



KANSAS CORPORATION COMMISSION 1146277  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

Form Must Be Typed  
Form must be Signed  
All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

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

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

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

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

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

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

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

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

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

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

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

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

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

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

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

Multiple Stage Cementing Collar Used?  Yes  No

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

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

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

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

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

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

Location of fluid disposal if hauled offsite: \_\_\_\_\_

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

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

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

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

**AFFIDAVIT**

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

Submitted Electronically

**KCC Office Use ONLY**

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



1146277

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

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing    Pumping    Gas Lift    Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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<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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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PO Box 93999  
Southlake, TX 76092

Voice: (817) 546-7282  
Fax: (817) 246-3361

# INVOICE

Invoice Number: 136298

Invoice Date: May 17, 2013

Page: 1

**Bill To:**

Werth Exploration Trust  
1308 Schwaller  
Hays, KS 67601

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Werth	54197	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-01	Russell	May 17, 2013	6/16/13

Quantity	Item	Description	Unit Price	Amount
		Worcester M #2		
175.00	MAT	Class A Common	17.90	3,132.50
3.00	MAT	Gel	23.40	70.20
6.00	MAT	Chloride	64.00	384.00
188.51	SER	Cubic Feet	2.48	467.51
499.67	SER	Ton Mileage	2.60	1,299.14
1.00	SER	Surface	1,512.25	1,512.25
58.00	SER	Pump Truck Mileage	7.70	446.60
58.00	SER	Light Vehicle Mileage	4.40	255.20
3.00	SER	Waiting on Location -- No Charge		
3.00	SER	Waiting on Location	440.00	1,320.00
1.00	CEMENTER	Tony Pfannenstiel		
1.00	OPER ASSIST	Nathan Donner		
1.00	OPER ASSIST	Joe Goodson		

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

\$ 2,221.85

ONLY IF PAID ON OR BEFORE  
Jun 11, 2013

Subtotal	8,887.40
Sales Tax	270.80
Total Invoice Amount	9,158.20
Payment/Credit Applied	
<b>TOTAL</b>	<b>9,158.20</b>

# ALLIED OIL & GAS SERVICES, LLC 054197

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
Russell, ks

Worcester M #2

DATE <u>5.17.13</u>	SEC. <u>21</u>	TWP. <u>7</u>	RANGE <u>22</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Worcester</u>	WELL #	LOCATION <u>Bogau, ks</u>			COUNTY <u>Braham</u>	STATE <u>ks</u>	
OLD OR <u>NEW</u> (Circle one)				<u>By 24" 18 4 w to rd 3103n H into</u>			

CONTRACTOR <u>White Knight</u>	OWNER
TYPE OF JOB <u>SURFACE</u>	
HOLE SIZE <u>12 1/4</u> T.D.	CEMENT
CASING SIZE <u>8 5/8</u> DEPTH <u>223.60'</u>	AMOUNT ORDERED <u>175 sk Class A</u>
TUBING SIZE DEPTH	<u>3/4 cc 2% gel</u>
DRILL PIPE DEPTH	
TOOL DEPTH	
PRES. MAX MINIMUM	COMMON <u>175 sk @ 17.90 \$3,132.50</u>
MEAS. LINE SHOE JOINT	POZMIX @
CEMENT LEFT IN CSG.	GEL <u>3 sk @ 23.40 \$70.20</u>
PERFS.	CHLORIDE <u>4 sk @ 44.00 \$176.00</u>
DISPLACEMENT <u>13.28 gal</u>	ASC @
EQUIPMENT	
PUMP TRUCK CEMENTER <u>Ray P</u>	
# <u>409</u> HELPER <u>Nathan D</u>	
BULK TRUCK	
# <u>473</u> DRIVER <u>Joe G</u>	
BULK TRUCK	
# DRIVER	
	HANDLING <u>188.51 1/2 @ 2.48 \$467.51</u>
	MILEAGE <u>499.67 1/4 @ 2.60 \$1,299.14</u>
	TOTAL <u>\$5,353.35</u>

REMARKS:

circulated mud to surface!  
Rem cement @ 175 sk - 26.60 gal  
Displaced cement @ 13.28 gal  
cement circulated to surface!

Worth Exploration

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

SERVICE

DEPTH OF JOB	<u>223.60</u>
PUMP TRUCK CHARGE	<u>\$1,512.25</u>
EXTRA FOOTAGE	@
MILEAGE <u>Acquy 58m</u>	@ <u>7.70 \$446.60</u>
MANIFOLD <u>Ligt 58m</u>	@ <u>4.40 \$255.20</u>
<u>10hr waiting time</u>	@ <u>440.00 \$4,400.00</u>
<u>3hrs waiting - N/C</u>	
<u>Total 3hr x 440.00</u>	
TOTAL	<u>\$2,217.05</u>
	<u>\$3,534.05</u>

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____

TOTAL \_\_\_\_\_

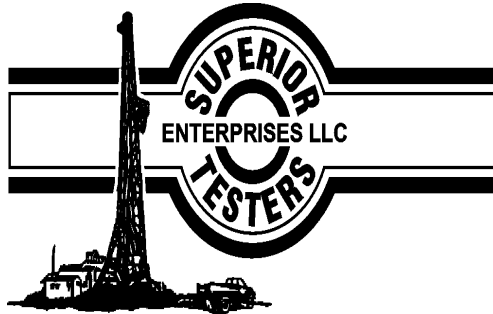
SALES TAX (If Any) 041.79  
\$8,887.4  
TOTAL CHARGES \$7,567.40  
DISCOUNT \$2,221.85 IF PAID IN 30 DAYS

PRINTED NAME John E Becker  
SIGNATURE John Becker

before  
net 6665.55

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.





## DRILL STEM TEST REPORT

Prepared For: **Werth Exploration Trust LLC**

1308 Schwaller Avenue  
Hays, Kansas 67601+2242

ATTN:

**Worcester M#2**

**21/7S/22W/Graham**

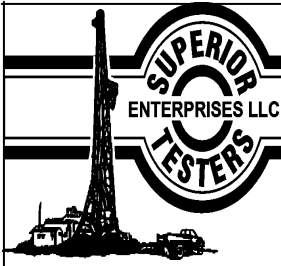
Start Date: 2013.05.21 @ 18:00:00

End Date: 2013.05.22 @ 00:56:30

Job Ticket #: 17495                      DST #: 1

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.05.22 @ 01:14:17



# DRILL STEM TEST REPORT

Werth Exploration Trust LLC

21/7S/22W/Graham

1308 Schwaller Avenue  
Hays, Kansas 67601+2242

**Worcester M#2**

Job Ticket: 17495

**DST#: 1**

ATTN:

Test Start: 2013.05.21 @ 18:00:00

## GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:54:30

Time Test Ended: 00:56:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Hays/118

Interval: **3546.00 ft (KB) To 3573.00 ft (KB) (TVD)**

Reference Elevations: 2264.00 ft (KB)

Total Depth: 3573.00 ft (KB) (TVD)

2259.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 6749 Inside**

Press @ Run Depth: 434.58 psia @ 3569.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.05.21

End Date:

2013.05.22

Last Calib.:

2013.05.22

Start Time: 18:00:00

End Time:

00:56:30

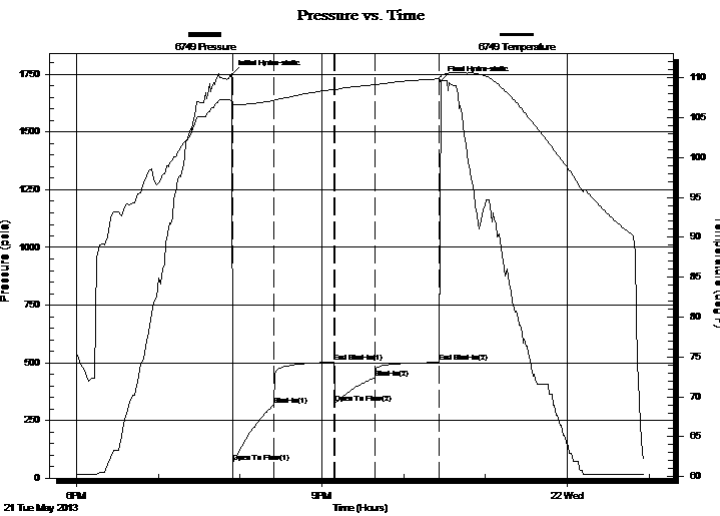
Time On Btm:

2013.05.21 @ 19:54:00

Time Off Btm:

2013.05.21 @ 22:27:00

**TEST COMMENT:** 1ST Open 30 Minutes/Good blow/Blow built to bottom of bucket in 3 minutes 30 seconds  
 1ST Shut In 45 Minutes/No blow back  
 2ND Open 30 Minutes/Fair blow/Blow built to bottom of bucket in 8 minutes  
 2ND Shut In 45 Minutes/No blow back



## PRESSURE SUMMARY

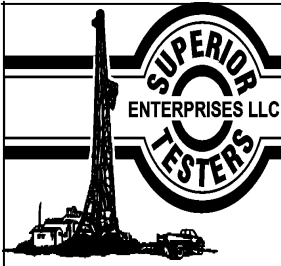
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1749.42	107.17	Initial Hydro-static
1	66.94	106.75	Open To Flow (1)
31	316.64	107.16	Shut-In(1)
75	503.68	108.57	End Shut-In(1)
76	324.09	108.53	Open To Flow (2)
105	434.58	109.16	Shut-In(2)
152	502.16	109.88	End Shut-In(2)
153	1723.27	110.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
868.00	Muddy Water with show of oil	12.18
0.00	Mud 10% Water 90%	0.00
0.00	Recovery Chlorides 60,000 ppm	0.00
0.00	Recov. Resist. .16 @ 65 deg	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

Werth Exploration Trust LLC

21/7S/22W/Graham

1308 Schwaller Avenue  
Hays, Kansas 67601+2242

**Worcester M#2**

Job Ticket: 17495

**DST#: 1**

ATTN:

Test Start: 2013.05.21 @ 18:00:00

## GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:54:30

Time Test Ended: 00:56:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Hays/118

Interval: **3546.00 ft (KB) To 3573.00 ft (KB) (TVD)**

Reference Elevations: 2264.00 ft (KB)

Total Depth: 3573.00 ft (KB) (TVD)

2259.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 6838 Outside**

Press @ Run Depth: 500.67 psia @ 3570.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.05.21

End Date:

2013.05.22

Last Calib.:

2013.05.22

Start Time: 18:00:00

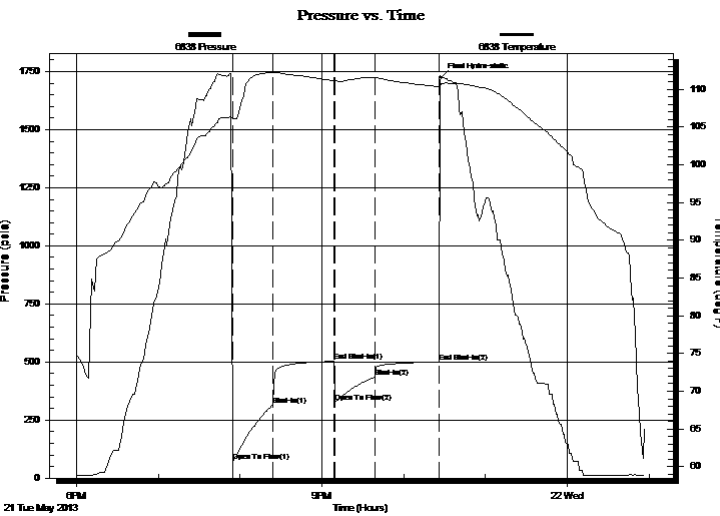
End Time:

00:56:30

Time On Btm:

Time Off Btm: 2013.05.21 @ 22:27:00

**TEST COMMENT:** 1ST Open 30 Minutes/Good blow/Blow built to bottom of bucket in 3 minutes 30 seconds  
 1ST Shut In 45 Minutes/No blow back  
 2ND Open 30 Minutes/Fair blow/Blow built to bottom of bucket in 8 minutes  
 2ND Shut In 45 Minutes/No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	70.40	106.12	Open To Flow (1)
30	315.53	112.20	Shut-In(1)
75	503.62	111.13	End Shut-In(1)
75	325.32	111.20	Open To Flow (2)
105	435.30	111.51	Shut-In(2)
152	500.67	110.34	End Shut-In(2)
153	1724.69	110.66	Final Hydro-static

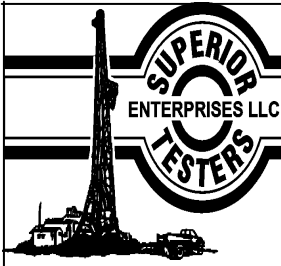
## Recovery

Length (ft)	Description	Volume (bbl)
868.00	Muddy Water with show of oil	12.18
0.00	Mud 10% Water 90%	0.00
0.00	Recovery Chlorides 60,000 ppm	0.00
0.00	Recov. Resist. .16 @ 65 deg	0.00

## Gas Rates

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





# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Werth Exploration Trust LLC

**21/7S/22W/Graham**

1308 Schwaller Avenue  
Hays, Kansas 67601+2242

**Worcester M#2**

Job Ticket: 17495

**DST#: 1**

ATTN:

Test Start: 2013.05.21 @ 18:00:00

## Tool Information

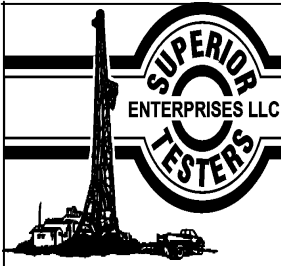
Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 49.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3546.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3531.00	
Hydraulic Tool	5.00			3536.00	
Packer	5.00			3541.00	20.00 Bottom Of Top Packer
Packer	5.00			3546.00	
Anchor	22.00			3568.00	
Recorder	1.00	6749	Inside	3569.00	
Recorder	1.00	6838	Outside	3570.00	
Bullnose	3.00			3573.00	27.00 Bottom Packers & Anchor

**Total Tool Length: 47.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Werth Exploration Trust LLC

**21/7S/22W/Graham**

1308 Schwaller Avenue  
Hays, Kansas 67601+2242

**Worcester M#2**

Job Ticket: 17495

**DST#: 1**

ATTN:

Test Start: 2013.05.21 @ 18:00:00

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 55.00 sec/qt  
Water Loss: 7.09 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 400.00 ppm  
Filter Cake: 1.00 inches

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

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
868.00	Muddy Water with show of oil	12.176
0.00	Mud 10% Water 90%	0.000
0.00	Recovery Chlorides 60,000 ppm	0.000
0.00	Recov. Resist. .16 @ 65 deg	0.000

Total Length: 868.00 ft      Total Volume: 12.176 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

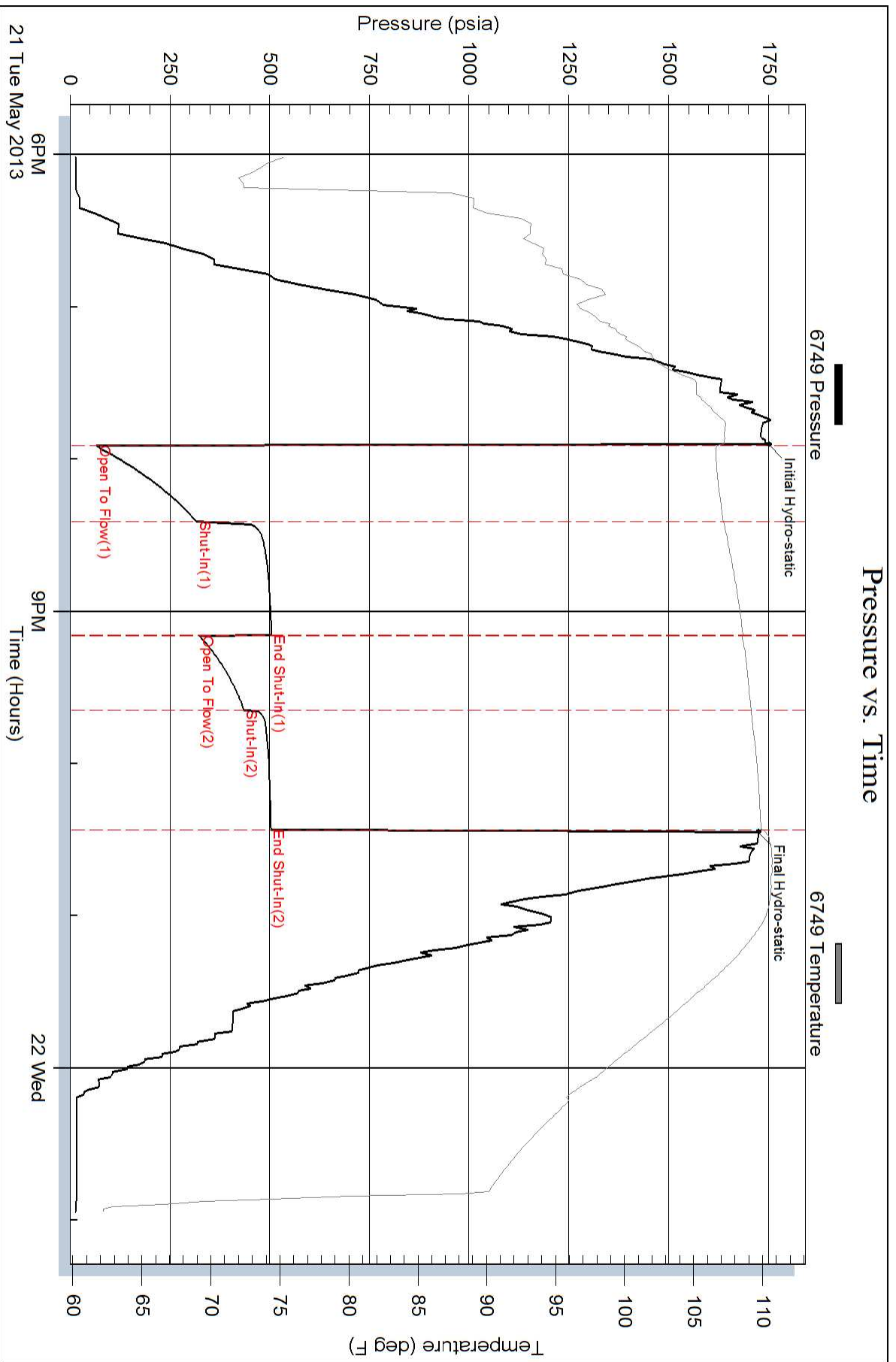
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



### Pressure vs. Time

