



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1174916  
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: \_\_\_\_\_

1174916

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 <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  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

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: <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> _____
---	--

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	K & N Petroleum, Inc.
Well Name	Panning 6
Doc ID	1174916

All Electric Logs Run

Cement Bond Log
Dual Induction Log
Dual Compensated Porosity Log
Microresistivity Log

Form	ACO1 - Well Completion
Operator	K & N Petroleum, Inc.
Well Name	Panning 6
Doc ID	1174916

Tops

Name	Top	Datum
Anhydrite	510	+1272
Base Anhydrite	535	+1247
Heebner	2902	-1120
Toronto	2918	-1136
Douglas	2937	-1155
Brown Lime	3023	-1241
Lansing	3043	-1261
Base Kansas City	3297	-1515
Conglomerate	3311	-1529
Arbuckle	3324	-1542
RTD	3425	-1643
LTD	3426	-1644



**TREATMENT REPORT**

Acid Stage No. \_\_\_\_\_

Date 12/2/2013 District G.B. F.O. No. C41991  
 Company K&N Petroleum  
 Well Name & No. Panning #6  
 Location \_\_\_\_\_ Field \_\_\_\_\_  
 County Barton State KS

Type Treatment: Amt. Type Fluid Sand Size Pounds of Sand  
 Bkdown \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 Flush \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_

Treated from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. No. ft. 0  
 from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. No. ft. 0  
 from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. No. ft. 0

Actual Volume of Oil / Water to Load Hole: \_\_\_\_\_ Bbl./Gal.

Pump Trucks. No. Used: Std. 320 Sp. \_\_\_\_\_ Twin \_\_\_\_\_  
 Auxiliary Equipment 360/310  
 Personnel Nathan, Scott, Joe  
 Auxiliary Tools \_\_\_\_\_

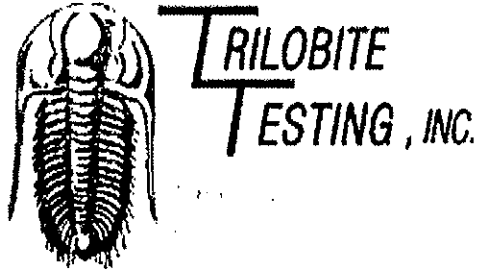
Plugging or Sealing Materials: Type \_\_\_\_\_ Gals. \_\_\_\_\_ lb.

Casing: Size 5.5" Type & Wt. 14.00# Set at \_\_\_\_\_ ft.  
 Formation: \_\_\_\_\_ Perf. \_\_\_\_\_ to \_\_\_\_\_  
 Formation: \_\_\_\_\_ Perf. \_\_\_\_\_ to \_\_\_\_\_  
 Formation: \_\_\_\_\_ Perf. \_\_\_\_\_ to \_\_\_\_\_  
 Liner: Size \_\_\_\_\_ Type & Wt. \_\_\_\_\_ Top at \_\_\_\_\_ ft. Bottom at \_\_\_\_\_ ft.  
 Cemented:  Perforated from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Tubing: Size & Wt. \_\_\_\_\_ Swung at \_\_\_\_\_ ft.  
 Perforated from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Open Hole Size \_\_\_\_\_ T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

Company Representative \_\_\_\_\_ Ed \_\_\_\_\_ Treater \_\_\_\_\_ Nathan W.

TIME	PRESSURES		Total Fluid Pumped	REMARKS
	a.m./p.m.	Tubing		
2:30		5.5"		On Location. Laying down drill pipe.
				Hole-3425'
				Centralizers-1,2,3,7,9
				Pipe-3407'
				Basket- 2,4
				KB-8'
				Pipe set at 3415'
				Baffle-3403'
				Break circulation with mud pump. Circulate for 45 minutes.
				Pump 600gal mud flush.
				Plug Rat hole with 30sk. 60/40poz
				Tie on 5.5" and mix 200sk. 60/40poz. 2%gel 18%salt 3/4% C-37
				3/4% C-41p 5#/sk. Gilsonite
				Displace with 83.3bbls at 6.25bpm-900# Plug landed at 1500#
9:00				Released pressure. Float held.
				Thank You!
				Nathan W.



## DRILL STEM TEST REPORT

Prepared For: **K&N Petroleum Inc**

1105 Walnut  
Great Bend KS 67530

ATTN: Ed Nemnich/Jim Musgr

### **Panning #6**

#### **23-19s-11w Barton,KS**

Start Date: 2013.11.29 @ 18:45:31

End Date: 2013.11.30 @ 01:00:10

Job Ticket #: 55453                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.12.04 @ 10:42:53

K&N Petroleum Inc 23-19s-11w Barton,KS Panning #6 DST # 1 LKC 2013.11.29



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

K&N Petroleum Inc  
1105 Walnut  
Great Bend KS 67530

**23-19s-11w Barton,KS**  
**Panning #6**  
Job Ticket: 55453      **DST#: 1**  
Test Start: 2013.11.29 @ 18:45:31

ATTN: Ed Nemnich/Jim Musgr

## GENERAL INFORMATION:

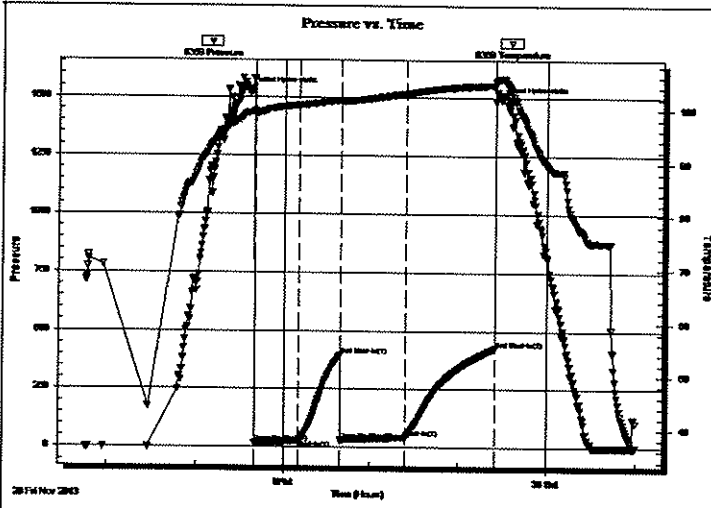
Formation: **LKC**  
 Deviated: No      Whipstock:      ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 20:39:41      Tester: Ray Schwager  
 Time Test Ended: 01:00:10      Unit No: 70  
 Interval: **3166.00 ft (KB) To 3250.00 ft (KB) (TVD)**      Reference Elevations: 1781.00 ft (KB)  
 Total Depth: 3250.00 ft (KB) (TVD)      1774.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair      KB to GR/CF: 7.00 ft

## Serial #: 8369

Inside

Press@RunDepth: 43.70 psig @ 3168.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.11.29      End Date: 2013.11.30      Last Calib.: 2013.11.30  
 Start Time: 18:45:31      End Time: 01:00:10      Time On Btm: 2013.11.29 @ 20:36:26  
 Time Off Btm: 2013.11.29 @ 23:28:40

TEST COMMENT: 30-IFP-w k bl thru-out 1/2" to 3 1/4" bl  
 30-ISIP-no bl  
 45-FFP-w k bl thru-out 1/4" to 3" bl  
 60-FSIP-no bl



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1522.34	99.41	Initial Hydro-static
4	16.66	99.02	Open To Flow (1)
34	28.57	100.77	Shut-In(1)
63	396.41	101.70	End Shut-In(1)
63	30.70	101.55	Open To Flow (2)
108	43.70	103.04	Shut-In(2)
169	426.25	104.65	End Shut-In(2)
173	1488.99	105.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	186'GIP	0.00
60.00	SO&GCM 5%G1%O94%M	0.84

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

K&N Petroleum Inc

23-19s-11w Barton,KS

1105 Walnut  
Great Bend KS 67530

**Panning #6**

Job Ticket: 55453

DST#: 1

ATTN: Ed Nemnich/Jim Musgr

Test Start: 2013.11.29 @ 18:45:31

## Mud and Cushion Information

Mud Type:	Gol Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbf		
Water Loss:	7.18 in <sup>3</sup>	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	1.00 inches				

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
0.00	186'GIP	0.000
60.00	SO&GCM 5%G1%O94%M	0.842

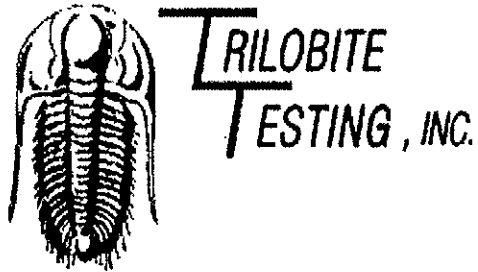
Total Length: 60.00 ft      Total Volume: 0.842 bbf

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **K&N Petroleum Inc**

1105 Walnut  
Great Bend KS 67530

ATTN: Ed Nernich/Jim Musgr

### **Panning #6**

#### **23-19s-11w Barton,KS**

Start Date: 2013.11.30 @ 13:50:16

End Date: 2013.11.30 @ 18:59:40

Job Ticket #: 55454                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.12.04 @ 10:42:18

K&N Petroleum Inc

23-19s-11w Barton,KS

Panning #6

DST # 2

Arbuckle

2013.11.30



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

K&N Petroleum Inc  
1105 Walnut  
Great Bend KS 67530  
ATTN: Ed Neundorfer/rocklog

**23-19s-11w Barton,KS**  
**Panning #6**  
Job Ticket: 55454      DST#: 2  
Test Start: 2013.11.30 @ 13:50:16

**GENERAL INFORMATION:**

Location: **Arbuckle**  
Whipstock: **No**      H (KB)  
Time Test Started: **15:23:56**  
Time Test Ended: **18:59:40**

Test Type: **Conventional Bottom Hole (Reset)**  
Tester: **Ray Schwager**  
Unit No: **70**

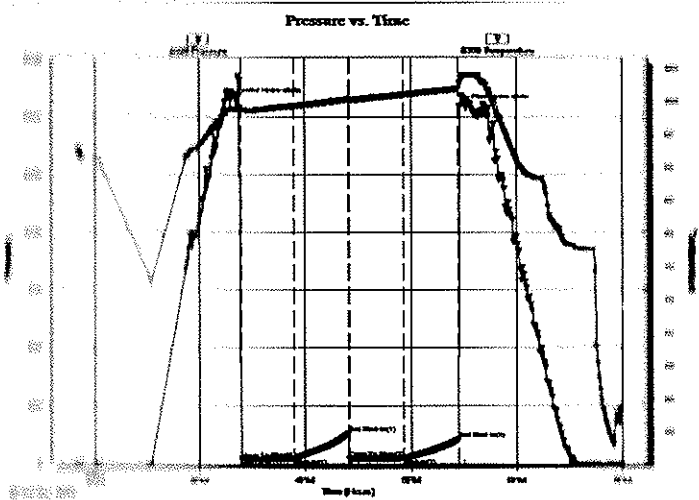
Interval: **3276.00 ft (KB) To 3336.00 ft (KB) (TVI)**  
True Depth: **3336.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **1781.00 ft (KB)**  
**1774.00 ft (CF)**  
KB to GR/CF: **7.00 ft**

Serial #: **0369**      **Inside**  
Pressure Depth: **22.96 psig @ 3280.00 ft (KB)**  
Start Time: **2013.11.30**      End Date: **2013.11.30**  
Start Time: **13:50:16**      End Time: **18:59:40**

Capacity: **8000.00 psig**  
Last Calib.: **2013.11.30**  
Time On Btm: **2013.11.30 @ 15:21:26**  
Time Off Btm: **2013.11.30 @ 17:31:11**

TEST COMMENTS: **30-IFP-w k bl thru-out 1/2" to 1" bl**  
**30-ISIP-no bl**  
**30-FFP-w k bl thru-out 1/2" to 1" bl**  
**30-FSIP-no bl**



**PRESSURE SUMMARY**

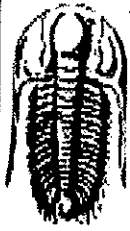
Time (Min)	Pressure (psig)	Temp (deg F)	Annotation
0	1572.29	98.96	Initial Hydro-static
19	18.28	98.76	Open To Flow (1)
33	22.21	99.38	Shut-In(1)
64	129.04	100.39	End Shut-In(1)
64	19.63	100.34	Open To Flow (2)
94	22.96	101.11	Shut-In(2)
176	101.15	102.03	End Shut-In(2)
180	1539.13	104.09	Final Hydro-static

**Recovery**

Description	Volume (ft³)
00%N2	0.00
00%O2M 5%G5%O90%M	0.28

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

K&N Petroleum Inc

23-19s-11w Barton,KS

1105 Walnut  
Great Bend KS 67530

**Panning #6**

Job Ticket: 55454

**DST#: 2**

ATTN: Ed Nemnich/Jim Musgr

Test Start: 2013.11.30 @ 13:50:16

## 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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	60'GIP	0.000
20.00	O&GCM 5%G5%O90%M	0.281

Total Length: 20.00 ft      Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 2

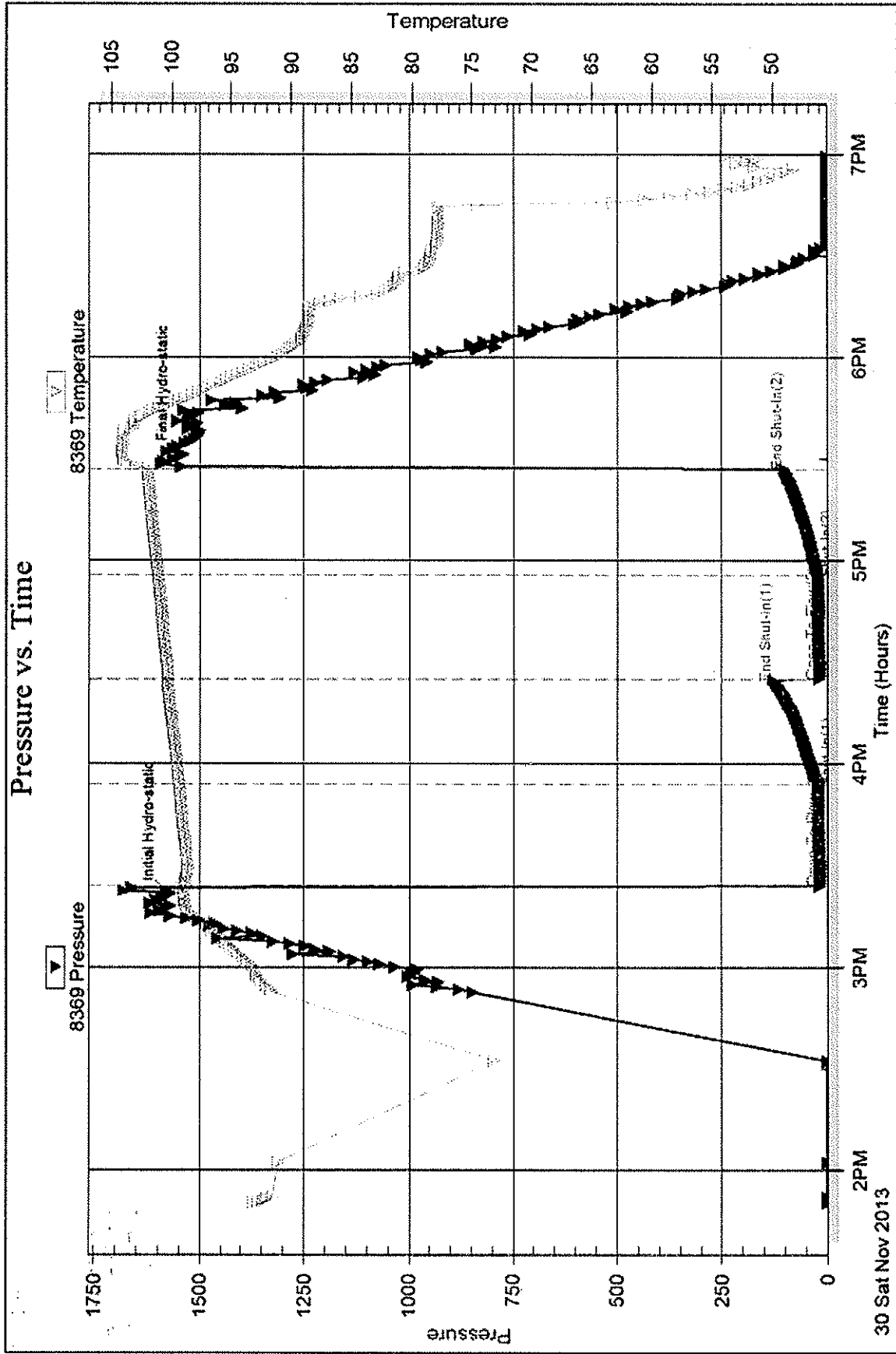
Panning #6

K&N Petroleum Inc

Inside

Serial #: 8369

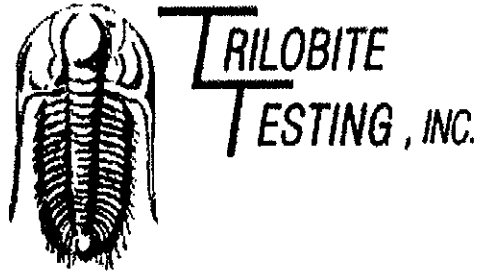
### Pressure vs. Time



Printed: 2013.12.04 @ 10:42:21

Ref. No: 55454

Triobite Testing, Inc



## DRILL STEM TEST REPORT

Prepared For: **K&N Petroleum Inc**

1105 Walnut  
Great Bend KS 67530

ATTN: Ed Nernich/Jim Musgr

### **Panning #6**

#### **23-19s-11w Barton,KS**

Start Date: 2013.11.30 @ 23:41:14

End Date: 2013.12.01 @ 06:57:44

Job Ticket #: 55455                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.12.04 @ 10:10:36

K&N Petroleum Inc

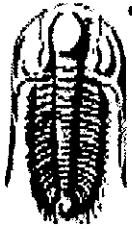
23-19s-11w Barton,KS

Panning #6

DST # 3

Arbuckle

2013.11.30



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

K&N Petroleum Inc  
 1105 Walnut  
 Great Bend KS 67530  
 ATTN: Ed Nemnich/Jim Musgr

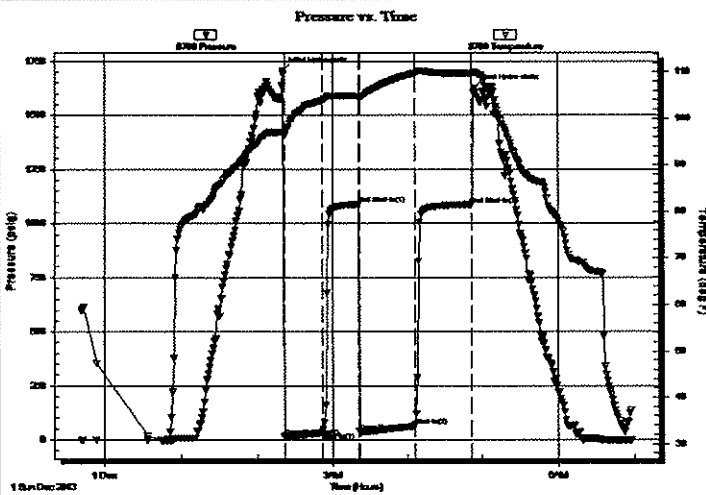
**23-19s-11w Barton,KS**  
**Panning #6**  
 Job Ticket: 55455      **DST#: 3**  
 Test Start: 2013.11.30 @ 23:41:14

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:20:59  
 Time Test Ended: 06:57:44  
 Interval: **3334.00 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: Tim Phillips  
 Unit No: 70  
 Reference Elevations: 1781.00 ft (KB)  
 1774.00 ft (CF)  
 KB to GRVCF: 7.00 ft

**Serial #: 8700**      **Outside**  
 Press@RunDepth: 62.16 psig @ 3336.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.11.30      End Date: 2013.12.01      Last Calib.: 2013.12.01  
 Start Time: 23:41:19      End Time: 06:57:43      Time On Btm: 2013.12.01 @ 02:19:44  
 Time Off Btm: 2013.12.01 @ 04:53:44

TEST COMMENT: IFP-30-BOB in 13 min  
 ISI-30-Built to 1/4" died back  
 FF-45-BOB in 9 min  
 FSI-45-Built to 1 1/2" died back to 1/4"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1705.49	97.11	Initial Hydro-static
2	15.20	96.39	Open To Flow (1)
32	35.36	103.95	Shut-In(1)
61	1088.31	104.99	End Shut-In(1)
62	38.05	104.64	Open To Flow (2)
106	62.16	109.83	Shut-In(2)
152	1086.74	109.77	End Shut-In(2)
154	1625.38	109.95	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
130.00	GO 10% gas, 90% Oil	1.82
0.00	630' of GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

K&N Petroleum Inc

23-19s-11w Barton,KS

1105 Walnut  
Great Bend KS 67530

Panning #6

Job Ticket: 55455

DST#: 3

ATTN: Ed Nemnich/Jim Musgr

Test Start: 2013.11.30 @ 23:41:14

## 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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
130.00	GO 10% gas, 90% Oil	1.824
0.00	630' of GIP	0.000

Total Length: 130.00 ft      Total Volume: 1.824 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

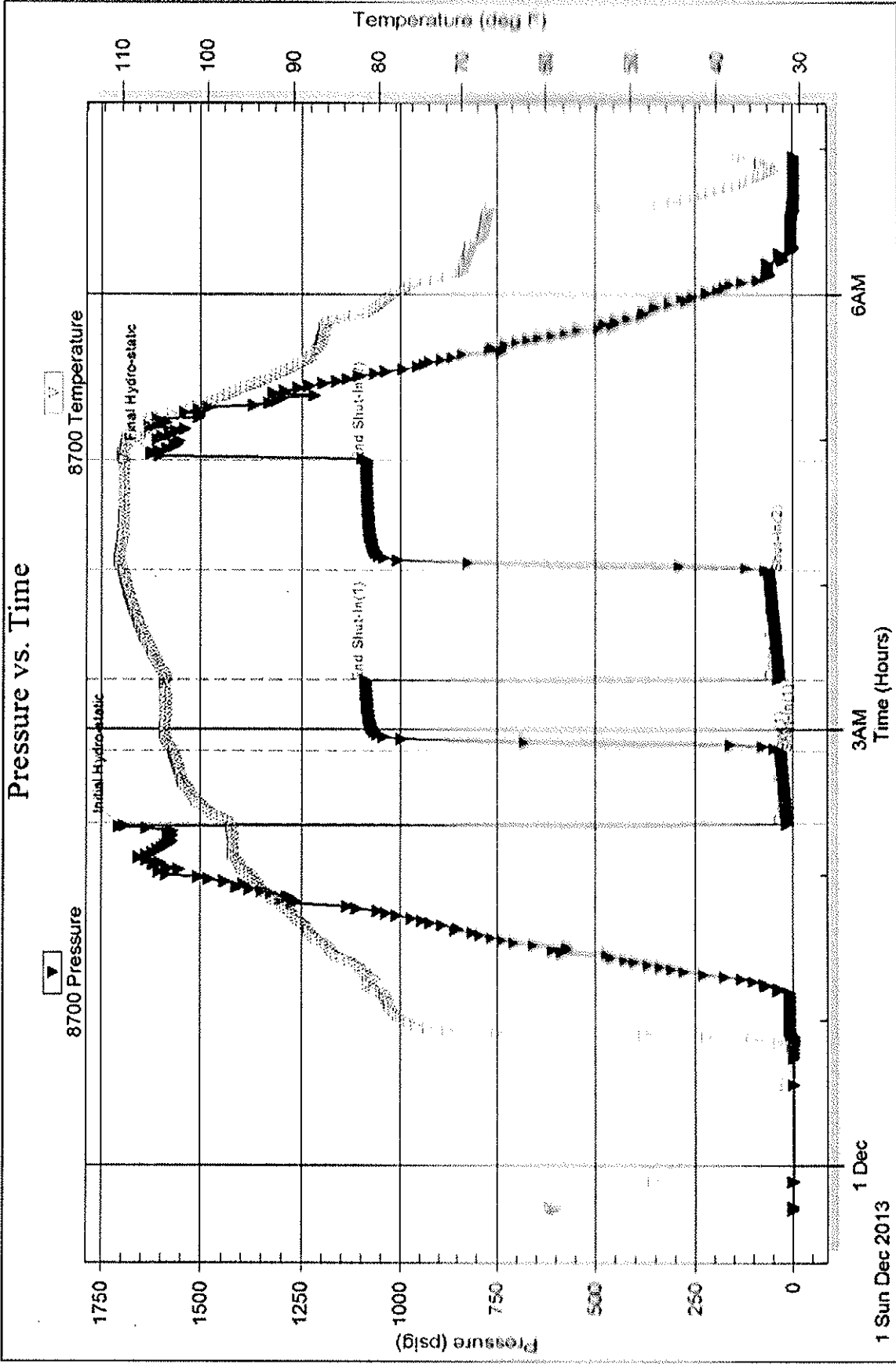
Serial #: 8700

Outside K&N Petroleum Inc

Panning #6

DST Test Number: 3

### Pressure vs. Time



Tribotek Testing, Inc

Ref. No: 55455

Printed: 2013.12.04 @ 10:10:39

**MORNING DRILLING REPORT**  
For: K&N Petroleum, Inc.

**SOUTHWIND DRILLING, INC.**  
RIG No. 6

Well Name: Panning #6  
Location: 1950' FNL & 330'FEE  
Section: 23-19S-11W  
County: Barton  
API: 15-009-25900-00-00

Elevation GL: 1774'  
KB: 1782'  
Est. TD: 3500'  
Conductor: N/A

Rig No. 6 (Pusher Wes Pfaff) 620 566-7094  
Rig No. 6 (Doghouse) 620 566-7156  
Southwind Drilling Office 620 564-3800



Rotary Total Depth: 3425'  
Log Total Depth: 3425'

Geologist: Jim Musgrove

Production Info: Ran 9 joints of new 2 3/8" casing, 8 5/8" casing, Tally @ 372', Set @ 382', used 300 sacks of 60/40 Poz, 2% gel, 3% cc, cement circulated, by Copeland (Ticket #41959), plug down @ 2:00 am on 11.26.13.  
Ran 84 joints of new 1 1/2" casing, Tally @ 3415', Set @ 3415', used 200 sacks of 60/40 Poz, 2% gel, 3% cc, cement circulated, by Copeland (Ticket #41991), job complete @ 9:00 am on 12.02.13.

**7:00 A.M. Depth: 3425'**

**7:00 A.M. Current Operation: TEAR DOWN**

Spud Date & Time:	11/25/13	11/26/13	11/27/13	11/28/13	11/29/13	11/30/13	12/01/13	12/02/13	Total
11/25/2013 @ 6:00 PM	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	
Total Depth (7:00am)	0	382	1690	2610	3124	3300	3346	3425	
Daily Progress	382	1308	920	514	176	46	79	0	3425
Ft. Per Hr.	127.33	81.75	46.58	26.70	20.11	30.67	28.73	0.00	48.24
Current Operation (7:00am)	Rig Up	WOC	Drilling	Drilling	CFS	Drilling	TOWT	Run Casing	
Formation	Surface	Surface	Sand / Shale	Shale	Lansing / KC	Kansas City	Arbuckle	Arbuckle	
Fuel Used	177.93	290.86	374.03	386.05	316.48	274.68	181.90	45.08	2046.99
Survey (degree & depth)	1/4" @ 382'				1" @ 3250'			1 1/2" @ 3425'	

Mud Info									
Mud Cost	\$0.00	\$0.00	\$0.00	\$5,872.95	\$0.00	\$0.00	\$415.90	\$0.00	\$6,288.85
Weight (# / Gal)	9.6	9.6	9.8	9.2	9.1	9.4	9.0		
Vis (Funnel)	40	28	29	51	54	48	58		
Water Loss (cc)				8.0	7.2	8.8			

Bit #1	JZ Tooth Retip								
Bit Make / Type	JZ Tooth Retip								
Bit Size	12 1/4								
Bit Hours	3.00								3.00
Bit #2	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	
Bit Make / Type	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	JZ HA20Q	
Bit Size	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	
Bit Hours	16.00	19.75	19.25	8.75	1.50	2.75		0.00	68.00
Bit Cumulative Hours	3.00	16.00	19.75	19.25	8.75	1.50	2.75	0.00	71.00
Weight on Bit (WOB)	20,000	32,000	35,000	35,000	35,000	35,000	35,000	35,000	
RPM	100	90	80	80	80	75	75		
Pump Pressure	450	800	800	850	800	800	800		
Drilling (Rotating) Hours	3.00	16.00	19.75	19.25	8.75	1.50	2.75	0.00	71.00

Daywork Hrs. (Operator's time)										
Rat Hole (>75 Hrs)										0.00
Wait on Cement	5.00	3.00								8.00
Tip				7.00	9.75					21.25
Circulate				3.25	3.75	6.75				17.25
Tool				1.00	1.50					2.75
Testing				2.75	4.50					7.25
Clean Floor							0.25			0.25
Logging							5.00			5.00
LDDP & LDDC							4.00			4.00
Run Casing / Cement	2.00						1.25	2.00		5.25
Nipple Down / Jet Cellar							1.00	0.50		1.50
Set Slips								0.50		0.50
Billable Hours	7.00	3.00	0.00	3.25	14.50	22.50	19.75	3.00		73.00
Non-Billable Hours (Southwind's time)										
Rig Up / Rig Down	10.50									13.00
Wait on Cement (if NC)										0.00
Drill Rat Hole (<75 hrs)	0.50									0.50
Drill Plug		0.50								0.50
Circulate / Trip (Surface)	1.00									1.00
Rig Repair		0.75	0.25							1.00
Connections	1.50	3.25	2.50	1.50	0.75					9.50
Jet/Displace	0.25	0.50	1.50							2.75
Surveys	0.25									0.50
Rig Check										0.00
Trip Time (NB)										0.00
Lost Circulation (< 2 hrs)										0.00
Lay Down Kelly / RH										0.75
Non-Billable Hrs.	14.00	5.00	4.25	1.50	0.75	0.00	1.50	13.00		40.00

Footage Cost									
	\$ 5,348.00	\$ 18,312.00	\$ 12,880.00	\$ 7,196.00	\$ 2,464.00	\$ 644.00	\$ 994.00	\$ -	\$ 47,838.00
Daywork Cost	\$ 2,450.00	\$ 1,050.00	\$ -	\$ 1,137.50	\$ 5,075.00	\$ 7,875.00	\$ 6,912.50	\$ 1,050.00	\$ 25,550.00
Combined Est. Cost*	\$ 7,798.00	\$ 19,362.00	\$ 12,880.00	\$ 8,333.50	\$ 7,539.00	\$ 8,519.00	\$ 7,906.50	\$ 1,050.00	\$ 73,388.00

\*Please note that this is estimated footage & daywork cost only. Additional charges will apply on invoice (fuel surcharge, water transfer pump, etc)

DST #1 Info -	DST #2 Info -
Footage Interval: 3166' - 3250' "Kansas City"	Footage Interval: 3276' - 3336' "Arbuckle"
Recovery: 186' Gas in Pipe 62' Oil Cut Mud	Recovery: 60' Gas in Pipe 20' Oil Cut Mud

DST #3 Info -	DST #4 Info -
Footage Interval: 3334' - 3346' "Arbuckle"	Footage Interval:
Recovery: 630' Gas in Pipe 150' Clean Oil	Recovery:

Displaced @ 2519' - 2582'

Anhydrite @