KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1093840

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

OPERATOR: License # 34506
Name: Empire Energy E&P, LLC
Address 1: 1900 N. Amidon, Ste 210
Address 2:
City: WICHITA State: KS Zip: 67203 + __ __ __ __
Contact Person: Rob Kramer
Phone: (316) 313-4394
CONTRACTOR: License # 34541
Name: Ninnescah Drilling LLC
Wellsite Geologist: James Musgrove
Purchaser: Coffeyville Resources

Designate Type of Completion:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] Oil [ ] WSW [ ] SWD [ ] SIOW
- [ ] Gas [ ] D&A [ ] ENHR [ ] SIGW
- [ ] OG [ ] GSW [ ] Temp. Abd.
- [ ] CM *(Coal Bed Methane)*
- [ ] Cathodic [ ] Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

- [ ] Deepening [ ] Re-perf. [ ] Conv. to ENHR [ ] Conv. to SWD
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

04/30/2012	05/07/2012	06/14/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-185-23745-00-00
Spot Description:
__ - NW - NW - NE Sec. 5 Twp. 22 S. R. 13 [ ] East [x] West
330 Feet from [x] North / [ ] South Line of Section
2310 Feet from [x] East / [ ] West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- [x] NE [ ] NW [ ] SE [ ] SW

County: Stafford
Lease Name: KIRKMAN Well #: 2
Field Name:
Producing Formation: Arbuckle
Elevation: Ground: 1901 Kelly Bushing: 1914
Total Depth: 4304 Plug Back Total Depth: 3854
Amount of Surface Pipe Set and Cemented at: 778 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] 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: 4300 ppm Fluid volume: 666 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. [ ] East [ ] West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- [ ] **Letter of Confidentiality Received**
  Date:
- [ ] **Confidential Release Date:**
- [x] **Wireline Log Received**
- [ ] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [x] **I** [ ] **II** [ ] **III** **Approved by:** Deanna Garrisor **Date:** 10/01/2012

Side Two

1093840

Operator Name: Empire Energy E&P, LLC Lease Name: KIRKMAN Well #: 2

Sec. 5 Twp. 22 S. R. 13 ☐ East ☑ West County: Stafford

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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	12.25	8.625	23	778	common	400	2% gel, 3% CaCl2, 1/2 #/sk flow-sea
Production	7.875	5.5	14	3905	AA-2	200	10% salt, .3% CFR, .25% defoamer, .8%

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
4		4" expendable gun	3789-3790
		CIBP	3785
4		4" expendable gun	3760-3761

TUBING RECORD: Size: 2.875 Set At: 3749 Packer At:

Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 06/14/2012

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	1		310		40

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:
3760
3761

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Empire Energy E&P, LLC
Well Name	KIRKMAN 2
Doc ID	1093840

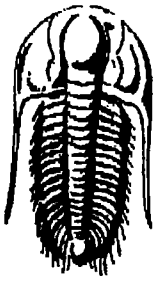
All Electric Logs Run

Micro
Sonic
Dual Induction
Compensated Density
Compensated Neutron
PE

Form	ACO1 - Well Completion
Operator	Empire Energy E&P, LLC
Well Name	KIRKMAN 2
Doc ID	1093840

Tops

Name	Top	Datum
Topeka	2870	-956
Heebner	3248	-1334
Toronto	3268	-1354
Douglas	3283	-1369
Brown Lime	3276	-1362
Lansing	3387	-1473
Base KC	3616	-1702
Viola	3659	-1745
Simpson	3710	-1796
Arbuckle	3760	-1846
TD	4304	-2390



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Empire Energy E&P, LLC.**

380 Southpointe Blvd. #130
Canonburg, PA 15917

ATTN: Josh Austin

Kirkman #2

5-22s-13w Stafford,KS

Start Date: 2012.05.04 @ 22:23:15
End Date: 2012.05.05 @ 06:57:15
Job Ticket #: 47226 DST #: 1

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

ORIGINAL

Printed: 2012.05.08 @ 15:19:15

Empire Energy E&P, LLC. 5-22s-13w Stafford,KS Kirkman #2 DST # 1 Arbuckle 2012.05.04

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Empire Energy E&P, LLC.

380 Southpointe Blvd. #130
Canonburg, PA 15917

ATTN: Josh Austin

5-22s-13w Stafford,KS

Kirkman #2

Job Ticket: 47226 **DST#: 1**

Test Start: 2012.05.04 @ 22:23:15

Tool Information

Drill Pipe:	Length:	3691.00 ft	Diameter:	3.80 inches	Volume:	51.78 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	
					Total Volume:	51.78 bbl	

Drill Pipe Above KB:	5.00 ft
Depth to Top Packer:	3706.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	64.00 ft
Tool Length:	84.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		28000.00 lb
Weight to Pull Loose:		4000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	59000.00 lb
	Final	61000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3687.00		
Shut In Tool	5.00			3692.00		
Hydraulic tool	5.00			3697.00		
Packer	5.00			3702.00	20.00	Bottom Of Top Packer
Packer	4.00			3706.00		
Stubb	1.00			3707.00		
Perforations	5.00			3712.00		
Change Over Sub	1.00			3713.00		
Drill Pipe	31.00			3744.00		
Change Over Sub	1.00			3745.00		
Recorder	0.00	8354	Inside	3745.00		
Recorder	0.00	8520	Outside	3745.00		
Perforations	22.00			3767.00		
Bullnose	3.00			3770.00	64.00	Bottom Packers & Anchor
Total Tool Length:	**84.00**					

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Empire Energy E&P, LLC.

380 Southpointe Blvd. #130
Canonburg, PA 15917

ATTN: Josh Austin

5-22s-13w Stafford,KS

Kirkman #2

Job Ticket: 47226 **DST#: 1**

Test Start: 2012.05.04 @ 22:23:15

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:22:15
Time Test Ended: 06:57:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Rash
Unit No: 38

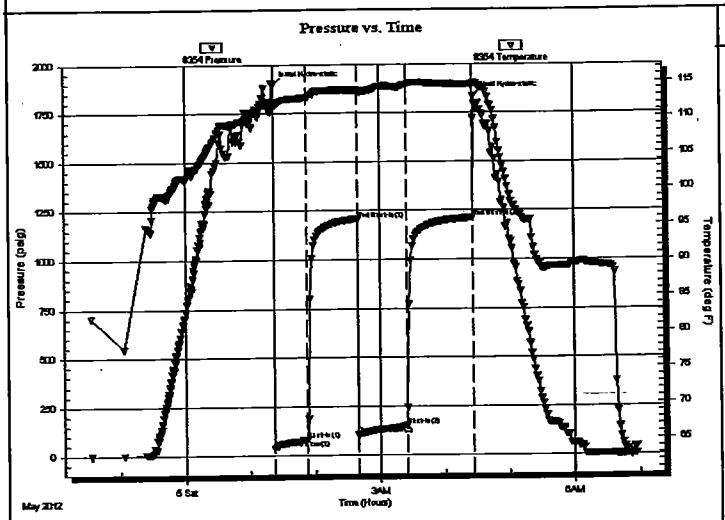
Interval: 3706.00 ft (KB) To 3770.00 ft (KB) (TVD)
Total Depth: 3770.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1914.00 ft (KB)
1901.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8354 **Inside**
Press@RunDepth: 151.81 psig @ 3745.00 ft (KB)
Start Date: 2012.05.04 End Date: 2012.05.05
Start Time: 22:33:15 End Time: 06:57:15

Capacity: 8000.00 psig
Last Calib.: 2012.05.05
Time On Btm: 2012.05.05 @ 01:21:45
Time Off Btm: 2012.05.05 @ 04:27:15

TEST COMMENT: IF-Fair building blow. BOB in 18 minutes.
ISI-No Return.
FF-Weak building blow. BOB in 33 minutes.
FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.28	112.26	Initial Hydro-static
1	36.75	111.80	Open To Flow (1)
31	82.34	112.80	Shut-In(1)
78	1204.46	113.79	End Shut-In(1)
78	106.77	113.55	Open To Flow (2)
123	151.81	114.51	Shut-In(2)
185	1212.81	114.48	End Shut-In(2)
186	1833.22	114.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	70%Water/30%Mud	1.74
124.00	10%Oil/15%Water/75%Mud	1.74
45.00	10%Gas/15%Oil/75%Mud	0.63
30.00	20%Gas/80%Oil	0.42
0.00	124' G.I.P.	0.00

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Empire Energy E&P, LLC.

380 Southpointe Blvd. #130
Canonburg, PA 15917

ATTN: Josh Austin

5-22s-13w Stafford,KS

Kirkman #2

Job Ticket: 47226 **DST#: 1**

Test Start: 2012.05.04 @ 22:23:15

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	31 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	22000 ppm
Viscosity:	44.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	0.35 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	70%Water/30%Mud	1.739
124.00	10%Oil/15%Water/75%Mud	1.739
45.00	10%Gas/15%Oil/75%Mud	0.631
30.00	20%Gas/80%Oil	0.421
0.00	124' G.I.P.	0.000

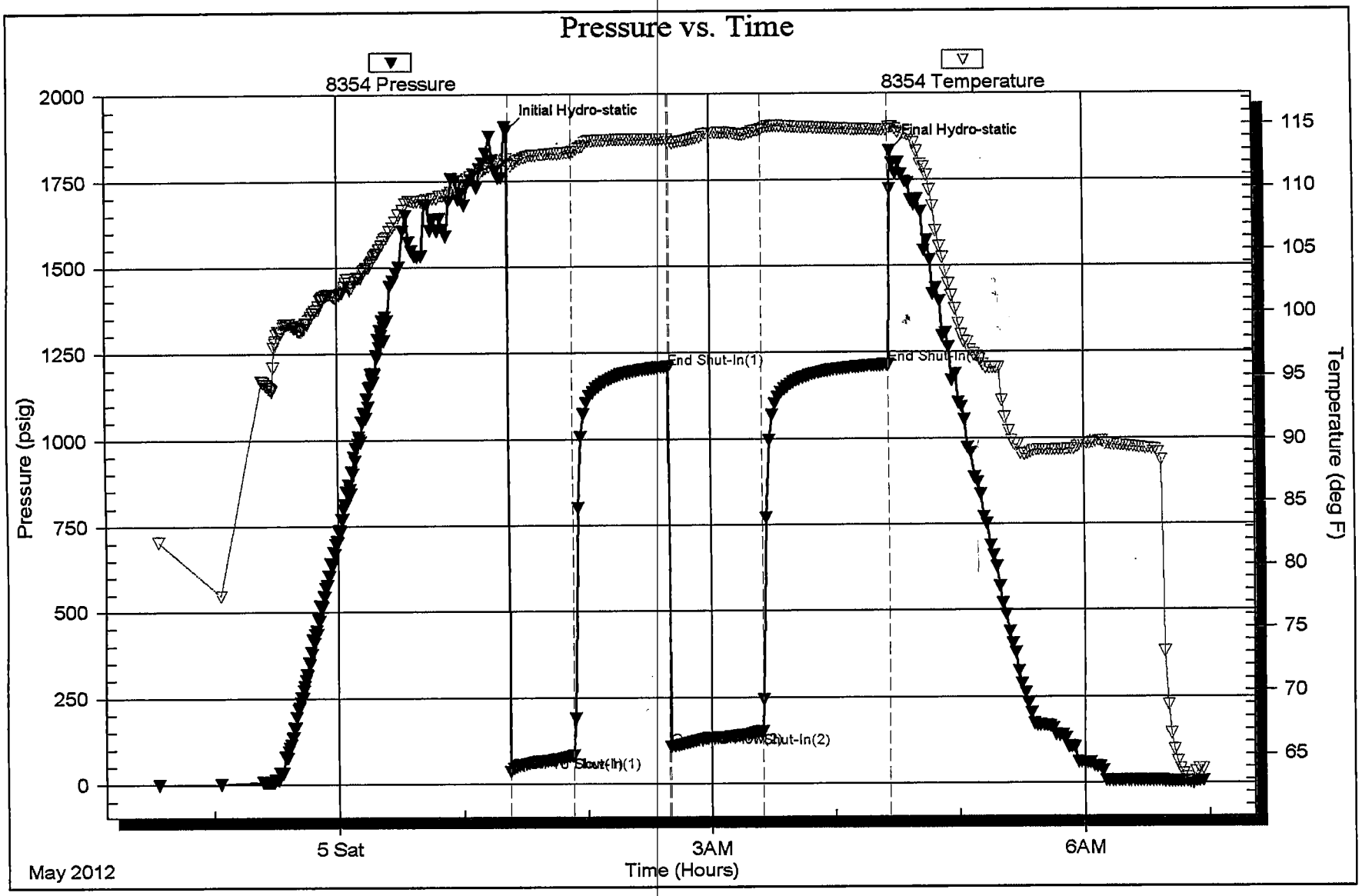
Total Length: 323.00 ft Total Volume: 4.530 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8354 Inside Empire Energy E&P, LLC. Kirkman #2 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 47226 Printed: 2012.05.08 @ 15:19:17

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 405

Cell 785-324-1041

5-1-12

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-30-12	5	22	13	Stafford	KS		12:45 AM

Lease Kirkman Well No. 2 Location 281 Hwy + K-19 Hwy Jct, 1N to 150 Rd

Contractor Ninnescah #101

Type Job Surface

Hole Size 12¼" T.D. 782'

Csg. 8⅝" Depth 778'

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 36' Shoe Joint 36'

Meas Line Displace 47¼ BLS

Owner 1½ W, S1 Into

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To Empire Energy

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 400 sx Common 3% CC 2% Gel ½ # Flo-seal

EQUIPMENT

Pumptrk 9 No. Cementer/Helper Matt

Bulktrk 12 No. Driver/Driver Nick

~~Bulktrk~~ p.u. No. Driver/Driver Rick

JOB SERVICES & REMARKS

Remarks Cement did Circulate.

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Common	400
Poz. Mix	
Gel.	8
Calcium	14
Hulls	
Salt	
Flowseal	100#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	422
Mileage	

FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

1- Rubber plug

1- Baffle plate

Pumptrk Charge Long Surface

Mileage 19

Tax

Discount

Total Charge

X Signature

BASIC energy services, L.P.

TREATMENT REPORT

Customer Empire Energy		Lease No.			Date 5-7-2012		
Lease Kirkman		Well # 2					
Field Order # 6402	Station Pratt	Casing 5 1/2	Depth 4305	County Stafford		State KS	
Type Job CNW 5 1/2 LS		Formation		Legal Description 5-22-13			

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size 5 1/2	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth 3992	Depth	From	To	Pre Pad	Max		5 Min.
Volume 94	Volume	From	To	Pad	Min		10 Min.
Max Press 1500	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative Rich Poppe | Station Manager David Scott | Treater Joe Melson

Service Units	27468	Phye	37980								
Driver Names	Wright	19960 19915	Melson								

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
3:30					On Loc Safety Meeting
3:45					Start Running Casing 93 Joints
					Turbolizer on
					1, 3, 4, 6, 8, 9, 10, 11, 12, 13, 15,
					17, 19, 21
					Basket on 1, 3, 13
5:00					Casing on Bottom Hook up to Circ.
5:45			6	4	Pump 250 gal AA2 Scavenger
			94	6.50	200 SK AA2 15.3
					Wash Pump Lines
			94	6.50	Disp 94 BBL
6:25					Plug Down
					JOB COMPLETE
					Thank you

Taylor Printing, Inc. 620-672-3656