# KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Tes	ype Test: (See Instructions on Reverse Side)														
✓ Open Flow				Total Base											
Deliverabilty				Test Date 7-13-10			API No. 15 <b>15-023-20691-00-00</b>								
Company		NC.					<del>-</del>	Lease NORTI	HUP		<del></del>	1-15	Well N	ımber	
County Location CHEYENNE SE/4					Section 15			TWP RNG (E/W) 2S 42W		Acres Attributed					
Field CHERRY CREEK						Reservoir NOBRARA		Gas (		thering Con	nection				
Completion Date 9-28-06					Plug Bac 1716	Plug Back Total Depth		h Packer NONE							
Casing Size Weight 4.5 9.5					Internal Diameter 4.090		Set at <b>1774</b>		orations 8	то <b>170</b> 0					
Tubing Size Weight 2.375 4.7			Internal E 1.995	Diameter				orations	То						
Type Cor			scribe)				d Productio	on	Pump Unit or Travelin YES-PUMP		g Plunger? Yes / No				
Producing	_	ı (Annı	ulus / Tu	ubing)		% C 0.168	arbon Diox	ride	% Nitrogen 5.266		Gas Gravity - G <sub>g</sub> 0,593				
Vertical D	Depth(	H)			····		Pressure Taps			0.200			(Meter Run) (Prover) Size		
1684 FLANGE 2.068"										10101, 0120					
Pressure	Build				0 2			. (AM) (PM)	Taken 7	12-10	20	at 1200		(AM) (PM)	
Well on L	ine:	S	tarted _	7-12-	10 2	0 at		. (AM) (PM)				at1200		(AM) (PM)	
							OBSERVI	ED SURFAC	E DATA	· · · · · · · · · · · · · · · · · · ·	····	Duration of Shu	<sub>it-in</sub> 72	.0 Hours	
Static / Dynamic	Dynamic Size		Meter Prover Pressure		Pressure Differential in	Flowing Well Head Temperature		Wellhead	Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Tubing ead Pressure	Duration (Hours)	Liqu	Liquid Produced	
Property Shut-In	(inch	ies)	psig (l	Pm)	Inches H <sub>2</sub> 0	t ·	t	psig	psia	psig	or (P <sub>i</sub> ) or (P <sub>c</sub> )	(Houls)		Barrels)	
Flow	.375	_	19.3				*** C	176.3	190.7	<u> </u>		72.0	-		
710₩	.373	,	19.5		6.0		75	21.4	35.8			24.0			
Plate		c	ircle one:			<u> </u>	FLOW STI	REAM ATTE	RIBUTES		<del> </del>			γ	
Coefficient  (F <sub>p</sub> ) (F <sub>p</sub> )  Mcfd		Meter or Prover Pressure psia		гө	Press Extension P <sub>m</sub> xh	Gravity Factor F <sub>g</sub>		Flowing Temperature Factor F <sub>11</sub> Temperature Factor F <sub>11</sub> Temperature Factor F <sub>pv</sub>		ctor	Metered Flo R (Mcfd)	GOR (Cubic Feet/ Barrel)		Flowing Fluid Gravity G <sub>in</sub>	
0.686		33.7	70	_ 1	4.22	1.298	6 1	.0632	1.003	6	13.5	NONE		0.593	
(P <sub>c</sub> ) <sup>2</sup> = 3	6.4	:	(P.,	) <sup>2</sup> = 1	1. <b>3</b> .	(OPEN FLO	400	/ERABILITY % (i	') CALCUL <sub>c</sub> - 14.4) +		190.7		$a_{1})^{2} = 0.2$	07	
				Cho	ose formula 1 or 2.				ssure Curve			(P <sub>1</sub>	<sub>3</sub> ) <sup>2</sup> =		
$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_a)^2$		(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>			1. P <sub>c</sub> <sup>2</sup> -P <sub>a</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> -P <sub>d</sub> <sup>2</sup>	formula 1. or 2. and divide		Slope 			LOG	Antilog	Del Equals	pen Flow iverability i R x Antilog	
				aivie	ded by: $P_c^2 - P_w^2$	by:		Stand	lard Slope		- J			(Mcfd)	
36.16		35.0	)8	1.0	031	0.0131		0.850		0.0	111	1.0260	13.8	<b>7</b>	
Open Flow 14 Mcfd @ 14.65 psi				65 psia	osia Deliverability					Mcfd @ 14.65 ρ	sia				
												ort and that he h			
the facts stated therein, and that said report is true and correct. Executed this the 13 day of JULY , 20 10 .															
COPY TO KCC WICHITA PRECISION WIRELINE AND TESTING  Witness (if any)  For Company															
COPY	Y TC	) KC		Sommissio	on			-			MARK B	שחרש	RECE	11/	
											Che	cked by	- <del></del>	IVEL	

JUL 2 6 2010 KCC WICHITA

i declare und	der penalty of perjury under the laws of the state of Kansas that I am authorized to request					
exempt status un	der Rule K.A.R. 82-3-304 on behalf of the operator					
	going pressure information and statements contained on this application form are true and					
correct to the bes	st 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.						
	lest a one-year exemption from open flow testing for the					
	rounds that said well:					
_(Checl	k 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 agre	ee to supply to the best of my ability any and all supporting documents deemed by Commission					
	ry to corroborate this claim for exemption from testing.					
Date:						
:	Signature:					
÷ ' ,	Title:					

### 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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Sample No: 20102322

#### PRECISION WIRELINE AND TESTING NATURAL GAS ANALYSIS REPORT 620-624-4505

Operator: MAREXCO INC Well Name: NORTHRUP 1-15

Analysis Date: 07/13/10 Sample Date: 07/12/10

Location: 15-2S-42W

Sample Pressure: 19.3 Sample Temperature:

County: CHEYENNE

Sample Time: 1200

State: KANSAS

Sample Source: METER RUN Formation: NIOBRARA

Bottle No: P-

Requested By: MAREXCO INC

Sampled By: MARK

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#### NATURAL GAS ANALYSIS

	Mole %	GPM
Helium Hydrogen Oxygen Nitrogen Carbon Dioxide Methane Ethane Propane Iso Butane Normal Butane Iso Pentane Normal Pentane	0.100 0.000 0.000 5.266 0.168 92.334 1.391 0.489 0.083 0.089 0.026	0.522 0.183 0.025 0.028 0.007 0.005
Hexanes Plus	0.036	0.008
TOTALS	100.000	0.779
Z Factor: Specific Gravity:		0.9999 0.5930
BTU/cu.ft. (sat, 60 BTU/cu.ft. (dry, 60 Octane Rating	F. 14.73 psia): F. 14.73 psia):	970.8 988.0 122.1

Comments:

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