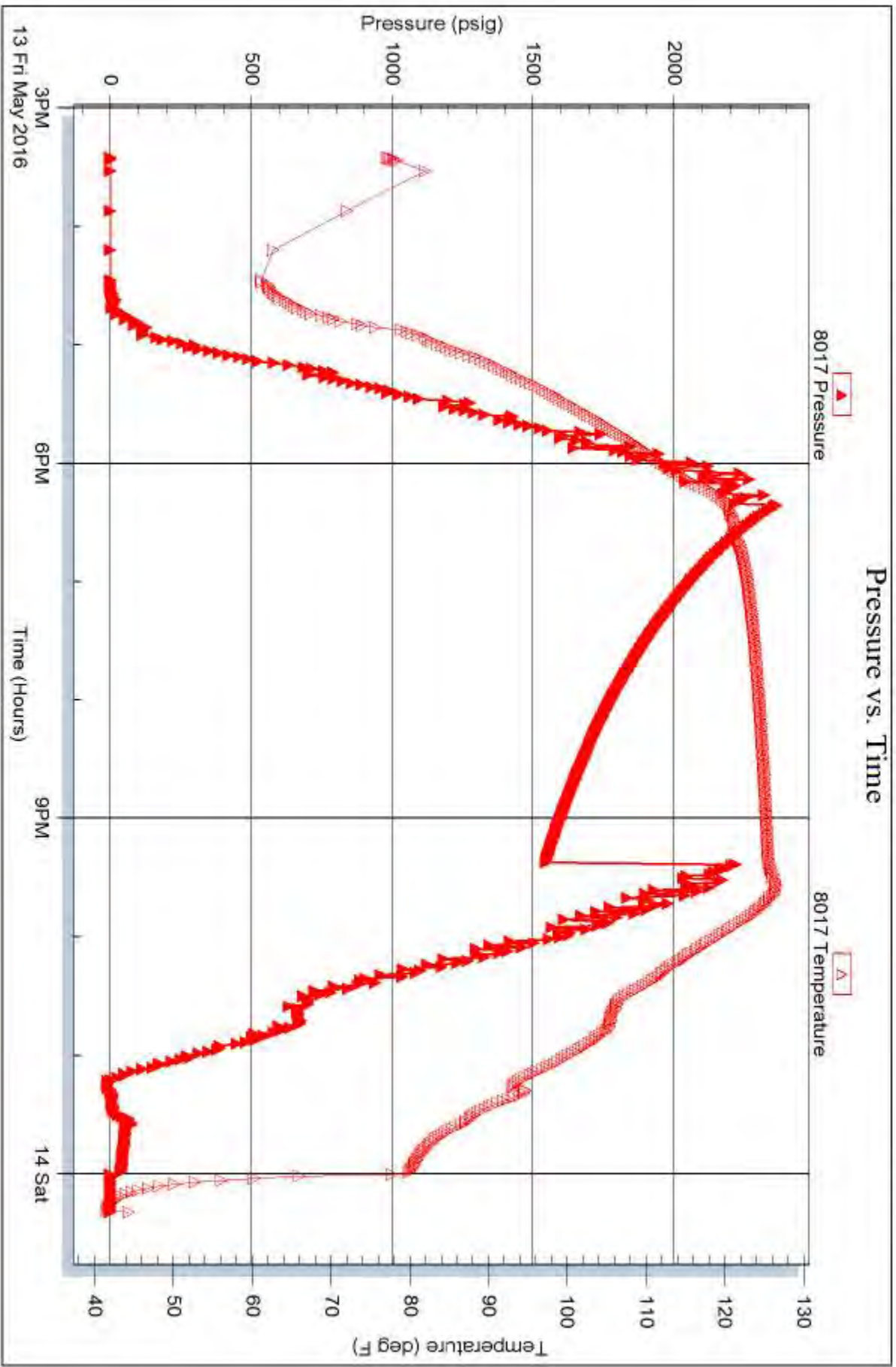


Serial #: 8017

Below (Strata) Exploration & Production, LLC

Muirhead Farms #1-12

DST Test Number: 4



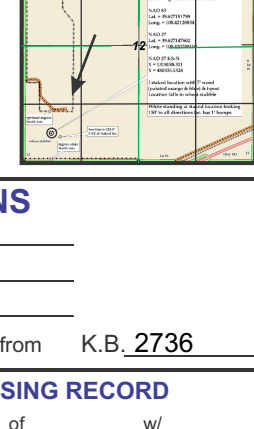


# GEOLOGICAL REPORT

## Larry A. Nicholson

NAD 83  
39.0271476  
-100.4212083

<p><b>COMPANY</b> Suemaur Exploration &amp; Production, LLC</p> <p><b>API #</b> 15-039-21230</p> <p><b>LEASE</b> Muirhead Farms</p> <p><b>LOCATION</b> NE SW SW SW</p> <p><b>SURVEY</b> 605 FSL 634 FWL</p> <p><b>SECTION</b> 12 TWP 5S RGE 28W</p> <p><b>COUNTY</b> Decatur STATE Kansas</p> <p><b>CONTRACTOR</b> Murfin Drilling Company Inc. Rig # 7</p> <p><b>SPUD</b> 5:15 pm 5-06-16</p> <p><b>RTD</b> 4:48:35 am 05-13-2016</p> <p><b>MUD UP AT</b> 3120' 700 bbl</p> <p><b>MUD TYPE</b> Chemical, Morgan Mud, Dave Lines</p> <p><b>SAMPLES SAVED</b> FROM 3500 TO RTD</p> <p><b>DRILLING TIME</b> FROM 3400 TO RTD</p> <p><b>SAMPLES EXAMINED</b> FROM 3400 TO RTD</p> <p><b>GEOLOGICAL SUPERVISION</b> LARRY A. NICHOLSON</p> <p><b>WELLSITE GEOLOGIST</b> LARRY A. NICHOLSON</p>	<p><b>FIELD</b> Wildcat</p> <p><b>WELL #</b> #1-12</p> <p><b>ELEVATIONS</b></p> <p><b>K.B.</b> 2736</p> <p><b>D.F.</b> _____</p> <p><b>G.L.</b> 2731</p> <p>All measurements from K.B. 2736</p> <p><b>CASING RECORD</b></p> <p>Conductor of _____ of _____ SA</p> <p>Surface _____ of _____ SA</p> <p>Production _____ of _____ SA</p>
--	--



### ELECTRICAL SURVEYS Weatherford, Den, Neu, Dual, Micro, Sonic, HI-Res

FORMATION	SAMPLE TOPS	SUBSEA DATUM	ELEG LOG TOPS	SUBSEA DATUM	REFERENCE WELL	
					A	B
Stone C	2533	+203	2534	+202		
Topoka	3708	-972	3708	-972		
Hoehner	3890	-1154	3897	-1151		
Bilchew	3895	-1159	3894	-1158		
LANS A	3935	-1199	3931	-1195		
LANS J	4085	-1349	4084	-1348		
LANS K	4111	-1375	4110	-1374		
LANS L	4127	-1401	4130	-1394		
BKC	4137	-1431	4142	-1406		
Cherokee	4314	-1678	4320	-1584		
Miss	4425	-1689	4425	-1689		
RTD	4485		4485			
LTD	4483		4483			

**REMARKS & RECOMMENDATIONS:**

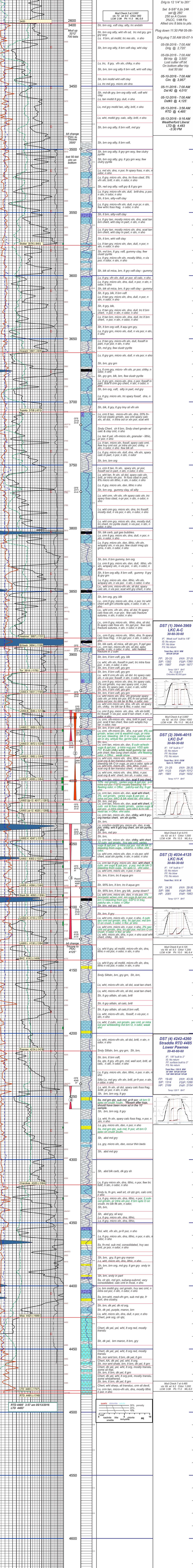
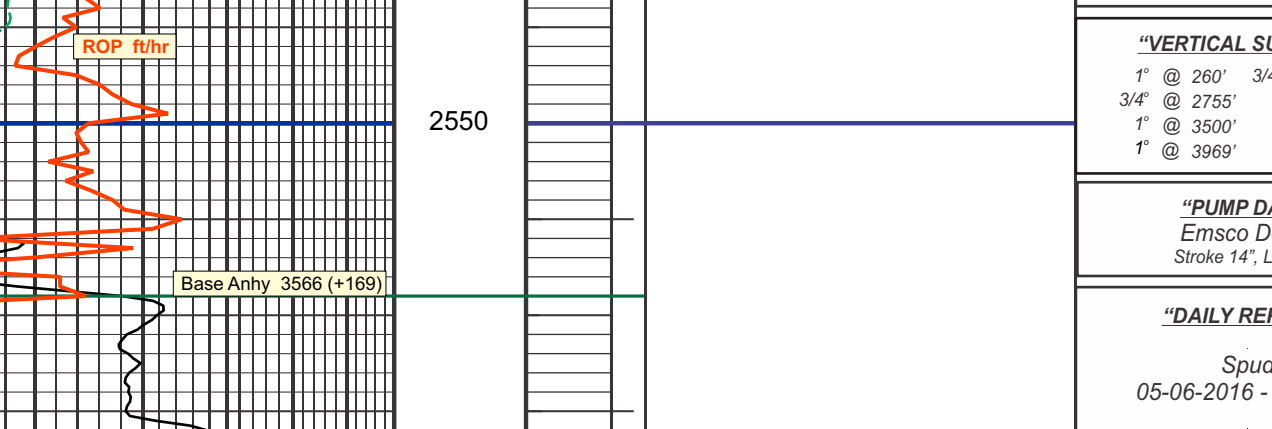
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

LAN 782, Modified 5/05, 11/11, 4/12 Hanover, KS 68845 1inch = 25.4mm 8.5 x 97.5 216 mm x 2460 mm

### LEGEND



FORMATION	SAMPLE TOPS	SUBSEA DATUM	ELEG LOG TOPS	SUBSEA DATUM	REFERENCE WELL	
					A	B
Stone C	2533	+203	2534	+202		
Topoka	3708	-972	3708	-972		
Hoehner	3890	-1154	3897	-1151		
Bilchew	3895	-1159	3894	-1158		
LANS A	3935	-1199	3931	-1195		
LANS J	4085	-1349	4084	-1348		
LANS K	4111	-1375	4110	-1374		
LANS L	4127	-1401	4130	-1394		
BKC	4137	-1431	4142	-1406		
Cherokee	4314	-1678	4320	-1584		
Miss	4425	-1689	4425	-1689		
RTD	4485		4485			
LTD	4483		4483			

**COMPANY** Suemaur Exploration & Production, LLC

**LEASE** Muirhead Farms #1-12 NE SW SW SW

**LOCATION** 605 FSL 634 FWL SEC 12 TWP 5S RGE 28W

**COUNTY** Decatur STATE Kansas

**ELEVATIONS**

**K.B.** 2736

**D.F.** \_\_\_\_\_

**G.L.** 2731

All measurements from K.B. 2736



# ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. #20-5975804

067571

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

SERVICE POINT:  
*Chalkley, Ky*

DATE <i>5/6/16</i>	SEC <i>12</i>	TWP. <i>5</i>	RANGE <i>28</i>	CALLED OUT	ON LOCATION	JOB START <i>11:00am</i>	JOB FINISH <i>11:30pm</i>
LEAS <i>Marion Head Farms</i>				LOCATION <i>Breadon W. Edge N 70</i>		COUNTY <i>Deaton</i>	STATE <i>Ky</i>
OLD OR NEW (Circle one) <u>NEW</u>				S. Edge of Cemetery E.S			

CONTRACTOR *MacFin 7*

TYPE OF JOB *Surface*

HOLE SIZE *12" 14* T.D.

CASING SIZE *8 5/8* DEPTH *261'*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. *15'*

PERFS.

DISPLACEMENT

OWNER *Same*

CEMENT AMOUNT ORDERED *2500lb 3" 70 CC 14 F40 Seal*

EQUIPMENT

PUMP TRUCK CEMENTER *Alan Ryan*

# *910-281* HELPER *Kevin Ryan*

BULK TRUCK

# *373-* DRIVER *Marty Phillips*

BULK TRUCK

# DRIVER

COMMON *230 94 @ 17.90 4425.00*

POZMIX @

GEL @

CHLORIDE *205 10 @ 1.10 225.00*

ASC @

*Flashed 63 16 @ 2.92 187.12*

@

@

@

@

@

TOTAL *5437.61*

REMARKS:

*Drill Hole, Run Casing, Cement, Displace Cement*

*Cement Did Circulate 8 BBL*

*TOP.*

*Thank You Alan, Kevin, Marty*

CHARGE TO *SWANA Suemaur Exploration*

STREET

CITY STATE ZIP

DISCOUNT *50% 2718.80*

SERVICE

HANDLING *269 CF @ 2.50 667.50*

MILEAGE *2.25 70 n/mile 1336.50*

DEPTH OF JOB

PUMP TRUCK CHARGE *1512.25*

EXTRA FOOTAGE @

HV MILEAGE *40 @ 7.20 288.00*

LV MILEAGE *40 @ 4.20 176.00*

@

@

TOTAL *3999.81*

DISCOUNT *50% 1999.94*

PLUG & FLOAT EQUIPMENT

*Centralizers 3 @ 75.00 225.00*

*Stoppling @ 69.00 69.00*

@

@

@

TOTAL *294.00*

DISCOUNT *50% 147.00*

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 *KELLY WILSON*

SIGNATURE *Kelly Wilson*

SALES TAX (If Any)

TOTAL CHARGES *9,731.48*

DISCOUNT *4,865.74 (50%)* IF PAID IN 30 DAYS

NET TOTAL *4,865.74* IF PAID IN 30 DAYS

Bid

Date 5/16/14 District Daklog H Ticket No. 067571  
 Company Sueman Rig Marlin 7  
 Lease Muirhead Farms Well No. 1-12  
 County Beckton State Ky  
 Location \_\_\_\_\_ Field \_\_\_\_\_

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 8 5/8 Type New Weight \_\_\_\_\_ Collar \_\_\_\_\_

Casing Depths: Top KB Bottom 261

Drill Pipe: Size 4 1/2 Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 12 1/4 T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. .063 Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

CEMENT DATA:

Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

LEAD: Pump Time \_\_\_\_\_ hrs. Type Open 390CL  
1/4 Pro Seal Excess \_\_\_\_\_

Amt. 250 Sks Yield 1.33 ft<sup>3</sup>/sk Density 14.87 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type \_\_\_\_\_  
 Excess \_\_\_\_\_

Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

WATER: Lead 6.2 gals/sk Tail \_\_\_\_\_ gals/sk Total \_\_\_\_\_ Bbls.

Pump Trucks Used 618-281  
 Bulk Equip. 373

Float Equip: Manufacturer \_\_\_\_\_  
 Shoe: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Float: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity 3 Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type H<sub>2</sub>O Amt. \_\_\_\_\_ Bbls. Weight \_\_\_\_\_ PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG

COMPANY REPRESENTATIVE \_\_\_\_\_

CEMENTER AK

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
						Calculation
						→ Flymiz - Setup
						Drill Hole
						Run Casing, Circulate
						Mix Cement
						Displace Cement
						Shut-in
<u>11:31</u>						Job Complete

# ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. #20-5975804

066882

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

SERVICE POINT:  
Dakley

DATE <u>5-14-16</u>	SEC. <u>12</u>	TWP. <u>5</u>	RANGE <u>28</u>	CALLED OUT	ON LOCATION <u>4:00 AM</u>	JOB START <u>8:20 AM</u>	JOB FINISH <u>9:00 AM</u>
<u>Murfin &amp; Farms</u>	WELL # <u>1-12</u>	LOCATION <u>Dresden 3/4 N E #5 into</u>	COUNTY <u>Decatur</u>	STATE <u>KS</u>			
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR Murfin 7  
 TYPE OF JOB PTA  
 HOLE SIZE 2 7/8 T.D. 4485'  
 CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE 4 1/2 DEPTH 2500'  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_  
 CEMENT LEFT IN CSG. \_\_\_\_\_  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_

OWNER Same  
 CEMENT AMOUNT ORDERED 255 sks 60/40 490gel  
14 Flo-seal  
 COMMON @ \_\_\_\_\_  
 POZMIX @ \_\_\_\_\_  
 GEL @ \_\_\_\_\_  
 CHLORIDE @ \_\_\_\_\_  
 ASC @ \_\_\_\_\_  
60/40 490gel 255 sks @ 18.92 4824.60  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_

EQUIPMENT  
 PUMP TRUCK CEMENTER Andrew Fairland  
 # 431 HELPER Wayne McElphy  
 BULK TRUCK # 410 DRIVER Cory Brown  
 BULK TRUCK # \_\_\_\_\_ DRIVER \_\_\_\_\_

TOTAL 5014.68  
 DISCOUNT 50% 2507.34

### REMARKS:

- 50 sks @ 2500'
- 100 sks @ 1730'
- 50 sks @ 310'
- 10 sks @ 40'
- 15 sks rd use hole
- 30 sks Rat hole

Thank you

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

### SERVICE

HANDLING 222.17 c/ft @ 2.48 674.98  
 MILEAGE 2.25 to 1/2 mile 11.43 ton 1257.30  
 DEPTH OF JOB 2500'  
 PUMP TRUCK CHARGE 2483.59  
 EXTRA FOOTAGE @ \_\_\_\_\_  
 HV MILEAGE 40 miles @ 7.70 308.00  
 LV MILEAGE 40 miles @ 4.40 176.00  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL 4899.87  
 DISCOUNT 50% 2449.93

### PLUG & FLOAT EQUIPMENT

8 5/8  
1 Dry hole plug @ 110.00  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL 110.00  
 DISCOUNT 50% 55.00

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 ORIS CONDREW  
 SIGNATURE [Signature]

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 10,024.55  
 DISCOUNT 5,012.27 (50%) IF PAID IN 30 DAYS  
 NET TOTAL 5,012.27 IF PAID IN 30 DAYS

Date 5-14-16 District Oakley Ticket No. 066882  
 Company Suemour Rig Murfin 7  
 Lease Muirhead Farms Well No. 1-12  
 County Decatur State KS  
 Location 12 S 28 Field \_\_\_\_\_  
Dresden 3/4 N E 7 S into

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner

Size \_\_\_\_\_ Type \_\_\_\_\_ Weight \_\_\_\_\_ Collar \_\_\_\_\_

CEMENT DATA:  
 Spacer Type: Water  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG \_\_\_\_\_

LEAD: Pump Time \_\_\_\_\_ hrs. Type 60/40 48gel  
14 Flow-seal Excess \_\_\_\_\_  
 Amt. 255 Sks Yield 1.4 ft<sup>3</sup>/sk Density 14.1 PPG \_\_\_\_\_

TAIL: Pump Time \_\_\_\_\_ hrs. Type \_\_\_\_\_  
 Excess \_\_\_\_\_  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG \_\_\_\_\_  
 WATER: Lead \_\_\_\_\_ gals/sk Tail \_\_\_\_\_ gals/sk Total \_\_\_\_\_ Bbls. \_\_\_\_\_

Pump Trucks Used 431  
 Bulk Equip. 410

Casing Depths: Top \_\_\_\_\_ Bottom \_\_\_\_\_

Drill Pipe: Size 4 1/2 Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 7 7/8 T.D. 4485 ft. P.B. to 2560 ft.

CAPACITY FACTORS:

Casing: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. 0.01422 Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

Float Equip: Manufacturer \_\_\_\_\_  
 Shoe: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Float: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top \_\_\_\_\_ Btrn. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type \_\_\_\_\_ Amt. \_\_\_\_\_ Bbls. Weight \_\_\_\_\_ PPG \_\_\_\_\_  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG \_\_\_\_\_

COMPANY REPRESENTATIVE \_\_\_\_\_

CEMENTER Andrew

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
<u>8:00</u>				<u>5</u>		<u>pump water 2560'</u>
				<u>8</u>		<u>mix cement</u>
				<u>5</u>		<u>pump water</u>
				<u>28</u>		<u>pump mud</u>
				<u>5</u>		<u>pump water 1730'</u>
				<u>16</u>		<u>mix cement</u>
				<u>5</u>		<u>pump water</u>
				<u>14</u>		<u>pump mud</u>
				<u>5</u>		<u>pump water 310'</u>
				<u>8</u>		<u>mix cement</u>
				<u>1.15</u>		<u>pump water</u>
				<u>1.15</u>		<u>mix cement 40'</u>
<u>9:00</u>				<u>2.15</u>		<u>mix cement mouse hole</u>
				<u>5</u>		<u>mix cement Rat hole</u>