

**CONFIDENTIAL**

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1  
June 2009

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

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

*ORIGINAL 9/8/13*

OPERATOR: License # 4767  
Name: Ritchie Exploration, Inc.  
Address 1: P.O. Box 783188  
Address 2: \_\_\_\_\_  
City: Wichita State: KS Zip: 67278 + 3188  
Contact Person: Peter Fiorini  
Phone: ( 316 ) 691-9500  
CONTRACTOR: License # 30606  
Name: Murfin Drilling Co., Inc.  
Wellsite Geologist: Kim Shoemaker  
Purchaser: \_\_\_\_\_

API No. 15 - 063-21914-00-00  
Spot Description: 10' S & 120' E  
W/2\_SW\_ \_\_\_\_\_ Sec. 5 Twp. 14 S. R. 31  East  West  
1,310 Feet from  North /  South Line of Section  
780 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW

County: Gove  
Lease Name: Steckel 5C Well #: 1  
Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_  
Elevation: Ground: 2954 Kelly Bushing: 2964

Total Depth: 4750 Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at: 210 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.

Designate Type of Completion:  
 New Well  Re-Entry  Workover  
 Oil  WSW  SWD  SLOW  
 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 #: \_\_\_\_\_

5/20/11 5/31/11 5/31/11  
Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

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**Drilling Fluid Management Plan**  
(Data must be collected from the Reserve Pit)  
Chloride content: 10000 ppm Fluid volume: 900 bbls  
Dewatering method used: evaporation  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Permit #: SEP 08 2013

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**INSTRUCTIONS:** An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

**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.  
Signature: \_\_\_\_\_  
Title: Development/Production Geologist Date: 9/8/11

**KCC Office Use ONLY**  
 Letter of Confidentiality Received  
Date: 9/8/11 - 9/8/13  
 Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: NY Date: 9-21-11

Operator Name: Ritchie Exploration, Inc. Lease Name: Steckel 5C Well #: 1  
 Sec. 5 Twp. 14 S. R. 31  East  West County: Gove

**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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run: <b>Dual Induction Log</b> <b>Compensated Density/Neutron Log</b>	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample Name Top Datum  SEE ATTACHED
---	--

CASING RECORD <input checked="" 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
Surface	12-1/4	8-5/8	23	210	common	175	3% cc, 2% gel

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth
		<b>RECEIVED</b> <b>SEP 08 2011</b> <b>KCC WICHITA</b>	

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	
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 (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) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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**#1 Steckel 5C**

1310' FSL & 780' FWL

10' S & 120' E of W/2 SW Section 5-14S-31W

Gove County, Kansas

API# 15-063-21914-0000

Elevation: 2954' GL: 2964' KB

<u>Sample Tops</u>			<u>Ref. Well</u>
Anhydrite	2445'	+519	+2
B/Anhydrite	2466'	+498	+3
Heebner	3968'	-1004	flat
Lansing	4008'	-1044	+2
LKC "E"	4084'	-1120	+4
Muncie Shale	4159'	-1195	+5
LKC "H"	4173'	-1209	+6
LCK "J"	4227'	-1263	+2
Stark Shale	4250'	-1286	flat
BKC	4336'	-1372	+1
Altamont	4379'	-1415	flat
Myrick	4490'	-1526	flat
Cherokee Shale	4536'	-1572	-1
Johnson	4579'	-1615	flat
B/Johnson	4604'	-1640	-1
Mississippian	4638'	-1674	-5
RTD	4750'	-1786	

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SEP 08 2013

**KCC**

# ALLIED CEMENTING CO., LLC. 043365

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

SERVICE POINT:  
Daklax KS

DATE <u>5-31-11</u>	SEC <u>5</u>	TWP <u>14</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION	JOB START <u>7:30pm</u>	JOB FINISH <u>8:30pm</u>
LEASE <u>Steelcat 32</u>	WELL # <u>1</u>	LOCATION <u>Daklax KS 115 3E 6748</u>			COUNTY <u>Gove</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)				<u>Emto</u>			

CONTRACTOR Murfin #14

TYPE OF JOB PFA

HOLE SIZE 7 7/8 T.D. 4250'

CASING SIZE 8 5/8 DEPTH 2145'

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 DEPTH 2455'

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT 3562

EQUIPMENT

PUMP TRUCK CEMENTER Lakene

# 431 HELPER Darren

BULK TRUCK

# 396 DRIVER Terry

BULK TRUCK

# DRIVER

OWNER Salve

CEMENT

AMOUNT ORDERED 220 SKS 6940 (220) 1/4" # 16 seal

COMMON 132 SKS @ 16.25 2145.00

POZMIX 85 SKS @ 8.50 722.50

GEL 7 SKS @ 24.25 169.75

CHLORIDE @

ASC @

HANDLING 227 SKS @ 2.25 510.75

MILEAGE 114 SK/mile 524.37

TOTAL 4076.87

REMARKS:

Mix 25 SKS at 2455' Displace 3 water

3262 mud. Mix 100 SKS at 1480'

Displace 7.636 water mix 40 SKS at

260', mix 10 SKS in top of hole 40'

Mix 20 SKS in mousehole mix 30 SKS

in cat hole.

Thank you

CHARGE TO: Ritchie

STREET

CITY STATE ZIP

SERVICE

DEPTH OF JOB 2455'

PUMP TRUCK CHARGE 1250.00

EXTRA FOOTAGE @

MILEAGE 21 X 2 @ 7.00 294.00

MANIFOLD @

Light vehicle mileage @ 4.00 168.00

TOTAL 1712.00

PLUG & FLOAT EQUIPMENT

1-8 5/8 wooden Plug @ 92.00

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SEP 08 2011 @

TOTAL 92.00

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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.

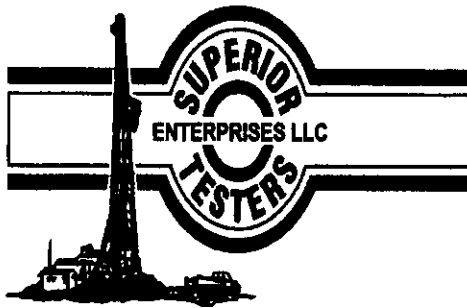
PRINTED NAME Clayton Flint

SIGNATURE

CONFIDENTIAL  
SEP 08 2013  
KCC

RF





## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188

ATTN: Kim Shoemaker

**5/14s/31w Gove Co**

**#1 Steckel 5C**

Start Date: 2011.05.25 @ 02:31:00

End Date: 2011.05.25 @ 10:16:30

Job Ticket #: 16538                      DST #: 1

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

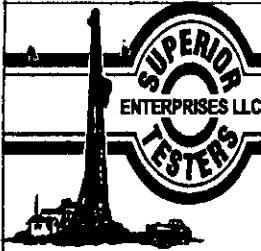
Printed: 2011.05.31 @ 11:07:28

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**KCC**

Ritchie Exploration Inc #1 Steckel 5C 5/14s/31w Gove Co DST #1 Lansing "E" Zone 2011.05.25



# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

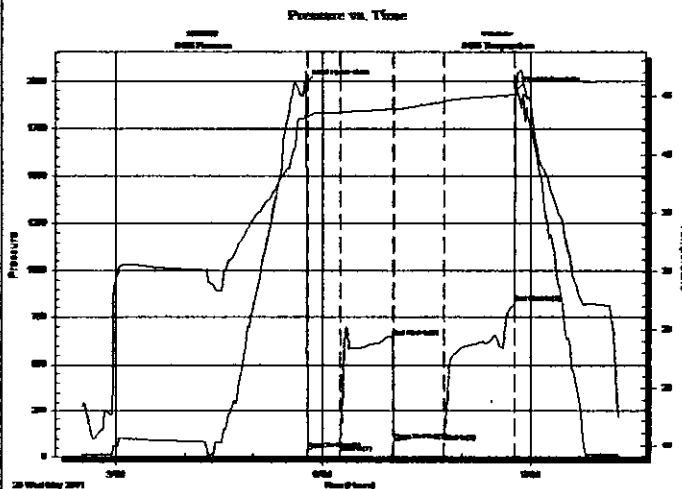
**#1 Steckel 5C**  
**5/14s/31w Gove Co**  
 Job Ticket: 16538      DST#: 1  
 Test Start: 2011.05.25 @ 02:31:00

## GENERAL INFORMATION:

Formation: **Lansing "E" Zone**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 05:46:30  
 Time Test Ended: 10:16:30  
 Interval: **4080.00 ft (KB) To 4100.00 ft (KB) (TVD)**  
 Total Depth: **4100.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney/Dylan  
 Unit No: 3345/Great Bend/330  
 Reference Elevations: 2964.00 ft (KB)  
 2954.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8405**      **Inside**  
 Press@RunDepth: 128.80 psia @ 4096.00 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2011.05.25      End Date: 2011.05.25      Last Calib.: 2011.05.25  
 Start Time: 02:31:01      End Time: 10:16:30      Time On Btm: 2011.05.25 @ 05:45:00  
 Time Off Btm: 2011.05.25 @ 08:47:30

**TEST COMMENT:** 1ST Opening 30 Minutes very weak blow/blow built to 3.50 inches into bucket of water  
 1ST Shut in 45 Minutes no blow back  
 2ND Opening 45 Minutes weak blow/blow built to 3 inches into bucket of water  
 2ND Shut in 60 Minutes no blow back



## PRESSURE SUMMARY

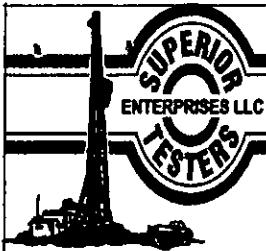
Time (Min.)	Pressure (psia)	Temp (deg C)	Annotation
0	1987.61	43.38	Initial Hydro-static
2	44.35	43.22	Open To Flow (1)
31	71.28	43.49	Shut-in(1)
76	647.02	43.83	End Shut-in(1)
77	90.20	43.77	Open To Flow (2)
120	128.80	44.42	Shut-in(2)
181	827.29	45.08	End Shut-in(2)
183	1953.66	45.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
6.00	Clean Free Oil 100%	0.03
24.00	Lightly Oil cut Watery Mud	0.12
0.00	Oil 10% Water 40% 50% Mud	0.00
190.00	Lightly Oil cut Muddy Water	0.93
0.00	Oil 10% Mud 10% Water 80%	0.00
0.00	Chlorides were 58,000	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

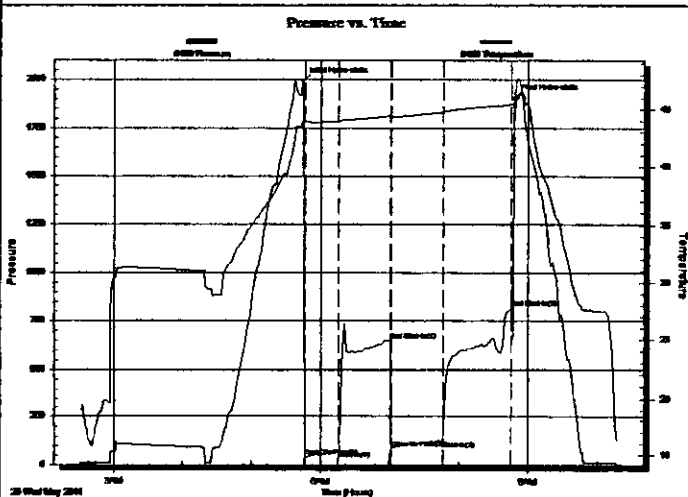
**#1 Steckel 5C**  
**5/14s/31w Gove Co**  
 Job Ticket: 16538      **DST#: 1**  
 Test Start: 2011.05.25 @ 02:31:00

## GENERAL INFORMATION:

Formation: **Lansing "E" Zone**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 05:46:30 Tester: Ken Swinney/Dylan  
 Time Test Ended: 10:16:30 Unit No: 3345/Great Bend/330  
 Interval: **4080.00 ft (KB) To 4100.00 ft (KB) (TVD)** Reference Elevations: 2964.00 ft (KB)  
 Total Depth: 4100.00 ft (KB) (TVD) 2954.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

**Serial #: 8400 Outside**  
 Press@RunDepth: 822.99 psia @ 4097.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.05.25 End Date: 2011.05.25 Last Calib.: 2011.05.25  
 Start Time: 02:31:10 End Time: 10:17:00 Time On Btm: 2011.05.25 @ 05:44:30  
 Time Off Btm: 2011.05.25 @ 08:47:30

**TEST COMMENT:** 1ST Opening 30 Minutes very weak blow /blow built to 3.50 inches into bucket of water  
 1ST Shut in 45 Minutes no blow back  
 2ND Opening 45 Minutes weak blow /blow built to 3 inches into bucket of water  
 2ND Shut in 60 Minutes no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg C)	Annotation
0	1991.66	43.76	Initial Hydro-static
2	42.21	43.87	Open To Flow (1)
32	71.76	43.91	Shut-in(1)
76	648.90	44.39	End Shut-in(1)
77	89.97	44.31	Open To Flow (2)
122	129.43	44.73	Shut-in(2)
181	822.99	45.45	End Shut-in(2)
183	1904.71	45.63	Final Hydro-static

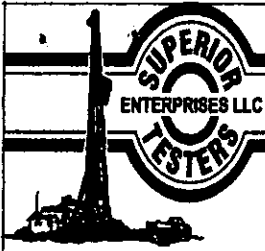
## Recovery

Length (ft)	Description	Volume (bbl)
6.00	Clean Free Oil 100%	0.03
24.00	Lightly Oil cut Watery Mud	0.12
0.00	Oil 10% Water 40% 50% Mud	0.00
190.00	Lightly Oil cut Muddy Water	0.93
0.00	Oil 10% Mud 10% Water 80%	0.00
0.00	Chlorides were 58,000	0.00

## Gas Rates

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





# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

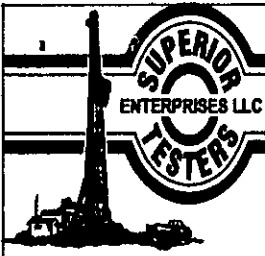
**#1 Steckel 5C**  
**5/14s/31w Gove Co**  
 Job Ticket: 16538      **DST#: 1**  
 Test Start: 2011.05.25 @ 02:31:00

### Tool Information

Drill Pipe:	Length: 3533.00 ft	Diameter: 3.80 inches	Volume: 49.56 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 533.78 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 20000.00 lb
			<b>Total Volume: 52.19 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.78 ft			String Weight: Initial 90000.00 lb
Depth to Top Packer:	4080.00 ft			Final 90000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-in Tool	5.00			4063.00	
Hydraulic Tool	5.00			4068.00	
Safety Joint	2.00			4070.00	
Packer	5.00			4075.00	22.00      Bottom Of Top Packer
Packer	5.00			4080.00	
Perforations	15.00			4095.00	
Recorder	1.00	8405	Inside	4096.00	
Recorder	1.00	8400	Outside	4097.00	
Bull Plug	3.00			4100.00	20.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

#1 Steckel 5C  
 5/14s/31w Gove Co  
 Job Ticket: 16538      DST#: 1  
 Test Start: 2011.05.25 @ 02:31:00

## Mud and Cushion Information

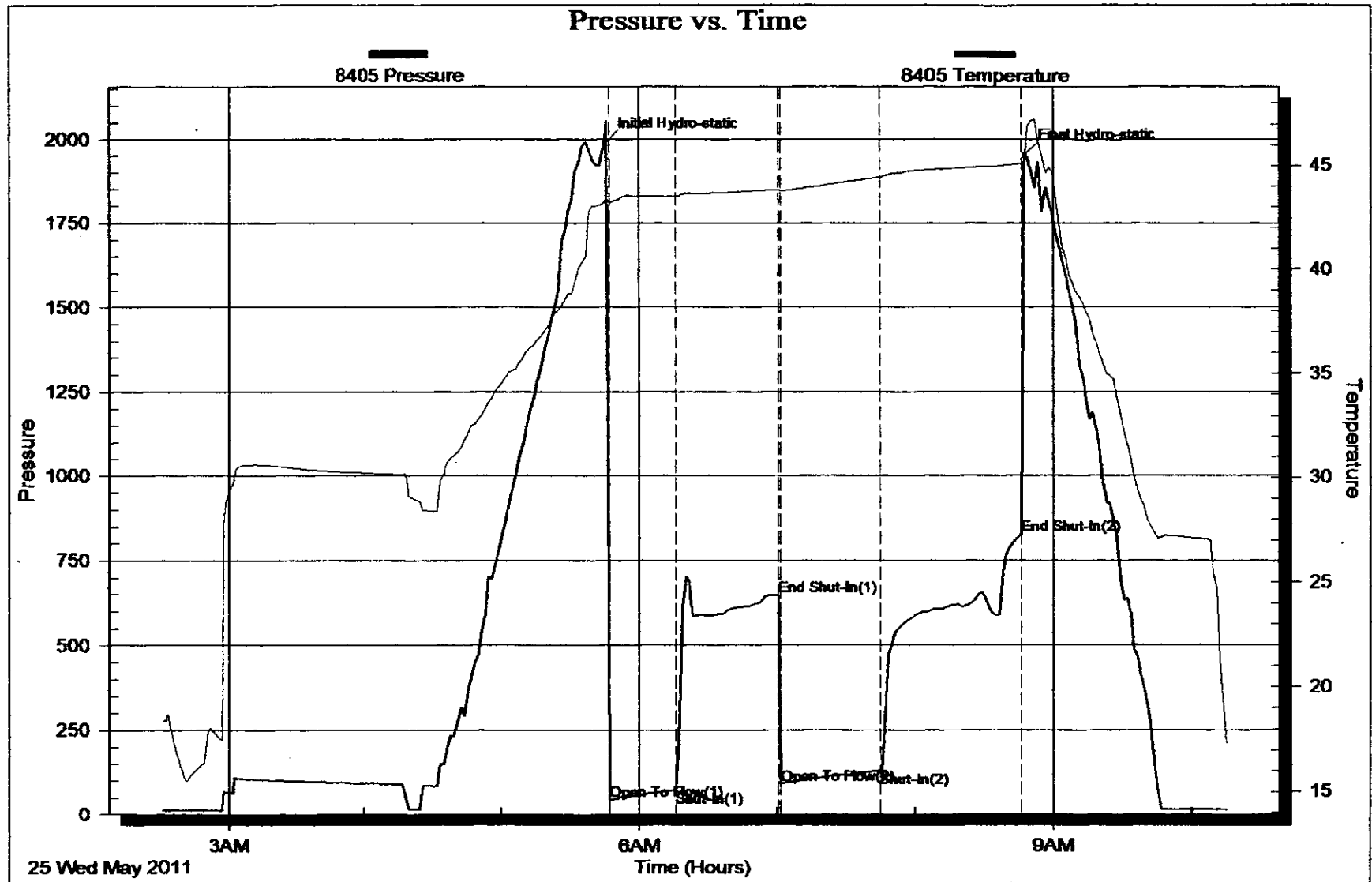
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 68.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.58 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2200.00 ppm			
Filter Cake: 1.00 inches			

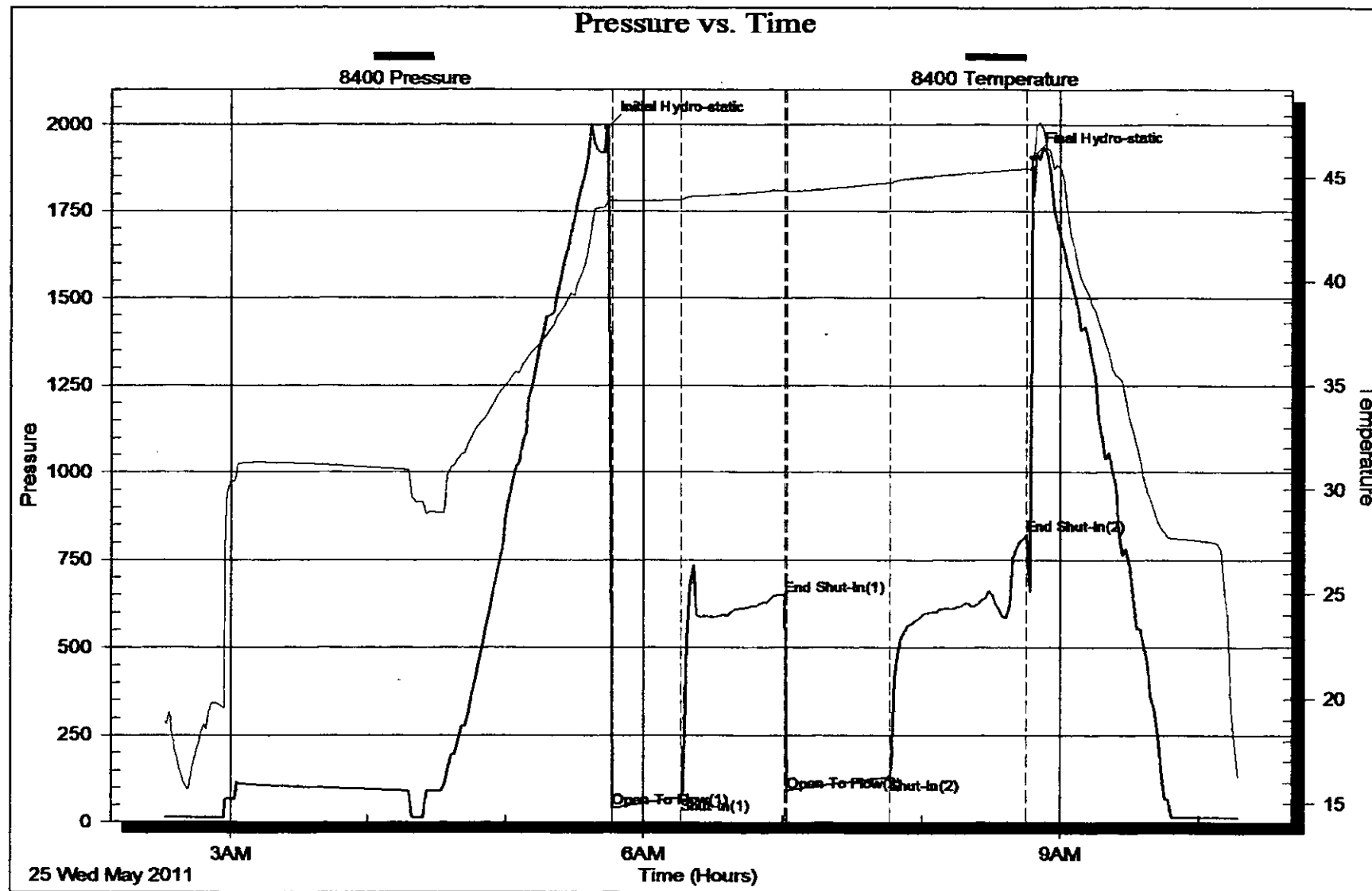
## Recovery Information

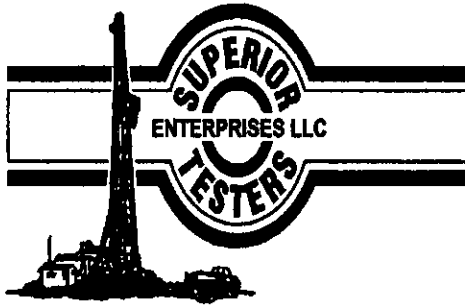
Recovery Table

Length ft	Description	Volume bbl
6.00	Clean Free Oil 100%	0.030
24.00	Lightly Oil cut Watery Mud	0.118
0.00	Oil 10% Water 40% 50% Mud	0.000
190.00	Lightly Oil cut Muddy Water	0.934
0.00	Oil 10% Mud 10% Water 80%	0.000
0.00	Chlorides were 58,000	0.000
0.00	Resistivity was .60 @ 54 degrees	0.000

Total Length: 220.00 ft      Total Volume: 1.082 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Ritche Exploration Inc**

PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188

ATTN: Kim Shoemaker

**5/14s/31w Gove Co**

**#1 Steckel 5C**

Start Date: 2011.05.26 @ 11:25:00

End Date: 2011.05.26 @ 17:03:30

Job Ticket #: 16539                      DST #: 2

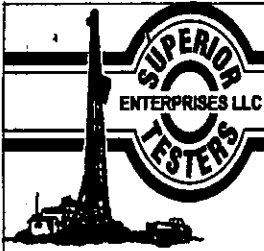
Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.05.31 @ 11:07:16

Ritche Exploration Inc #1 Steckel 5C 5/14s/31w Gove Co DST # 2 Lansing H zone 2011.05.26







# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

#1 Steckel 5C  
 5/14s/31w Gove Co  
 Job Ticket: 16539      DST#: 2  
 Test Start: 2011.05.26 @ 11:25:00

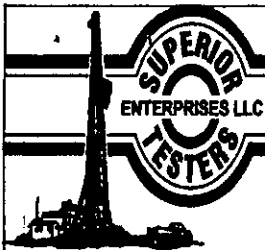
### Tool Information

Drill Pipe:	Length: 3620.00 ft	Diameter: 3.80 inches	Volume: 50.78 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 533.80 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 35000.00 lb
			<b>Total Volume: 53.41 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.80 ft			String Weight: Initial 88000.00 lb
Depth to Top Packer:	4155.00 ft			Final 88000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4138.00	
Hydraulic Tool	5.00			4143.00	
Safety Joint	2.00			4145.00	
Packer	5.00			4150.00	22.00      Bottom Of Top Packer
Packer	5.00			4155.00	
Perforations	35.00			4190.00	
Recorder	1.00	8405	Inside	4191.00	
Recorder	1.00	8400	Outside	4192.00	
Bull Plug	3.00			4195.00	40.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>62.00</b>				





# DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc  
PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188  
ATTN: Kim Shoemaker

#1 Steckel 5C  
5/14s/31w Gove Co  
Job Ticket: 16539      DST#: 2  
Test Start: 2011.05.26 @ 11:25:00

## Mud and Cushion Information

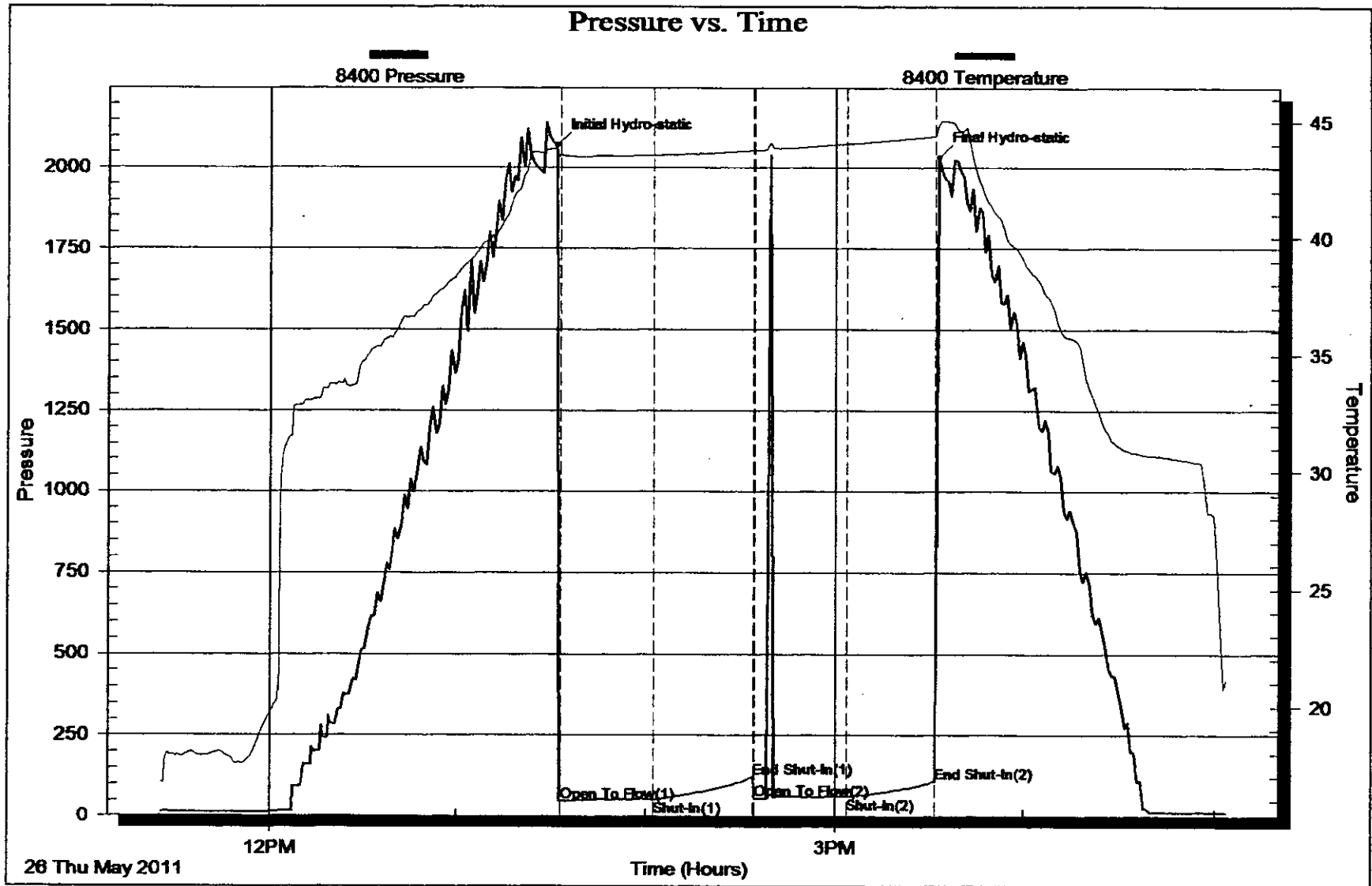
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 68.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2800.00 ppm			
Filter Cake: 1.00 inches			

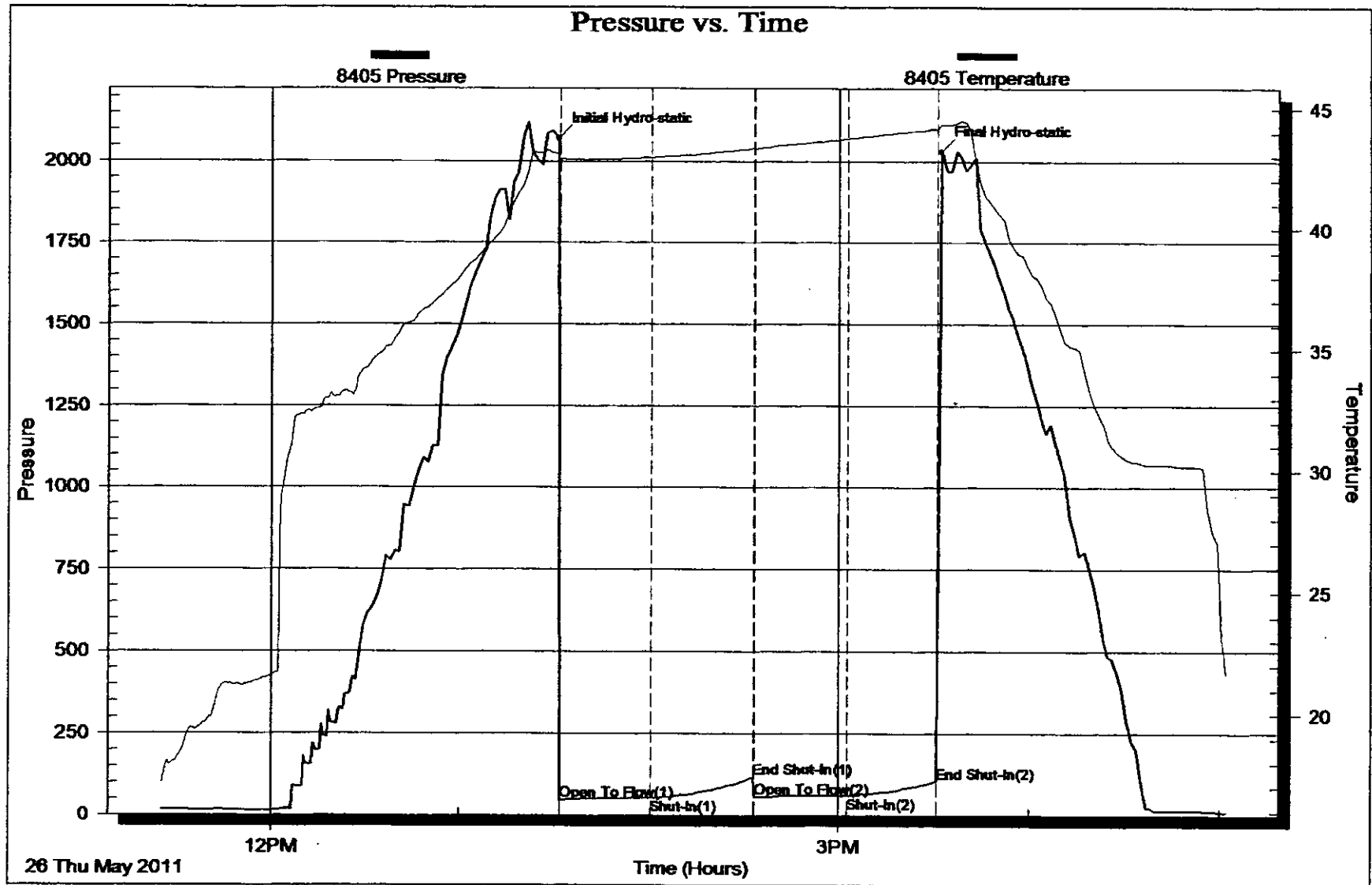
## Recovery Information

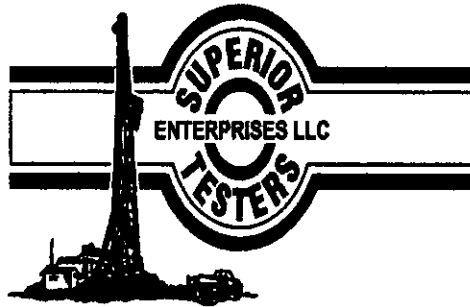
Recovery Table

Length ft	Description	Volume bbl
10.00	Lightly oil spotted mud 2% oil 98% mud	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188

ATTN: Kim Shoemaker

**5/14s/31w Gove Co**

**#1 Steckel 5C**

Start Date: 2011.05.27 @ 02:49:00

End Date: 2011.05.27 @ 08:45:30

Job Ticket #: 16540                      DST #: 3

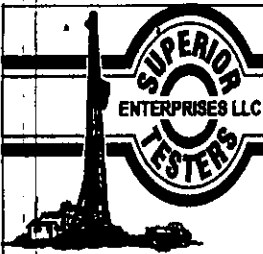
Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.05.31 @ 11:04:16

Ritchie Exploration Inc #1 Steckel 5C 5/14s/31w Gove Co DST # 3 Lansing J zone 2011.05.27







# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

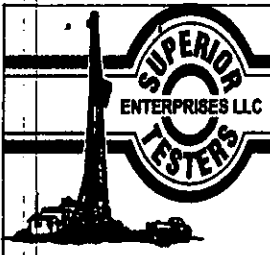
#1 Steckel 5C  
 5/14s/31w Gove Co  
 Job Ticket: 16540      DST#: 3  
 Test Start: 2011.05.27 @ 02:49:00

### Tool Information

Drill Pipe:	Length: 3681.00 ft	Diameter: 3.80 inches	Volume: 51.63 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 533.00 ft	Diameter: 2.25 inches	Volume: 2.62 bbl	Weight to Pull Loose: 35000.00 lb
			<u>Total Volume: 54.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			
Depth to Top Packer:	4216.00 ft			
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut-in Tool	5.00			4199.00	
Hydraulic Tool	5.00			4204.00	
Safety Joint	2.00			4206.00	
Packer	5.00			4211.00	22.00      Bottom Of Top Packer
Packer	5.00			4216.00	
Perforations	19.00			4235.00	
Recorder	1.00	8405	Inside	4236.00	
Recorder	1.00	8400	Outside	4237.00	
Bull Plug	3.00			4240.00	24.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>46.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc  
PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188  
ATTN: Kim Shoemaker

#1 Steckel 5C  
5/14s/31w Gove Co  
Job Ticket: 16540      DST#: 3  
Test Start: 2011.05.27 @ 02:49:00

## 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: 68.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2800.00 ppm			
Filter Cake: 1.00 inches			

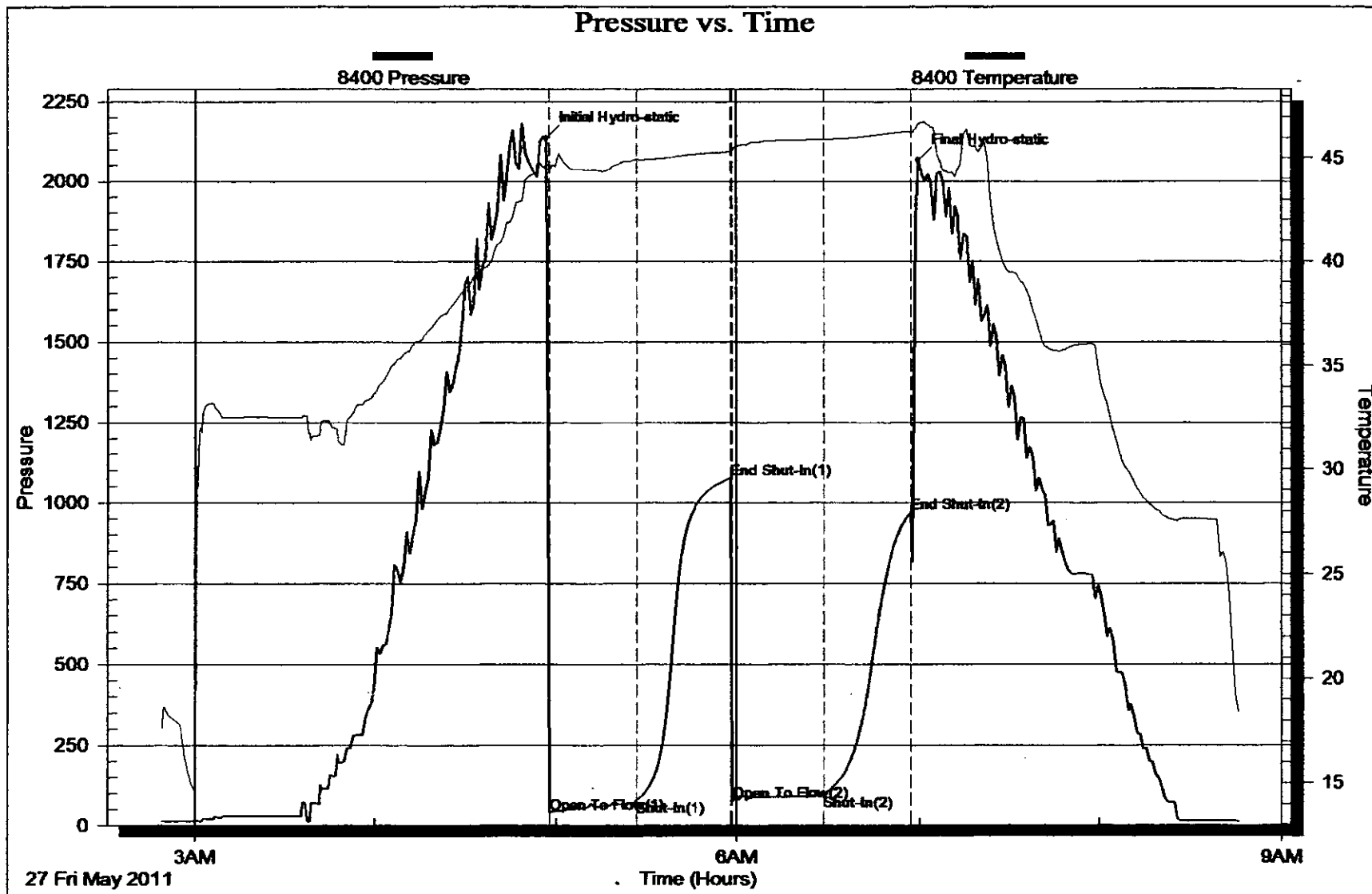
## Recovery Information

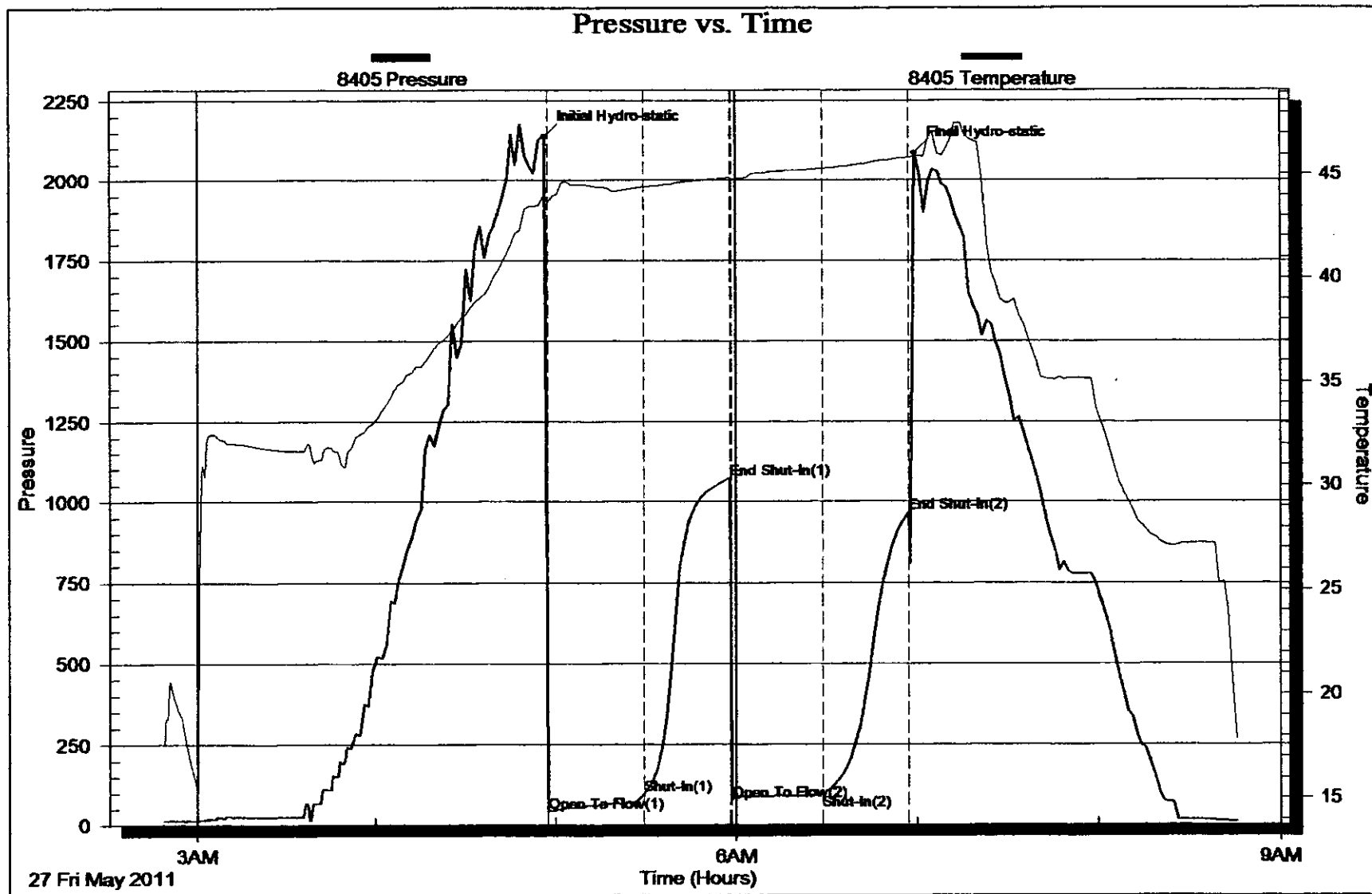
Recovery Table

Length ft	Description	Volume bbl
125.00	lightly spotted oil cut mud 100%	0.615

Total Length: 125.00 ft      Total Volume: 0.615 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188

ATTN: Kim Shoemaker

**5/14s/31w Gove Co**

**#1 Steckel 5C**

Start Date: 2011.05.27 @ 09:23:00

End Date: 2011.05.27 @ 15:30:00

Job Ticket #: 16541                      DST #: 4

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

Printed: 2011.05.31 @ 11:03:59

Ritchie Exploration Inc

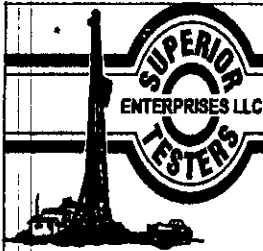
#1 Steckel 5C

5/14s/31w Gove Co

DST # 4

Lansing K L zone

2011.05.27



# DRILL STEM TEST REPORT

Richie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

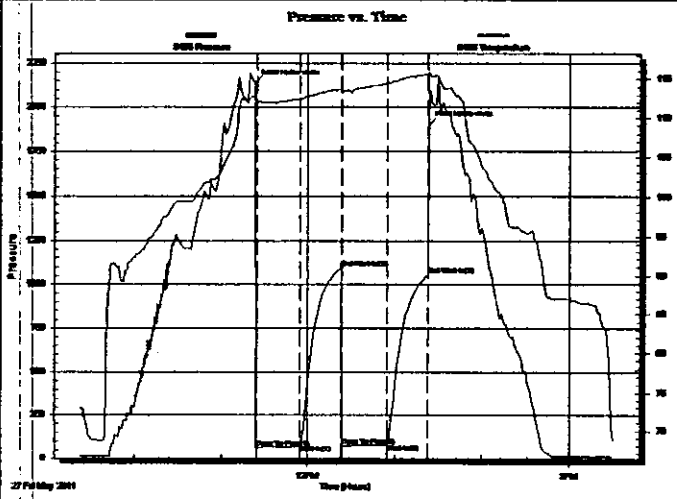
**#1 Steckel 5C**  
**5/14s/31w Gove Co**  
 Job Ticket: 16541      DST#: 4  
 Test Start: 2011.05.27 @ 09:23:00

## GENERAL INFORMATION:

Formation: **Lansing KL zone**  
 Deviated: **No Whipstock:**      ft (KB)  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Time Tool Opened: **11:24:30**  
 Tester: **Kern/Dyan**  
 Time Test Ended: **15:30:00**  
 Unit No: **3345 Scott City/94**  
 Interval: **4248.00 ft (KB) To 4323.00 ft (KB) (TVD)**  
 Reference Elevations: **2964.00 ft (KB)**  
 Total Depth: **4323.00 ft (KB) (TVD)**  
**2954.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 KB to GR/CF: **10.00 ft**

**Serial #: 8405**      **Inside**  
 Press@RunDepth: **88.15 psia @ 4318.20 ft (KB)**      Capacity: **5000.00 psia**  
 Start Date: **2011.05.27**      End Date: **2011.05.27**      Last Calib.: **2011.05.28**  
 Start Time: **09:23:01**      End Time: **15:30:00**      Time On Btm: **2011.05.27 @ 11:23:30**  
 Time Off Btm: **2011.05.27 @ 13:23:30**

**TEST COMMENT:** 1ST Open      30 minutes/Weak blow/blow built to 1/4 inch  
 1ST Shut in      30 minutes/No blow back  
 2ND Open      30 minutes/No blow/Flush tool/Good surge/Weak surface blow/Blow died in 10 minutes  
 2ND Shut in      30 minutes/No blow back



## PRESSURE SUMMARY

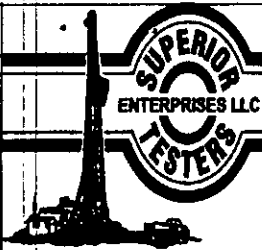
Time (Min.)	Pressure (psia)	Temp (deg C)	Annotation
0	2139.13	112.73	Initial Hydro-static
1	65.90	112.25	Open To Flow (1)
31	77.98	112.46	Shut-in(1)
60	1092.93	113.75	End Shut-in(1)
60	73.10	113.52	Open To Flow (2)
92	88.15	114.48	Shut-in(2)
120	1054.52	115.61	End Shut-in(2)
120	1900.13	115.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	100 % mud	0.07

## Gas Rates

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



# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

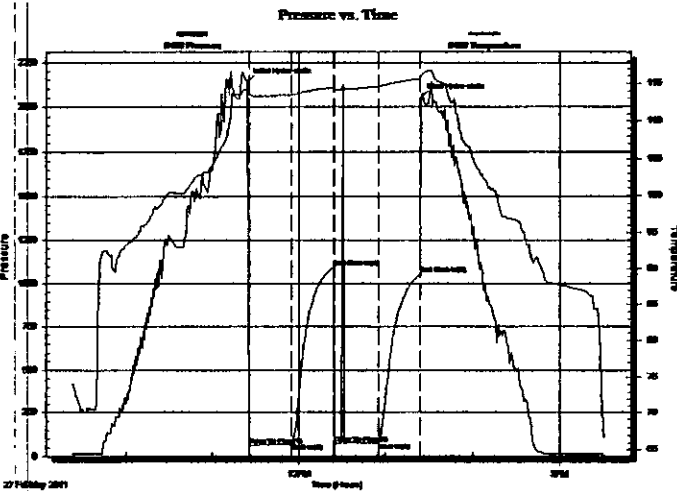
**#1 Steckel 5C**  
**5/14s/31w Gove Co**  
 Job Ticket: 16541      **DST#: 4**  
 Test Start: 2011.05.27 @ 09:23:00

## GENERAL INFORMATION:

Formation: **Lansing KL zone**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 11:24:30  
 Time Test Ended: 15:30:00  
 Interval: **4248.00 ft (KB) To 4323.00 ft (KB) (TVD)**  
 Total Depth: **4323.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken/Dyan  
 Unit No: 3345 Scott City/94  
 Reference Elevations: 2964.00 ft (KB)  
 2954.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8400      Outside**  
 Press@RunDepth: 1057.64 psia @ 4319.20 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2011.05.27      End Date: 2011.05.27      Last Calib.: 2011.05.28  
 Start Time: 09:23:10      End Time: 15:30:30      Time On Btrm: 2011.05.27 @ 11:24:30  
 Time Off Btrm: 2011.05.27 @ 13:24:30

**TEST COMMENT:** 1ST Open      30 minutes/Weak blow /blow built to 1/4 inch  
 1ST Shut in      30 minutes/No blow back  
 2ND Open      30 minutes/No blow /Flush tool/Good surge/Weak surface blow /Blow died in 10 minutes  
 2ND Shut in      30 minutes/No blow back



## PRESSURE SUMMARY

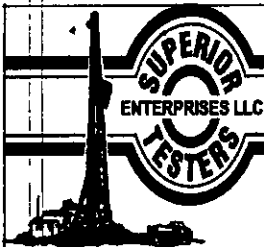
Time (Min.)	Pressure (psia)	Temp (deg C)	Annotation
0	2139.55	114.09	Initial Hydro-static
1	65.48	113.50	Open To Flow (1)
31	74.71	113.48	Shut-in(1)
60	1096.06	114.39	End Shut-in(1)
60	72.86	114.09	Open To Flow (2)
91	81.29	114.55	Shut-in(2)
120	1057.64	115.60	End Shut-in(2)
120	2051.24	116.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	100 % mud	0.07

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

#1 Steckel 5C  
 5/14s/31w Gove Co  
 Job Ticket: 16541      DST#: 4  
 Test Start: 2011.05.27 @ 09:23:00

## Tool Information

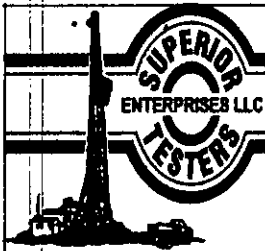
Drill Pipe:	Length: 3712.00 ft	Diameter: 3.80 inches	Volume: 52.07 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 533.78 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose:	35000.00 lb
		Total Volume: 54.70 bbl		Tool Chased	0.00 ft
Drill Pipe Above KB:	19.78 ft			String Weight: Initial	88000.00 lb
Depth to Top Packer:	4248.00 ft			Final	88000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	74.20 ft				
Tool Length:	96.20 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4231.00	
Hydraulic Tool	5.00			4236.00	
Safety Joint	2.00			4238.00	
Packer	5.00			4243.00	22.00      Bottom Of Top Packer
Packer	5.00			4248.00	
Perforations	5.00			4253.00	
Change Over Sub	0.75			4253.75	
Drill Pipe	31.70			4285.45	
Change Over Sub	0.75			4286.20	
Perforations	31.00			4317.20	
Recorder	1.00	8405	Inside	4318.20	
Recorder	1.00	8400	Outside	4319.20	
Bull Plug	3.00			4322.20	74.20      Bottom Packers & Anchor

**Total Tool Length: 96.20**



# DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc  
PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188  
ATTN: Kim Shoemaker

#1 Steckel 5C  
5/14s/31w Gove Co  
Job Ticket: 16541      DST#: 4  
Test Start: 2011.05.27 @ 09:23:00

## Mud and Cushion Information

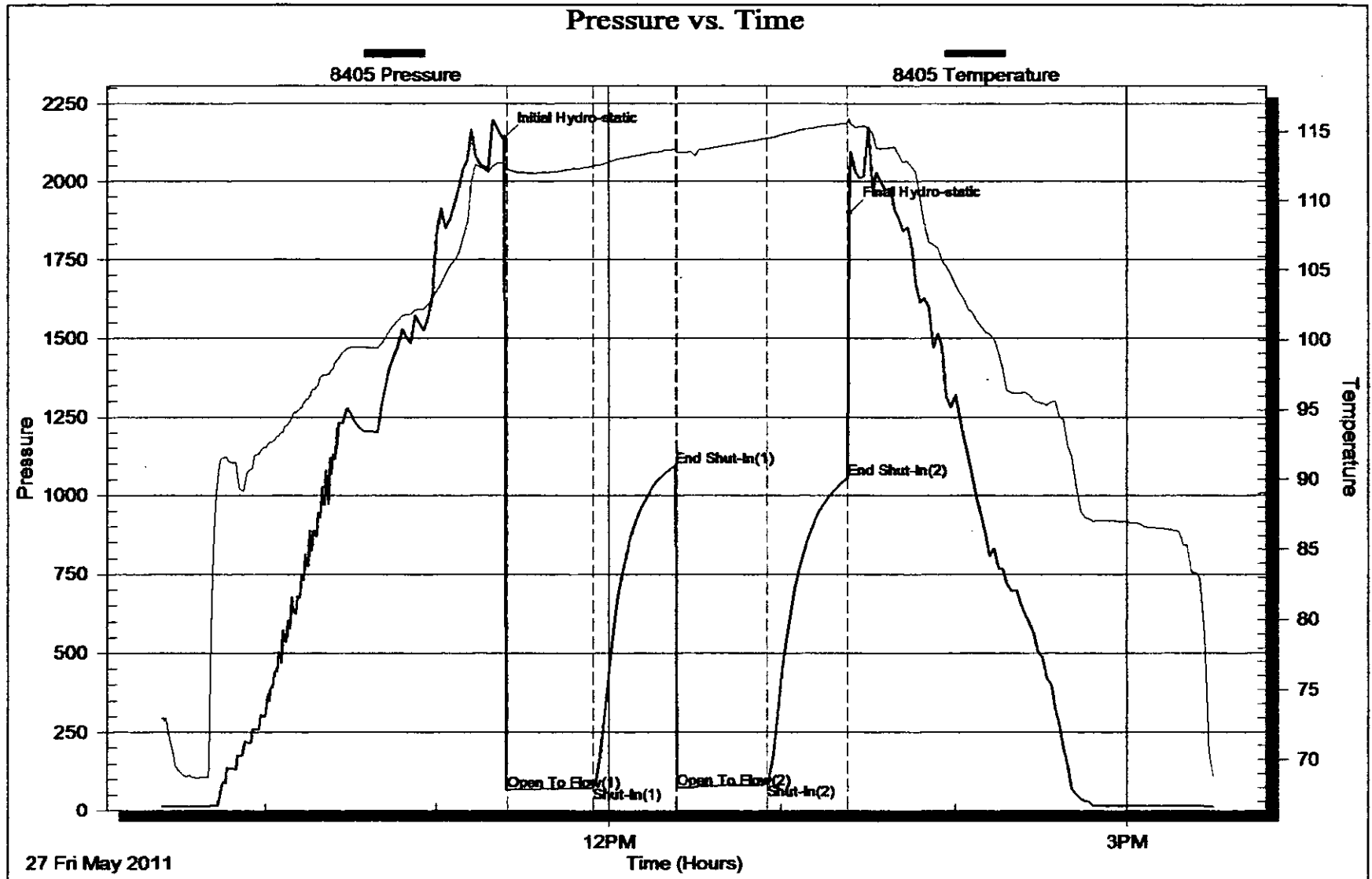
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3800.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

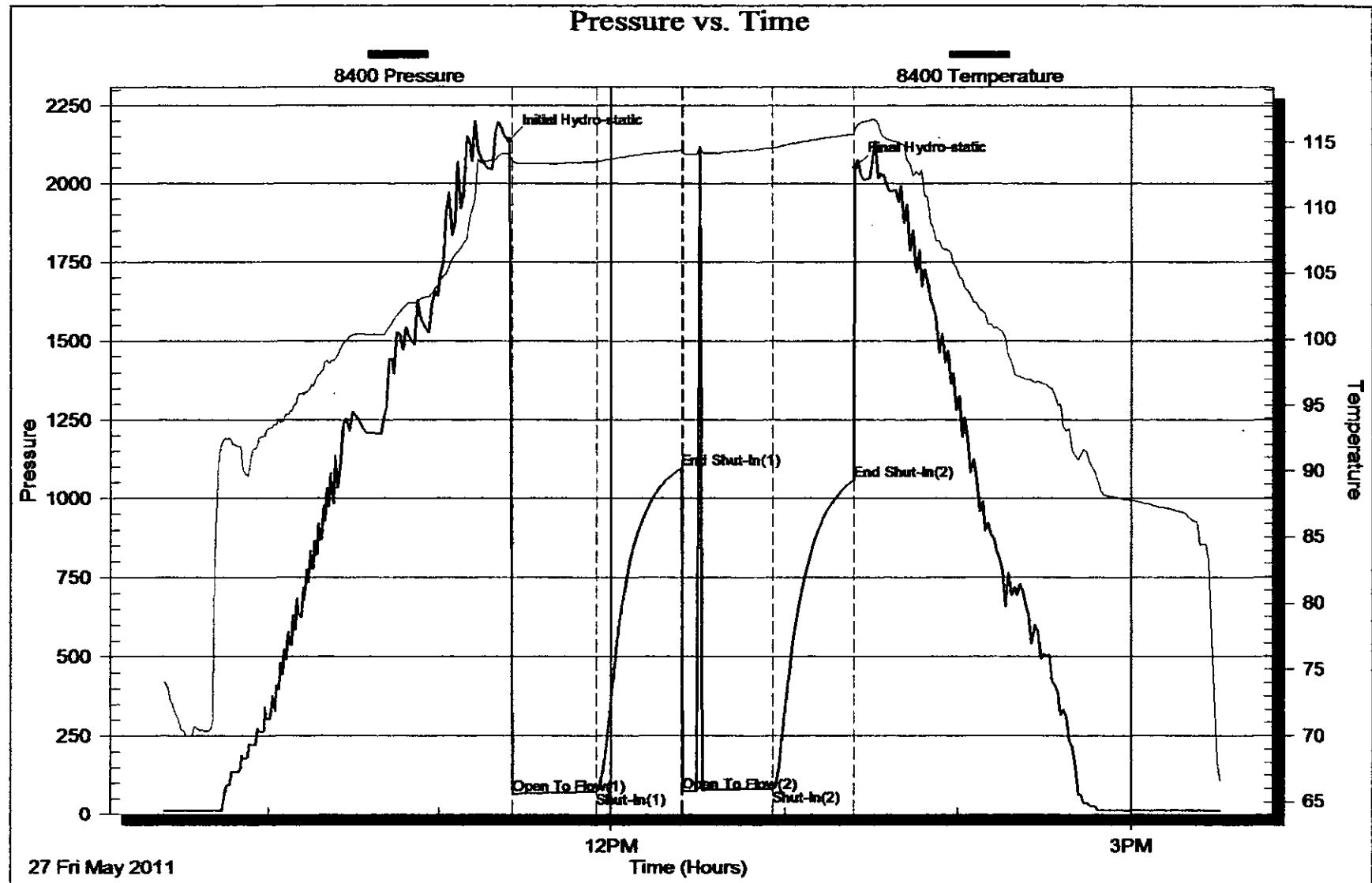
Recovery Table

Length ft	Description	Volume bbl
15.00	100 % mud	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188

ATTN: Kim Shoemaker

**5/14s/31w Gove Co**

**#1 Steckel 5C**

Start Date: 2011.05.29 @ 05:50:00

End Date: 2011.05.29 @ 11:59:00

Job Ticket #: 16542                      DST #: 5

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

Printed: 2011.05.31 @ 11:03:36

Ritchie Exploration Inc

#1 Steckel 5C

5/14s/31w Gove Co

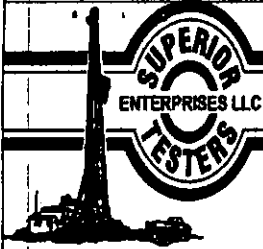
DST # 5

Cherokee Lime

2011.05.29







# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

#1 Steckel 5C  
 5/14s/31w Gove Co  
 Job Ticket: 16542      DST#: 5  
 Test Start: 2011.05.29 @ 05:50:00

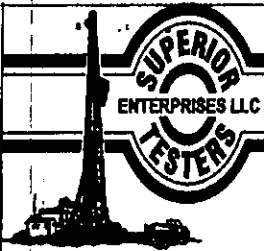
### Tool Information

Drill Pipe:	Length: 4000.00 ft	Diameter: 2.25 inches	Volume: 19.67 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 533.78 ft	Diameter: 3.80 inches	Volume: 7.49 bbl	Weight to Pull Loose: 40000.00 lb
			Total Volume: 27.16 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.78 ft			String Weight: Initial 92000.00 lb
Depth to Top Packer:	4533.00 ft			Final 92000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4510.00	
Hydrolic Tool	5.00			4515.00	
Jars	6.00			4521.00	
Safety Joint	2.00			4523.00	
Packer	5.00			4528.00	28.00      Bottom Of Top Packer
Packer	5.00			4533.00	
Perforations	22.00			4555.00	
Recorder	1.00	8405	Inside	4556.00	
Recorder	1.00	8400	Outside	4557.00	
Bull Plug	3.00			4560.00	27.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>55.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Ritchie Exploration Inc  
PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188  
ATTN: Kim Shoemaker

**#1 Steckel 5C**  
**5/14s/31w Gove Co**  
Job Ticket: 16542      DST#: 5  
Test Start: 2011.05.29 @ 05:50:00

### 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: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

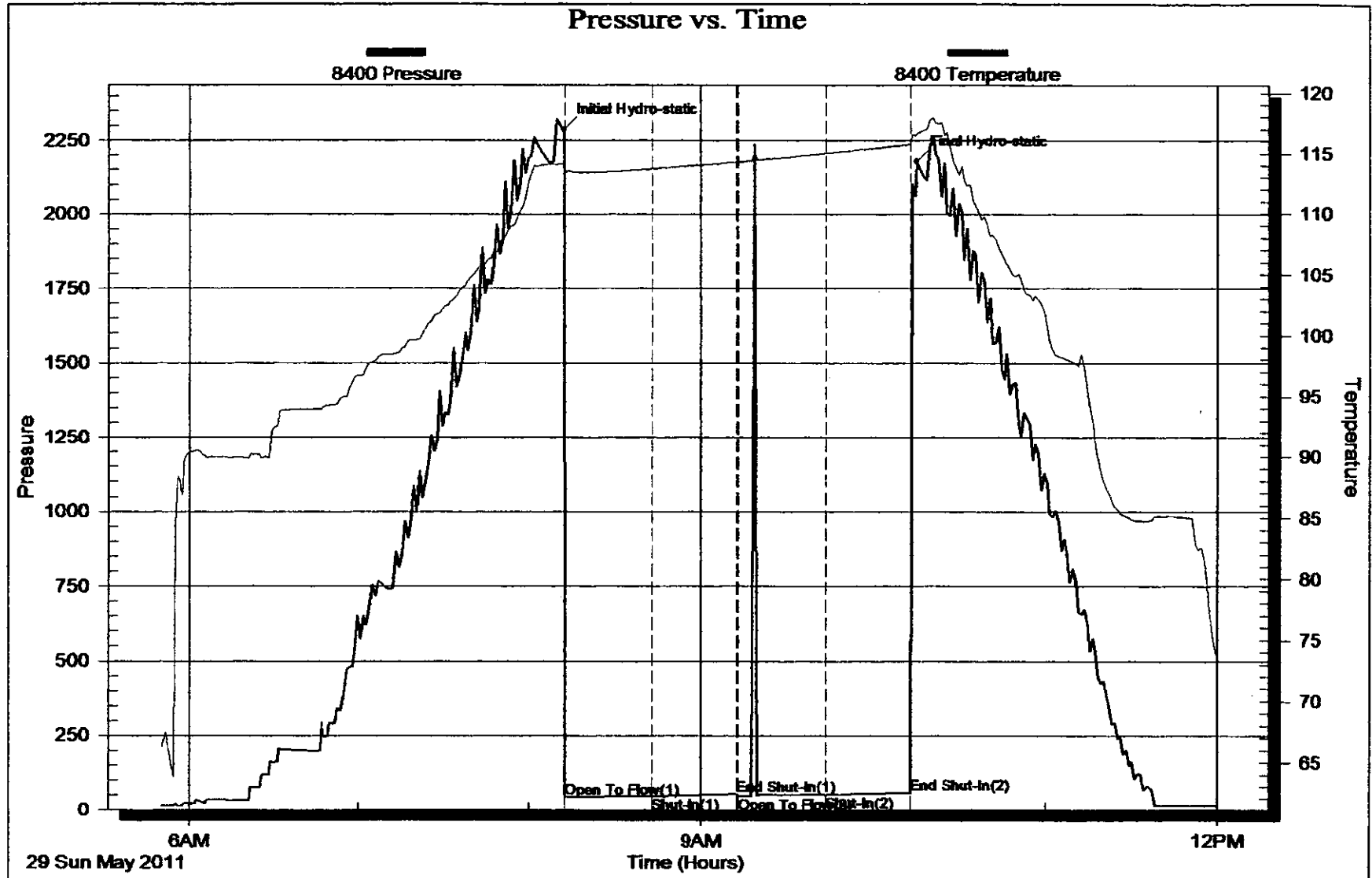
### Recovery Information

Recovery Table

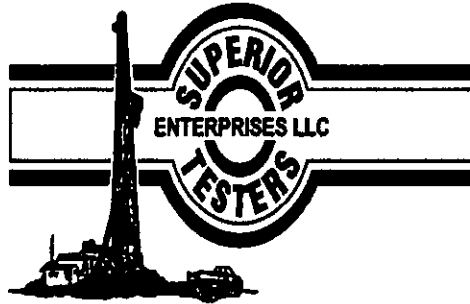
Length ft	Description	Volume bbl
10.00	10 feet mud 100%	0.140

Total Length: 10.00 ft      Total Volume: 0.140 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188

ATTN: Kim Shoemaker

**5/14s/31w Gove Co**

**#1 Steckel 5C**

Start Date: 2011.05.29 @ 08:28:00

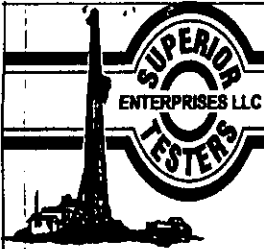
End Date: 2011.05.30 @ 16:24:30

Job Ticket #: 16543                      DST #: 6

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

Printed: 2011.05.31 @ 10:56:24

Ritchie Exploration Inc    #1 Steckel 5C    5/14s/31w Gove Co    DST # 6    Johnson    2011.05.29



# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

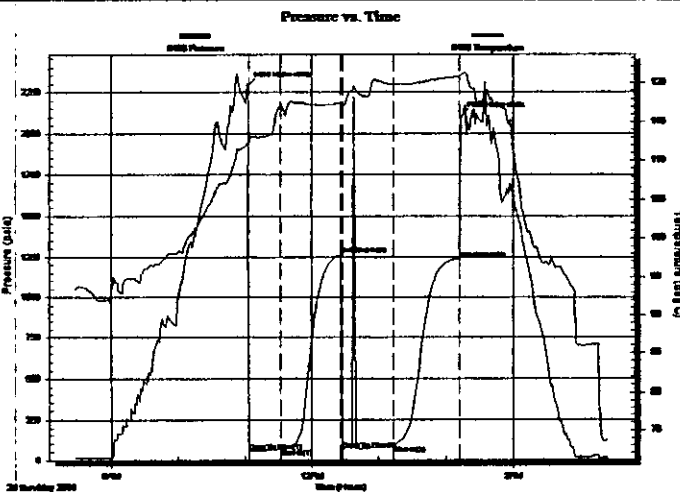
#1 Steckel 5C  
 5/14s/31w Gove Co  
 Job Ticket: 16543 DST#: 6  
 Test Start: 2011.05.29 @ 08:28:00

## GENERAL INFORMATION:

Formation: **Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:03:30  
 Time Test Ended: 16:24:30  
 Interval: 4557.00 ft (KB) To 4603.00 ft (KB) (TVD)  
 Total Depth: 4603.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken/Dylan  
 Unit No: 3345 Scott City/94  
 Reference Elevations: 2964.00 ft (KB)  
 2954.00 ft (CF)  
 KB to GR/CF: 10.00 ft

Serial #: 8405 Inside  
 Press@RunDepth: 87.08 psia @ 4599.20 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.05.29 End Date: 2011.05.29 Last Calib.: 2011.05.30  
 Start Time: 08:28:01 End Time: 16:24:30 Time On Btrm: 2011.05.29 @ 11:02:30  
 Time Off Btrm: 2011.05.29 @ 14:13:30

TEST COMMENT: 1ST Open 30 Minutes/Very weak surface blow/Blow died in 12 minutes  
 1ST Shut In 45 Minutes/No blow back  
 2ND Open 45 Minutes/No blow/Flush tool/Didn't help/Blow dead  
 2ND Shut In 60 Minutes/No blow back



## PRESSURE SUMMARY

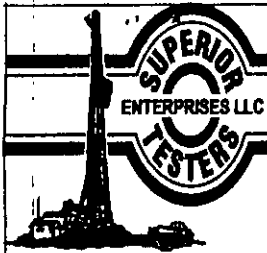
Time (Min.)	Pressure (psia)	Temp (deg C)	Annotation
0	2289.10	112.29	Initial Hydro-static
1	53.94	112.17	Open To Flow (1)
30	70.19	117.01	Shut-In(1)
84	1263.23	117.41	End Shut-In(1)
85	64.56	117.17	Open To Flow (2)
131	87.08	119.84	Shut-In(2)
190	1239.35	120.70	End Shut-In(2)
191	2104.25	120.96	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	lightly oil spotted mud 100%	0.05

## Gas Rates

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



# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

**#1 Steckel 5C**  
**5/14s/31w Gove Co**  
 Job Ticket: 16543      DST#: 6  
 Test Start: 2011.05.29 @ 08:28:00

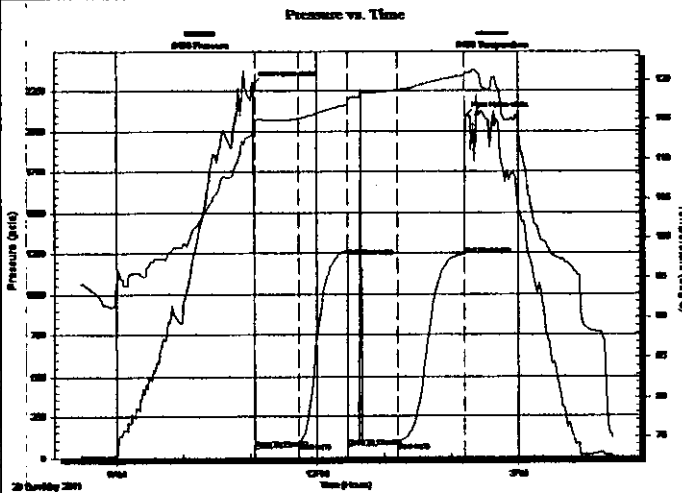
## GENERAL INFORMATION:

Formation: <b>Johnson</b>	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Ken/Dylan
Time Tool Opened: 11:03:30	Unit No: 3345 Scott City/94
Time Test Ended: 16:24:30	Reference Elevations: 2964.00 ft (KB)
Interval: <b>4557.00 ft (KB) To 4603.00 ft (KB) (TVD)</b>	2954.00 ft (CF)
Total Depth: 4603.00 ft (KB) (TVD)	KB to GR/CF: 10.00 ft
Hole Diameter: 7.88 inches Hole Condition: Fair	

<b>Serial #: 8400</b>	<b>Outside</b>	Capacity: 5000.00 psia
Press@RunDepth: 1241.16 psia @ 4600.20 ft (KB)	Last Calib.: 2011.05.30	
Start Date: 2011.05.29	End Date: 2011.05.29	Time On Btrr: 2011.05.29 @ 11:03:00
Start Time: 08:28:10	End Time: 16:24:30	Time Off Btrr: 2011.05.29 @ 14:13:00

**TEST COMMENT:**

1ST Open	30 Minutes/Very weak surface blow /Blow died in 12 minutes
1ST Shut In	45 Minutes/No blow back
2ND Open	45 Minutes/No blow /Flush tool/Didn't help/Blow dead
2ND Shut In	60 Minutes/No blow back



## PRESSURE SUMMARY

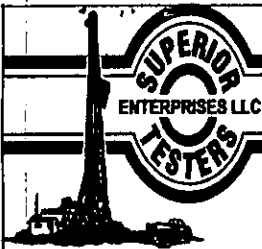
Time (Min.)	Pressure (psia)	Temp (deg C)	Annotation
0	2285.69	113.47	Initial Hydro-static
1	52.93	114.21	Open To Flow (1)
41	87.73	115.14	Shut-in(1)
85	1226.61	116.90	End Shut-in(1)
85	63.86	117.25	Open To Flow (2)
130	87.06	118.80	Shut-in(2)
189	1241.16	120.63	End Shut-in(2)
190	2089.41	120.96	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	lightly oil spotted mud 100%	0.05

## Gas Rates

Choke (Inches)	Pressure (psia)	Gas Rate (Mcf/d)
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# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc  
 PO Box 783188  
 8100 E 22nd Street North #700  
 Wichita, KS 67278-3188  
 ATTN: Kim Shoemaker

#1 Steckel 5C  
 5/14s/31w Gove Co  
 Job Ticket: 16543      DST#: 6  
 Test Start: 2011.05.29 @ 08:28:00

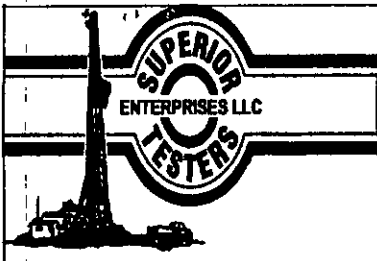
### Tool Information

Drill Pipe:	Length: 4026.00 ft	Diameter: 3.80 inches	Volume: 56.47 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 533.78 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 101000.0 lb
			<u>Total Volume: 59.10 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.78 ft			String Weight: Initial 90000.00 lb
Depth to Top Packer:	4557.00 ft			Final 90000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.20 ft			
Tool Length:	74.20 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Charge for packer

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4534.00	
Hydraulic Tool	5.00			4539.00	
Jars	6.00			4545.00	
Safety Joint	2.00			4547.00	
Packer	5.00			4552.00	28.00      Bottom Of Top Packer
Packer	5.00			4557.00	
Perforations	5.00			4562.00	
Change Over Sub	0.75			4562.75	
Drill Pipe	31.70			4594.45	
Change Over Sub	0.75			4595.20	
Perforations	3.00			4598.20	
Recorder	1.00	8405	Inside	4599.20	
Recorder	1.00	8400	Outside	4600.20	
Bull Plug	3.00			4603.20	46.20      Bottom Packers & Anchor

**Total Tool Length: 74.20**



# DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc  
PO Box 783188  
8100 E 22nd Street North #700  
Wichita, KS 67278-3188  
ATTN: Kim Shoemaker

#1 Steckel 5C  
5/14s/31w Gove Co  
Job Ticket: 16543      DST#: 6  
Test Start: 2011.05.29 @ 08:28:00

## 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: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3700.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	lightly oil spotted mud 100%	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

