



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1073647  
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: \_\_\_\_\_

1073647

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

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

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

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

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

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

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

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

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

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

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

<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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Chaco Energy Company
Well Name	J&W Farms 2
Doc ID	1073647

Tops

Name	Top	Datum
Anhydrite	2618	505
Heebner shale	4025	-902
Lansing	4066	-943
Stark Shale	4286	-1163
Base Kansas City	4342	-1219
Marmaton	4366	-1243
Ft. Scott	4532	-1409
Cherokee shale	4560	-1437
Johnson	4605	-1482
Basal Penn sand	Shale	
Mississippian	4668	-1545

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/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

February 07, 2012

Alan Nelson  
Chaco Energy Company  
PO BOX 1587  
DENVER, CO 80201-1587

Re: ACO1  
API 15-193-20830-00-00  
J&W Farms 2  
NW/4 Sec.28-10S-33W  
Thomas 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,  
Alan Nelson



# CEMENTING LOG

STAGE NO.

Date 11/9/12 District Fablow Ticket No. 0236067  
 Company Chaco Rig WW 8  
 Lease J & N Farm Well No. 2  
 County Thomas State KY  
 Location San Tillet Field \_\_\_\_\_

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 8 5/8 Type Ann Weight 24 Collar \_\_\_\_\_

Casing Depths: Top KB Bottom 260'

Drill Pipe: Size 4 1/2 Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 12 1/4 T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. 0637 Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_

Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

CEMENT DATA: SURFACE  
 Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Skys Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

LEAD: Pump Time \_\_\_\_\_ hrs. Type Ann 370CL278  
 Excess \_\_\_\_\_  
 Amt. 165 Skys Yield 1.34 ft<sup>3</sup>/sk Density 15.04 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type \_\_\_\_\_  
 Excess \_\_\_\_\_  
 Amt. \_\_\_\_\_ Skys Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG  
 WATER: Lead 6.5 gals/sk Tail \_\_\_\_\_ gals/sk Total 25.53 Bbls

Pump Trucks Used None - 422  
 Bulk Equip. Ann - 34

Float Equip: Manufacturer \_\_\_\_\_  
 Shoe: Type None Depth \_\_\_\_\_  
 Float: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type H<sub>2</sub>O Amt 15.6 Bbls. Weight 8.3 PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG

COMPANY REPRESENTATIVE Syd. CEMENTER Alan Ryan

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
						9- caution, SET, MZ, Set system
						Drill Hole
						Ann Csg
						Circulate
<u>2:30 pm</u>				<u>25.53</u>	<u>3.5</u>	Wp Cement
				<u>15.6065</u>	<u>4.5</u>	Displace Cement
				<u>5.0</u>	<u>2.0</u>	Wash out collar
<u>2:00 pm</u>						Job Complete
						Cement Displ
						Circulate

# ALLIED CEMENTING CO., LLC. 036072

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:

Osage, KS

DATE <u>1/17/12</u>	SEC. <u>28</u>	TWP. <u>10</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION	JOB START <u>12:30</u>	JOB FINISH <u>1:30</u>
LEASE <u>OTW Farm</u>	WELL.# <u>#2</u>	LOCATION <u>Monument N 70 CL 14W</u>			COUNTY <u>Thomas</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)		<u>N 1/4 E 20</u>					

CONTRACTOR WV 4

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. 4750 FT

CASING SIZE 8 7/8 DEPTH 200'

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT

OWNER Same

CEMENT AMOUNT ORDERED 205.60/40.47 and 14 Flo Seal

D/A

EQUIPMENT

PUMP TRUCK CEMENTER Alan

# 422 HELPER Wayne

BULK TRUCK

# 404 DRIVER Same

BULK TRUCK DRIVER

COMMON	<u>123</u>	@	<u>16.25</u>	<u>1998.25</u>
POZMIX	<u>82</u>	@	<u>8.20</u>	<u>697.20</u>
GEL	<u>7</u>	@	<u>21.25</u>	<u>148.75</u>
CHLORIDE		@		
ASC		@		
<u>Fosch 5116</u>		@	<u>2.20</u>	<u>137.20</u>
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>214</u>	@	<u>2.25</u>	<u>481.50</u>
MILEAGE	<u>114.52/mile</u>	@		<u>235.90</u>
TOTAL				<u>3699.20</u>

REMARKS:

25K @ 2631'

5K @ 1717'

15K @ 309'

10.5K @ 40'

10.5K @ Ret Hole

Thomas, KS  
Alan, Wayne, Same

CHARGE TO Chaco Energy

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			<u>1250.00</u>
EXTRA FOOTAGE	@		
MILEAGE	<u>10</u>	@	<u>7.00</u> <u>70.00</u>
MANIFOLD	@		
<u>ext vehicle 10</u>	@	<u>4.00</u>	<u>40.00</u>
	@		
TOTAL <u>1360.00</u>			

PLUG & FLOAT EQUIPMENT

<u>8" B Wpd</u>	@		<u>92.00</u>
<u>Plug</u>	@		
	@		
	@		
TOTAL <u>92.00</u>			

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.

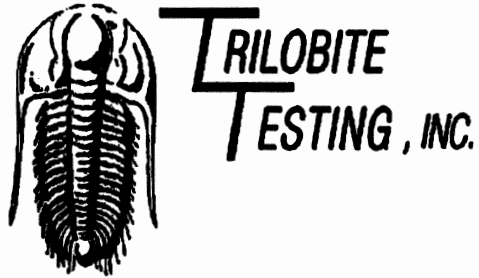
PRINTED NAME Jid Deutscher

NATURE Jid Deutscher

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

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

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



## DRILL STEM TEST REPORT

Prepared For: **Chaco Energy Co.**

PO Box 1587  
Denver CO 80201

ATTN: Chris Gough

**J & W Farms #2**

**28-10s-33w Thomas, KS**

Start Date: 2012.01.14 @ 15:50:00

End Date: 2012.01.14 @ 22:52:30

Job Ticket #: 44988                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

# ORIGINAL

Printed: 2012.01.19 @ 15:46:46

Chaco Energy Co.

28-10s-33w Thomas, KS

J & W Farms #2

DST # 1

Lansing I-K

2012.01.14



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Chaco Energy Co.

**28-10s-33w Thomas, KS**

PO Box 1587  
Denver CO 80201

**J & W Farms #2**

Job Ticket: 44988

**DST#: 1**

ATTN: Chris Gough

Test Start: 2012.01.14 @ 15:50:00

### Tool Information

Drill Pipe:	Length: 4093.00 ft	Diameter: 3.80 inches	Volume: 57.41 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: 24000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 18000.00 lb
			<u>Total Volume: 58.02 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4230.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	120.00 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			4201.00	
Shut In Tool	5.00			4206.00	
Sampler	2.00			4208.00	
Hydraulic tool	5.00			4213.00	
Jars	5.00			4218.00	
Safety Joint	3.00			4221.00	
Packer	5.00			4226.00	30.00 Bottom Of Top Packer
Packer	4.00			4230.00	
Stubb	1.00			4231.00	
Recorder	0.00	8358	Inside	4231.00	
Recorder	0.00	6668	Outside	4231.00	
Perforations	19.00			4250.00	
Change Over Sub	1.00			4251.00	
Drill Pipe	63.00			4314.00	
Change Over Sub	1.00			4315.00	
Bullnose	5.00			4320.00	90.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>120.00</b>				

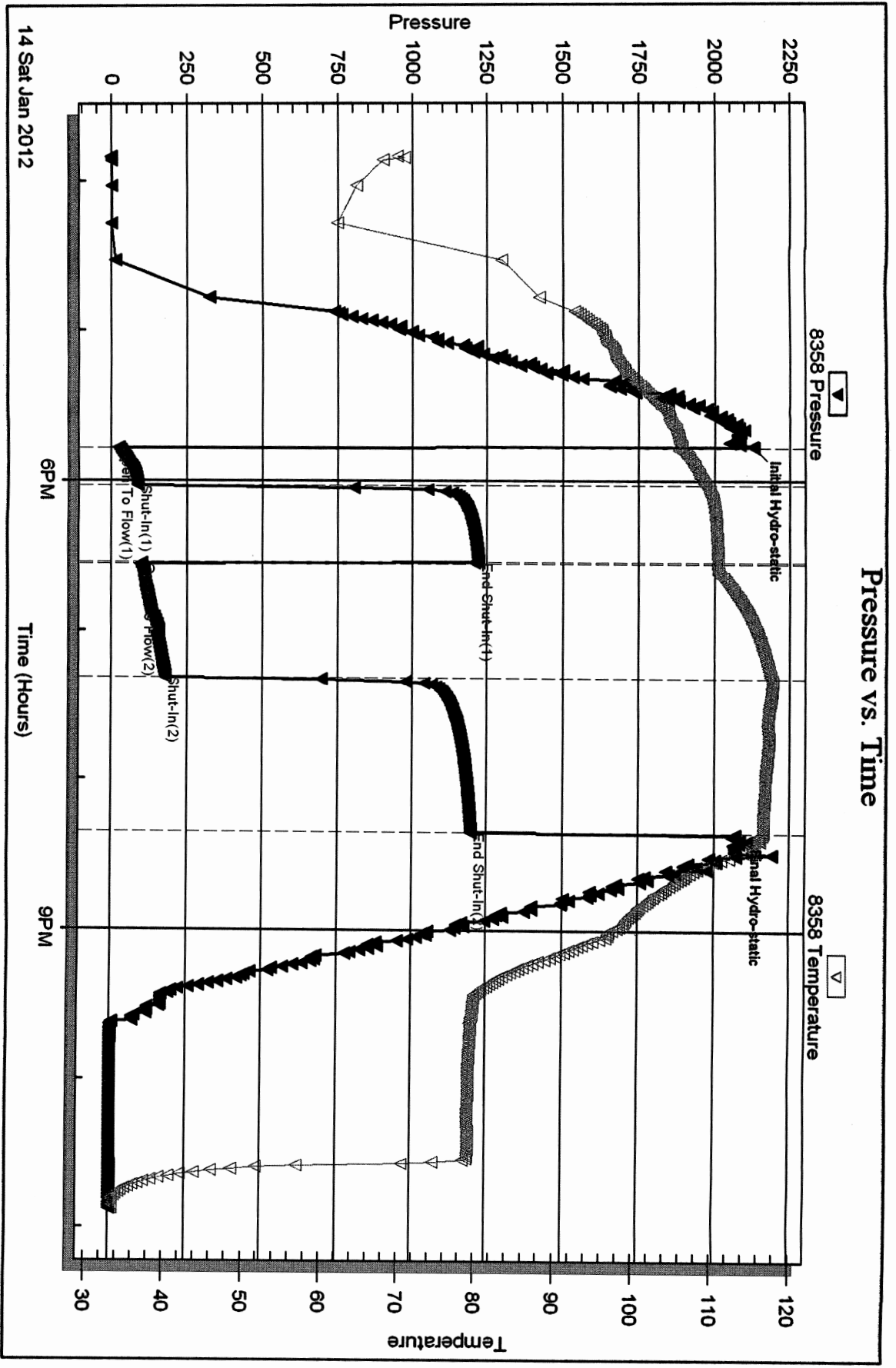


Serial #: 8358

Inside Oraco Energy Co.

J & W Farms #2

DST Test Number: 1



Trilocke Testing, Inc

Ref. No: 44988

Printed: 2012.01.19 @ 15:46:47



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Chaco Energy Co.**

PO Box 1587  
Denver CO 80201

ATTN: Chris Gough

**J & W Farms #2**

**28-10s-33w Thomas, KS**

Start Date: 2012.01.16 @ 04:30:00

End Date: 2012.01.16 @ 11:20:00

Job Ticket #: 44989                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.01.19 @ 15:47:07

Chaco Energy Co.

28-10s-33w Thomas, KS

J & W Farms #2

DST # 2

Cherokee / Johnson

2012.01.16



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Chaco Energy Co.

**28-10s-33w Thomas, KS**

PO Box 1587  
Denver CO 80201

**J & W Farms #2**

Job Ticket: 44989

**DST#: 2**

ATTN: Chris Gough

Test Start: 2012.01.16 @ 04:30:00

**Tool Information**

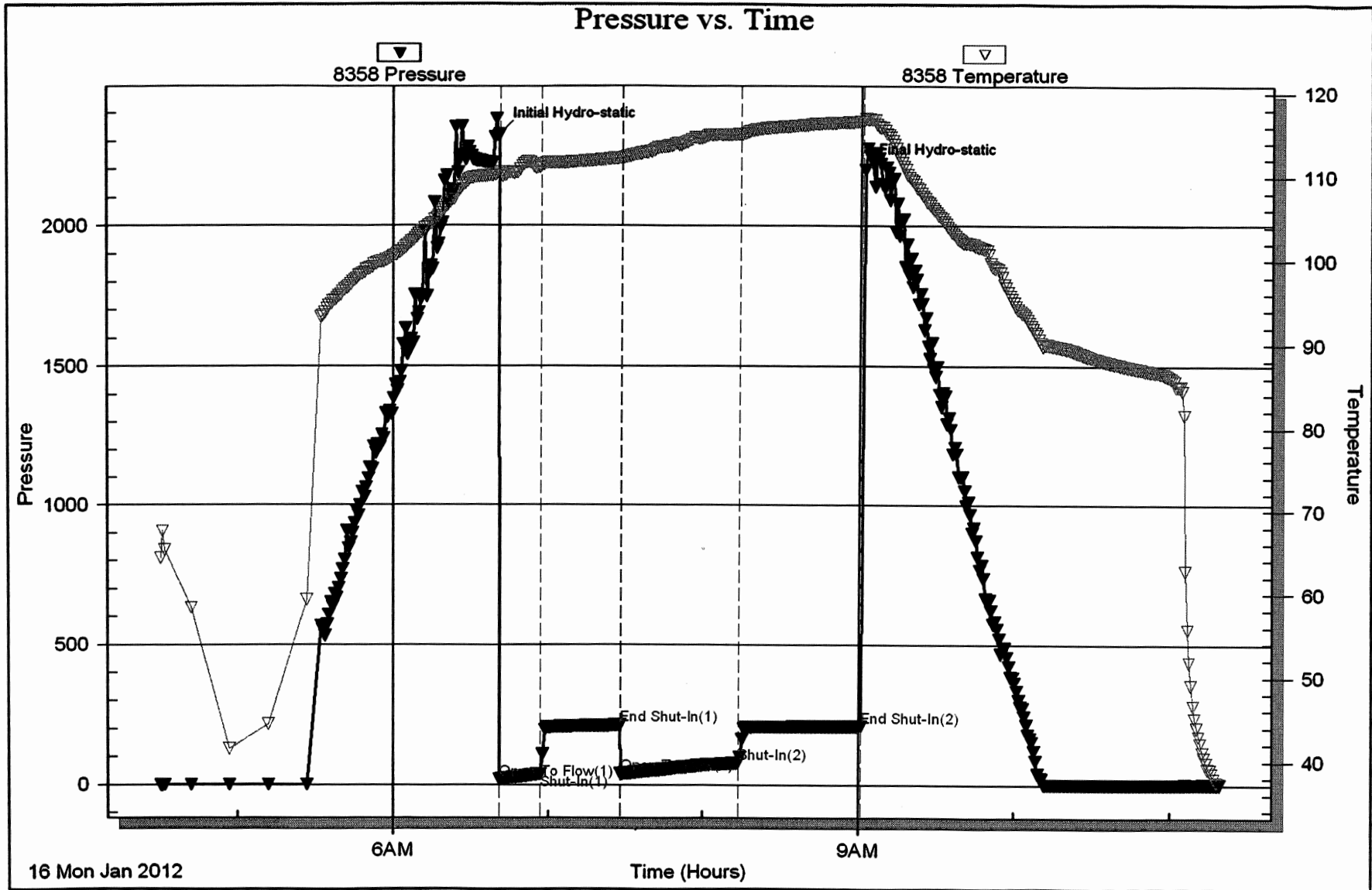
Drill Pipe:	Length: 4440.00 ft	Diameter: 3.80 inches	Volume: 62.28 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 62.89 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4572.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	88.00 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			4543.00	
Shut In Tool	5.00			4548.00	
Sampler	2.00			4550.00	
Hydraulic tool	5.00			4555.00	
Jars	5.00			4560.00	
Safety Joint	3.00			4563.00	
Packer	5.00			4568.00	30.00 Bottom Of Top Packer
Packer	4.00			4572.00	
Stubb	1.00			4573.00	
Recorder	0.00	8358	Inside	4573.00	
Recorder	0.00	6668	Outside	4573.00	
Perforations	19.00			4592.00	
Change Over Sub	1.00			4593.00	
Drill Pipe	31.00			4624.00	
Change Over Sub	1.00			4625.00	
Bullnose	5.00			4630.00	58.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>88.00</b>				



16 Mon Jan 2012



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## RECEIVED Test Ticket

JAN 18 2012

NO. 44988

Well Name & No. J+W Farms #2 Test No. DST #1 Date 1-14-12  
 Company Chaco Energy Co. Elevation 3121 KB 3116 GL  
 Address P.O. Box 1587 Denver CO 80201  
 Co. Rep / Geo. Chris Gough Rig WW Rig #8  
 Location: Sec. 28 Twp. 10s Rge. 33w Co. Thomas State KS

Interval Tested 4230 - 4320 Zone Tested Lansing I, J, K  
 Anchor Length 90 Drill Pipe Run 4093 Mud Wt. 9.1  
 Top Packer Depth 4226 Drill Collars Run 124 Vis 52  
 Bottom Packer Depth 4230 Wt. Pipe Run 0 WL 7.6  
 Total Depth 4320 Chlorides 3400 ppm System LCM 216

Blow Description IF - Surface Blow Built to 5"  
ISI - No Blow  
FF - Weak Surface Blow Built to 4"  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>130</u>	<u>WCM</u>			<u>15</u>	<u>85</u>
<u>62</u>	<u>WCM</u>			<u>45</u>	<u>55</u>
<u>62</u>	<u>MCW</u>			<u>85</u>	<u>15</u>
<u>60</u>	<u>MCW</u>			<u>75</u>	<u>25</u>
Rec	Feet of	%gas	%oil	%water	%mud
	<u>Slightly gasy water</u>				

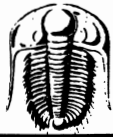
Rec Total 314 BHT 113 Gravity API RW = 46.7 @ 39 °F Chlorides 24000 ppm

(A) Initial Hydrostatic	<u>2130</u>	<input checked="" type="checkbox"/> Test	<u>1225</u>	T-On Location	<u>10:44 AM</u>
(B) First Initial Flow	<u>24</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u><del>16:50</del> 15:50</u>
(C) First Final Flow	<u>87</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>17:46</u>
(D) Initial Shut-In	<u>1,222</u>	<input checked="" type="checkbox"/> C/c Sub	<u>N/C</u>	T-Pulled	<u>20:21</u>
(E) Second Initial Flow	<u>99</u>	<input checked="" type="checkbox"/> Hourly Standby	<u>2 hrs 200</u>	T-Out	<u>22:52</u>
(F) Second Final Flow	<u>179</u>	<input checked="" type="checkbox"/> Mileage	<u>120 R/T 168</u>	Comments	<u>Sampler Recovery</u>
(G) Final Shut-In	<u>1,198</u>	<input checked="" type="checkbox"/> Sampler	<u>250</u>		<u>100 mL of mud</u>
(H) Final Hydrostatic	<u>2069</u>	<input type="checkbox"/> Straddle			<u>1900 mL of water / 100 PSI</u>

Initial Open	<u>15</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In	<u>30</u>	<input type="checkbox"/> Ruined Packer
Final Flow	<u>45</u>	<input type="checkbox"/> Extra Copies
Final Shut-In	<u>60</u>	Sub Total <u>0</u>
		Total <u>2168</u>
		MP/DST Disc't
		Sub Total <u>2168</u>

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

RECEIVED

JAN 18 2012

BY: \_\_\_\_\_

## FLUID SAMPLER DATA

Ticket No. 44988 Date 1-14-12

Company Name Chaco Energy Co.

Lease J+W Farms #2 Test No. DST #1 Lansing I, J, K

County Thomas Co KS Sec. 28 Twp. 10S Rng. 33W

## SAMPLER RECOVERY

Gas \_\_\_\_\_ ML

Oil \_\_\_\_\_ ML

Mud 100 ML

Water 1900 ML

Other \_\_\_\_\_ ML

Pressure 100 PSI ~~ML~~

Total 2000 ML

## PIT MUD ANALYSIS

Chlorides \_\_\_\_\_ ppm.

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Viscosity \_\_\_\_\_

Mud Weight \_\_\_\_\_

Filtrate \_\_\_\_\_

Other \_\_\_\_\_

## SAMPLER ANALYSIS

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Chlorides \_\_\_\_\_ ppm.

Gravity \_\_\_\_\_ corrected @60F

Approved by [Signature]  
Tester [Signature]

## PIPE RECOVERY

TOP Resistivity 467 ohms @ 39 F

Chlorides 24000 ppm.

MIDDLE Resistivity 467 ohms @ 39 F

Chlorides 24000 ppm.

BOTTOM Resistivity 467 ohms @ 39 F

Chlorides 24000 ppm.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
JAN 18 2012

## Test Ticket

NO. 44989

Well Name & No. J4W Farms #2 BY: DST #2 Test No. DST #2 Date 7-16-12  
 Company Chaco Energy Co. Elevation 3121 KB 3116 GL  
 Address P.O. Box 1587 Denver CO 80201  
 Co. Rep / Geo. Chris Gough Rig WW Rig #8  
 Location: Sec. 28 Twp. 10s Rge. 33w Co. Thomas State KS

Interval Tested 4572 - 4630 Zone Tested Cherokee / Johnson  
 Anchor Length 58 Drill Pipe Run 4440 Mud Wt. 9.2  
 Top Packer Depth 4568 Drill Collars Run 124 Vis 53  
 Bottom Packer Depth 4572 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4630 Chlorides 4100 ppm System LCM 21b

Blow Description IF - Weak Surface Blow Built to 3/4"  
ISI - No Blow  
FF - Weak Surface Blow Built to 1/4"  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>Mud with oil spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT 113 Gravity API RW @ ° F Chlorides ppm  
 (A) Initial Hydrostatic 2325  Test 1225' T-On Location 3:55 AM  
 (B) First Initial Flow 18  Jars 250' T-Started 4:30 AM  
 (C) First Final Flow 38  Safety Joint 75' T-Open 6:41 AM  
 (D) Initial Shut-In 212  Circ Sub NIC T-Pulled 9:02 AM  
 (E) Second Initial Flow 39  Hourly Standby T-Out 11:20 AM  
 (F) Second Final Flow 77  Mileage 120 R/T x 2 Comments Sampler Recovery  
 (G) Final Shut-In 207  Sampler 250' 336' 2000 ML of Mud  
 (H) Final Hydrostatic 2197  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder

Initial Open 15 Sub Total 175.04  
 Initial Shut-In 30 Total 2311.04  
 Final Flow 45 MP/DST Disc't  
 Final Shut-In 45 Sub Total 2136'

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 44989 Date 1-16-12  
 Company Name Chaco Energy Co  
 Lease J + W Farms #2 Test No. DST #2  
 County Thomas Co. KS Sec. 28 Twp. 10S Rng. 33W

### SAMPLER RECOVERY

Gas \_\_\_\_\_ ML  
 Oil \_\_\_\_\_ ML  
 Mud 2000 ML  
 Water \_\_\_\_\_ ML  
 Other \_\_\_\_\_ ML  
 Pressure \_\_\_\_\_ 40 PSI ML  
 Total 2000 ML

### PIT MUD ANALYSIS

Chlorides \_\_\_\_\_ ppm.  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Viscosity \_\_\_\_\_  
 Mud Weight \_\_\_\_\_  
 Filtrate \_\_\_\_\_  
 Other \_\_\_\_\_

### SAMPLER ANALYSIS

Resistivity 7 ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
 Gravity \_\_\_\_\_ corrected @60F

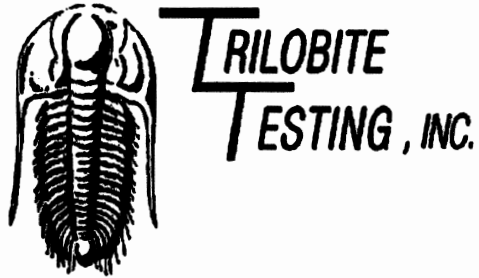
### PIPE RECOVERY

**TOP**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
**MIDDLE**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
**BOTTOM**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.

*Geo [Signature]*

*Tester [Signature]*





## DRILL STEM TEST REPORT

Prepared For: **Chaco Energy Co.**

PO Box 1587  
Denver CO 80201

ATTN: Chris Gough

**J & W Farms #2**

**28-10s-33w Thomas, KS**

Start Date: 2012.01.14 @ 15:50:00

End Date: 2012.01.14 @ 22:52:30

Job Ticket #: 44988                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

# ORIGINAL

Printed: 2012.01.19 @ 15:46:46

Chaco Energy Co.

28-10s-33w Thomas, KS

J & W Farms #2

DST # 1

Lansing I-K

2012.01.14



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Chaco Energy Co.

**28-10s-33w Thomas, KS**

PO Box 1587  
Denver CO 80201

**J & W Farms #2**

Job Ticket: 44988

**DST#: 1**

ATTN: Chris Gough

Test Start: 2012.01.14 @ 15:50:00

### Tool Information

Drill Pipe:	Length: 4093.00 ft	Diameter: 3.80 inches	Volume: 57.41 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: 24000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Full Loose: 18000.00 lb
			<u>Total Volume: 58.02 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4230.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	120.00 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			4201.00	
Shut In Tool	5.00			4206.00	
Sampler	2.00			4208.00	
Hydraulic tool	5.00			4213.00	
Jars	5.00			4218.00	
Safety Joint	3.00			4221.00	
Packer	5.00			4226.00	30.00 Bottom Of Top Packer
Packer	4.00			4230.00	
Stubb	1.00			4231.00	
Recorder	0.00	8358	Inside	4231.00	
Recorder	0.00	6668	Outside	4231.00	
Perforations	19.00			4250.00	
Change Over Sub	1.00			4251.00	
Drill Pipe	63.00			4314.00	
Change Over Sub	1.00			4315.00	
Bullnose	5.00			4320.00	90.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>120.00</b>				

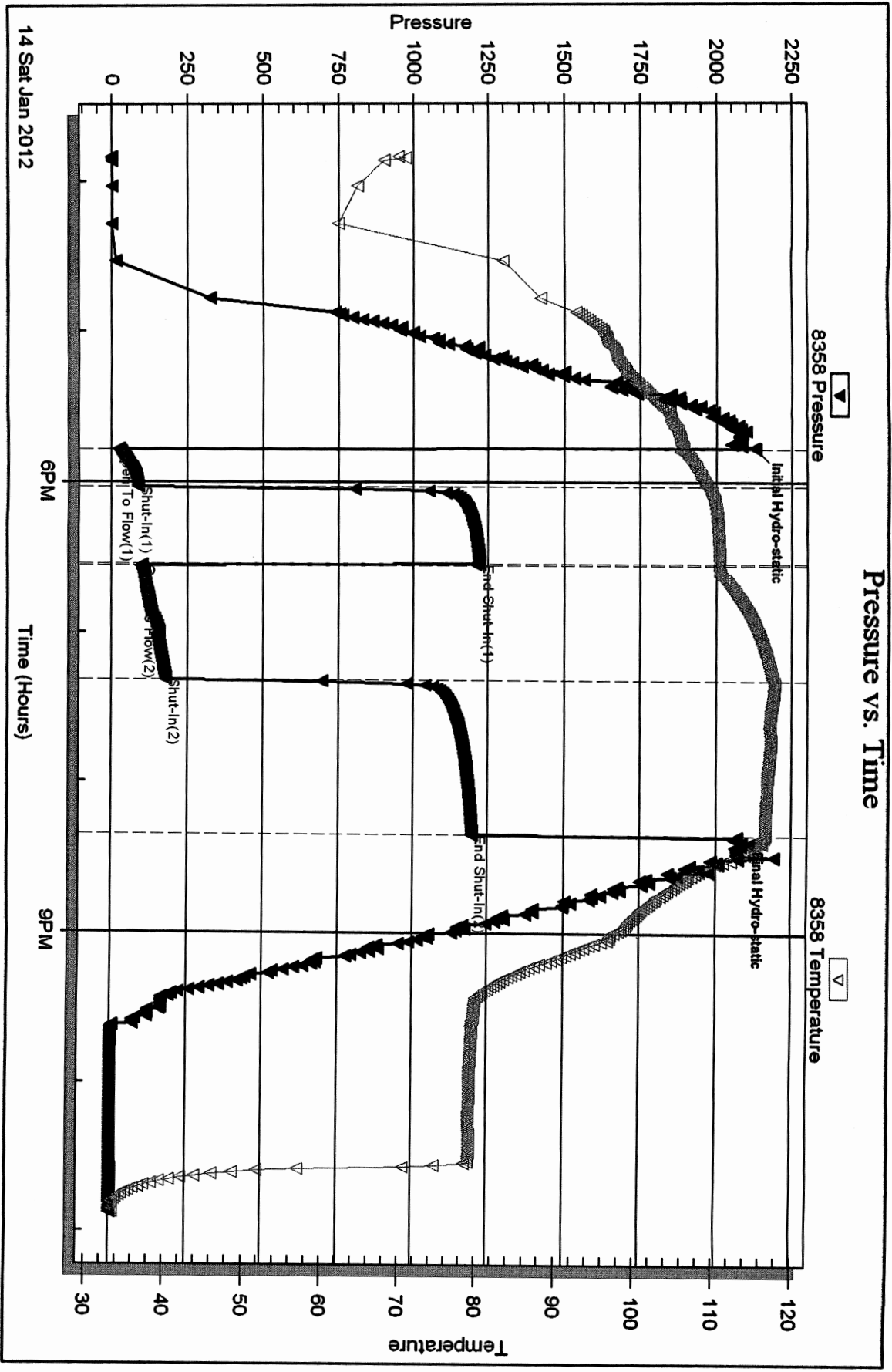
Serial #: 8358

Inside Oraco Energy Co.

J & W Farms #2

DST Test Number: 1

### Pressure vs. Time



Trilocke Testing, Inc

Ref. No: 44988

Printed: 2012.01.19 @ 15:46:47



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Chaco Energy Co.**

PO Box 1587  
Denver CO 80201

ATTN: Chris Gough

**J & W Farms #2**

**28-10s-33w Thomas, KS**

Start Date: 2012.01.16 @ 04:30:00

End Date: 2012.01.16 @ 11:20:00

Job Ticket #: 44989                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.01.19 @ 15:47:07

Chaco Energy Co.

28-10s-33w Thomas, KS

J & W Farms #2

DST # 2

Cherokee / Johnson

2012.01.16



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Chaco Energy Co.

**28-10s-33w Thomas, KS**

PO Box 1587  
Denver CO 80201

**J & W Farms #2**

Job Ticket: 44989

**DST#: 2**

ATTN: Chris Gough

Test Start: 2012.01.16 @ 04:30:00

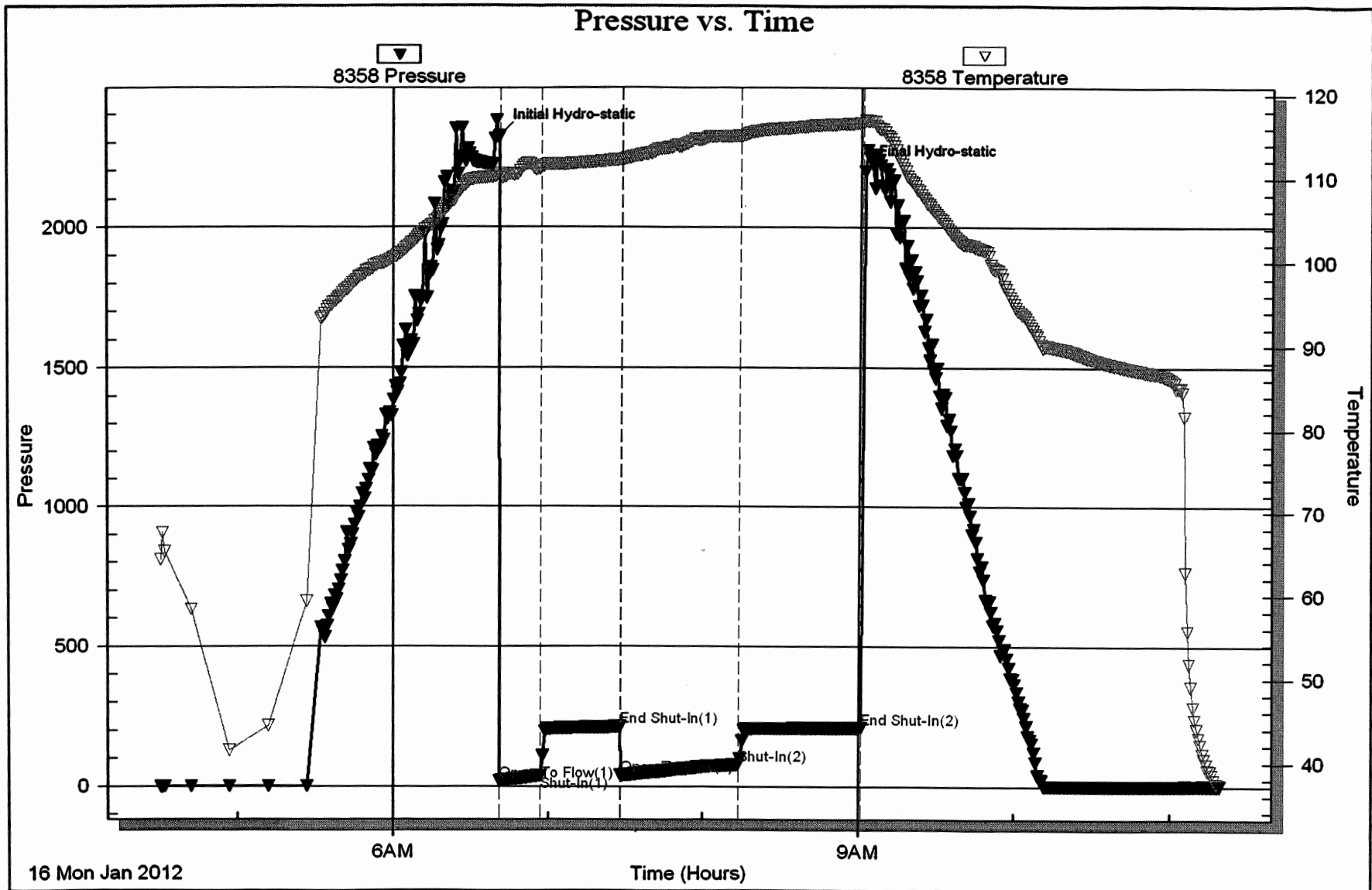
### Tool Information

Drill Pipe:	Length: 4440.00 ft	Diameter: 3.80 inches	Volume: 62.28 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: 26000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 62.89 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4572.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	88.00 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			4543.00	
Shut In Tool	5.00			4548.00	
Sampler	2.00			4550.00	
Hydraulic tool	5.00			4555.00	
Jars	5.00			4560.00	
Safety Joint	3.00			4563.00	
Packer	5.00			4568.00	30.00 Bottom Of Top Packer
Packer	4.00			4572.00	
Stubb	1.00			4573.00	
Recorder	0.00	8358	Inside	4573.00	
Recorder	0.00	6668	Outside	4573.00	
Perforations	19.00			4592.00	
Change Over Sub	1.00			4593.00	
Drill Pipe	31.00			4624.00	
Change Over Sub	1.00			4625.00	
Bullnose	5.00			4630.00	58.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>88.00</b>				





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## RECEIVED Test Ticket

JAN 18 2012

NO. 44988

Well Name & No. J+W Farms #2 Test No. DST #1 Date 1-14-12  
 Company Chaco Energy Co. Elevation 3121 KB 3116 GL  
 Address P.O. Box 1587 Denver CO 80201  
 Co. Rep / Geo. Chris Gough Rig WW Rig #8  
 Location: Sec. 28 Twp. 10s Rge. 33w Co. Thomas State KS

Interval Tested 4230 - 4320 Zone Tested Lansing I, J, K  
 Anchor Length 90 Drill Pipe Run 4093 Mud Wt. 9.1  
 Top Packer Depth 4226 Drill Collars Run 124 Vis 52  
 Bottom Packer Depth 4230 Wt. Pipe Run 0 WL 7.6  
 Total Depth 4320 Chlorides 3400 ppm System LCM 216

Blow Description IF - Surface Blow Built to 5"  
ISI - No Blow  
FF - Weak Surface Blow Built to 4"  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>130</u>	<u>WCM</u>			<u>15</u>	<u>85</u>
<u>62</u>	<u>WCM</u>			<u>45</u>	<u>55</u>
<u>62</u>	<u>MCW</u>			<u>85</u>	<u>15</u>
<u>60</u>	<u>MCW</u>			<u>75</u>	<u>25</u>
Rec	Feet of <u>Slightly gasy water</u>	<u>By order to be written</u>			

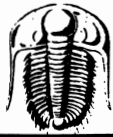
Rec Total 314 BHT 113 Gravity API RW = 46.7 @ 39 ° F Chlorides 24000 ppm

(A) Initial Hydrostatic	<u>2130</u>	<input checked="" type="checkbox"/> Test	<u>1225</u>	T-On Location	<u>10:44 AM</u>
(B) First Initial Flow	<u>24</u>	<input checked="" type="checkbox"/> J/s	<u>250</u>	T-Started	<u><del>16:50</del> 15:50</u>
(C) First Final Flow	<u>87</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>17:46</u>
(D) Initial Shut-In	<u>1,222</u>	<input checked="" type="checkbox"/> C/c Sub	<u>N/C</u>	T-Pulled	<u>20:21</u>
(E) Second Initial Flow	<u>99</u>	<input checked="" type="checkbox"/> Hourly Standby	<u>2 hrs 200</u>	T-Out	<u>22:52</u>
(F) Second Final Flow	<u>179</u>	<input checked="" type="checkbox"/> Mileage	<u>120 R/T 168</u>	Comments	<u>Sampler Recovery</u>
(G) Final Shut-In	<u>1,198</u>	<input checked="" type="checkbox"/> Sampler	<u>250</u>		<u>100 mL of mud</u>
(H) Final Hydrostatic	<u>2069</u>	<input type="checkbox"/> Straddle			<u>1900 mL of water / 100 PSI</u>

Initial Open	<u>15</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In	<u>30</u>	<input type="checkbox"/> Ruined Packer
Final Flow	<u>45</u>	<input type="checkbox"/> Extra Copies
Final Shut-In	<u>60</u>	Sub Total <u>0</u>
		Total <u>2168</u>
		MP/DST Disc't
		Sub Total <u>2168</u>

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

RECEIVED

JAN 18 2012

BY: \_\_\_\_\_

## FLUID SAMPLER DATA

Ticket No. 44988 Date 1-14-12

Company Name Chaco Energy Co.

Lease J+W Farms #2 Test No. DST #1 Lansing I,J,K

County Thomas Co KS Sec. 28 Twp. 10S Rng. 33W

## SAMPLER RECOVERY

Gas \_\_\_\_\_ ML

Oil \_\_\_\_\_ ML

Mud 100 ML

Water 1900 ML

Other \_\_\_\_\_ ML

Pressure 100 PSI ~~ML~~

Total 2000 ML

## PIT MUD ANALYSIS

Chlorides \_\_\_\_\_ ppm.

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Viscosity \_\_\_\_\_

Mud Weight \_\_\_\_\_

Filtrate \_\_\_\_\_

Other \_\_\_\_\_

## SAMPLER ANALYSIS

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Chlorides \_\_\_\_\_ ppm.

Gravity \_\_\_\_\_ corrected @60F

Approved by [Signature]  
tester [Signature]

## PIPE RECOVERY

TOP Resistivity 467 ohms @ 39 F

Chlorides 24000 ppm.

MIDDLE Resistivity 467 ohms @ 39 F

Chlorides 24000 ppm.

BOTTOM Resistivity 467 ohms @ 39 F

Chlorides 24000 ppm.





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44989

RECEIVED  
JAN 18 2012

Well Name & No. J4W Farms #2 BY: DST #2 Test No. DST #2 Date 7-16-12  
 Company Chaco Energy Co. Elevation 3121 KB 3116 GL  
 Address P.O. Box 1587 Denver CO 80201  
 Co. Rep / Geo. Chris Gough Rig WW Rig #8  
 Location: Sec. 28 Twp. 10s Rge. 33w Co. Thomas State KS

Interval Tested 4572 - 4630 Zone Tested Cherokee / Johnson  
 Anchor Length 58 Drill Pipe Run 4440 Mud Wt. 9.2  
 Top Packer Depth 4568 Drill Collars Run 124 Vis 53  
 Bottom Packer Depth 4572 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4630 Chlorides 4100 ppm System LCM 21b

Blow Description IF - Weak Surface Blow Built to 3/4"  
ISI - No Blow  
FF - Weak Surface Blow Built to 1/4"  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>Mud with oil spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT 113 Gravity 1225 API RW 250 @ 336 °F Chlorides 4100 ppm

(A) Initial Hydrostatic 2325  Test 1225 T-On Location 3:55 AM  
 (B) First Initial Flow 18  Jars 250 T-Started 4:30 AM  
 (C) First Final Flow 38  Safety Joint 75 T-Open 6:41 AM  
 (D) Initial Shut-In 212  Circ Sub N/C T-Pulled 9:02 AM  
 (E) Second Initial Flow 39  Hourly Standby T-Out 11:20 AM  
 (F) Second Final Flow 77  Mileage 120 R/T x 2 Comments Sampler Recovery  
 (G) Final Shut-In 207  Sampler 250 2000 ML of Mud  
 (H) Final Hydrostatic 2197  Straddle  Ruined Shale Packer 40 PSI

Initial Open 15  Shale Packer  Ruined Packer  
 Initial Shut-In 30  Extra Packer  Extra Copies  
 Final Flow 45  Extra Recorder  Sub Total 175.04  
 Final Shut-In 45  Day Standby 29 1/4 hrs Total 2311.04  
 Accessibility  MP/DST Disc't  
 Sub Total 2136

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 44989 Date 1-16-12  
 Company Name Chaco Energy Co  
 Lease J + W Farms #2 Test No. DST #2  
 County Thomas Co. KS Sec. 28 Twp. 10S Rng. 33W

### SAMPLER RECOVERY

Gas \_\_\_\_\_ ML  
 Oil \_\_\_\_\_ ML  
 Mud 2000 ML  
 Water \_\_\_\_\_ ML  
 Other \_\_\_\_\_ ML  
 Pressure \_\_\_\_\_ 40 PSI ML  
 Total 2000 ML

### PIT MUD ANALYSIS

Chlorides \_\_\_\_\_ ppm.  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Viscosity \_\_\_\_\_  
 Mud Weight \_\_\_\_\_  
 Filtrate \_\_\_\_\_  
 Other \_\_\_\_\_

### SAMPLER ANALYSIS

Resistivity 7 ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
 Gravity \_\_\_\_\_ corrected @60F

### PIPE RECOVERY

**TOP**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
**MIDDLE**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
**BOTTOM**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.

Geo [Signature]

Tester [Signature]