



KANSAS CORPORATION COMMISSION 1151917
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: _____



1151917

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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> 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: <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> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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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> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	R. P. Nixon Operations, Inc
Well Name	Keough 7
Doc ID	1151917

All Electric Logs Run

Sonic
Microresistivity
Dual Induction
Dual Porosity
CPI

Form	ACO1 - Well Completion
Operator	R. P. Nixon Operations, Inc
Well Name	Keough 7
Doc ID	1151917

Tops

Name	Top	Datum
Anhydrite	1428'	+764
Anhydrite Base	1465'	+727
Topeka	3224'	-1032
Heebner	3507'	-1315
Toronto	3530'	-1338
Lansing	3548'	-1356
Base KC	3804'	-1612
Cherokee Sand	3923'	-1731
Arbuckle	3931'	-1739

QUALITY C'WELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6726

Date	4-1-13	Sec.	15	Twp.	16	Range	20	County	Rush	State	KS	On Location		Finish	11:30 PM
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Lease **Keough** Location **Leibenthal 15 13W to 130 1/2 N**

Well No. **7** Owner **E INTO Leibenthal 15 13W to 130 1/2 N**

Contractor ~~State~~ **Shields** To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish **1/2 N** cementer and helper to assist owner or contractor to do work as listed.

Type Job **Surface** Charge To **R P NIXON**

Hole Size **12 1/4** T.D. **214** Street **R P NIXON**

Csg. **4 5/8** Depth City State

Tbg. Size Depth The above was done to satisfaction and supervision of owner agent or contractor.

Tool Depth Cement Left in Csg. **20 FT** Shoe Joint **20 AT** Cement Amount Ordered **150 39500**

Meas Line Displace **12.5 BBL** **2% gel** Common **1/50**

EQUIPMENT			
Pumptrk	No.	Cementer	
		Helper	
Bulktrk	No.	Driver	
		Driver	
Bulktrk	No.	Driver	
		Driver	

Job Services & Remarks: Halls

Remarks: Salt

Rat Hole Flowseal

Mouse Hole Kol-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

Cement did Handling **158**

Circulate Mileage

FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge **Surface** Mileage **31**

Signature  Tax Discount Total Charge

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6685

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-8-13	15	16	20	Rush	KS		6:00 AM

Location Liebenthal 13W to 1300 1/2 N E into

Lease Keough Well No. 7 Owner Liebenthal, KS

Contractor Shields
Type Job Production String
To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 7/8 T.D. 4000 Charge To R.P. Nixon

Csg. 5/2 Depth 3993.62 Street

Tbg. Size Depth City State

Tool Port Collar Depth 1445 The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 20.3 Shoe Joint 20.3 Cement Amount Ordered 175 cu m 10% salt 5% Gilsonite

Meas Line Displace 94 1/2 BC 500 gal mud clear

EQUIPMENT

Pumptrk	No.	Cement	Common
9		<u>Coig</u>	<u>175</u>
		Helper	Poz. Mix
Bulktrk	No.	Driver	Gel.
		<u>Coig</u>	
Bulktrk	No.	Driver	Calcium
1		<u>Clayton</u>	

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole <u>30SK</u>	Salt <u>15</u>
Mouse Hole <u>15SK</u>	Flowseal
Centralizers	Kol-Seal <u>875#</u>
Baskets	Mud CLR 48 <u>500 gal</u>
D/V or Port Collar	CFL-117 or CD110 CAF 38
<u>5/2 set @ 3993.62 - In @ 3973</u>	Sand
<u>Est. Circulation. Pump 500 gal mud clear</u>	Handling <u>198</u>
<u>10B Space Cement Katherley Mousehole.</u>	Mileage
<u>Cement 5/2 with 130SK Clear</u>	
<u>lines Displace <u>Prop. Plug.</u></u>	
<u>Plug Tamper @ 1500ft.</u>	

FLOAT EQUIPMENT

Guide Shoe	<u>1 5/2</u>
Centralizer	<u>9 Turbolizers</u>
Baskets	<u>2</u>
AFU Inserts	
Float Shoe	<u>Port Collar</u>
Latch Down	<u>1</u>

Pumptrk Charge prod Long String
Mileage 31

Tax
Discount
Total Charge

X Signature Duane Oetleberg

GEOLOGICAL REPORT

Dan A. Nixon, Petroleum Geologist - Licensed & Certified

Well Name: #7 Keough

Location: 2270' FSL, 1290' FWL
Section 15, T16S-R20W
Rush County, Kansas

Operator: R.P. Nixon Oper., Inc.
207 West 12th Street
Hays, KS 67601-3898

Contractor: Shields Oil Producers
P.O. Box 709
Russell, Kansas 67665

Elevation: Central Kansas Surveying and Mapping
2344 Washington
Great Bend, Kansas 67530
Rotary Bushing: 2192'
Ground Level: 2187'

Samples: Ten foot samples from 3170'
to 3490' and five foot samples
from 3490' to 3900'.

Time Log: One foot intervals from 3170'
to 4000' RTD. A copy of the
time log is included in this report.

Surface Casing: 8 5/8" @ 211' w/150 sacks

Production Casing: 5 1/2" set at 3995'

Port Collar or DV Tool: Port Collar set at 1445'

Spud Date: 4/1/13

Completion Date: 4/7/13

API #: 15-165-22016-00-00

FORMATION TOPS:	SAMPLE DEPTH	LOG DEPTH	MINUS DATUM
Anhydrite (driller's)	1429'	1428'	+764
Anhydrite Base (driller's)	1466'	1465'	+727
Topeka	3220'	3224'	-1032
Heebner Shale	3508'	3507'	-1315
Toronto Lime	3532	3530'	-1338
Lansing	3551'	3548'	-1356
Base of the Kansas City	3807'	3804'	-1612
Pawnee	3873'	3870'	-1678
Cherokee Sand	3925'	3923'	-1731
Arbuckle	3935'	3931'	-1739
Total Depth	4000'	3998'	-1808

SAMPLE ANALYSIS OF ZONES OF INTEREST: (CORRECTED TO THE LOG)

Lansing	3574'-3583'	Fine crystalline, white limestone, spotty to light saturated stain, fair vuggy porosity. Slight show of free odor and fair odor in the wet samples. Calculated good on the CPI (Computer Processed Interpretation) log. Test this zone since well is quite high compared to surrounding (Cherokee Sand and Arbuckle) production. (To date, this zone has not produced in the immediate area)
	3538'-48'	The CPI log indicated this "G" zone favorable for testing. Representative samples of this zone were not observed in the drill cuttings. Regardless, not worthy of testing.
	3363'-3650'	Grey, oolitic, barren lime, Good oolitic porosity. No show or odor in the wet samples. Not worthy of testing.
	3792-99'	Oolitic limestone as above. Not worthy of testing.
Cherokee Sand	3923'-28'	Frosty, poorly-sorted, rounded sand, fair-good intergranular porosity. Saturated stain with a good show of free oil and odor in the wet samples. Worthy of testing. Open on Drill Stem Test #1.

Drill Stem Test #1 Results: Interval: 3885'-3932' (Cherokee Sand)
 Recovery: 487' total fluid as follows:
 5' clean oil,
 226' of oil & water cut mud
 (5% oil, 45% water, 50% mud)
 256' of oil & mud cut water
 (2% oil, 30% mud, 68% water)

DRILLING TIME LOG

3150'-3175'					3-2-2-3-2
3180'-3200'	4-3-3-3-2	3-2-2-2-2	2-2-3-2-2	2-1-2-1-2	2-2-2-1-1
3200'-3225'	1-1-1-1-1	1-1-1-1-1	1-1-1-1-1	1-1-1-1-1	3-2-1-1-2
3225'-3250'	2-2-3-2-2	3-3-2-3-2	2-3-3-2-2	3-2-3-2-1	1-3-3-2-2
3250'-3275'	2-1-1-2-1	1-2-2-1-1	3-2-2-2-2	1-1-1-1/2-1/2	1/2-1/2-1/2-1/2-1
3275'-3300'	1-1-1-2-2	2-2-2-2-2	2-2-1-2-1	2-1-2-2-2	2-1-2-1-2
3300'-3325'	2-2-1-1-1	2-1-1-1-1	1-2-2-2-3	2-2-1-2-1	2-1-1-1-1
3325'-3350'	2-2-2-2-2	2-1-1-1-1	2-1-1-1-1	1-1-1-1-1	1-1-1-1-1
3350'-3375'	1-1-2-2-1	1-2-1-2-2	1-1-2-2-2	2-2-1-1-3	2-3-2-2-2
3375'-3400'	2-2-2-1-1	1/2-1-2-2-2	2-2-1-2-2	2-1-1-1-2	2-3-1-1-2
3400'-3425'	1-2-2-1-2	2-2-2-2-2	2-2-2-2-3	2-1-3-2-2	2-2-2-2-2
3425'-3450'	2-1-1-1-1	1-1-1-1-1	1-2-2-2-2	2-1-1-1-1	1-1-1-2-1
3450'-3475'	2-2-1/2-1/2-1	1/2-1-1-1/2-1	1/2-1-1-1-1	1-1-1-1-1	1-1-1-1-1/2
3475'-3500'	1/2-1/2-1-1-1	1-1-1-1-1	1-1/2-1/2-1-1	1-1-1-1-1	2-2-3-2-2
3500'-3525'	2-2-2-2-2	3-3-3-2-2	1-2-3-3-3	3-2-3-3-3	3-4-2-3-3
3525'-3550'	3-3-3-3-3	3-3-4-4-3	4-3-3-3-4	4-3-3-1-2	2-3-3-2-3
3550'-3575'	3-4-3-3-4	4-4-2-3-3	3-4-4-4-4	3-3-3-3-3	3-3-3-3-3
3575'-3600'	3-2-2-2-1	1-3-3-2-3	2-2-4-3-3	3-4-3-3-3	3-4-3-3-3
3600'-3625'	3-3-3-3-4	3-3-4-3-4	4-3-3-2-4	3-4-4-3-3	2-3-4-4-3
3625'-3650'	3-4-3-2-2	2-1-2-3-3	4-3-4-2-3	3-4-3-3-2	2-2-3-2-2
3650'-3675'	3-4-4-3-3	3-3-3-3-3	3-3-4-4-3	4-4-3-4-4	3-4-3-4-3
3675'-3700'	4-3-3-4-3	4-3-2-2-3	3-3-3-3-3	4-4-3-3-3	3-4-3-3-3
3700'-3725'	3-3-2-3-2	3-3-3-3-3	3-3-3-4-2	3-3-2-2-3	2-3-3-3-3
3725'-3750'	3-4-4-4-4	3-3-3-4-3	4-5-4-4-3	1-1-2-2-2	1-1-1/2-2-2
3750'-3775'	2-3-4-3-3	3-3-3-3-3	4-4-4-4-3	3-3-3-2-2	3-3-4-3-3
3775'-3800'	3-3-3-3-3	3-3-3-3-3	3-3-3-4-5	6-4-4-2-2	2-1-2-2-2

DRILLING TIME LOG (cont.)

3800'-3825'	2-2-2-3-3	3-3-4-3-4	5-3-2-2-3	3-1-1-1-3	4-4-4-4-5
3825'-3850'	5-4-4-2-4	3-3-3-2-2	2-1-1-3-2	3-3-4-3-4	3-5-4-4-4
3850'-3875'	3-4-3-3-3	2-4-3-2-3	2-3-3-3-3	2-3-2-2-1	1-2-3-3-3
3875'-3900'	3-3-3-3-2	3-2-3-3-3	3-3-3-3-4	4-3-3-3-3	4-3-2-3-3
3900'-3925'	3-2-3-3-2	2-3-2-2-3	3-3-3-3-3	4-4-4-4-4	3-3-3-4-3
3925'-3950'	2-1-0-1-1	2-2-3-3-3	2-2-1-3-2	2-1-2-3-2	2-2-3-3-2
3950'-3975'	2-2-2-2-2	2-2-2-2-2	3-1-1-2-2	1-2-2-2-2	2-1-2-2-1
3975'-4000'	1-1-1-2-2	1-2-2-2-2	1-2-2-2-3	2-2-1-1-1	2-3-2-2-2

4000' RTD

CFS @ 3925' CFS @ 4000'



DRILL STEM TEST REPORT

Prepared For: **R. P. Nixon Operations, Inc.**

207 W 12th St
Hays KS 67601-3898

ATTN: Dan Nixon

Keough #7

15-16s-20w Rush

Start Date: 2013.04.07 @ 02:28:00

End Date: 2013.04.07 @ 08:43:00

Job Ticket #: 52074 DST #: 1

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

Printed: 2013.04.11 @ 16:47:13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

R. P. Nixon Operations, Inc.

15-16s-20w Rush

207 W 12th St
Hays KS 67601-3898

Keough #7

Job Ticket: 52074

DST#: 1

ATTN: Dan Nixon

Test Start: 2013.04.07 @ 02:28:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:28:00

Time Test Ended: 08:43:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jim Svaty

Unit No: 41

Interval: **3890.00 ft (KB) To 3932.00 ft (KB) (TVD)**

Reference Elevations: 2197.00 ft (KB)

Total Depth: 3932.00 ft (KB) (TVD)

2192.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6752

Inside

Press @ Run Depth: 232.58 psig @ 3896.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.07

End Date:

2013.04.07

Last Calib.:

2013.04.07

Start Time: 02:28:01

End Time:

08:42:50

Time On Btm:

2013.04.07 @ 04:27:50

Time Off Btm:

2013.04.07 @ 06:45:30

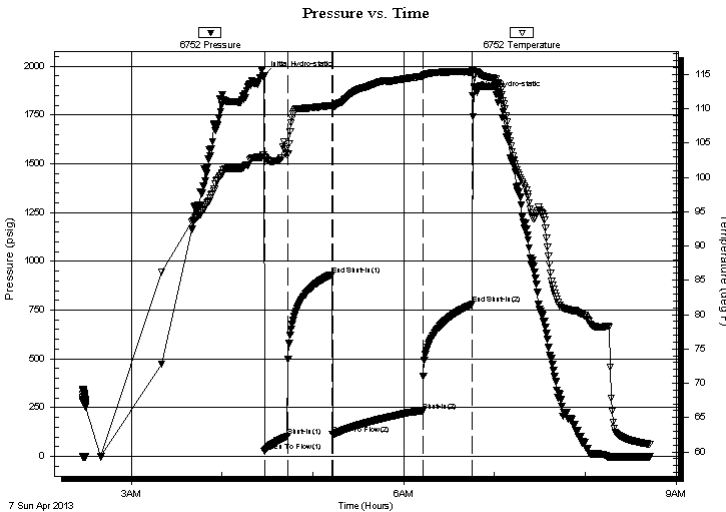
TEST COMMENT: 15-IFP- BOB in 14 1/2 min.

30-ISIP- No Blow

60-FFP- BOB in 26 min.

30-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1951.82	103.29	Initial Hydro-static
1	26.44	102.79	Open To Flow (1)
16	102.00	103.30	Shut-In(1)
45	931.88	110.47	End Shut-In(1)
46	113.05	110.31	Open To Flow (2)
105	232.58	114.75	Shut-In(2)
138	779.86	115.37	End Shut-In(2)
138	1850.34	115.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
256.00	OMCW 2%o 30% m 68% w	1.88
226.00	OWCM 5%o 45% w 50% m	1.76
5.00	CO 100%o	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

R. P. Nixon Operations, Inc.

15-16s-20w Rush

207 W 12th St
Hays KS 67601-3898

Keough #7

Job Ticket: 52074

DST#: 1

ATTN: Dan Nixon

Test Start: 2013.04.07 @ 02:28:00

Tool Information

Drill Pipe:	Length: 3406.00 ft	Diameter: 3.80 inches	Volume: 47.78 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 467.00 ft	Diameter: 2.75 inches	Volume: 3.43 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			Total Volume: 51.21 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3890.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	69.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3868.00	
Hydraulic tool	5.00			3873.00	
Jars	5.00			3878.00	
Safety Joint	2.00			3880.00	
Packer	5.00			3885.00	27.00 Bottom Of Top Packer
Packer	5.00			3890.00	
Stubb	1.00			3891.00	
Perforations	5.00			3896.00	
Recorder	0.00	6752	Inside	3896.00	
Recorder	0.00	8322	Outside	3896.00	
Change Over Sub	1.00			3897.00	
Blank Spacing	31.00			3928.00	
Change Over Sub	1.00			3929.00	
Bullnose	3.00			3932.00	42.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

R. P. Nixon Operations, Inc.

15-16s-20w Rush

207 W 12th St
Hays KS 67601-3898

Keough #7

Job Ticket: 52074

DST#: 1

ATTN: Dan Nixon

Test Start: 2013.04.07 @ 02:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: 43.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6800.00 ppm

Filter Cake: 0.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
256.00	OMCW 2%o 30%m 68%w	1.881
226.00	OWCM 5%o 45%w 50%m	1.761
5.00	CO 100%o	0.070

Total Length: 487.00 ft

Total Volume: 3.712 bbl

Num Fluid Samples: 0

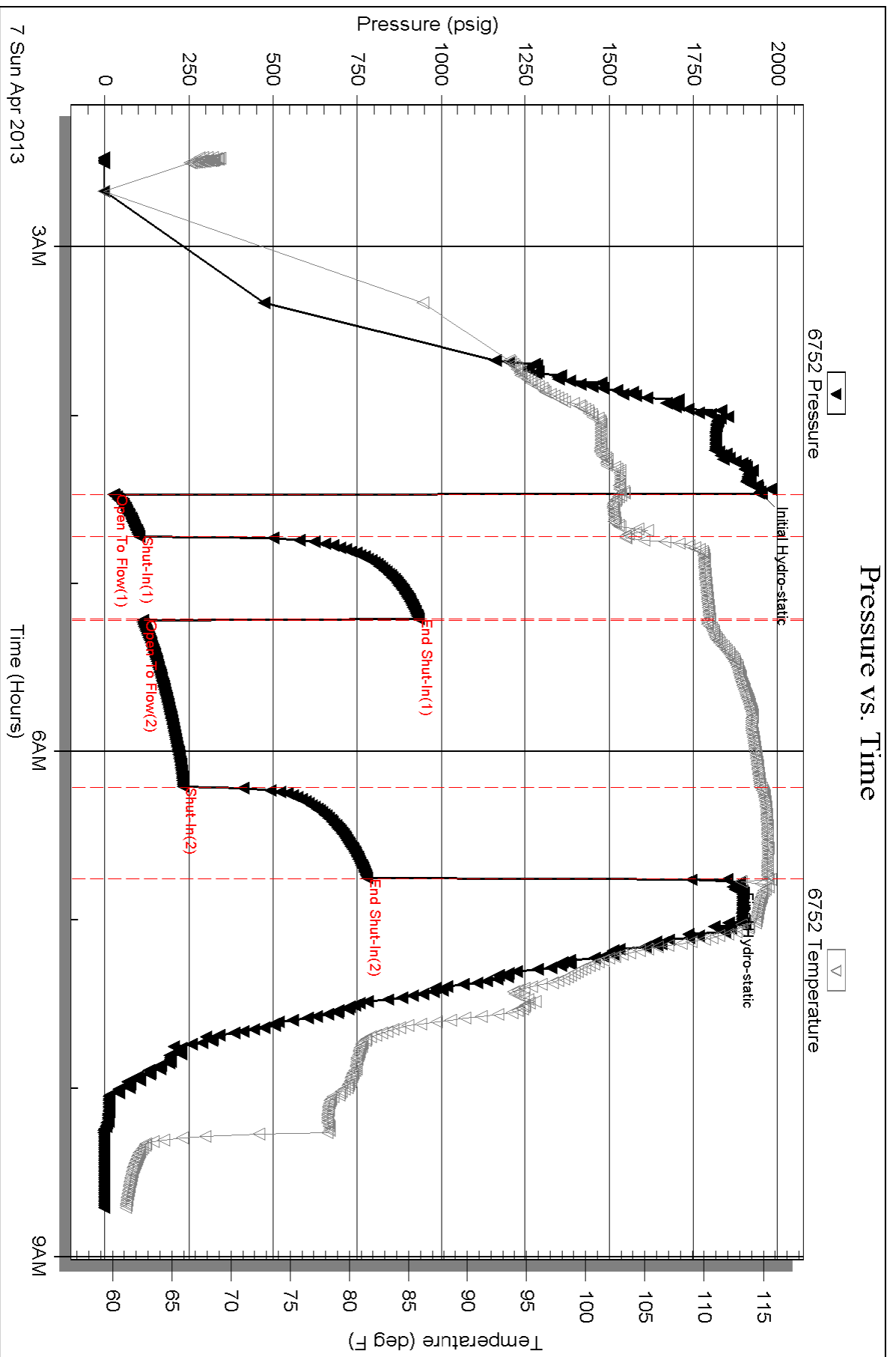
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .270 @ 60

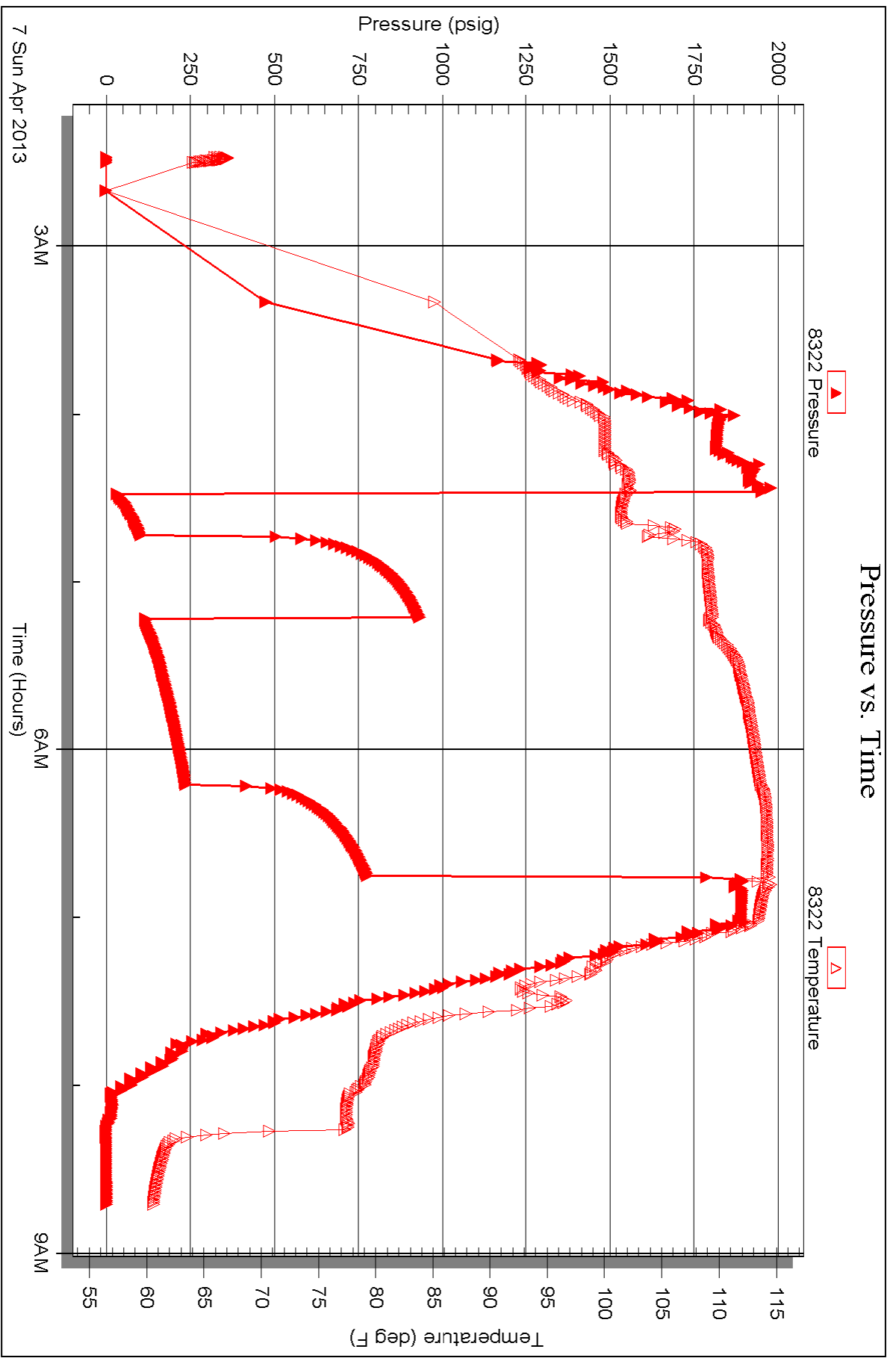


Serial #: 8322

Outside R. P. Nixon Operations, Inc.

Keough #7

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52074

Well Name & No. Keough #7 Test No. 1 Date 4-6-13
 Company RP. Nixon Operations, Inc. Elevation 2197 KB 2192 GL
 Address 207 W 12th St Hays KS. 67601-3898
 Co. Rep / Geo. RAN NIXON Rig Shields
 Location: Sec. 15 Twp. 16^s Rge. 20^w Co. Rush State KS

Interval Tested 3890 - 3932 Zone Tested Cherokee Sand.
 Anchor Length 42 Drill Pipe Run 3406 Mud Wt. 9.3
 Top Packer Depth 3885 Drill Collars Run 0 Vis 43
 Bottom Packer Depth 3890 Wt. Pipe Run 467 WL 10.4
 Total Depth 3932 Chlorides 6800 ppm System LCM 0

Blow Description IFP - BOB in 14 1/2 min.
ISIP - No Blow
FFP - BOB in 26 min
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>256</u>	<u>0mcw</u>	<u>2</u>	<u>68</u>	<u>30</u>	
<u>226</u>	<u>0WCM</u>	<u>5</u>	<u>45</u>	<u>50</u>	
<u>5</u>	<u>CO</u>	<u>100</u>			

Rec Total 481 BHT 115 Gravity 41 API RW .270 @ 60 °F Chlorides 30000 ppm

(A) Initial Hydrostatic 1951 Test 1150 T-On Location 23:40
 (B) First Initial Flow 26 Jars 250 T-Started 02:28
 (C) First Final Flow 102 Safety Joint 75 T-Open 04:28
 (D) Initial Shut-In 931 Circ Sub _____ T-Pulled 06:43
 (E) Second Initial Flow 113 Hourly Standby _____ T-Out 08:43

(F) Second Final Flow 232 Mileage 64 RT X 2 198.40
 (G) Final Shut-In 779 Sampler _____
 (H) Final Hydrostatic 1850 Straddle _____

Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____

Initial Open 15 Day Standby _____
 Initial Shut-In 30 Accessibility _____
 Final Flow 60 Sub Total 0
 Final Shut-In 30 Total 1673.40

Sub Total 1673.40 MP/DST Disc't _____

Approved By _____ Our Representative

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.