

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See instructions on Reverse Side)

Type Test:

- Open Flow
 Deliverability

Date: 10/6/2010

API No. 15
15-075-30113 - 0000

Company Chesapeake Operating, Inc.		Lease Thielen		Well Number 1-27	
County Hamilton	Location S2 SE NW	Section 27	TWP 22S	Ring (E/W) 41W	Acres Attributed
Field Bradshaw		Reservoir Winfield		Gas Gathering Connection Chesapeake Energy Marketing, Inc.	
Completion Date		Plug Back Total Depth 2634		Packer Set at N/A	
Casing Size 5.5	Weight 14.0	Internal Diameter 5.012	Set at 2636	Perforations 2100'	To 2626'
Tubing Size 2.375	Weight 4.7	Internal Diameter 1.995	Set at 2628	Perforations	To
Type Completion (Describe) Single Gas		Type Fluid Production Water		Pump Unit or Traveling Plunger? Yes / No Pump Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 2637		Pressure Taps		(Meter Run) (Prover) Size	
Pressure Buildup: Shut in 10/6 20 10 at 8 AM (AM) (PM) Taken 10/7 20 10 at 8 AM (AM) (PM)					
Well on Line: Started _____ 20 _____ at _____ (AM) (PM) Taken _____ 20 _____ at _____ (AM) (PM)					

OBSERVED SURFACE DATA

Duration of Shut-in _____ Hours

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter or Prover Pressure psig (Pm)	Pressure Differential in Inches H ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P ₁) or (P ₂)		Tubing Wellhead Pressure (P _w) or (P ₁) or (P ₂)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						61	75.4	116	130.4	24	
Flow											

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _v) (F _s) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F _g	Flowing Temperature Factor F _t	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_e)² = 0.207
(P_w)² = _____

(P_e)² = _____ ; (P_w)² = _____ ; P_e = _____ % (P_e - 14.4) + 14.4 = _____

(P _e) ² - (P _w) ² or (P _e) ² - (P _w) ²	Choose formula 1 or 2: 1. P _e ² - P _w ² 2. P _e ² - P _w ² divided by: P _e ² - P _w ²	LOG of formula 1, or 2, and divide by: $\frac{P_e^2 - P_w^2}{P_e^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)

Open Flow Mcfd @ 14.65 psia Deliverability Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct. Executed this the 15th day of November, 20 10.

Witness (if any)

For Commission

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KCC WICHITA

For Company

Checked by

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DEC 06 2010

KCC WICHITA

I declare under penalty of perjury under the laws of the state of Kansas that I am authorized to request exempt status under Rule K.A.R. 82-3-304 on behalf of the operator Chesapeake Operating, Inc. and that the foregoing pressure information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon available production summaries and lease records of equipment installation and/or upon type of completion or upon use being made of the gas well herein named.

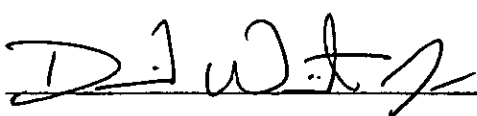
I hereby request a one-year exemption from open flow testing for the Thielen 1-27 gas well on the grounds that said well:

(Check one)

- is a coalbed methane producer
- is cycled on plunger lift due to water
- is a source of natural gas for injection into an oil reservoir undergoing ER
- is on vacuum at the present time; KCC approval Docket No. _____
- is not capable of producing at a daily rate in excess of 250 mcf/D

I further agree to supply to the best of my ability any and all supporting documents deemed by Commission staff as necessary to corroborate this claim for exemption from testing.

Date: November 15, 2010

Signature: 
Title: David Wiist, Production Engineer

Instructions: If a gas well meets one of the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to claim exempt status for the gas well.

At some point during the current calendar year, wellhead shut-in pressure shall have been measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under **OBSERVED SURFACE DATA**. Shut-in pressure shall thereafter be reported yearly in the same manner for so long as the gas well continues to meet the eligibility criterion or until the claim of eligibility for exemption IS denied.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The form must be signed and dated on the front side as though it was a verified report of annual test results.

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GO JET SERVICES INC.

PERFORATING — LOGGING

OKLAHOMA CITY, OKLA.

SALES CONTRACT AND FIELD WORK ORDER

Job No. 901-779	Charge To: Kansas-Nebraska Natural Gas	Customer Order No.
Date 10-26-65	Address 300 N. Joseph	Nearest Town Syracuse
Operator FELCHMAN	City & State HASTINGS, NEBRASKA	Field BRADSHAW
Riggers Paquette-Clark	Mail Invoices To: SAME	Lease and Well No. Thickon #1
Legal Description 27-225-41W	Address 11	County HAMILTON
	City & State 11	State KANSAS

In consideration of service work to be performed, the undersigned hereby agrees to the following general terms and conditions of services:

- (1) All accounts are to be paid within the terms fixed by Go Jet Services Inc. invoices; and should these terms not be observed, interest at the rate of 8% per annum will be charged from the date of such invoice. In the event the enforcement of a claim for indebtedness, arising hereunder, is placed in the hands of an attorney for collection, the customer agrees to pay all costs of collection and reasonable attorney's fees, which in no event shall be less than \$75.00.
- (2) Because of the uncertain conditions and hazards existing in a well which are beyond the control of Go Jet Services, Inc., it is understood by the customer that Go Jet Services, Inc., cannot guarantee the results of their services and will not be held responsible for personal or property damage in the performances of their services.
- (3) Should any Go Jet Services, Inc., instruments or equipment be lost or damaged in the performance of the operations requested, the customer agrees to make every reasonable effort to recover same, and to reimburse Go Jet Services, Inc., for the value of the items which cannot be recovered, or the cost of repairing damage to items recovered.
- (4) It is further understood and agreed that all depth measurements shall be supervised by the customer or its employees.
- (5) The customer certifies that it has the full right and authority to order such work on such well and that the well in which the work is to be done by Go Jet Services, Inc., is in proper and suitable condition for the performances of said work.
- (6) The customer agrees to pay any and all taxes, fees and charges placed on services rendered by Go Jet Services, Inc., by governmental requirements including city, county, state and federal taxes and fees or reimburse Go Jet Services, Inc., for such taxes and fees paid to said agencies.
- (7) No employee is authorized to alter the terms or conditions of this agreement.

DATE **10-26-65** CUSTOMER **Kansas-Nebraska Natural Gas Co** BY **Laurance Holmstrom**
PRINT CORRECT NAME SIGNATURE OF CUSTOMER OR AUTHORIZED REPRESENTATIVE

WORK PERFORMED	PRICING
Log Correlations Gamma + Cement Log	Set up \$ 37.50
From 2626 ft. to 2100 ft.; From _____ ft. to _____ ft.	1st 20 Shots \$ 130.00
From _____ ft. to _____ ft.; From _____ ft. to _____ ft.	Next _____ Shots @ \$ _____ Ea. \$ _____
Bridge Plug at _____ ft.	Next _____ Shots @ \$ _____ Ea. \$ _____
Perforated with 3 1/2 STICK-TEX as Follows:	LOGGING:
From 2612 ft. to _____ ft. 4 Shots	Depth Charge 2626 ft. @ \$.03 ft. \$ 78.78
	Logging Chg. 2626 ft. @ \$.02 ft. \$ 50.00
	BRIDGE PLUG:
	Type _____ \$ _____
	Setting Charge _____ \$ _____
	Depth Charge _____ ft. @ \$ _____ ft. \$ _____
	DUMP BAILER SERVICE:
	1st Run _____ ft. @ \$ _____ ft. \$ _____
	Additional Runs:
	No. Runs _____ X _____ ft. X \$ _____ ft. \$ _____
Other Services (Specify)	Other Services (Specify)
	Portable Mast per Day 50.00
	W.S.I. Royalty 10.00
	RECEIVED 10.00
	JAN 20 2011 356.28
	KCC WICHITA

Handwritten notes:
 Less 10% Discount
 356.28
 35.628
 320.652
 Total

WELL NO. 7' A.G.H.	CASING SIZE 5 1/2	CASING WT. 14#	CUSTOMER'S JOB NO. 2626	LOG NO. 2626	FLUID LEVEL Full
CUSTOMER'S COLLARS 2514-2553-2594			GO COLLARS 2514-2553-2594		TYPE FLUID IN WELL Water

SALES CREDIT TO: **LIBORCH**

COMMENTS: **W.O. 2646**

I certify that the above ordered services have been performed to my satisfaction, that all zones perforated were designated by me and all depth measurements checked and approved.

THE WESTERN COMPANY

Engineered Well Services

GENERAL OFFICES - FORT WORTH, TEXAS

TREATMENT REPORT

<p style="text-align: right;">Date <u>10-30-65</u></p> <p>Well Data</p> <p>Operator <u>Kansas Nebraska</u></p> <p>Lease <u>Thick</u> Well No. <u>1</u></p> <p>Field <u>Oralobaw</u></p> <p>Location _____</p> <p>County <u>Hamilton</u> State <u>Kansas</u></p> <p>Formation <u>Wanfield</u> Depth <u>2612</u></p> <p>Stage No. <u>1</u> this section. Old _____ New <input checked="" type="checkbox"/> Well</p> <p>Depth: TD <u>2626</u> PBTD _____</p> <p>Size Casing <u>5.5</u> Weight <u>14^{lb}</u> Set <u>2626</u></p> <p>Size Liner _____ Weight _____ Set from _____ to _____</p> <p>Size hole below _____</p> <p>Casing Perforations w/holes per foot <u>D.E. 2612</u></p> <p>Size Tubing <u>none</u> Tubing Perf. _____</p> <p>Type Packer <u>none</u> Set at _____</p>	<p>Field Receipt No. <u>86275</u></p> <p style="text-align: right;">Treatment Data</p> <p>Volume and Type <u>15,000 gal 3% acid</u></p> <p>Amount Sand <u>4000</u> Size <u>20-40</u></p> <p>Perforation Sealers _____ in _____ Stages</p> <p>Misc. Mtls. <u>136.0 gal Raw acid 150 # 5-2 150 # 1</u> <u>20 # 8-12 shells 10 Ton Co₂</u></p> <p>Pumping Eqpt. <u>L.F.m. 600</u></p> <p>Tbg Cap. _____ Csg. Cap. <u>63.73</u></p> <p>Annular Cap. _____ Open hole cap. _____</p> <p>Fluid to load _____ Trtg. Fluid <u>240.0</u></p> <p>Flush <u>64.0</u> Overflush _____</p> <p>Total load to recover _____ Type Flush <u>acid</u></p> <p>Max. Press. <u>1300</u> Min. Press. <u>1000</u></p> <p>Rate on Frac. <u>18.7</u> Flush <u>18.7</u> Avg. Rate <u>18.7</u></p> <p>ISDP _____ FSIP _____ in _____ Min.</p>
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TIME	PRESSURE		FLUID PMPD	RATE BPM	REMARKS
	TBG	CSG			
10:20		0			Start fluid to break down ^{desired} string
10:23		900	10		Breakdown complete. Shut down
10:25		0			Pump 6 bbl acid via production string
10:27		0	16		Acid in.
10:45		0			Start 6 bbl 3% acid to break down
10:49		1000			Not loaded. Shut down
10:56		0	81		Breakdown complete. Shut down to rig Co ₂
11:00		0			Start frac. Co ₂
		1200			Pumps put speed
11:09		1100	253	18.7	Frac in. Start shells
11:11		1100	301	18.7	Shells in. Start flush.
11:12		1300	371	18.7	Shells on formation
11:15		1000			Flush in. Shut down to rig floor line
11:20					with flowing to pit set complete

Previous Treatment None with

Operator Representative Lawrence Holstman

Western Engineer Powell

Western District Berryton Elbert

Operator Max. Trtg Pressure: 2000 Test Western Connection to: 3500

REMARKS: Fluids break desired string w/ 10 bbl gal 3% acid. Pump 6 bbl 15% acid via production string. Breakdown w/ 6.5 bbl 3% acid. Total w/ 7000 gal 6.4000 # 20-40, 200 gal + 200 # 8-12 shells. Flush 3 w/ 10 gal 15% acid via 10 T Co₂

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DISTRIBUTION

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