



**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: \_\_\_\_\_



1053544

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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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> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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# DAVID D MONTAGUE

## GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY KNIGHTON OIL COMPANY  
 LEASE KACHELMAN, No. 3  
 FIELD ALBANO WEST  
 LOCATION 970' FSL & 1030' FEL  
 SEC 11 TWP 25S RGE 14W  
 COUNTY STAFFORD STATE KANSAS

ELEVATIONS  
 KB 1965  
 DF \_\_\_\_\_  
 GL 1959  
 Measurements Are All  
 From KB

CONTRACTOR Southwind Drlg., Rig 4  
 SPUD 2/12/2011 COMP 2/23/2011  
 RTD 4325' LTD 4328'  
 MUD UP 3170' TYPE MUD Chemical

CASING  
 SURFACE 8 5/8" / 260' w/200sx  
 PRODUCT ION 5 1/2" / 4326' w/225sx  
 ELECTRICAL SURVEYS  
MPD/MDN, MSS,  
MAI/MFE, MML

SAMPLES SAVED FROM 3000' TO RTD  
 DRILLING TIME KEPT FROM 2900' TO RTD  
 SAMPLES EXAMINED FROM 3500' TO RTD  
 GEOLOGICAL SUPERVISION FROM 3500' TO RTD  
 GEOLOGIST ON WELL Dave Montague (API 15-185-23661-00-00)

FORMATION TOPS	LOG	SAMPLES
HEEBNER	3504 (-1539)	3507 (-1542)
LANSING	3676 (-1711)	3676 (-1711)
BKC	3931 (-1966)	3931 (-1966)
VIOLA	4102 (-2137)	4103 (-2138)
SIMPSON	4260 (-2295)	4262 (-2297)
ARBUCKLE	4300 (-2335)	4299 (-2334)


DAILY PENETRATION		BIT RECORDS						
DATE	DEPTH	NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS
2/12/11	M.I.R.U., Spud							
2/13/11	260', W.O.C.							
2/14/11	1620' Drlg.							
2/15/11	2110' Drlg.							
2/16/11	2600' Drlg.							
2/17/11	3170' Drlg.							
2/18/11	3710' CFS							
2/19/11	3842' Drlg.							
2/20/11	4024' Drlg.							
2/21/11	4200' Drlg.							
2/22/11	4325' Logging							
2/23/11	4325' Run Csg.							

DRILL STEM TESTS							
No.	Interval	IFP/Tine	ISIP/Tine	FFP/Tine	FSIP/Tine	IHH-FHH	RECOVERY
1	3795 to 3817	44-61 30"	1192 60"	73-102 30"	1185 60"	1800 to 1776	off BOS/30 sec, GTS/13" Gz 3A MCF, 2nd Op 40 MCF Rec 90' CGO (81/6, 92/0) 125' GMLCO (26/9, 48/0, 26/11)
2	3912 to 3924	103-59 30"	1266 60"	77-75 30"	1204 60"	1870 to 1821	off BOS/10 sec, GTS/3" Gz 164 MCF, 2nd Op 89 MCF Rec 60' CGO (10/6, 50/0) 122' GMLCO (29/6, 51/0, 20/11)
3	4106 to 4127	79-83 30"	422 60"	76-76 45"	421 90"	1996 to 1945	off BOS/10 sec, GTS/3" Gz 245 MCF, 2nd Op 259 MCF, Rec 65' GOCIVM, 60' GOCM (filtrate wtr)
4	4304 to 4325	38-161 30"	1414 30"	169-264 30"	1456 60"	2269 to 3060	off BOS/22" Rec 180' MLCW (60/11, 40/11), 365' 5MLCIV (10/11, 50/11)

REMARKS AND RECOMMENDATIONS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

LEGEND

Anhydrite  
 Salt  
 Sandstone  
 Shale  
 Carbonaceous Limestone  
 Chert  
 Dolomite



3400

50

3500

50

3600

50

HEEBNER  
35071-15421

BROWN LIME  
356781-16831

Geologist and Location  
2/17/2011 @ 7 PM

48 Vis, 9.1 wt

46 Vis, 9.2 wt

DST 3795-3817, 30-60-  
30-60, OBB / 30 Sec,  
Go 34 MCF, 2nd Op Go 40  
MCF, Rec 90' CGO, 125'  
GMCO (26% G, 48% O, 26%  
M) SIP 1192-1185  
FP 44-61 : 73-102  
HP 1800-1776  
BHT 113° (Fridolite, Chris. Gony)

DST 3912-3924, 30-60-  
30-60, OBB/10 Sec,  
GTS / 3" Go 85 MCF, 2nd  
Op Go 89 MCF, Rec 60'  
CGO, 122' GMCO (29% G,  
51% O, 20% M)  
(BTU 112.1) SIP 1266-1204  
FP 103-59: 77-75  
HP 1870-1821, BHT 112°

44 Vis, 9.2 wt

ls, congl, lt qtz, med Xln,  
scat ppts. vugy in pt, pthy  
not w/ qd calc

sh, some blake (carb), dk qtz  
lt qtz, fr brn-red

ls, tan, qtz, med Xln, foss  
ls, qtz, med Xln, foss  
dus

40% sh, blk carb in pt, dk qtz  
qtz-grn, green

60% ls, lt qtz, little in pt,  
med Xln, some brn, fr in Xln  
100% sh, ss, ss

40% ls, ss

sh, dk qtz, qtz, red, qtz-grn

10% sh, qtz, green, red  
25% ls, congl, tan, fr in Xln

sh, qtz, lt qtz, salt in pt

sh, qtz, qtz-grn, green

60% sh, qtz-grn, qtz, red  
15% siltstone, sh, qtz

100% qtz  
25% ls, blk, buff, fr Xln

60% sh, qtz, qtz-grn, salt  
in part

40% siltstone, qtz, mica  
fr pyrite

20% sh, ss

20% siltstone ss

ls, tan, med Xln, pthy, foss  
sh, qtz, dk qtz

40% siltstone, gray, w/ calc fr pyrite	44V15, 9.2wt
20% sh. A.A.	
20% siltstone A.A.	
15% tan, med xln, pty, foss	
sh, gray, dk gray	
95% sh, gray w/ siltstone	
10% ls, tan, pty, blacky	
90% sh, gray, siltstone	
15% ls, tan, brn, litho to fx xln, ls, lt gray, argil	
50% sh, gray, gray, w/ calc, frag	
50% ls, tan, cherty, blacky, hd	
w/ ls, crin, fr-med xln, fr chalky	
10% sh, gray, green	
70% ls, lt gray, litho w/ ls, lt gray, fr-med xln, foss, w/ brk fresh chert	
ls, crin, tan, brn, fr xln	
sh, show in cpl pcs, clear	
ls, lt gray, crin, fr xln	
several pcs ls, tan, brn	
ool w/ fair ool, nsto	
ls, lt gray, v. fr xln w/ chert	
w/ fresh	
Circ 20" @ 3817	
ls, tan, crin, fr xln, w/ chert, wh, gray, fresh	
w/ fr gray, green sh	
ls, gray, fr xln, dus	
same ls, gray, argil	
ls, wh, buff, fr xln, foss	
in pt, cpl pcs w/ waxy p. inter xln of sfo (sp. mostly silt)	
ls, tan, crin, foss, pty, small	
ool w/ scat waxy & inter xln	
g sfo, fair odor w/ ls, tan	
xln, lt gray, foss in pt, waxy has inter xln bright tan, arg, arg, arg	
inter xln & waxy in pt, g sfo	
ls, tan, lt gray, fr xln, dus (show A.A.)	
25% sh, gray, green	
ls, brn, hd	
ls, lt gray, fr xln, sh, silt, fr-gd top, some inter xln of sfo in several pcs, no odor	
ls, crin, tan, lt gray, fr xln, dus	

BROWN LINE  
36781-16831  
LANSING  
36781-17111

3700

3800

3900

44V15, 9.2wt

Circ 20" @ 3710  
50% sh, gray, dull gray  
50% ls, gray, dk gray, argil  
ls, lt gray, fr-med xln, dus  
ls, lt gray, buff, chalky

Circ 40" @ 3710  
ls, wh, buff, fr xln, sue  
w/ poor ppy, dull fluor, nsto  
w/ ls, lt gray, fr-med xln,  
scat waxy ps, show waxy  
free oil, slow dull cut,  
slight odor (4 to 5 pcs  
per tray w/ sfo)

Circ 60" @ 3710  
same A.A.

47V15, 9.0wt

ANDY'S MUD ✓  
47V15, 9.2wt, 3# CML  
Cu 4800 ppm, 10 AWC

SAT @ 3817 1/4°  
strap: 2.34 long to bed

Circ 40" @ 3817

ls, crin, wh, fr xln, chalky  
in pt w/ >10% ool w/ gd ool  
ps, even sat brown oil  
sh, g sfo, immed bright cut  
w/ ls, 25% lt gray, fr xln  
w/ fr-gd inter xln of sfo, sat  
sh, g sfo, slight odor

Circ 60" @ 3817  
same as above, fair odor  
(show does not fluor flat)

Sp. 3870-80, show as above  
w/ ls, wh, buff, fr xln, ool  
w/ fair ool ps, nsto w/ ls  
wh, chalky

57V15, 8.9wt

Circ 40" at 3924  
15% dk gray sh

57 Vis, 8.9wt

Circ 40" at 3924  
 15% dk gray sh  
 95% ls, dk gray, brown tan  
 cherty, dus w/ls, Crm, tan  
 foss in pt, fair-gd interstr  
 ps, gsf in several pcs,  
 no odor (does not flow well)

Circ 60" at 3924  
 several pcs ls w/sgf in  
 vari texture, cherty  
 w/interbedded edges w/ppp  
 ls in Xln od w/oc p, sat

58 Vis, 9.0wt  
 58 Vis, 9.0wt

59 Vis, 9.0wt

Some of the fresh chert is  
 orange, smoky, veins in pt  
 very sharp, looks very frac.  
 some pcs weath. along edges  
 nso or gas bubbles

ANDY'S MUD  
 52 Vis, 9.0wt, 16.8WL  
 Cl 13,000ppm, #LCM

Circ 20" @ 4127  
 Chert, wh, Crm, fresh to weath.  
 to highly weath., bright fluor  
 on edges, also, lt gray, tan  
 tan Xln, fair-gd interstr ps, vuggy  
 in pt, even bright fluor, gd show  
 of gas bubbles & very light oil,  
 no odor, 4r ls, lt gray, dus

Circ 40" @ 4127  
 Chert as above w/ tan tripolitic  
 ps, bright fluor, stgo, w/dolo  
 as above, gas bubbles as aud.  
 naturally, gd show light fire oil  
 Circ 60" @ 4127, Chert, very gd  
 tripolitic in pt, 9stgo  
 1st stgo

ls, gray, tan, lit gray, for Xln, dus  
 blocky, some chert  
 Circ 20" @ 3924  
 ls, Crm, tan, for Xln, dus  
 to block sh

ls, Crm, tan, lit gray, si foss, dus

40% sh, black (carb) dk gray, qm  
 tan, ls, tan, tan, dus w/ls  
 tan, gray, foss, dus

ls, several pcs tan, brn,  
 for Xln, foss in pt, pt-tr inter  
 Xln p, stgo, no odor

ls, brn, litho in pt

sh, blk, green, some  
 1500 frag, within w/ls  
 gray, argl

15% sh, gray, gray-red, green  
 85% ls, Crm, blocky, ls, brn  
 mud-cr Xln w/chert areas w/  
 4-5 siltsome, tan, green  
 chert, vari colors  
 80% sh, gray, purple, brick  
 red, green

20% shale s.s. w/ tan  
 ps's ls, Crm, for Xln, highly  
 foss, pt sluggish p, stgo

sh, gray, qm, purple  
 chert, weathered gray, pp in  
 pt, edge fluor, show GfH, rised w/  
 100% Crm, lit gray, fresh to ptly  
 weath., edge fluor in tan ps's

sh, gray, blk red (hard)  
 w/ chert vari color w/ls  
 lt gray, Crm, dus

for siltsome, gray, green, dus  
 sh, gray, light purple, green  
 chert, vari colors

ls, lit gray, for Xln, dus

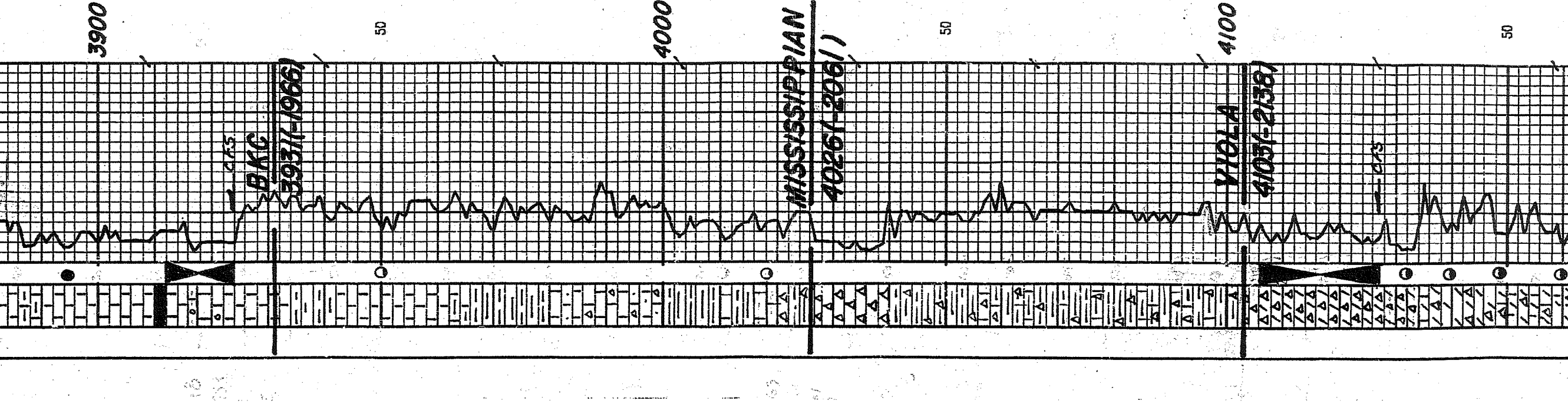
chert, vari color w/ smoky gray  
 dk tan, block w/ls s.s. s.s.

sh, blk, gray, red, ls, blocky, hd  
 cherts, vari color

chert, wh, Crm, weath. in pt, edge  
 bright fluor, dolo, tan, for Xln,  
 bright even fluor in some show  
 light fire oil, show gas bubbles,  
 no odor

sh, gray, qm, tan-red  
 dolo, tan, for Xln, blk w/  
 dolo, lit gray, for Xln, w/sgf p  
 stgo, chert, blk, fresh

dolo, lit gray, for Xln, tan, ps  
 w/ chert, tan, fluor, stgo  
 w/ chert, tripolitic in pt, 9stgo  
 1st stgo



14 Minutes	DRILLING TIME	DEPTH	SAMPLE DESCRIPTION	REMARKS
1			dolo. lt. gr. f. xln, v. bright	bright floor, stgo, w/dolo
2			stgo, chert, wh. fresh	as above, gas bubbles as aud.
3			stgo, lt. gr. f. xln, v. bright	naturally, and show light fine oil
4			stgo, chert, wh. fresh	circ 60" @ 4127, chert, very gd
5			stgo, lt. gr. f. xln, v. bright	fracture in pt, stgo
6			stgo, chert, wh. fresh	st. shot color
7			stgo, lt. gr. f. xln, v. bright	DST 4106-4127, 30-60-
8			stgo, chert, wh. fresh	45-90, OBB/10 Sec.
9			stgo, lt. gr. f. xln, v. bright	GTS/ 3', Ga 245 MCF.
10			stgo, chert, wh. fresh	2nd Op Ga 259 MCF, Rec
11			stgo, lt. gr. f. xln, v. bright	65' GOCWM (10% G, 18% M)
12			stgo, chert, wh. fresh	22% filtrate Wtr, 50% M)
13			stgo, lt. gr. f. xln, v. bright	SIP 422-421, FP 75-
14			stgo, chert, wh. fresh	83:76.76, HP 1996-
15			stgo, lt. gr. f. xln, v. bright	1945, BHT 114° (Tribble, Brett)
16			stgo, chert, wh. fresh	47' vs 9.1 wt, 3# LCM
17			stgo, lt. gr. f. xln, v. bright	ANN'S MUD ✓
18			stgo, chert, wh. fresh	50' vs, 9.0 wt, 128 WL
19			stgo, lt. gr. f. xln, v. bright	chl 8000 ppm, 3# LCM
20			stgo, chert, wh. fresh	DST 4304-4325,
21			stgo, lt. gr. f. xln, v. bright	30-30-30-60, OBB/
22			stgo, chert, wh. fresh	20", Rec 180' MCF, 365' SMCW, (Chl.
23			stgo, lt. gr. f. xln, v. bright	72,000 ppm)
24			stgo, chert, wh. fresh	SIP 1414-1456
25			stgo, lt. gr. f. xln, v. bright	FP 38-161: 169-264
26			stgo, chert, wh. fresh	HP 2269-2060
27			stgo, lt. gr. f. xln, v. bright	BHT 127° (Tribble, Brett)
28			stgo, chert, wh. fresh	Stand Short Trip
29			stgo, lt. gr. f. xln, v. bright	
30			stgo, chert, wh. fresh	
31			stgo, lt. gr. f. xln, v. bright	
32			stgo, chert, wh. fresh	
33			stgo, lt. gr. f. xln, v. bright	
34			stgo, chert, wh. fresh	
35			stgo, lt. gr. f. xln, v. bright	
36			stgo, chert, wh. fresh	
37			stgo, lt. gr. f. xln, v. bright	
38			stgo, chert, wh. fresh	
39			stgo, lt. gr. f. xln, v. bright	
40			stgo, chert, wh. fresh	
41			stgo, lt. gr. f. xln, v. bright	
42			stgo, chert, wh. fresh	
43			stgo, lt. gr. f. xln, v. bright	
44			stgo, chert, wh. fresh	
45			stgo, lt. gr. f. xln, v. bright	
46			stgo, chert, wh. fresh	
47			stgo, lt. gr. f. xln, v. bright	
48			stgo, chert, wh. fresh	
49			stgo, lt. gr. f. xln, v. bright	
50			stgo, chert, wh. fresh	
51			stgo, lt. gr. f. xln, v. bright	
52			stgo, chert, wh. fresh	
53			stgo, lt. gr. f. xln, v. bright	
54			stgo, chert, wh. fresh	
55			stgo, lt. gr. f. xln, v. bright	
56			stgo, chert, wh. fresh	
57			stgo, lt. gr. f. xln, v. bright	
58			stgo, chert, wh. fresh	
59			stgo, lt. gr. f. xln, v. bright	
60			stgo, chert, wh. fresh	
61			stgo, lt. gr. f. xln, v. bright	
62			stgo, chert, wh. fresh	
63			stgo, lt. gr. f. xln, v. bright	
64			stgo, chert, wh. fresh	
65			stgo, lt. gr. f. xln, v. bright	
66			stgo, chert, wh. fresh	
67			stgo, lt. gr. f. xln, v. bright	
68			stgo, chert, wh. fresh	
69			stgo, lt. gr. f. xln, v. bright	
70			stgo, chert, wh. fresh	
71			stgo, lt. gr. f. xln, v. bright	
72			stgo, chert, wh. fresh	
73			stgo, lt. gr. f. xln, v. bright	
74			stgo, chert, wh. fresh	
75			stgo, lt. gr. f. xln, v. bright	
76			stgo, chert, wh. fresh	
77			stgo, lt. gr. f. xln, v. bright	
78			stgo, chert, wh. fresh	
79			stgo, lt. gr. f. xln, v. bright	
80			stgo, chert, wh. fresh	
81			stgo, lt. gr. f. xln, v. bright	
82			stgo, chert, wh. fresh	
83			stgo, lt. gr. f. xln, v. bright	
84			stgo, chert, wh. fresh	
85			stgo, lt. gr. f. xln, v. bright	
86			stgo, chert, wh. fresh	
87			stgo, lt. gr. f. xln, v. bright	
88			stgo, chert, wh. fresh	
89			stgo, lt. gr. f. xln, v. bright	
90			stgo, chert, wh. fresh	
91			stgo, lt. gr. f. xln, v. bright	
92			stgo, chert, wh. fresh	
93			stgo, lt. gr. f. xln, v. bright	
94			stgo, chert, wh. fresh	
95			stgo, lt. gr. f. xln, v. bright	
96			stgo, chert, wh. fresh	
97			stgo, lt. gr. f. xln, v. bright	
98			stgo, chert, wh. fresh	
99			stgo, lt. gr. f. xln, v. bright	
100			stgo, chert, wh. fresh	

4200

50

SIMPSON SHALE  
4262 (-2297)

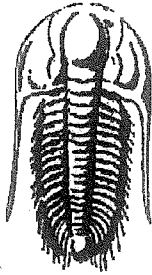
ARBUCKLE  
4299 (-2354)

4300

TOTAL DEPTH  
4325 (-2360)

50





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Knighton Oil Co Inc.**

1700 Waterfront Pky.  
Wichita Ks. 67206

Bldg 100 Ste A

ATTN: Dave Montaque

**11-25s14 Stafford KS**

**Kachelman # 3**

Start Date: 2011.02.18 @ 20:53:36

End Date: 2011.02.19 @ 04:30:21

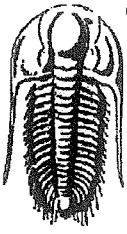
Job Ticket #: 37420

DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Knighton Oil Co Inc.  
1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206  
ATTN: Dave Montaque

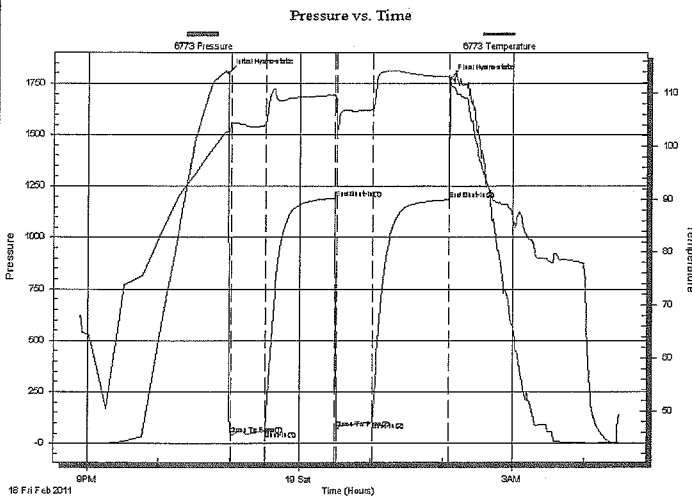
**Kachelman # 3**  
**11-25s14 Stafford KS**  
Job Ticket: 37420 **DST#: 1**  
Test Start: 2011.02.18 @ 20:53:36

### GENERAL INFORMATION:

Formation: **Lansing Drum**  
Deviated: **No Whipstock:** ft (KB)  
Time Tool Opened: 23:01:21  
Time Test Ended: 04:30:21  
Interval: **3795.00 ft (KB) To 3817.00 ft (KB) (TVD)**  
Total Depth: **3817.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
Test Type: **Conventional Bottom Hole**  
Tester: **Gary Pevoteaux**  
Unit No: **34**  
Reference Elevations: **1965.00 ft (KB)**  
**1959.00 ft (CF)**  
KB to GR/CF: **6.00 ft**

**Serial #: 6773** Inside  
Press@RunDepth: **102.34 psig @ 3796.00 ft (KB)** Capacity: **8000.00 psig**  
Start Date: **2011.02.18** End Date: **2011.02.19** Last Calib.: **2011.02.19**  
Start Time: **20:53:41** End Time: **04:30:20** Time On Btm: **2011.02.18 @ 22:58:36**  
Time Off Btm: **2011.02.19 @ 02:06:51**

**TEST COMMENT:** IF: Strong blow . B.O.B. in 30 secs. GTS in 13 mins. (see gas flow report)  
ISI: No blow .  
FF: Strong blow . (see gas flow report)  
FSI: No blow .



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1800.03	102.70	Initial Hydro-static
3	44.40	104.30	Open To Flow (1)
33	61.44	103.96	Shut-In(1)
92	1192.32	109.66	End Shut-In(1)
93	73.06	102.71	Open To Flow (2)
123	102.34	106.86	Shut-In(2)
187	1184.62	113.01	End Shut-In(2)
189	1775.72	111.39	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
125.00	GMCO 26%g 26%m 48%o	1.21
90.00	CGO 8%g 92%o	1.26

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	5.00	30.78
Last Gas Rate	0.25	11.00	40.30
Max. Gas Rate	0.25	11.00	40.30



### DRILL STEM TEST REPORT

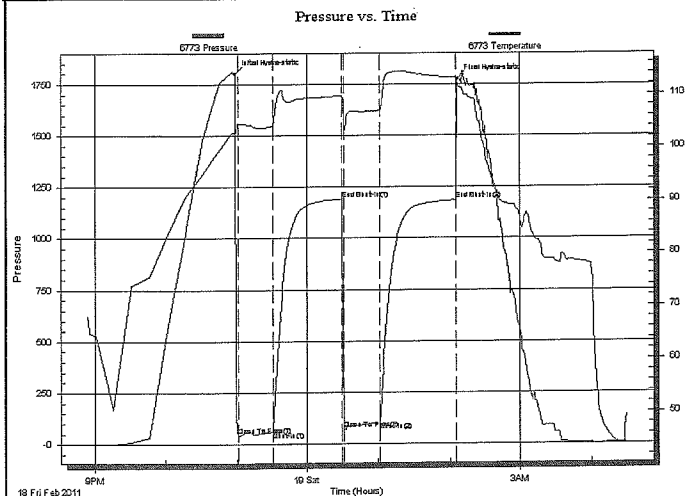
Knighton Oil Co Inc. **Kachelman # 3**  
 1700 Waterfront Pky. Bldg 100 Ste A **11-25s14 Stafford KS**  
 Wichita Ks. 67206 Job Ticket: 37420 **DST#: 1**  
 ATTN: Dave Montaque Test Start: 2011.02.18 @ 20:53:36

#### GENERAL INFORMATION:

Formation: Lansing Drum  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:01:21  
 Time Test Ended: 04:30:21  
 Interval: 3795.00 ft (KB) To 3817.00 ft (KB) (TVD)  
 Total Depth: 3817.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: Gary Pevoteaux  
 Unit No: 34  
 Reference Elevations: 1965.00 ft (KB)  
 1959.00 ft (CF)  
 KB to GR/CF: 6.00 ft

**Serial #: 6773** Inside  
 Press@RunDepth: 102.34 psig @ 3796.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.02.18 End Date: 2011.02.19 Last Calib.: 2011.02.19  
 Start Time: 20:53:41 End Time: 04:30:20 Time On Btm: 2011.02.18 @ 22:58:36  
 Time Off Btm: 2011.02.19 @ 02:06:51

**TEST COMMENT:** IF: Strong blow . B.O.B. in 30 secs. GTS in 13 mins. (see gas flow report)  
 IS: No blow .  
 FF: Strong blow . (see gas flow report)  
 FS: No blow .



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1800.03	102.70	Initial Hydro-static
3	44.40	104.30	Open To Flow (1)
33	61.44	103.96	Shut-In(1)
92	1192.32	109.66	End Shut-In(1)
93	73.06	102.71	Open To Flow (2)
123	102.34	106.86	Shut-In(2)
187	1184.62	113.01	End Shut-In(2)
189	1775.72	111.39	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
125.00	GMCO 26%g 26%m 48%o	1.21
90.00	CGO 8%g 92%o	1.26

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	5.00	30.78
Last Gas Rate	0.25	11.00	40.30
Max. Gas Rate	0.25	11.00	40.30



### DRILL STEM TEST REPORT

TOOL DIAGRAM

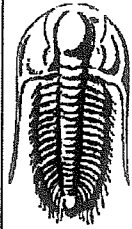
Knighton Oil Co Inc. **Kachelman # 3**  
 1700 Waterfront Pky. Bldg 100 Ste A **11-25s14 Stafford KS**  
 Wichita Ks. 67206 Job Ticket: 37420 **DST#: 1**  
 ATTN: Dave Montaque Test Start: 2011.02.18 @ 20:53:36

#### Tool Information

Drill Pipe: Length: 3736.00 ft Diameter: 3.80 inches Volume: 52.41 bbl Tool Weight: 2400.00 lb  
 Heavy Wt. Pipe: Length: 0.00 ft Diameter: 0.00 inches Volume: 0.00 bbl Weight set on Packer: 25000.00 lb  
 Drill Collar: Length: 60.00 ft Diameter: 2.25 inches Volume: 0.30 bbl Weight to Pull Loose: 55000.00 lb  
 Total Volume: 52.71 bbl Tool Chased: 0.00 ft  
 Drill Pipe Above KB: 29.00 ft String Weight: Initial 48000.00 lb  
 Depth to Top Packer: 3795.00 ft Final 49000.00 lb  
 Depth to Bottom Packer: ft  
 Interval between Packers: 22.00 ft  
 Tool Length: 50.00 ft  
 Number of Packers: 2 Diameter: 6.75 inches  
 Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3768.00	
Shut In Tool	5.00			3773.00	
Hydraulic tool	5.00			3778.00	
Jars	5.00			3783.00	
Safety Joint	3.00			3786.00	
Packer	4.00			3790.00	28.00 Bottom Of Top Packer
Packer	5.00			3795.00	
Stubb	1.00			3796.00	
Recorder	0.00	8166	Outside	3796.00	
Recorder	0.00	6773	Inside	3796.00	
Perforations	18.00			3814.00	
Bullnose	3.00			3817.00	22.00 Bottom Packers & Anchor

**Total Tool Length: 50.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Knighthon Oil Co Inc.

Kachelman # 3

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

11-25s14 Stafford KS

Job Ticket: 37420 DST#: 1

ATTN: Dave Montaque

Test Start: 2011.02.18 @ 20:53:36

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 31.7 deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: 4800 ppm

Viscosity: 47.00 sec/qt

Cushion Volume: bbl

Water Loss: 10.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 4800.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
125.00	GMCO 26%g 26%m 48%o	1.207
90.00	CGO 8%g 92%o	1.262

Total Length: 215.00 ft Total Volume: 2.469 bbl

Num Fluid Samples: 0

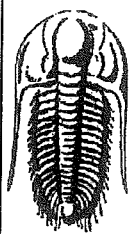
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**GAS RATES**

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky.  
Wichita Ks. 67206

Bldg 100 Ste A

**11-25s14 Stafford KS**

Job Ticket: 37420

**DST#: 1**

ATTN: Dave Montaque

Test Start: 2011.02.18 @ 20:53:36

## Gas Rates Information

Temperature: 59 deg C  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
1	20	0.25	5.00	30.78
1	25	0.25	6.00	32.36
1	30	0.25	7.00	33.95
2	10	0.25	10.00	38.71
2	20	0.25	11.00	40.30
2	30	0.25	11.00	40.30

DST Test Number: 1

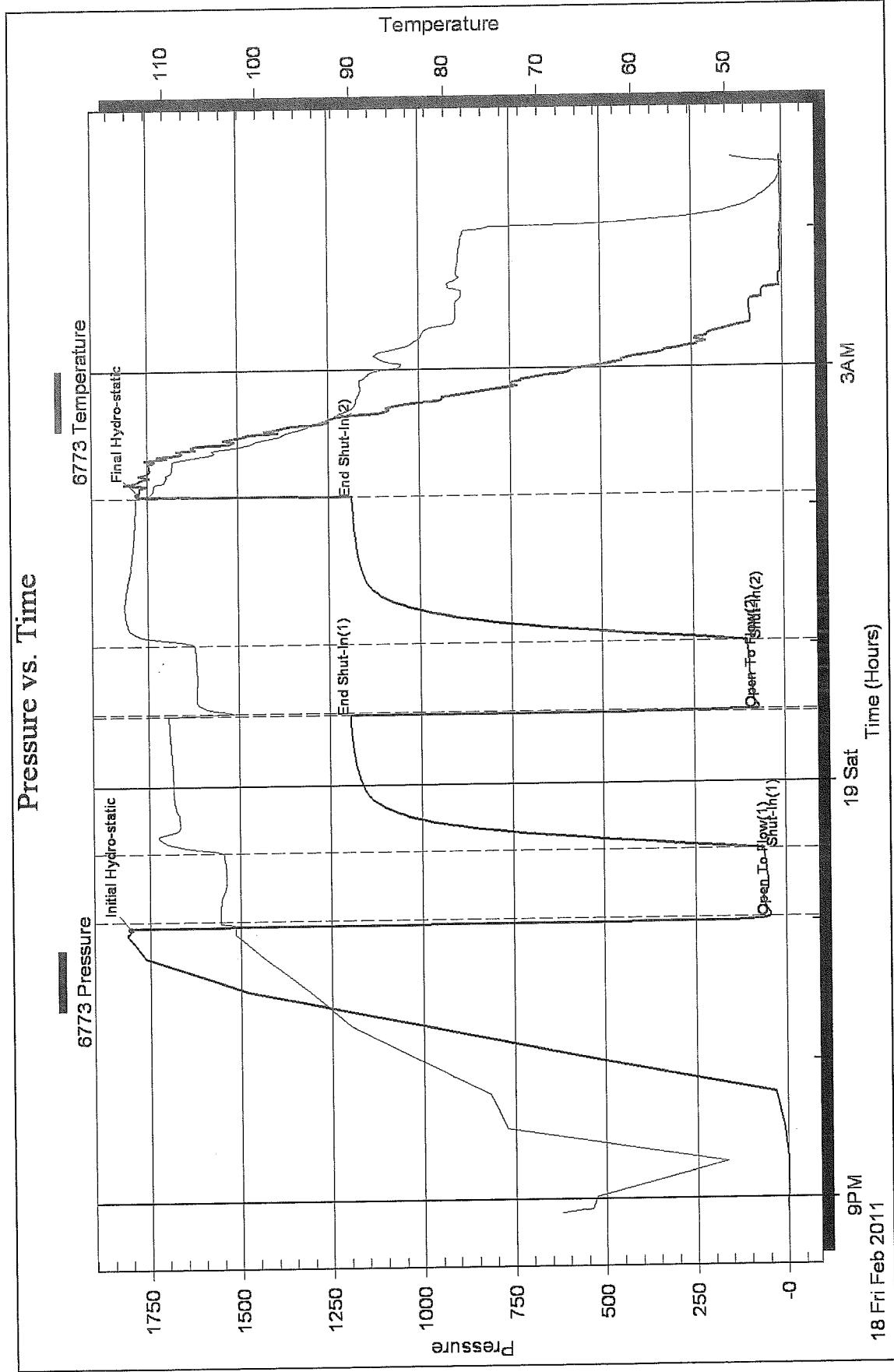
11-25s14 Stafford KS

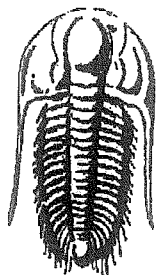
Knighton Oil Co Inc.

Inside

Serial #: 6773

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Knighton Oil Co Inc.**

1700 Waterfront Pky.  
Wichita Ks. 67206

Bldg 100 Ste A

ATTN: Dave Montaque

**11-25s14 Stafford KS**

**Kachelman # 3**

Start Date: 2011.02.19 @ 14:54:45

End Date: 2011.02.19 @ 21:48:30

Job Ticket #: 37421

DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Knighton Oil Co Inc.

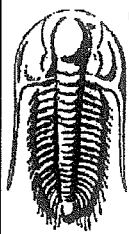
Kachelman # 3

11-25s14 Stafford KS

DST # 2

Lansing Hertha

2011.02.19



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

**11-25s14 Stafford KS**

Job Ticket: 37421 DST#: 2

ATTN: Dave Montaque

Test Start: 2011.02.19 @ 14:54:45

## GENERAL INFORMATION:

Formation: Lansing Hertha  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 16:38:45  
Time Test Ended: 21:48:30

Test Type: Conventional Bottom Hole  
Tester: Gary Pevoteaux  
Unit No: 34

Interval: 3912.00 ft (KB) To 3924.00 ft (KB) (TVD)  
Total Depth: 3924.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1965.00 ft (KB)  
1959.00 ft (CF)  
KB to GR/CF: 6.00 ft

**Serial #: 8166**

Outside

Press@RunDepth: 74.71 psig @ 3913.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.19

End Date: 2011.02.19

Last Calib.: 2011.02.19

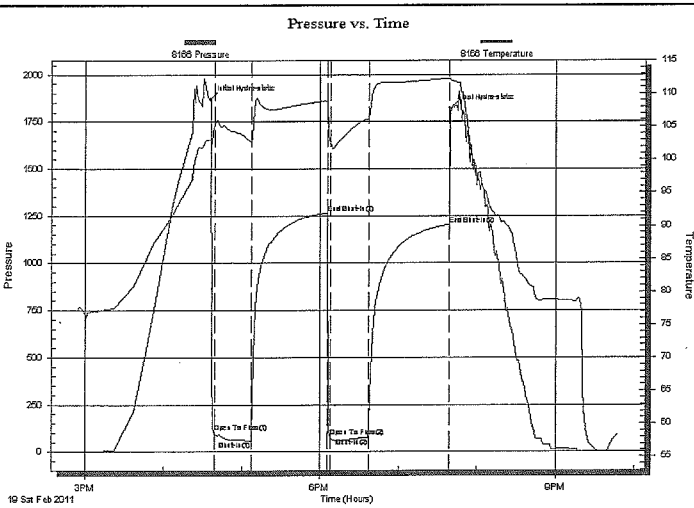
Start Time: 14:54:50

End Time: 21:48:29

Time On Btm: 2011.02.19 @ 16:35:30

Time Off Btm: 2011.02.19 @ 19:39:15

TEST COMMENT: IF: Strong blow . BOB 10 sec GTS 3 Min {see gas flow report}  
IS: No blow  
FF: Strong blow {see gas flow report}  
FS: Weak blow back 3/4"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1869.82	103.00	Initial Hydro-static
4	102.77	105.02	Open To Flow (1)
32	59.07	102.65	Shut-In(1)
91	1266.36	108.93	End Shut-In(1)
93	76.62	102.77	Open To Flow (2)
122	74.71	106.11	Shut-In(2)
183	1204.28	112.25	End Shut-In(2)
184	1820.76	112.06	Final Hydro-static

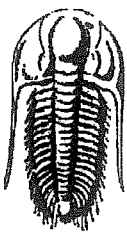
## Recovery

Length (ft)	Description	Volume (bbl)
122.00	GMCO 29%g 20%m 51%o	1.16
60.00	CGO 10%g 90%o	0.84

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	10.00	164.60
Last Gas Rate	0.38	9.00	85.72
Max. Gas Rate	0.38	12.00	96.71





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Knighton Oil Co Inc.

Kachelman # 3

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

11-25s14 Stafford KS

Job Ticket: 37421

DST#: 2

ATTN: Dave Montaque

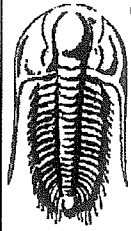
Test Start: 2011.02.19 @ 14:54:45

### Tool Information

Drill Pipe:	Length: 3831.00 ft	Diameter: 3.80 inches	Volume: 53.74 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 60.00 ft	Diameter: 2.25 inches	Volume: 0.30 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.04 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3912.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3885.00	
Shut In Tool	5.00			3890.00	
Hydraulic tool	5.00			3895.00	
Jars	5.00			3900.00	
Safety Joint	3.00			3903.00	
Packer	4.00			3907.00	28.00 Bottom Of Top Packer
Packer	5.00			3912.00	
Stubb	1.00			3913.00	
Recorder	0.00	8166	Outside	3913.00	
Recorder	0.00	6773	Inside	3913.00	
Perforations	8.00			3921.00	
Bullnose	3.00			3924.00	12.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>40.00</b>				



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Knighton Oil Co Inc.

Kachelman # 3

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

11-25s14 Stafford KS

Job Ticket: 37421

DST#: 2

ATTN: Dave Montaque

Test Start: 2011.02.19 @ 14:54:45

### 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: 12000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume: bbl

Water Loss: 15.15 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 12000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
122.00	GMCO 29%g 20%m 51%o	1.165
60.00	CGO 10%g 90%o	0.842

Total Length: 182.00 ft Total Volume: 2.007 bbl

Num Fluid Samples: 0

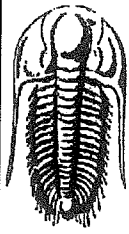
Num Gas Bombs: 1

Serial #: cs-2

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**GAS RATES**

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky.  
Wichita Ks. 67206

Bldg 100 Ste A

**11-25s14 Stafford KS**

Job Ticket: 37421

DST#: 2

ATTN: Dave Montaque

Test Start: 2011.02.19 @ 14:54:45

## Gas Rates Information

Temperature: 59 deg C  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

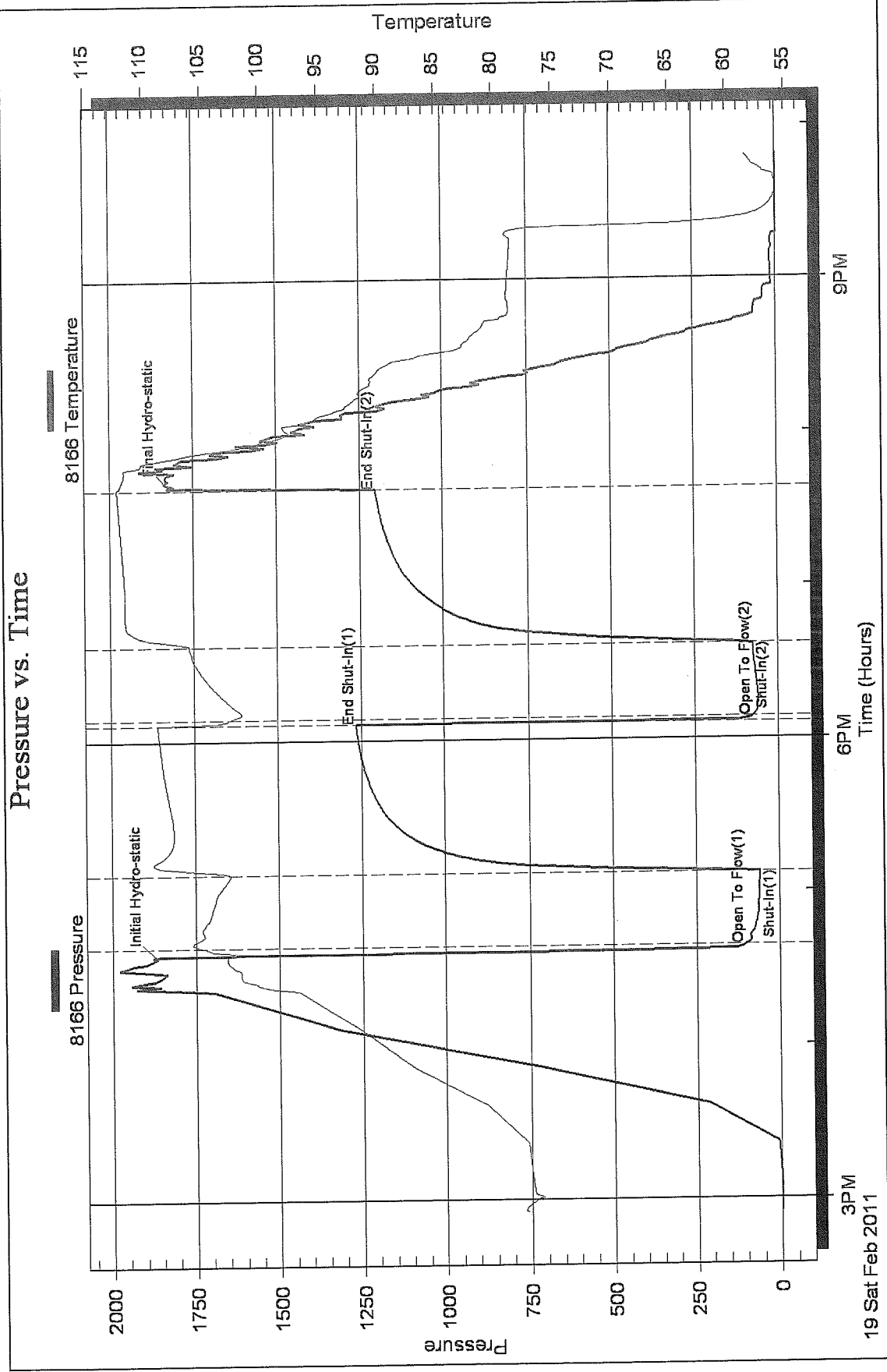
Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
1	5	0.50	10.00	164.60
1	5	0.50	10.00	164.60
1	10	0.50	10.00	164.60
1	20	0.38	12.00	96.71
1	30	0.38	9.00	85.72
2	10	0.38	8.00	82.06
2	20	0.38	9.00	85.72

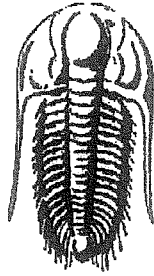
DST Test Number: 2

11-25s14 Stafford KS

Outside Knighton Oil Co Inc.

Serial #: 8166





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Knighthon Oil Co Inc.**

1700 Waterfront Pky.  
Wichita Ks. 67206

Bldg 100 Ste A

ATTN: Dave Montaque

**11-25s14 Stafford KS**

**Kachelman # 3**

Start Date: 2011.02.20 @ 18:42:50

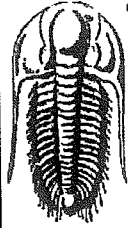
End Date: 2011.02.21 @ 02:34:50

Job Ticket #: 37422                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Knighton Oil Co Inc.  
1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206  
ATTN: Dave Montaque

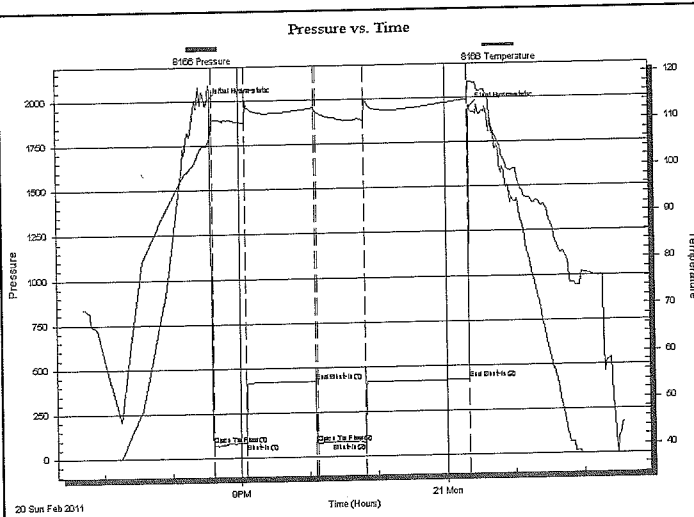
**Kachelman # 3**  
**11-25s14 Stafford KS**  
Job Ticket: 37422 DST#: 3  
Test Start: 2011.02.20 @ 18:42:50

## GENERAL INFORMATION:

Formation: Viola  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:36:20  
Time Test Ended: 02:34:50  
Interval: 4106.00 ft (KB) To 4127.00 ft (KB) (TVD)  
Total Depth: 4127.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Gary Pevoteaux  
Unit No: 34  
Reference Elevations: 1965.00 ft (KB)  
1959.00 ft (CF)  
KB to GR/CF: 6.00 ft

Serial #: 8166 Outside  
Press@RunDepth: 76.28 psig @ 4107.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.02.20 End Date: 2011.02.21 Last Calib.: 2011.02.21  
Start Time: 18:42:55 End Time: 02:34:49 Time On Btm: 2011.02.20 @ 20:31:50  
Time Off Btm: 2011.02.21 @ 00:21:35

TEST COMMENT: IF: Strong blow BOB 10 sec GTS 3 min { See gas flow report}  
IS: Strong blow back  
FF: Strong Blow { See gas flow report }  
FSI: No blow



## PRESSURE SUMMARY

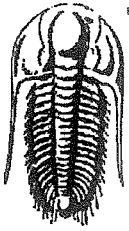
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1996.32	104.88	Initial Hydro-static
5	75.35	110.22	Open To Flow (1)
34	82.64	109.80	Shut-In(1)
94	421.64	112.88	End Shut-In(1)
96	75.96	112.16	Open To Flow (2)
138	76.28	109.81	Shut-In(2)
229	421.14	114.27	End Shut-In(2)
230	1945.25	117.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 10%g 24%o 66%m	0.30
65.00	GOCVM 10%g 18%o 22%w 50%m	0.91

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	22.00	245.54
Last Gas Rate	0.50	24.00	259.04
Max. Gas Rate	0.50	24.00	259.04



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

**11-25s14 Stafford KS**

Job Ticket: 37422

**DST#: 3**

ATTN: Dave Montaque

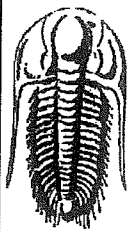
Test Start: 2011.02.20 @ 18:42:50

**Tool Information**

Drill Pipe:	Length: 4050.00 ft	Diameter: 3.80 inches	Volume: 56.81 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 60.00 ft	Diameter: 2.25 inches	Volume: 0.30 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4106.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4079.00	
Shut In Tool	5.00			4084.00	
Hydraulic tool	5.00			4089.00	
Jars	5.00			4094.00	
Safety Joint	3.00			4097.00	
Packer	4.00			4101.00	28.00 Bottom Of Top Packer
Packer	5.00			4106.00	
Stubb	1.00			4107.00	
Recorder	0.00	8166	Outside	4107.00	
Recorder	0.00	6773	Inside	4107.00	
Perforations	17.00			4124.00	
Bullnose	3.00			4127.00	21.00 Bottom Packers & Anchor

**Total Tool Length: 49.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

**11-25s14 Stafford KS**

Job Ticket: 37422

**DST#: 3**

ATTN: Dave Montaque

Test Start: 2011.02.20 @ 18:42:50

### 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:

13000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 16.75 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 13000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GOCM 10%g 24%o 66%m	0.295
65.00	GOCWM 10%g 18%o 22%w 50%m	0.912

Total Length: 125.00 ft

Total Volume: 1.207 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

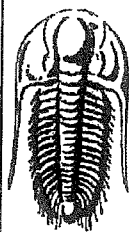
Serial #: cs-3

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky.  
Wichita Ks. 67206

Bldg 100 Ste A

**11-25s14 Stafford KS**

Job Ticket: 37422

**DST#: 3**

ATTN: Dave Montaque

Test Start: 2011.02.20 @ 18:42:50

### Gas Rates Information

Temperature: 59 deg C  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
1	10	0.50	22.00	245.54
1	10	0.50	22.00	245.54
1	20	0.75	10.00	381.12
1	30	0.50	22.00	245.54
2	10	0.50	21.00	238.80
2	20	0.50	23.00	252.29
2	40	0.50	24.00	259.04

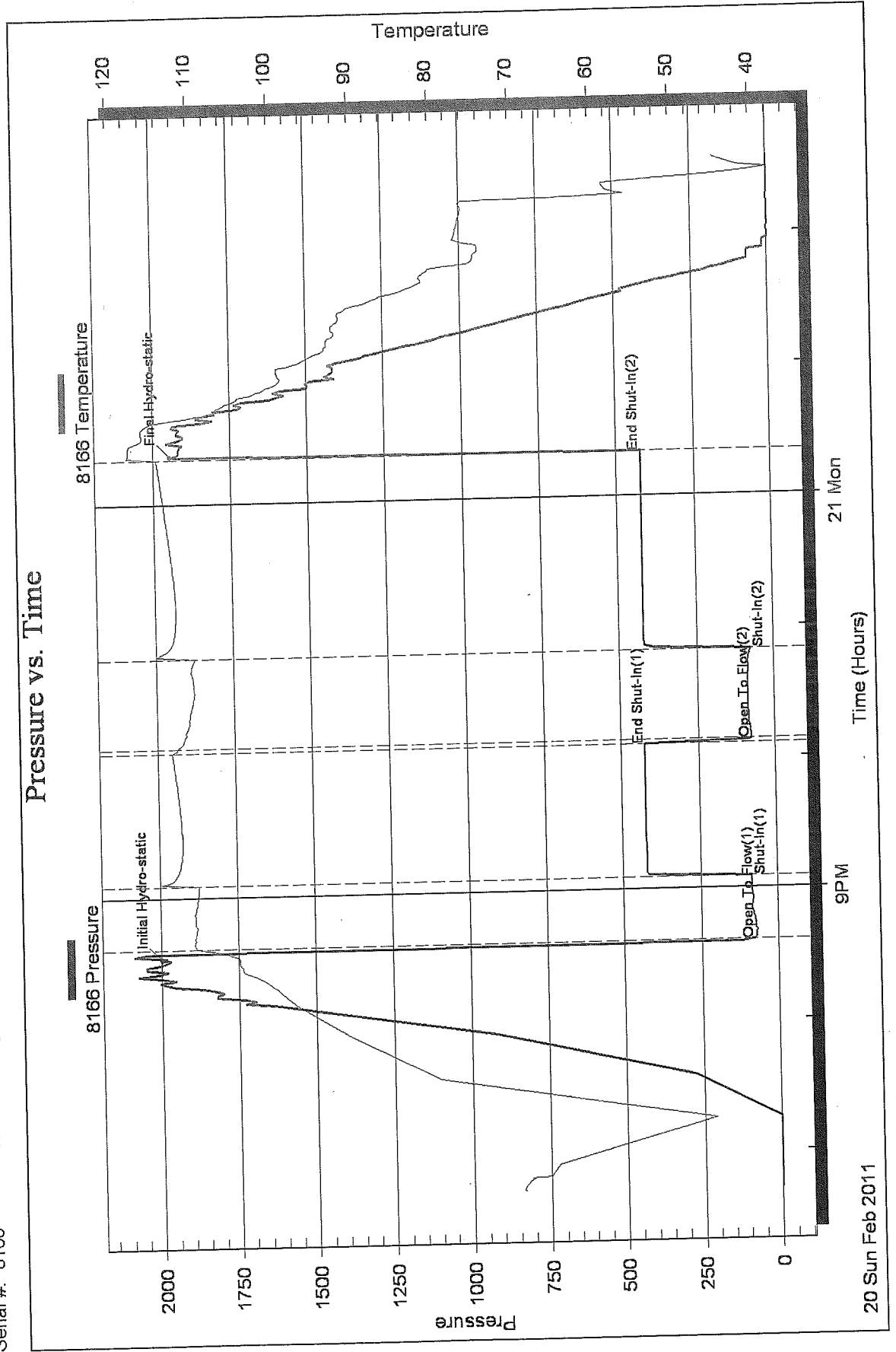
DST Test Number: 3

11-25s14 Stafford KS

Outside Knighton Oil Co Inc.

Serial #: 8166

### Pressure vs. Time

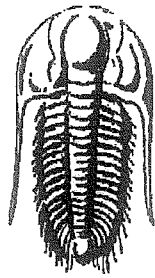


20 Sun Feb 2011

9PM

21 Mon

Time (Hours)



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Knighton Oil Co Inc.**

1700 Waterfront Pky.  
Wichita Ks. 67206

Bldg 100 Ste A

ATTN: Dave Montaque

**11-25s14 Stafford KS**

**Kachelman # 3**

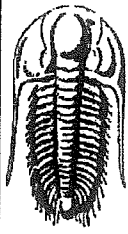
Start Date: 2011.02.21 @ 22:15:06

End Date: 2011.02.22 @ 06:30:36

Job Ticket #: 41924                      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

**11-25s14 Stafford KS**

Job Ticket: 41924 DST#: 4

ATTN: Dave Montaque

Test Start: 2011.02.21 @ 22:15:06

## GENERAL INFORMATION:

Formation: Arbuckle

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:10:06

Time Test Ended: 06:30:36

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Interval: 4304.00 ft (KB) To 4325.00 ft (KB) (TVD)

Reference Elevations: 1965.00 ft (KB)

Total Depth: 4325.00 ft (KB) (TVD)

1959.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 6.00 ft

Serial #: 8369

Outside

Press@RunDepth: 264.80 psig @ 4305.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.21

End Date: 2011.02.22

Last Calib.: 2011.02.22

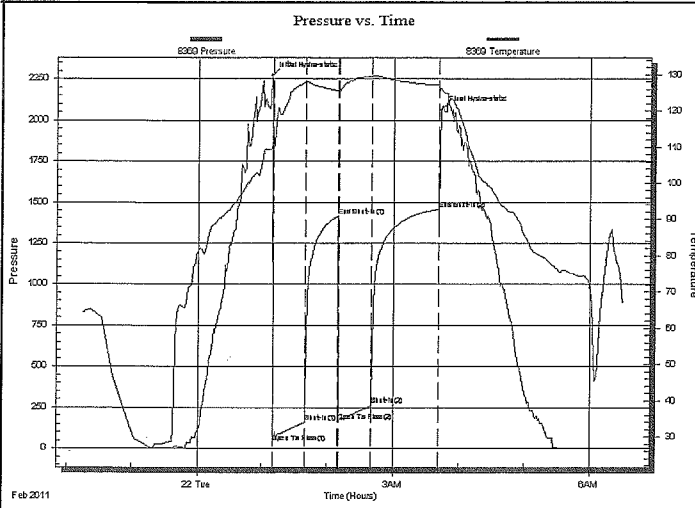
Start Time: 22:15:11

End Time: 06:30:35

Time On Btm: 2011.02.22 @ 01:08:36

Time Off Btm: 2011.02.22 @ 03:43:36

TEST COMMENT: IF-BOB in 20min  
ISI-Very weak surface blow died in 16min  
FF-BOB in 13min  
FSI-No blow



## PRESSURE SUMMARY

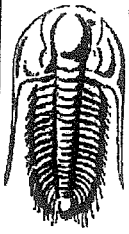
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2269.34	109.67	Initial Hydro-static
2	38.99	109.59	Open To Flow (1)
32	161.60	127.74	Shut-In(1)
61	1414.60	125.49	End Shut-In(1)
62	169.52	125.11	Open To Flow (2)
92	264.80	129.45	Shut-In(2)
153	1456.15	127.11	End Shut-In(2)
155	2060.07	126.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
365.00	SMCW 10%M 90%W	4.03
180.00	MCW 60%W 40%M	2.52

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Knighton Oil Co Inc.

**Kachelman # 3**

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

**11-25s14 Stafford KS**

Job Ticket: 41924

DST#: 4

ATTN: Dave Montaque

Test Start: 2011.02.21 @ 22:15:06

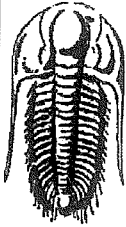
### Tool Information

Drill Pipe:	Length: 4176.00 ft	Diameter: 3.80 inches	Volume: 58.58 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 85000.00 lb
		Total Volume: - bbl		Tool Chased 3.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4304.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	49.00 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			4277.00	
Shut In Tool	5.00			4282.00	
Hydraulic tool	5.00			4287.00	
Jars	5.00			4292.00	
Safety Joint	2.00			4294.00	
Packer	5.00			4299.00	28.00 Bottom Of Top Packer
Packer	5.00			4304.00	
Stubb	1.00			4305.00	
Recorder	0.00	6719	Inside	4305.00	
Recorder	0.00	8369	Outside	4305.00	
Perforations	17.00			4322.00	
Bullnose	3.00			4325.00	21.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>49.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

Knighton Oil Co Inc.

Kachelman # 3

1700 Waterfront Pky. Bldg 100 Ste A  
Wichita Ks. 67206

11-25s14 Stafford KS

Job Ticket: 41924

DST#: 4

ATTN: Dave Montaque

Test Start: 2011.02.21 @ 22:15:06

## 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: 72000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 12.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
365.00	SMCW 10%M 90%W	4.027
180.00	MCW 60%W 40%M	2.525

Total Length: 545.00 ft

Total Volume: 6.552 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

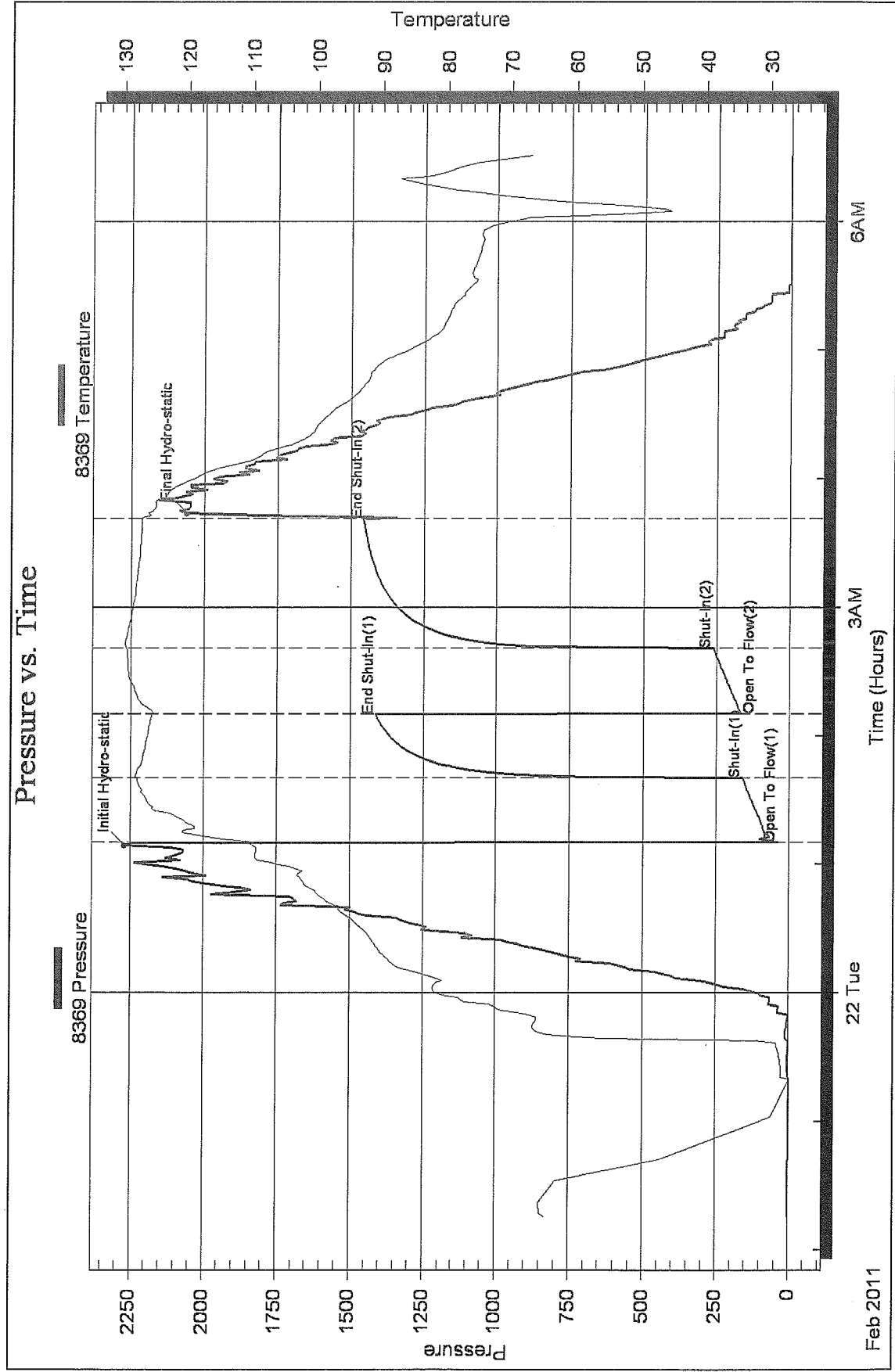
Recovery Comments:

Serial #: 8369

Outside Knighton Oil Co Inc.

11-25s14 Stafford KS

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 41924



PO BOX 31 Russell, KS 67665

# INVOICE

Invoice Number: 126201

Invoice Date: Feb 12, 2011

Page: 1

Voice: (785) 483-3887

Fax: (785) 483-5566

**Bill To:**

Knighton Oil Co., Inc.  
1700 No. Waterfront Parkway  
Building #100 - Suite A  
Wichita, KS 67206

Federal Tax I.D.#: 20-5975804

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Knig	Kachelman #3	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Great Bend	Feb 12, 2011	3/14/11

Quantity	Item	Description	Unit Price	Amount
200.00	MAT	Class A Common	13.50	2,700.00
4.00	MAT	Gel	20.25	81.00
7.00	MAT	Chloride	51.50	360.50
50.00	MAT	Flo Seal	2.45	122.50
200.00	SER	Handling	2.25	450.00
20.00	SER	Mileage 200 sx @.10 per sk per mi	20.00	400.00
1.00	SER	Surface	991.00	991.00
20.00	SER	Pump Truck Mileage	7.00	140.00

*1 DC*  
*KACHELMAN*  
*CEMENT SURFACE*  
*CASING (#3)*

**PAID**  
66315  
2/18/11

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

\$ 1049.00

ONLY IF PAID ON OR BEFORE  
**Mar 9, 2011**

Subtotal	5,245.00
Sales Tax	238.27
Total Invoice Amount	5,483.27
Payment/Credit Applied	
<b>TOTAL</b>	<b>5,483.27</b>

\$ 4434.27

**WELL FILE**



# ALLIED CEMENTING CO., LLC. 040080

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
*Medicine Lodge KS*

DATE <u>02 12 11</u>	SEC. <u>11</u>	TWP. <u>25s</u>	RANGE <u>14w</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Kachelman</u>	WELL # <u>3</u>	LOCATION <u>201 # 50, 3w, South to 3rd</u>	CORNER, 1/4 1/4 N, W/4th	COUNTY <u>Stafford</u>	STATE <u>KS</u>	<u>11:30 PM</u>	
OLD OR NEW (Circle one)							

CONTRACTOR Southwind # OWNER Knighton Oil

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 260

CASING SIZE 8 3/4 DEPTH 250

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 300 MINIMUM

MEAS. LINE SHOE JOINT NA

CEMENT LEFT IN CSG 20'

PERFS. 14k

DISPLACEMENT 0 Bbls Fresh H<sub>2</sub>O

EQUIPMENT

PUMP TRUCK CEMENTER D. Feli

# 366 HELPER B. Roller

BULK TRUCK

# 544-170 DRIVER K. Wreghouse

BULK TRUCK

# DRIVER

CEMENT

AMOUNT ORDERED 400 5x60 ~~400~~ class A + 3/4cc + 2% gel + 1/4 # Flaseul (used 20)

COMMON 200 @ 13.50 2700.00

POZMIX @

GEL 4 @ 20.25 81.00

CHLORIDE 7 @ 51.50 360.50

ASC @

P/O seen 50 @ 2.45 122.50

HANDLING 200 @ 2.25 450.00

MILEAGE 200 x 20 x .10 400.00

TOTAL 4114.00

REMARKS:

Pipe on Bttm, Break Circ, Pump Spacers, Mix 200 5x A 3/2 cement, Start Disp w/ Fresh H<sub>2</sub>O, See increase in PSI, Slow Rate, Stop Pump at 15 Bbls total Disp, Shut in, Cement Did Circ.

CHARGE TO: Knighton oil co., inc.

1700 N' Waterfront Parkway

Building 100 Suite A

CITY Wichita STATE KS ZIP 67206

TOTAL 1131.00

## PLUG & FLOAT EQUIPMENT

DEPTH OF JOB 256

PUMP TRUCK CHARGE 991.00

EXTRA FOOTAGE @

MILEAGE 20 @ 7.00 140.00

MANIFOLD NA @

NONE @

@

@

@

@

@

TOTAL

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

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

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

To Allied Cementing Co., LLC.

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

PRINTED NAME Robert Stevenson

SIGNATURE Robert Stevenson

WELL FILE



PO BOX 31 Russell, KS 67665

# INVOICE

Invoice Number: 126333

Invoice Date: Feb 23, 2011

Page: 1

Voice: (785) 483-3887

Fax: (785) 483-5566

**Bill To:**

Knighton Oil Co., Inc.  
1700 No. Waterfront Parkway  
Building #100 - Suite A  
Wichita, KS 67206

Federal Tax I.D.#: 20-5975804

**PAID**  
00453  
3/14/11

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Knig	Kachelman #3	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Russell	Feb 23, 2011	3/25/11

Quantity	Item	Description	Unit Price	Amount
4.00	MAT	Gel	20.25	81.00
225.00	MAT	ASC Class A	16.70	3,757.50
500.00	MAT	WFR-2	1.10	550.00
225.00	SER	Handling	2.25	506.25
20.00	SER	Mileage 225 sx @.10 per sk per mi	22.50	450.00
1.00	SER	Production String	1,957.00	1,957.00
20.00	SER	Pump truck Mileage	7.00	140.00
1.00	EQP	5.5 Guide Shoe	101.00	101.00
1.00	EQP	5.5 AFU Insert	112.00	112.00
9.00	EQP	5.5 Centralizer	35.00	315.00
1.00	EQP	Basket	161.00	161.00
1.00	EQP	Top Rubber Plug	43.00	43.00

*KACHELMAN  
CEMENT PRODUCTION  
CASING (#3)*

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

\$ 1634.75

ONLY IF PAID ON OR BEFORE

Mar 20, 2011

Subtotal	8,173.75
Sales Tax	373.80
Total Invoice Amount	8,547.55
Payment/Credit Applied	
<b>TOTAL</b>	<b>8,547.55</b>

4 6909.80

**WELL FILE** *mi*



Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



phone: 316-337-6200  
fax: 316-337-6211  
<http://kcc.ks.gov/>

Thomas E. Wright, Chairman  
Ward Loyd, Commissioner

Corporation Commission

Sam Brownback, Governor

April 07, 2011

David D. Montague  
Knighton Oil Company, Inc.  
1700 N WATERFRONT PKY  
BLDG 100 STE A  
WICHITA, KS 67206

Re: ACO1  
API 15-185-23661-00-00  
Kachelman 3  
SE/4 Sec.11-25S-14W  
Stafford County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
David D. Montague