



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1179157
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: _____

1179157

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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

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

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

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> _____	PRODUCTION INTERVAL: _____ _____
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PO Box 93999
Southlake, TX 76092

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

INVOICE

Invoice Number: 140322
Invoice Date: Dec 13, 2013
Page: 1

Bill To:
K & B Norton Oil & Inv. LLC 1209 W. Park Grove Dr. Manhattan, KS 66503-2469

Customer ID	Field Ticket #	Payment Terms	
Norton	61082	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-01	Great Bend	Dec 13, 2013	1/12/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Bender #3		
275.00	CEMENT MATERIALS	Class A Common	17.90	4,922.50
5.00	CEMENT MATERIALS	Gel	23.40	117.00
775.00	CEMENT MATERIALS	Chloride	0.80	620.00
297.08	CEMENT SERVICE	Cubic Feet Charge	2.48	736.76
230.68	CEMENT SERVICE	Ton Mileage Charge	2.60	599.77
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
17.00	CEMENT SERVICE	Pump Truck Mileage	7.70	130.90
17.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	74.80
1.00	CEMENT SUPERVISOR	Joshua Isaac		
1.00	OPERATOR ASSISTANT	Andy Fimple		
1.00	EQUIPMENT OPERATOR	Daniel Casper		

Subtotal	8,713.98
Sales Tax	461.25
Total Invoice Amount	9,175.23
Payment/Credit Applied	
TOTAL	9,175.23

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

\$ 1,742.79

ONLY IF PAID ON OR BEFORE
Jan 7, 2014

ALLIED OIL & GAS SERVICES, LLC 061082

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

Great Bend

DATE <u>12-13-13</u>	SEC <u>21</u>	TWP <u>15</u>	RANGE <u>14</u>	CALLED OUT	ON LOCATION	JOB START <u>2:30pm</u>	JOB FINISH <u>5pm</u>
LEASE <u>Becker</u>		WELL # <u>3</u>		LOCATION <u>N 2 miles Boston Co line camp</u>		COUNTY <u>Russell</u>	STATE <u>KY</u>
OLD OR <u>NEW</u> (Circle one)				<u>to Russell - 1/2 W 1/2 N Winto</u>			

CONTRACTOR Shields #1

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D.

CASING SIZE 3 1/2 DEPTH 413.57

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15 Ft

PERFS.

DISPLACEMENT 25.38 bbl fresh water

OWNER

CEMENT AMOUNT ORDERED 275 sks Class A
3 bbl 2 1/2 gal

COMMON	<u>275</u>	@ <u>17.90</u>	<u>4,922.50</u>
POZMIX		@	
GEL	<u>5</u>	@ <u>23.40</u>	<u>117.00</u>
CHLORIDE	<u>775</u>	@ <u>.80</u>	<u>620.00</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>297.08</u>	@ <u>2.48</u>	<u>736.72</u>
MILEAGE	<u>13.57 x 17 x</u>	@ <u>2.60</u>	<u>599.79</u>
TOTAL			<u>6,976.01</u>

EQUIPMENT

PUMP TRUCK CEMENTER Josh Coak

366 HELPER Andy Forkel

BULK TRUCK

871-112 DRIVER Don Casper

BULK TRUCK

DRIVER

REMARKS:

On location - Rig up - had softening meeting
Run 8 1/2 casing, break circulation w/ big mud
run pump 5 bbl fresh water
mix 275 sks class A 3 bbl 2 1/2 gal
Displace 25.38 bbl fresh water
Shut in
Cement did circulate
big down

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE	<u>1512.25</u>		
EXTRA FOOTAGE		@	
MILEAGE <u>Hum 17</u>	@ <u>7.70</u>		<u>130.90</u>
MANIFOLD		@	
<u>Hum 17</u>	@ <u>4.40</u>		<u>74.80</u>
		@	

TOTAL 1,717.95

CHARGE TO: K&B Norton Oil

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

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

TOTAL _____

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME X George Becker

SIGNATURE X George Becker

Thank you

SALES TAX (If Any) _____

TOTAL CHARGES 8,713.99

DISCOUNT 1,742.79 IF PAID IN 30 DAYS

6,971.19



PO Box 93999
Southlake, TX 76092

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

INVOICE

Invoice Number: 140413
Invoice Date: Dec 18, 2013
Page: 1

Bill To:
K & B Norton Oil & Inv. LLC 1209 W. Park Grove Dr. Manhattan, KS 66503-2469

Customer ID	Field Ticket #	Payment Terms	
Norton	54951	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-03	Russell	Dec 18, 2013	1/17/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Becker #3		
138.00	CEMENT MATERIALS	Class A Common	17.90	2,470.20
92.00	CEMENT MATERIALS	Pozmix	9.35	860.20
7.91	CEMENT MATERIALS	Gel	23.40	185.09
50.00	CEMENT MATERIALS	Flo Seal	2.97	148.50
246.52	CEMENT SERVICE	Cubic Feet Charge	2.48	611.37
113.42	CEMENT SERVICE	Ton Mileage Charge	2.60	294.89
1.00	CEMENT SERVICE	Plug to Abandon	2,600.47	2,600.47
11.00	CEMENT SERVICE	Pump Truck Mileage	7.70	84.70
11.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	48.40
1.00	CEMENT SUPERVISOR	Robert Yakubovich		
1.00	CEMENT SUPERVISOR	Glenn Ginther		
1.00	OPERATOR ASSISTANT	Joe Goodson		

Subtotal	7,303.82
Sales Tax	595.26
Total Invoice Amount	7,899.08
Payment/Credit Applied	
TOTAL	7,899.08

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

\$ 1,825.95

ONLY IF PAID ON OR BEFORE
Jan 12, 2014

ALLIED OIL & GAS SERVICES, LLC 054951

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Russell KS

DATE <u>12-18-13</u>	SEC. <u>21</u>	TWP. <u>15</u>	RANGE <u>14</u>	CALLED OUT	ON LOCATION	JOB START <u>11:30 am</u>	JOB FINISH <u>12:00 pm</u>
LEASE <u>Becker</u>	WELL# <u>3</u>	LOCATION <u>Russell KS 9S 1/2W 1/2</u>			COUNTY <u>Russell</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)		<u>N Winto</u>					

CONTRACTOR Shields
 TYPE OF JOB PTA
 HOLE SIZE 7 7/8 T.D. 3346
 CASING SIZE 8 5/8 DEPTH 413
 TUBING SIZE DEPTH
 DRILL PIPE 4 1/2 16.6 DEPTH 3311
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG.
 PERFS.
 DISPLACEMENT

OWNER
 CEMENT AMOUNT ORDERED 230 60/40 490 gcl 1/4 7/10

COMMON	<u>138</u>	@	<u>17.90</u>	<u>2470.20</u>
POZMIX	<u>92</u>	@	<u>9.35</u>	<u>860.20</u>
GEL	<u>7.91</u>	@	<u>23.40</u>	<u>185.07</u>
CHLORIDE		@		
ASC		@		
<u>5/16 50# 2 sk</u>		@	<u>2.97</u>	<u>148.50</u>
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>246.52</u>	@	<u>2.48</u>	<u>611.36</u>
MILEAGE	<u>113.4155</u>	@	<u>2.60</u>	<u>294.88</u>
				TOTAL <u>4570.24</u>

EQUIPMENT

PUMP TRUCK CEMENTER Robert V
 # 417 HELPER Glen G
 BULK TRUCK
 # 473 DRIVER Joe G
 BULK TRUCK
 # DRIVER

REMARKS:

p1 50sk @ 3311
p2 25sk @ 910
p3 100sk @ 418
p4 10sk @ 40
30sk in Rat
15sk in Mouse

SERVICE

DEPTH OF JOB	<u>3311</u>		
PUMP TRUCK CHARGE	<u>2600.47</u>		
EXTRA FOOTAGE		@	
MILEAGE	<u>11 HVMZ</u>	@	<u>7.70 84.70</u>
MANIFOLD		@	
<u>11 LVMI</u>		@	<u>4.40 48.40</u>
		@	

CHARGE TO: KB Norton Oil
 STREET _____
 CITY _____ STATE _____ ZIP _____

TOTAL 2733.57

PLUG & FLOAT EQUIPMENT

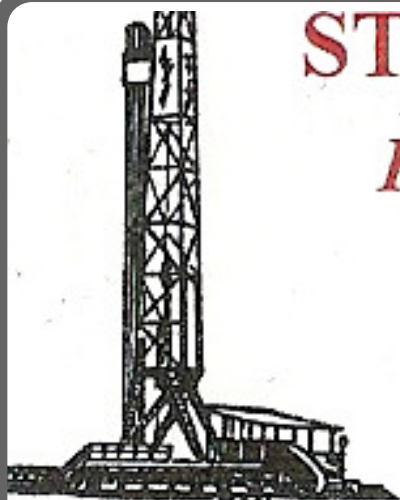
	@	
	@	
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	@	
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TOTAL _____

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.

SALES TAX (If Any) _____
 TOTAL CHARGES 7303.81
 DISCOUNT 1825.95 IF PAID IN 30 DAYS
net \$ 5477.86

PRINTED NAME George Bealor
 SIGNATURE George Bealor



STEVEN P. MURPHY, P.G.

Petroleum Geologist (KS #228)

Cell 620.639.3030

Fax 785.387.2400

RR#1, Box 69

Otis, Kansas 67565

geomurphy@gbta.net

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Bender #3
 Location: Russell County
 License Number: API #15-167-23921-00-00
 Spud Date: 12/12/13
 Surface Coordinates: 2160' FSL & 330' FEL (Approx S/2 NE NE SE)
 Section 21-T15S-R14W
 Bottom Hole: Same as above
 Coordinates: (vertical well with minimal deviation)
 Ground Elevation (ft): 1887' K.B. Elevation (ft): 1892'
 Logged Interval (ft): 2750' To: TD Total Depth (ft): 3346'
 Formation: Topeka through Arbuckle
 Type of Drilling Fluid: Chemical (Mudco - Mud Engineer Gary Schmidtberger)

Region: Kansas

Drilling Completed: 12/18/13

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: K&B Norton Oil & Investments, LLC
 Address: PO BOX 860891
 Shawnee, KS 66286-0891

GEOLOGIST

Name: Steven P. Murphy, P.G.
 Company: Consulting Petroleum Geologist (KS #228)
 Address: 3365 CR 390
 Otis, KS 767565

LogTops (Datum)

No logs were run on this well, the following are sample tops:

Topeka - 2783 (-911)
 Heebner - 3018 (-1146)
 Toronto - 3036 (-1164)
 Lansing - 3081 (-1209)
 Arbuckle - 3331 (-1459)

Rig Total Depth - 3346'

DSTs

DSTs performed by Trilobite Testing (Hays shop):

DST #1 3306-3334 (Arbuckle)

30:30:30:30
 IF: 1/8" blow, NR
 FF: Wk surf blow, NR
 Recovery: 5' Mud
 IHP: 1640 FHP: 1601
 IFP: 15-16 ISIP: 31
 FFP: 17-17 FSIP: 24
 BHT - 90 F

DST #2 3310-3346 (Arbuckle)

30:30:30:30
 IF: BOB 9 min, NR
 FF: BOB 12 min, NR
 Recovery: 1' Free oil,
 120' VSOWCM (2%O,10%W, 78%M),
 120' VSOMCW (2%O, 30%W, 48%M),
 346' MCW (80%W, 20%M)
 IHP: 1643 FHP: 1613
 IFP: 23-196 ISIP: 1112
 FFP: 201-290 FSIP: 1112
 BHT - 102 F
 Chlorides - 40,000 ppm

COMMENTS

Based on the structural position and poor results of DSTs, the well was plugged at a RTD of 3346'. No log was run.

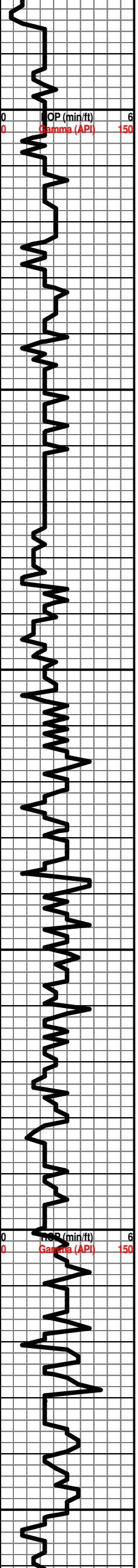
ROCK TYPES

- | | | | |
|-------|-------|-------|--------|
| Anhy | Coal | Lmst | Shcol |
| Bent | Congl | Meta | Shgy |
| Brec | Dol | Mrlst | Slstst |
| Cht | Gyp | Salt | Ss |
| Clyst | Igne | Shale | Till |

OTHER SYMBOLS

- | | | | |
|-----------------|------|-----------------|--------------|
| OIL SHOW | Dead | INTERVAL | EVENT |
| Even | Gas | Core | Conn |
| Spotted | | Dst | Rft |
| Ques | | | Sidewall |

Curve Track 1 ROP (min/ft) ——— Gamma (API) - - - -		Depth	Lithology	Oil Shows	Geological Descriptions	REMARKS
0	0	0				Shields Drilling Co Rig #1 MIRU 12/12/13
6	150	2700			THE FOLLOWING ARE SAMPLE DESCRIPTIONS LAGGED TO DEPTH FOR LOG TOPS PLEASE REFER TO HEADER SECTION ABOVE:	THE FOLLOWING ARE SAMPLE TOPS - FOR LOG TOPS PLEASE REFER TO HEADER SECTION ABOVE:
		2750				8-5/8" @ 410' w/275 sx
					SH: gry	



TOPEKA 2783 (-911)

LS: crm-gry, fxlIn, foss, chalky, NS

LS: as above

LS: crm-gry, vfxIn, foss, chalky, NS

LS: as above

LS: tan-gry, vfxIn, dense, foss, NS

LS: as above

LS: gry, vfxIn, dense, foss, NS

LS: as abvoe

SH: gry-blk-grn

LS: crm-tan, vfxIn, dense, foss, sl chalky, NS

LS: as above

LS: wht-tan-gry, vfxIn, dense, foss, chalky, NS

LS: as above w/abund gr shale

SH: blk, gry

Δ LS: wht-tan-brn, fxlIn, sl chalky, dense, rare pr ppt por, nsfo, tr dead stn, no odor

LS: crm-gry, fxlIn, foss, dense, sl chalky, NS

LS: crm-tan, vfxIn, foss, dense, chalky, NS

LS: as above

LS: as above

LS: crm-gry, vfxIn, dense, sl foss, NS

LS: as above

HEEBNER 3018 (-1146)

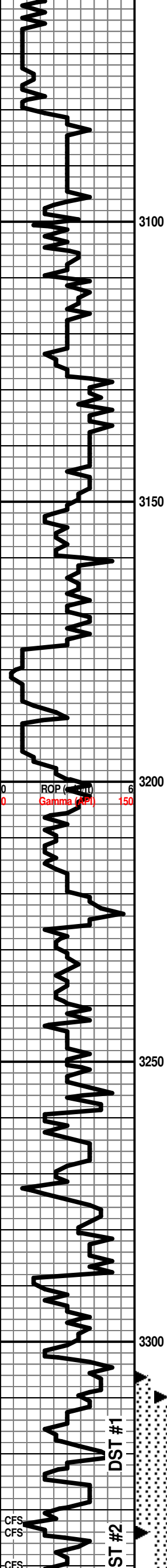
SH: blik, carb

SH: gry-grn-brn

TORONTO 3036 (-1164)

LS: crm-tan, vfxIn, dense, NS

SH: dk gry-brn-grn-red



SH: as above

LANSING 3081 (-1209)

LS: crm-tan, vfxln, dense, foss, sl chalky, NS

SH: gry-grn-rust

● LS: wht-gry, fxln, foss, dense, rare fr vug por, vssfo, spotty stn, sl odor

LS: wht-tan-brn, vfxln, sl foss, dense, sl chalky, NS

LS: as above

LS: wht-tan-gry, vfxln, dense, sl chalky, NS

LS: tan-gry, vfxln, dense, mottled, chalky, NS

LS: as above

● LS: crm-tan, fxln, ool, gd ooc por, ssfo, spotty lite stn, fr odor

● LS: as above

LS: crm-gry, vfxln, oolitic, dense, NS

SH: blk-gry-rust

LS: wht-tan-gry, vfxln, dense, sl ool, sl chalky, NS

SH: blk-gry-grn-red

LS: crm-tan-gry, vfxln, dense, minor chert, sl chalky, NS

LS: as above (tr stn, nsfo, no odor, NVP)

SH: blk, carb

● LS: wht-tan, fxln, mostly dense, rare mxln w/fr inxln por, nsfo, lite spotty stn, sl odor

LS: crm-tan, vfxln, dense, sl chalky, NS

SH: gry-grn-red

● LS: wht-tan, fxln, oolic in pt, vssfo on brk, spotty lite stn, fr odor

SH: gry-grn-red

LS: crm-tan, vfxln, dense, NS

SH: grn-red, brn and LS: as above

ARBUCKLE 3331 (-1459)

● DOL: tan-gry, mxln, fr-gd inxln por, ssfo, even sat stn, gd odor

DOL: as above w/pr por/show

DST #1 3306-3334 (Arbuckle)

30:30:30:30

IF: 1/8" blow, NR

FF: Wk surf blow, NR

Recovery: 5' Mud

IHP: 1640 FHP: 1601

IFP: 15-16 ISIP: 31

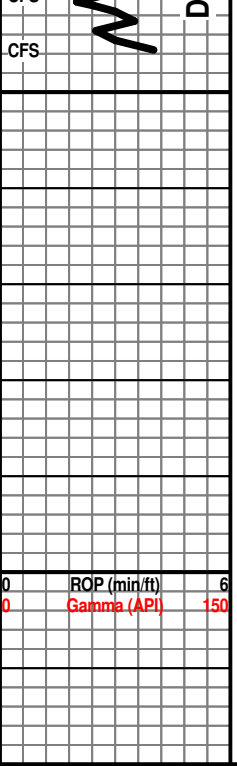
FFP: 17-17 FSIP: 24

BHT - 90 F

DST #2 3310-3346 (Arbuckle)

30:30:30:30

IF: BOB 9 min. NR



● DOL: crm-tan, mxln, gd inxln por, fsfo, even sat str, str odor

FF: BOB 12 min, NR
 Recovery: 1' Free oil,
 120' VSOWCM (2%O, 10%W, 78%M)
 120' VSOMCW (2%O, 30%W, 48%M)
 346' MCW (80%W, 20%M)
 IHP: 1643 FHP: 1613
 IFP: 23-196 ISIP: 1112
 FFP: 201-290 FSIP: 1112
 BHT - 102 F
 Chlorides - 40,000 ppm



DRILL STEM TEST REPORT

Prepared For: **K&B Norton Oil & Investments**

PO Box 860891
Shawnee KS 66826

ATTN: Steve Murphy

Bender #3

21-15s-14w Russell,KS

Start Date: 2013.12.17 @ 20:15:00

End Date: 2013.12.18 @ 01:45:16

Job Ticket #: 55489 DST #: 1

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

Printed: 2013.12.20 @ 10:40:51



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

K&B Norton Oil & Investments

21-15s-14w Russell,KS

PO Box 860891
Shawnee KS 66826

Bender #3

Job Ticket: 55489

DST#: 1

ATTN: Steve Murphy

Test Start: 2013.12.17 @ 20:15:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:11:08

Time Test Ended: 01:45:16

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 3306.00 ft (KB) To 3334.00 ft (KB) (TVD)

Reference Elevations: 1873.00 ft (KB)

Total Depth: 3334.00 ft (KB) (TVD)

1868.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6741

Inside

Press@RunDepth: 17.25 psig @ 3307.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.17

End Date:

2013.12.18

Last Calib.:

2013.12.18

Start Time:

20:15:05

End Time:

01:45:15

Time On Btm:

2013.12.17 @ 22:10:53

Time Off Btm:

2013.12.18 @ 00:12:53

TEST COMMENT:

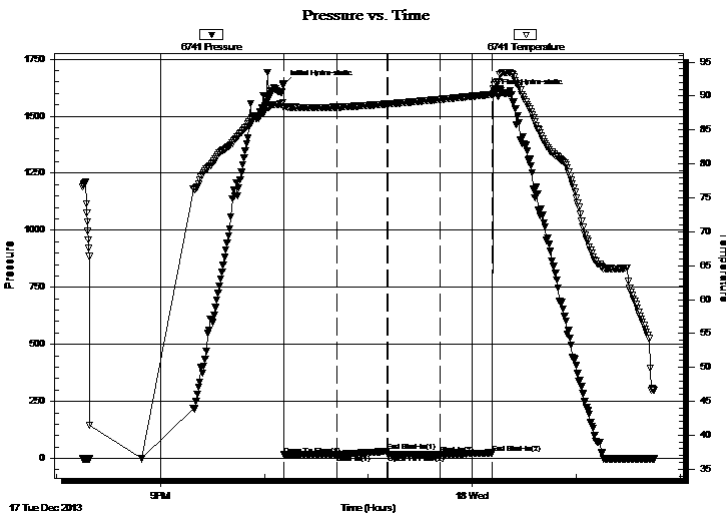
IF-1/8" blow

IS-No blow

FF-Very weak surface blow died in 18 min

FS-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1640.08	88.96	Initial Hydro-static
1	15.09	88.30	Open To Flow (1)
31	16.42	88.37	Shut-In(1)
60	30.68	88.83	End Shut-In(1)
61	16.94	88.83	Open To Flow (2)
91	17.25	89.51	Shut-In(2)
121	24.02	90.26	End Shut-In(2)
122	1600.83	91.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	0.04

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

K&B Norton Oil & Investments

21-15s-14w Russell, KS

PO Box 860891
Shawnee KS 66826

Bender #3

Job Ticket: 55489

DST#: 1

ATTN: Steve Murphy

Test Start: 2013.12.17 @ 20:15:00

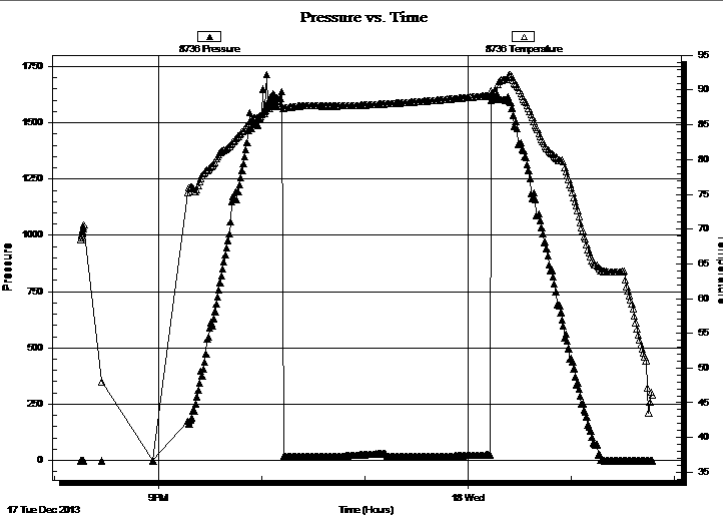
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 22:11:08
 Tester: Brett Dickinson
 Time Test Ended: 01:45:16
 Unit No: 59
Interval: 3306.00 ft (KB) To 3334.00 ft (KB) (TVD)
 Reference Elevations: 1873.00 ft (KB)
 Total Depth: 3334.00 ft (KB) (TVD)
 1868.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 8736 Outside

Press@RunDepth: psig @ 3307.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.17 End Date: 2013.12.18 Last Calib.: 2013.12.18
 Start Time: 20:15:05 End Time: 01:47:44 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-1/8" blow
 IS-No blow
 FF-Very weak surface blow died in 18 min
 FS-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K&B Norton Oil & Investments

21-15s-14w Russell,KS

PO Box 860891
Shawnee KS 66826

Bender #3

Job Ticket: 55489

DST#: 1

ATTN: Steve Murphy

Test Start: 2013.12.17 @ 20:15:00

Tool Information

Drill Pipe:	Length: 2836.00 ft	Diameter: 3.80 inches	Volume: 39.78 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 467.00 ft	Diameter: 2.70 inches	Volume: 3.31 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: 65000.00 lb
			<u>Total Volume: 43.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3306.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 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			3279.00	
Shut In Tool	5.00			3284.00	
Hydraulic tool	5.00			3289.00	
Jars	5.00			3294.00	
Safety Joint	2.00			3296.00	
Packer	5.00			3301.00	28.00 Bottom Of Top Packer
Packer	5.00			3306.00	
Stubb	1.00			3307.00	
Recorder	0.00	6741	Inside	3307.00	
Recorder	0.00	8736	Outside	3307.00	
Perforations	24.00			3331.00	
Bullnose	3.00			3334.00	28.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K&B Norton Oil & Investments

21-15s-14w Russell, KS

PO Box 860891
Shawnee KS 66826

Bender #3

Job Ticket: 55489

DST#: 1

ATTN: Steve Murphy

Test Start: 2013.12.17 @ 20:15:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud	0.035

Total Length: 5.00 ft Total Volume: 0.035 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

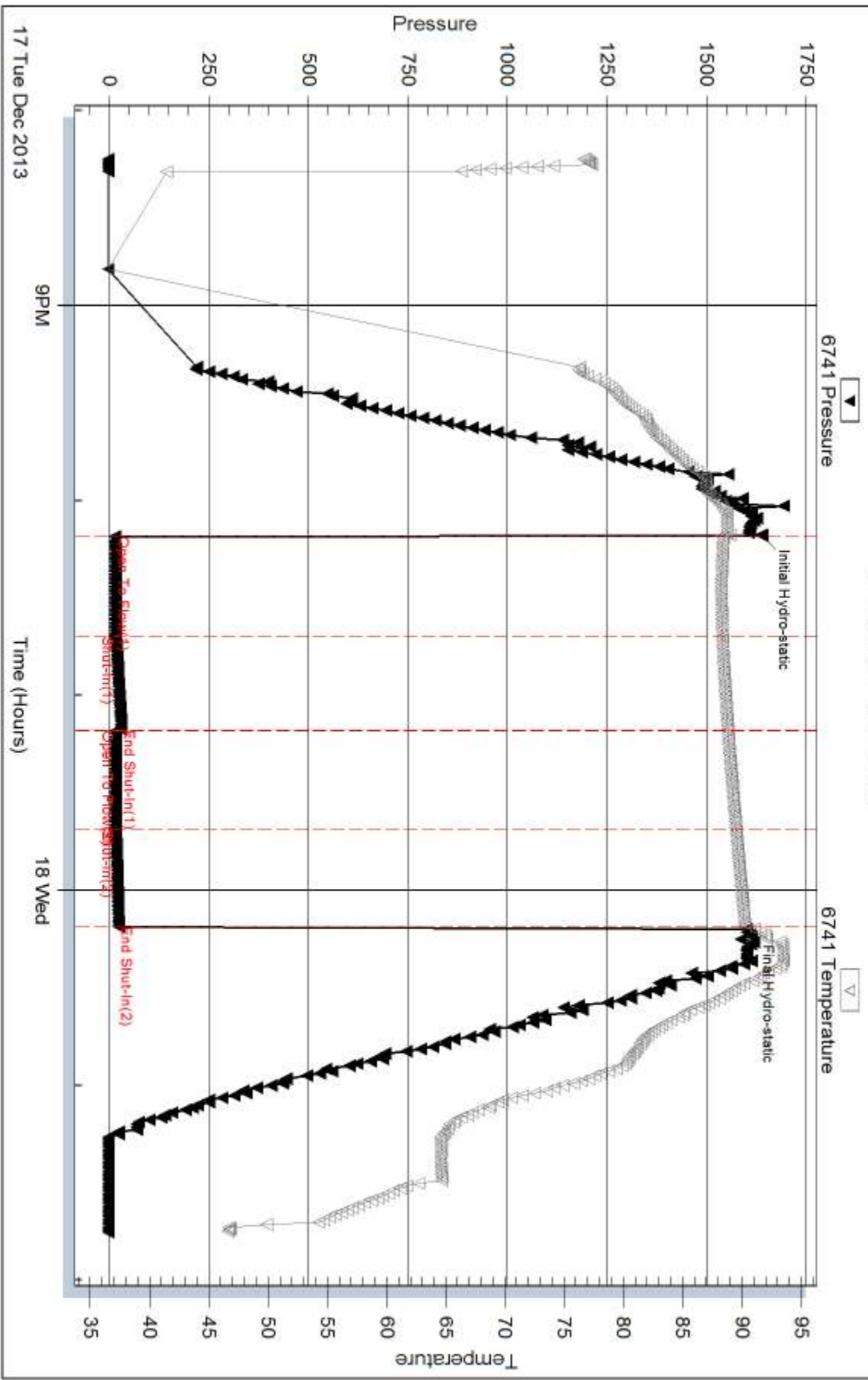
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

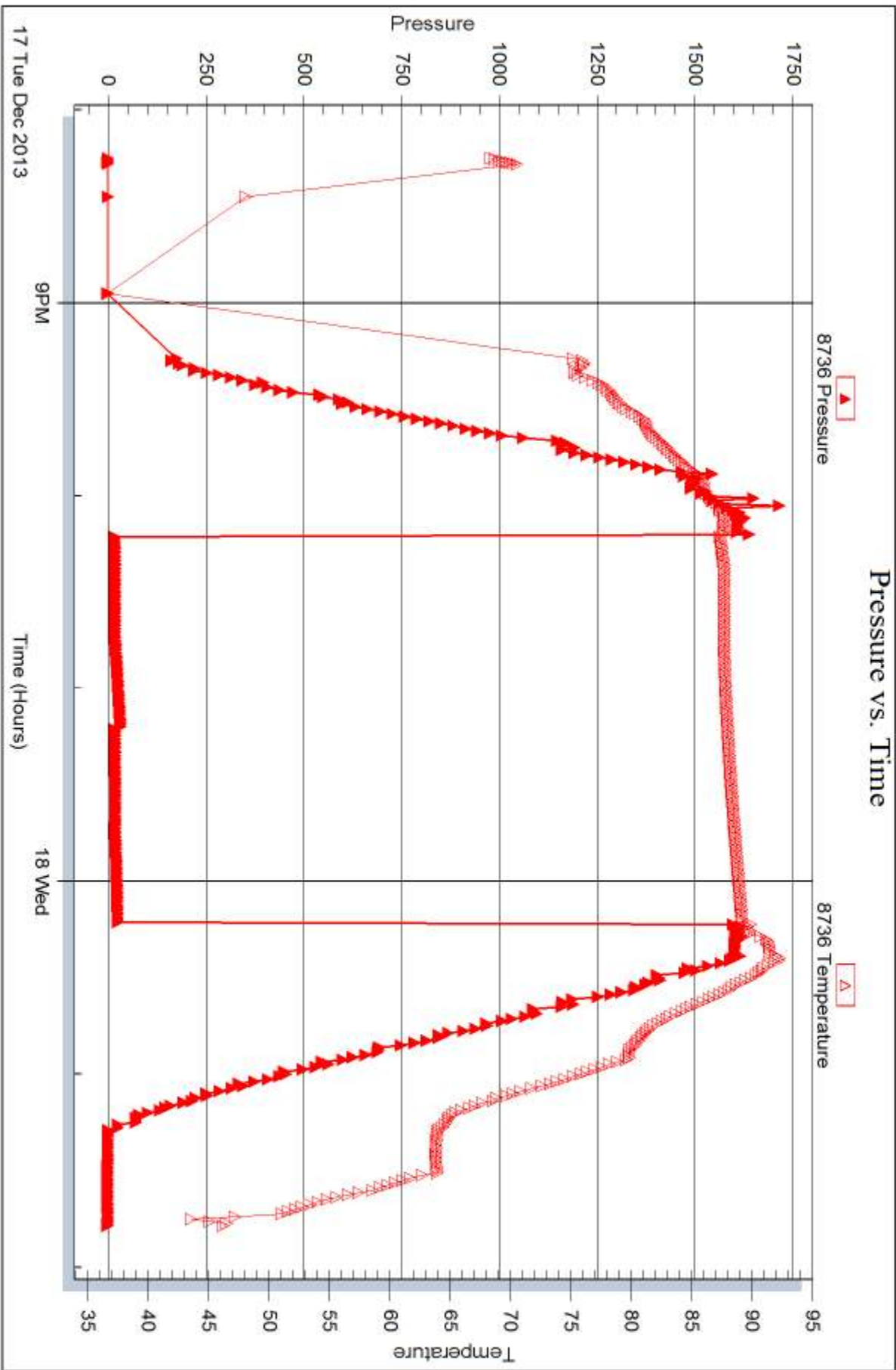


Serial #: 8736

Outside K&B Norton Oil & Investments

Bender #3

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **K&B Norton Oil & Investments**

PO Box 860891
Shawnee KS 66826

ATTN: Steve Murphy

Bender #3

21-15s-14w Russell,KS

Start Date: 2013.12.18 @ 09:30:00

End Date: 2013.12.18 @ 14:51:58

Job Ticket #: 55490 DST #: 2

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

Printed: 2013.12.20 @ 11:23:30



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

K&B Norton Oil & Investments

21-15s-14w Russell, KS

PO Box 860891
Shawnee KS 66826

Bender #3

Job Ticket: 55490

DST#: 2

ATTN: Steve Murphy

Test Start: 2013.12.18 @ 09:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:28

Time Test Ended: 14:51:58

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3310.00 ft (KB) To 3346.00 ft (KB) (TVD)

Reference Elevations: 1873.00 ft (KB)

Total Depth: 3346.00 ft (KB) (TVD)

1868.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6741

Inside

Press@RunDepth: 290.10 psig @ 3311.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.18

End Date:

2013.12.18

Last Calib.: 2013.12.18

Start Time: 09:30:05

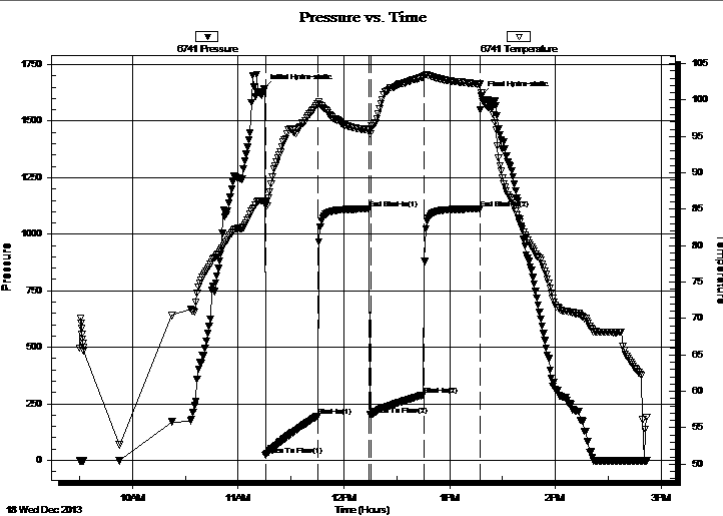
End Time:

14:51:58

Time On Btm: 2013.12.18 @ 11:14:43

Time Off Btm: 2013.12.18 @ 13:17:58

TEST COMMENT: IF-BOB in 9 min
IS-No blow
FF-BOB in 12 min
FS-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1643.30	86.20	Initial Hydro-static
1	22.51	85.56	Open To Flow (1)
31	196.23	99.46	Shut-In(1)
60	1111.79	95.95	End Shut-In(1)
61	200.72	96.09	Open To Flow (2)
91	290.10	103.11	Shut-In(2)
123	1112.06	102.15	End Shut-In(2)
124	1613.04	100.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
346.00	MCW 20%M 80%W	2.45
120.00	VSOMCW 2%O 50%W 48%M	0.85
120.00	VSOWCM 2%O 10%W 78%M	1.68
1.00	Free Oil	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

K&B Norton Oil & Investments

21-15s-14w Russell, KS

PO Box 860891
Shawnee KS 66826

Bender #3

Job Ticket: 55490

DST#: 2

ATTN: Steve Murphy

Test Start: 2013.12.18 @ 09:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:15:28
 Time Test Ended: 14:51:58
 Interval: **3310.00 ft (KB) To 3346.00 ft (KB) (TVD)**
 Total Depth: 3346.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 1873.00 ft (KB)
 1868.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8736

Outside

Press@RunDepth: psig @ 3311.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.18 End Date: 2013.12.18

Last Calib.: 2013.12.18

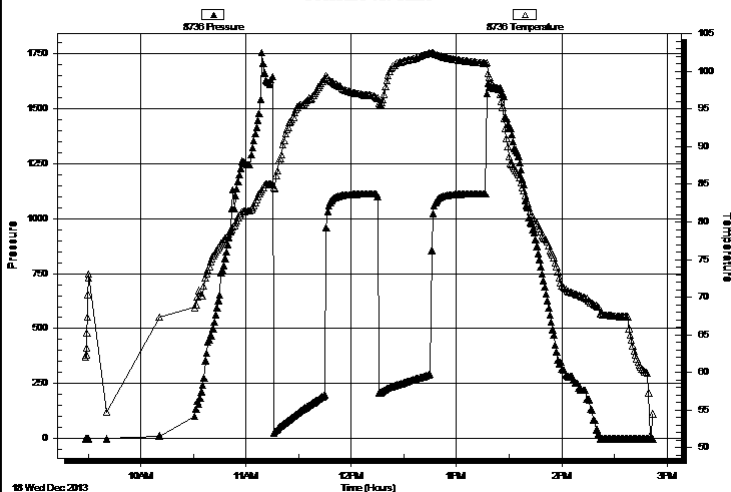
Start Time: 09:28:35 End Time: 14:51:59

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-BOB in 9 min
 IS-No blow
 FF-BOB in 12 min
 FS-No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
346.00	MCW 20%M 80%W	2.45
120.00	VSOMCW 2%O 50%W 48%M	0.85
120.00	VSOWCM 2%O 10%W 78%M	1.68
1.00	Free Oil	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K&B Norton Oil & Investments

21-15s-14w Russell, KS

PO Box 860891
Shawnee KS 66826

Bender #3

Job Ticket: 55490

DST#: 2

ATTN: Steve Murphy

Test Start: 2013.12.18 @ 09:30:00

Tool Information

Drill Pipe:	Length: 2836.00 ft	Diameter: 3.80 inches	Volume: 39.78 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 467.00 ft	Diameter: 2.70 inches	Volume: 3.31 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: 45000.00 lb
			<u>Total Volume: 43.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3310.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	64.00 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			3283.00	
Shut In Tool	5.00			3288.00	
Hydraulic tool	5.00			3293.00	
Jars	5.00			3298.00	
Safety Joint	2.00			3300.00	
Packer	5.00			3305.00	28.00 Bottom Of Top Packer
Packer	5.00			3310.00	
Stubb	1.00			3311.00	
Recorder	0.00	6741	Inside	3311.00	
Recorder	0.00	8736	Outside	3311.00	
Perforations	32.00			3343.00	
Bullnose	3.00			3346.00	36.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K&B Norton Oil & Investments

21-15s-14w Russell,KS

PO Box 860891
Shaw nee KS 66826

Bender #3

Job Ticket: 55490

DST#: 2

ATTN: Steve Murphy

Test Start: 2013.12.18 @ 09:30:00

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:

40000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
346.00	MCW 20%M 80%W	2.450
120.00	VSOMCW 2%O 50%W 48%M	0.850
120.00	VSOWCM 2%O 10%W 78%M	1.676
1.00	Free Oil	0.014

Total Length: 587.00 ft

Total Volume: 4.990 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

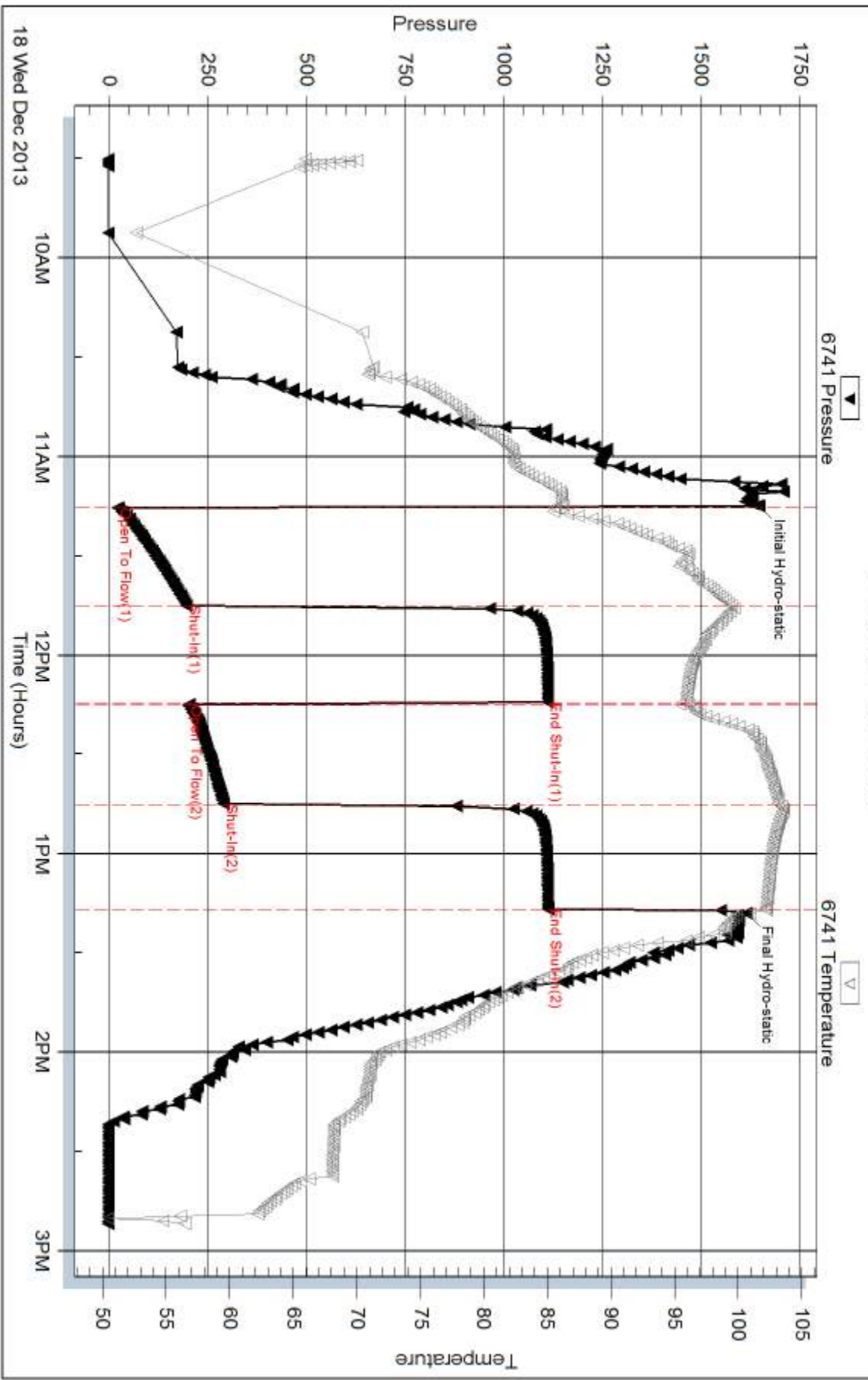
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



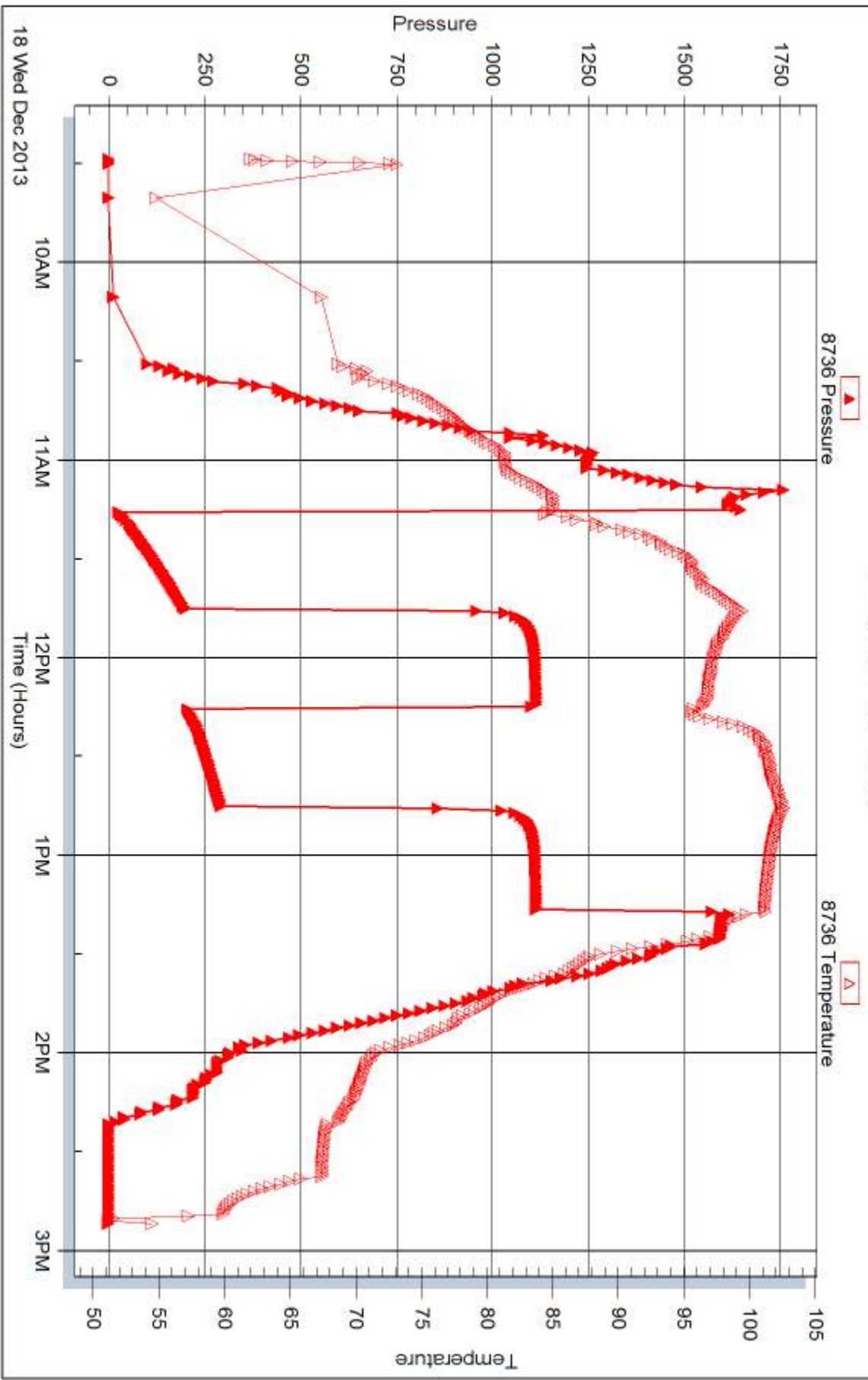
Serial #: 8736

Outside K&B Norton Oil & Investments

Bender #3

DST Test Number: 2

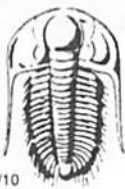
Pressure vs. Time



Triobite Testing, Inc

Ref. No: 55490

Printed: 2013.12.20 @ 11:23:32



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55489**

Well Name & No. Bender #3 Test No. 1 Date 12/12/13
 Company K&B Norton Oil & Investments, LLC Elevation 1823 KB 1868 GL
 Address PO BOX 860891 Shawnee KS ~~66226~~
 Co. Rep / Geo. _____ Rig Shields
 Location: Sec. 21 Twp. 15 Rge. 14 Co. Russell State KS

Interval Tested 3306 - 3334 Zone Tested Arb
 Anchor Length 28 Drill Pipe Run 2836 Mud Wt. 9.1
 Top Packer Depth 3301 Drill Collars Run _____ Vis 55
 Bottom Packer Depth 3306 Wt. Pipe Run 467 WL 8.0
 Total Depth 3334 Chlorides 4,800 ppm System LCM 1^A

Blow Description FF - 1/8 in blow
FSI - No blow
PF - very weak surface blow died in 18 min
FSI - No blow

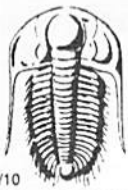
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 90 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1,640</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>19:45</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>20:03</u>
(C) First Final Flow <u>16</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>22:07</u>
(D) Initial Shut-In <u>31</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>00:07</u>
(E) Second Initial Flow <u>17</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1:42</u>
(F) Second Final Flow <u>17</u>	<input checked="" type="checkbox"/> Mileage <u>23.7</u> <u>113.15</u>	Comments _____
(G) Final Shut-In <u>24</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1,601</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>1588.15</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
	Sub Total <u>1588.15</u>	

Approved By _____ Our Representative Burt D...

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55490**

Well Name & No. Bender #3 Test No. 2 Date 12/18/13
 Company K & B Norton Oil & Investments, LLC Elevation 1873 KB 1868 GL
 Address _____
 Co. Rep / Geo. Steve Mar Rig Shields
 Location: Sec. 21 Twp. 15 Rge. 14 Co. Russell State KS

Interval Tested 3310 - 3346 Zone Tested Arb.
 Anchor Length 36 Drill Pipe Run _____ Mud Wt. 9.3
 Top Packer Depth 3305 Drill Collars Run _____ Vis 59
 Bottom Packer Depth 3310 Wt. Pipe Run 467 WL 7.8
 Total Depth 3346 Chlorides ~~5,100~~ ppm System LCM 1#

Blow Description IF-BOB in 9min
ISI-No blow
FF-BOB in 12 min
FST-No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>346</u>	<u>MCW</u>		<u>80</u>	<u>20</u>	
<u>120</u>	<u>VSOMCW</u>		<u>2</u>	<u>50</u>	<u>48</u>
<u>120</u>	<u>VSOWCM</u>		<u>2</u>	<u>10</u>	<u>78</u>
<u>1</u>	<u>Free Oil</u>				

Rec Total 587 BHT 602 Gravity _____ API RW 22 @ 60 °F Chlorides 49,000 ppm

(A) Initial Hydrostatic 1,643 Test 1150 T-On Location 9:00
 (B) First Initial Flow 23 Jars 250 T-Started 9:30
 (C) First Final Flow 196 Safety Joint 75 T-Open 11:18
 (D) Initial Shut-In 1,112 Circ Sub _____ T-Pulled 13:18
 (E) Second Initial Flow 201 Hourly Standby _____ T-Out 14:55
 (F) Second Final Flow 290 Mileage 73ft 113.15
 (G) Final Shut-In 1,112 Sampler _____
 (H) Final Hydrostatic 1,613 Straddle _____

Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1588.15
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1588.15

Approved By _____ Our Representative Steve Mar

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.