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

Type Tes	t: oen Flo	w			(	See Instruc	ctions on Rev	erse Side	)						
	eliverat				Test Date 12/7/20					No. 15 199-20357	2000				
Company Raven F		rces	, LLC				Lease Lutters					Well Number			
County Location Wallace County NE/4 NW/4				Section TWP 25 11S				RNG (E/ 42W	W)		Acres Attributed				
Field						Reservoir Niobrara				Gas Gathering Connection Closed gathering system (West Kansas Pipeline)					
Completi 8/2008	on Da	te			Plug Bac 1158'	k Total Der	oth		Packer S	et at					
Casing S 4 1/2"	ize		Weigh 10.5	t	Internal [	Diameter	Set at 1194			ations 3' - 1044'	То				
Tubing S 2 3/8"	ize		Weigh 4.7	t	Internal Diameter Set at				Perfo	ations	То				
Type Cor CO2 Fr		n (D	escribe)		Type Flui	d Production	n		Pump Un	it or Traveling	Plunger? Yes	No			
Producing Tubing	g Thru	(Anı	nulus / Tubin	g)	% C	arbon Diox	kide		% Nitrog	ən	Gas Gra	avity - G <sub>g</sub>			
Vertical D	Depth(H	H)			-	Pres	ssure Taps				(Meter F .500	Run) (Prover) Size			
Pressure	Buildu	ıp:	Shut in	72	0 09 at 9	30am	(AM) (PM)	Taken_12	2-8	20	09 <sub>at</sub> 930am	(AM) (PM)			
Well on L	.ine:		Started 12-		09 at 9		. (AM) (PM)		2-9	20	<u>09</u> at <u>930am</u>	(AM) (PM)			
***************	. 1					OBSERVE	ED SURFACE	DATA			Duration of Shut-	in 24 Hours			
Static / Dynamic Property	Orifi Siz (inch	e	Circle one:  Meter  Prover Pressu  psig (Pm)	Pressure Differential in Inches H <sub>2</sub> 0	Flowing Temperature t	Well Head Temperature t	(P <sub>w</sub> ) or (P <sub>t</sub> )	ressure	Wellhea	ubing ad Pressure (P <sub>t</sub> ) or (P <sub>c</sub> )	Duration (Hours)	Liquid Produced (Barrels)			
Shut-In	.500	)	14.9	0			psig 5	рыа	5	psia	24	0			
Flow	.500	)	15.6	3			2		2		24	0			
				1	1	FLOW STI	REAM ATTRI	BUTES				<del></del>			
Plate Coeffiec (F <sub>b</sub> ) (F Mcfd	ient p)	Pro	Circle one: Meter or over Pressure psia	Press Extension P <sub>m</sub> xh	Grav Fact	tor	Flowing Temperature Factor F <sub>rt</sub>	Fa	ation ctor	Metered Flov R (Mcfd)	y GOR (Cubic Fer Barrel)	Flowing Fluid Gravity G <sub>m</sub>			
	;				(0.00)					- · · · · · · · · · · · · · · · · · · ·					
(P <sub>c</sub> ) <sup>2</sup> =		·	(P <sub>w</sub> ) <sup>2</sup> =	:	(OPEN FLO		<b>/ERABILITY)</b> % (P		ATIONS 14.4 =		(P <sub>a</sub> ) <sup>2</sup> (P <sub>d</sub> ) <sup>2</sup>	c = 0.207			
(P <sub>c</sub> ) <sup>2</sup> - (I	P <sub>a</sub> ) <sup>2</sup>	(F	P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2. 1. $P_c^2 - P_e^2$ 2. $P_c^2 - P_d^2$ divided by: $P_c^2 - P_w^2$	LOG of formula 1, or 2, and divide	P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	Backpress Slope 	sure Curve = "n" or gned rd Slope	n x l	og [	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)			
								· · · · ·							
Open Flo	l w			Mcfd @ 14.	65 psia		Deliverabil	ity			Mcfd @ 14.65 psi	a			
The i	unders	igned	d authority, or	n behalf of the	Company, s	tates that h	ne is duly aut	horized to	make the	e above repo	rt and that he ha	s knowledge of			
the facts s	tated t	herei	n, and that sa	aid report is true	and correct	EXECUTE OF AS CORPORA	HOE DO COMMISS	SION (	day of			, 20			
			Witness (i	fany)		MAY 2	0 2010			For C	ompany				
			For Comm	ission	<del></del>		_	1.1		Chec	ked by				

CONSERVATION DIVISION WIGHTA, KS

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

Type Test					f-	See Instr	uction	s on Re	verse Side	e)					
Open Flow				Test Date:					API No. 15						
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Company	as 1 a 1 1 2 .		- Sin its in a discovery					ease Ters	,		The State of the State of the State of			Vell Nu	
County	eryon ye r	. *	Locati	ου 	Section			reza IWP	<del></del>	RNG (E/V	<u></u> γη			cres /	Attributed
Wall	-		•		25			115		-	2				
Field		* n	E, 1 pp.) mendago, melako kan, dakelardakka		Reservçir			· · · · · · · · · · · · · · · · · · ·		Gas Gath	ering Conne	ection	***************************************	-	elementur (E), , v,
					Neober										
Completic		Ð			Plug Baci		epth			Packer Se	rt et				
8-/-						8			2				_		
Casing Si			Weigh		Internal Diameter			Set		Perfora		-/044 To			
Tubing Si		e de co	/O.	<u>.                                    </u>	Internal C	iametar		//7 Sot :	<i>4.59</i> at	Parlors	/0/8	-/04	<del>9</del> To	ecus u	,
23/2				, 7		nameto.			z.92´	1 411012	MOID				
Type Con	npletlor	(Do	escribe)	- muchanian	Type Flui	Produci	lion	101	<u>د ۱۶۵</u>	Pump Unit	or Traveling	Plunger?	Yes	63	
COZ	•		-								_	_			
Producing	Thru	(Ana	niduT \ aulur	))	% C	arbon Di	oxide			% Nitroge	n		Gas Gra	vity - (	3,
Vertical D	eoth(H					 Pr	ressure	a Taps	<del>, ,</del>				Meler R	un) (P	rover) Size
		•						•				·	•	. 37	
-	Andreas Andreas	******	Oh. 4 12	2-7 20	. 49	9:30	16	an man	Tokon	12-8	> ^^	A9	9:2	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	ATA COLL
Pressure	Ranani														
Well on L	ine:		Started	2-8 20	09 at	9:30	(E	🚱 (PM)	Taken	12-9	20	<i>9</i> 2 at	9:30	٠. ا	(PM)
		-			· · · ·	OBSER	VED S	SURFAC	E DATA			Duration e	of Shut-i	n	
Static /	Orifo		Circle one:	Prossure	Flowing	Well Hea	ad De	Cas	-		bing	_			_
Dynamic	Siz		Prover Pressu	Difficrential in	Temperature	1	- 1		Pressure P <sub>e</sub> ) or (P <sub>e</sub> )		d Pressure P,) or (P,)	Durad (Hou			d Produced Barre(s)
Property	(inch	63)	psig (Pm)	Inches H <sub>2</sub> O	1	1		psig	psis.	ps/g	psis.	(1 100	,	, '	<b>DDIVO.</b> 2)
Shut-En	. 50	20	14.9	0	· · · · · · · · · · · · · · · · · · ·			ح	·	5		29	V		0
Flow	. 5	x	15.6	3	• • •			2		2		24	,	,	0
			L			FLOW S	TREA	M ATTR	IBUTES	<del></del>				·	
<b>6</b> 1-4-	I		Ciralo ono:		1			owing							Flowing
Plate Coeffiction  (F <sub>b</sub> ) (F <sub>r</sub> )  Mod			Meter or	Press Extension	Fi .	Gravity Factor		Temperature L		elation actor	Matered Flow		GOR (Cubic For		Fixed
		Pit	per Pressure psia	✓ P <sub>m</sub> xh	F,		F	actor F <sub>ii</sub>		F <sub>nv</sub>	(McId)	'	Barrel)	,,,	Gravily G <sub>n</sub>
MCIO			logic.		1			111							
		-													<u> </u>
					(OPEN FL	OW) (DEI	LIVER	ABILITY	) CALCUL	ATIONS			(P )2	= 0.2	207
(P <sub>c</sub> ) <sup>2</sup> =		;	(P <sub>n</sub> ) <sup>2</sup> =	:	Pas		%	(i	P <sub>c</sub> - 14.4) +	14.4 =			(P <sub>a</sub> ) <sup>2</sup>		aude Cuetoper u.1
				Ghoose tonnuls 1 or 2:	1		<u> </u>		essure Curve	e	Г٦			Ω	pen Flow
(P <sub>a</sub> )²- (I		(F	5)5- (b")5	1. P. 2 - P. 2	LOG of formula				-04 -04	_ n x Li	og	Antik	op g	De	liverability
(P <sub>o</sub> )2- (I	P <sub>0</sub> )2		}	2. P <sub>2</sub> ·P <sub>3</sub> ²	1. or 2. and divide	p.z. p. 2		As	ssigned terd Slope	ĺ			•		s R x Antilog (Mofd)
	-2.5	<del> ,</del>	-	dividentaly: P <sub>q</sub> <sup>2</sup> · P <sub>p</sub> <sup>2</sup>	by:		<u> </u>	364	and oliptic	_					
	اير														
Open Flo	w			Mcfd @ 14.6	65 psia			Deliveral	bility			Modd @ 1	4.65 psi	3	
The	unders	igne	d authority, o	n behalf of the	Company, s	iates tha	n he i	s đuhy a	uthorized	to make the	above repo	ort and tha	it he ha	s knov	vledge of
		•	-	aid report is true											20 10 .
nie iacis S	idigi (	itile	rı, arını iller Si	alie report is true	and conec	4. LAULU	neer trii	- une	<del></del>	July 51					
										Such		ist	<u></u>		
2			Witness (	1 any)		***			,6:		For (	Company			
montractor			For Come	TSSION	KANCAC	REC CORPOR	EIVE	D			Che	Cited by	: Lander Transie	. ****** :*_*	
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MAY 20 2019

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I declare under p	enalty of perjury under the laws of the state of Kansas that I am authorized to request
exempt status under F	Rule K.A.R. 82-3-304 on behalf of the operator Raven Resources, LLC
and that the foregoin	g pressure information and statements contained on this application form are true and
correct to the best of r	my knowledge and belief based upon available production summaries and lease records
of equipment installat	on 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 Lutters 2-25
gas well on the groun	ds 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.
=	not capable of producing at a daily rate in excess of 250 mcf/D
<del></del>	
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: 5/18//	<u>2</u>
	Signature: And Signat

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.