## 13

## Kansas Corporation Commission One Point Stabilized Open Flow or Deliverability Test

Type Test	t:		•				(See Inst	ructions on Re	everse Side)	)					
Ор	en Flo	w				~ . ~ .									
<b>√</b> De	liverab	ilty				Test Date		02/14/2012	,	API I	No. 15 5-047-20-1	32 - OOX	$\overline{}$		
C	<del></del>					02/13/2	2012 - (			13	)-U47-2U, 1	<del></del>			
Company		mna	iny, L.L.	n.			Lease LUNZ						Well Number 2-21		
County	311 00	inpo			<del></del>	Section		. TWP	·	RNG (E/	١٨/١		Acres At	tributed	
Edward	<del>-</del>			21					**) :		10165 AI	iributed			
Field				<u>-</u>		Reservoir		240	<del></del>	16W	ering Conne	ction		·	
Embry	/Multi	inav	)			Mississ			ţ		as Gatherii				
Completic			<u>′                                     </u>		<del> </del>	Plug Back	<del></del>	enth		Packer S	<del></del>	19 2.2.0.			
06/26/1		•				, lag Başı	· ·ota· be			, donor o					
Casing Si			Weig	 ht		Internal D	iameter	Set	at	Perfo	ations	То		<del> </del>	
4-1/2"							4379'		2'-4305'						
	ing Size Weight			Internal Diameter			Set at		ations	То		- ·- · · · · · · · · · · · · · · · · ·			
2-3/8"			4.7	-				31:	27'						
	npletion	n (Des				Type Flui	Product			Pump Un	it or Traveling	Plunger? Yes /	No		
ype Completion (Describe) Single (Gas)				ŚW	•			Pump	Ü						
	Producing Thru (Annulus / Tubing)				% Carbor	% Carbon Dioxide			% Nitroge		Gas Gra	Gas Gravity - G			
Tubing	-									J			•	в , .	
ertical D	epth/H	1)					Pre	ssure Taps		<del></del>		(Meter R	un) (Pro	ver) Size	
		-,										(**************************************		,	
			00	)/40	/2012	n.	00	· .		0/40/00	40	0.00			
ressure	Buildu	p: S	thut in _UZ	413/	201219	at _8:	UU	(AM) (PM	) Taken (	2/13/20	12 <sub>19</sub>	at 8:00	(	AM) (PM)	
						at 8:00 (AM) (PM) Take				12 19	at 8:00	at 8:00 (AM) (PM)			
ven on L	mi <del>c</del> .	3	.aeu		19	al		(AIVI) (FIVI	, iakeii <u></u>		19	at	(/	LIVI) (LIVI)	
							OBCED	WED CUDEA	DATA			D	<sub>n</sub> 24		
	r	- 1	Circle et				OBSER	EVED SURFAC		r <u> </u>		Duration of Shut-i	n <u> </u>	Hou	
Static /	Orifi	i Meteror			Pressure Differential		Well Hea	ad Wellbear	psig psia		ubing ad Pressure	Duration	Liquid	Liquid Produced (Barrels)	
)ynamic	Siz				L		Temperature t	Hro I			(P <sub>t</sub> ) or (P <sub>c</sub> )	(Hours)	1 '		
Property	inch				Inches H <sub>2</sub> 0	t ·					psia				
Shut-In								205		5.77		24			
	ļ								<del>                                     </del>	-		_ :	-		
Flow								•							
							FLOW S	TREAM ATT	RIBUTES						
Plate			Circle one:		D			Flowing						Flowing	
Coeffiec		Meter or		İ	Press Extension	Gravity Factor		Temperature	T LIEVI		Metered Flow	w GOR (Cubic Fee		Fluid	
(F <sub>b</sub> ) (F		Prover Pressure		.	š P <sub>m</sub> x H <sub>w</sub>	F <sub>g</sub>		Factor		etor : pv	(Mcfd)	Barrel)	eu	Gravity	
Mcfd	1		psia 			`	<u>'</u>	F <sub>ft</sub>		ρv	· · · · · ·		-	G <sub>m</sub>	
	•			-			:		ļ	1			·		
						40.000	L						i		
						(OPEN FL	OW) (DE	LIVERABILIT	Y) CALCUL	ATIONS			= 0.20	07	
P <sub>c</sub> ) <sup>2</sup> =		:	(P <sub>w</sub> ) <sup>2</sup>	=	:	P <sub>d</sub> =		_%	(P <sub>c</sub> - 14.4) +	14.4 =		(P <sub>d</sub> ) <sup>2</sup>	=		
				1	ose formula 1 or 2:	1.00		Backpr	essure Curve		Γ'n	-	On	en Flow	
$(P_c)^2 - (P_a)^2$		(P	<sub>c</sub> )² - (P <sub>w</sub> )²		1. P <sub>c</sub> <sup>2</sup> -P <sub>s</sub> <sup>2</sup>	LOG of formula	formula		ope = "n"	n v i	og	Antilog	Deliverability Equals R x Antilog		
or (P <sub>c</sub> ) <sup>2</sup> - (I	$P_{a})^{2}$			:	2. P <sub>c</sub> <sup>2</sup> -P <sub>d</sub> <sup>2</sup>	1. or 2. and divide p 2 - p 2		1 1	or ssigned			Andiog			
· 6/ (	a'			divid	led by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	by:			dard Slope					Mcfd	
				+	<del> </del>	+			<del> </del>	<del></del>					
	İ														
					Mofd @ 14 c	5 neia		Deliverab	ility			Mcfd @ 14 65 nois			
🗥	1				Mcfd @ 14.6	o psia		Deliverab	anty			Mcfd @ 14.65 psia			
pen Flov	w1				half of the Co	ompany, sta	tes that h	e is duly autho	orized to ma	ike the ab	ove report and	d that he has know	ledge of	f the facts	
		igned	authority,	on be	man or the or										
The u	undersi	•	•					_	_1 -					n	
The u	undersi	•	•			ect. Execute	ed this the	e	day o	f		<del>y , </del>	•	9	
The u	undersi	•	•			ect. Execute	ed this the	ə	day o	f			•		
The u	undersi	•	•	rt is t	rue and corre	ect. Execute	ed this the	e	day o	f		Company	•	ECEIV	
	undersi	•	t said repo	rt is t	rue and corre	ect. Execute	ed this the	9	day o	f		Company	R		

· · · · · · · · · · · · · · · · · · ·		state of Kansas that I am authorized	I to request
exempt status under Rule K.	A.R. 82-3-304 on behalf of the ope	rator F.G. Holl Company, L.L.C.	
and that the foregoing inforr	mation and statements contained	on this application form are true an	d correct to
he best of my knowledge a	nd belief based upon gas produc	ction records and records of equipme	ent installa-
• • • • • • • • • • • • • • • • • • • •	on or upon use of the gas well he	·	
I hereby request a perma	anent exemption from open flow te	sting for the LUNZ 2-21	· · · · · · · · · · · · · · · · · · ·
gas well on the grounds tha	t said well:		
(Check one)			
<u></u>	ped methane producer		
	on plunger lift due to water		
	ce of natural gas for injection into		
	uum at the present time; KCC a		<del></del>
✓ is incapa	ble of producing at a daily rate in	n excess of 250 mct/D	
Date: 02/15/2012	· · · · · · · · · · · · · · · · · · ·		
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	••	( )	
	Signature: Title: _Geolo	Loveness mpaji	

Instructions:

All active gas wells must have at least an original G-2 form on file with the conservation division. If a gas well meets 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 obtain a testing exemption.

At some point during the succeeding calendar year, wellhead shut-in pressure shall be 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.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than thirty (30) days after the taking of the pressure reading. The form must be signed and dated on the front side as though it was a verified report of test results.

FEB 2 2 2012