

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

Test Date:
1/14 to 1/15/12

API No. 15
047-21598-00-00

Company McCoy Petroleum		Lease Lewis Trust E		Well Number 1-1	
County Edwards	Location 61'N of SESENW	Section 01	TWP 26S	RNG (EW) 19W	Acres Attributed
Field Titus		Reservoir Miss.		Gas Gathering Connection SemGas	
Completion Date 5/18/11		Plug Back Total Depth		Packer Set at none	
Casing Size 4.5	Weight 10.5	Internal Diameter	Set at 4718	Perforations 4692	To 4704
Tubing Size 2.375	Weight	Internal Diameter	Set at 4675	Perforations	To
Type Completion (Describe) single		Type Fluid Production Oil & SW		Pump Unit or Traveling Plunger? Yes / No yes - pump unit	
Producing Thru (Annulus / Tubing) annulus		% Carbon Dioxide .1372		% Nitrogen 4.6371	Gas Gravity - G _g .619
Vertical Depth(H)		Pressure Taps flange			(Meter Run) (Prover) Size 2"
Pressure Buildup: Shut in <u>1/11</u> 20 <u>12</u> at <u>9:15 am</u> (AM) (PM) Taken <u>1/14</u> 20 <u>12</u> at <u>9:15 am</u> (AM) (PM)					
Well on Line: Started <u>1/14</u> 20 <u>12</u> at <u>9:45 am</u> (AM) (PM) Taken <u>1/15</u> 20 <u>12</u> at <u>9:45 am</u> (AM) (PM)					

OBSERVED SURFACE DATA

Duration of Shut-in 72 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or Prover Pressure psig (P _m)	Pressure Differential in Inches H ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P _i) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						899.7	914.1			72	
Flow	.500	94	1.9	38		741.7	756.1			24	

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (F _p) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_w \times h}$	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
1.219	108.4	14.35	1.271	1.022	-----	23		.619

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 836.127 ; (P_w)² = 571.687 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_a)² = 0.207 ; (P_d)² = _____

(P _c) ² - (P _w) ² or (P _c) ² - (P _d) ²	(P _w) ² - (P _d) ²	Choose formula 1 or 2: 1. P _c ² - P _w ² 2. P _c ² - P _d ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG $\left[\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2} \right]$	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
835.92	264.44	3.161	.4998	.676	.3378	2.18	50

Open Flow **50** Mcfd @ 14.65 psia X .50 = Deliverability **25** 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 31st day of January, 20 12.

Witness (if any)

For Commission

[Signature]

For Company
Checked by
RECEIVED
FEB 07 2012
KCC WICHITA

STATE OF KANSAS - CORPORATION COMMISSION
MULTIPOINT BACK PRESSURE TEST

FORM CG-1 Rev.

TYPE TEST: Initial Annual Special TEST DATE: 1/14/12

COMPANY McCoy Petroleum LEASE Lewis Trust E WELL NO: 1-1

COUNTY Edwards LOCATION 61'N of SESENW SECTION 01 TWP 26S RNG (E/W) 19W ACRES

API WELL NUMBER 15-047-21598-00-00 RESERVOIR Miss. PIPELINE CONNECTION SemGas

COMPLETION DATE 5/18/11 PLUG BACK TOTAL DEPTH none PACKER SET AT

CASING SIZE 4.5 WT. ID. SET AT 4718 PERF. 4692 TO 4704

TUBING SIZE 2.375 WT. ID. SET AT 4675 PERF. TO

TYPE COMPLETION (Describe) single TYPE FLUID PRODUCTION Oil & SW

PRODUCING THRU casing RESERVOIR TEMPERATURE °F BAR PRESS - P. 14.4 Psia

GAS GRAVITY - G_s 619 % CARBON DIOXIDE 1372 % NITROGEN 4.6371 API GRAVITY OF LIQUID

VERTICAL DEPTH (H) TYPE METER CONNECTION flange (METER RUN) (PROVER) SIZE 2"

REMARKS

Tested into SemGas pipeline (EFM)

OBSERVED DATA							DURATION OF SHUT-IN 72 HR.			
RATE NO.	ORIFICE SIZE in	(METER) (PROVER) PRESSURE Psig	DIFF. (h ₁) (h ₂)	FLOWING TEMP t	WELL-HEAD TEMP. t	CSG WELLHEAD PRESS. Psig (P ₁)(P ₂) Psia	TBG WELLHEAD PRESS. Psig (P ₁)(P ₂) Psia	FLOW DURATION (HOURS)	LIQUID PROD. Bbls.	
SHUT IN						899.7	914.1	72		
1	.500	95	8.0	47		856.4	870.8	.75		
2	"	96	15.4	48		825.6	840.0	.75		
3	"	98	26.7	49		791.7	806.1	.75		
4	"	99	41.9	50		757.5	771.9	.75		

RATE OF FLOW CALCULATIONS

RATE NO.	COEFFICIENT (F ₁)(F ₂) Mcfd	(METER) (PROVER) PRESSURE Psia	PRESS EXTENSION $\sqrt{P_1 \cdot h_1}$	GRAVITY FACTOR F _g	FLOWING TEMP FACTOR F _t	DEVIATION FACTOR F _d	RATE OF FLOW Q Mcfd	GOR (ft ³ /Bbl)	G _g
1	1.219	109.4	29.58	1.271	1.013	---	46		
2	"	110.4	41.23	"	1.012	---	65		
3	"	112.4	54.78	"	1.011	---	86		
4	"	113.4	68.93	"	1.010	---	107		

PRESSURE CALCULATIONS

RATE NO.	P ₁ Psia	P _c Psia	P ₂ Psia	(P ₁) ² THOUSANDS	(P ₂) ² THOUSANDS	PLOTTING POINTS		% SHUT-IN 100 $\frac{(P_1 - P_2)}{(P_1 - P_c)}$
						(P ₁) ² - (P ₂) ² THOUSANDS	Q Mcfd	
1		914.1	870.8	836.1	758.3	77.8	46	95.2
2		"	840.0	"	705.6	130.5	65	91.8
3		"	806.1	"	649.8	186.3	86	88.1
4		"	771.9	"	595.8	240.3	107	84.4

INDICATED WELLHEAD OPEN FLOW 220 Mcfd @ 14.65 Psia "u" = .676

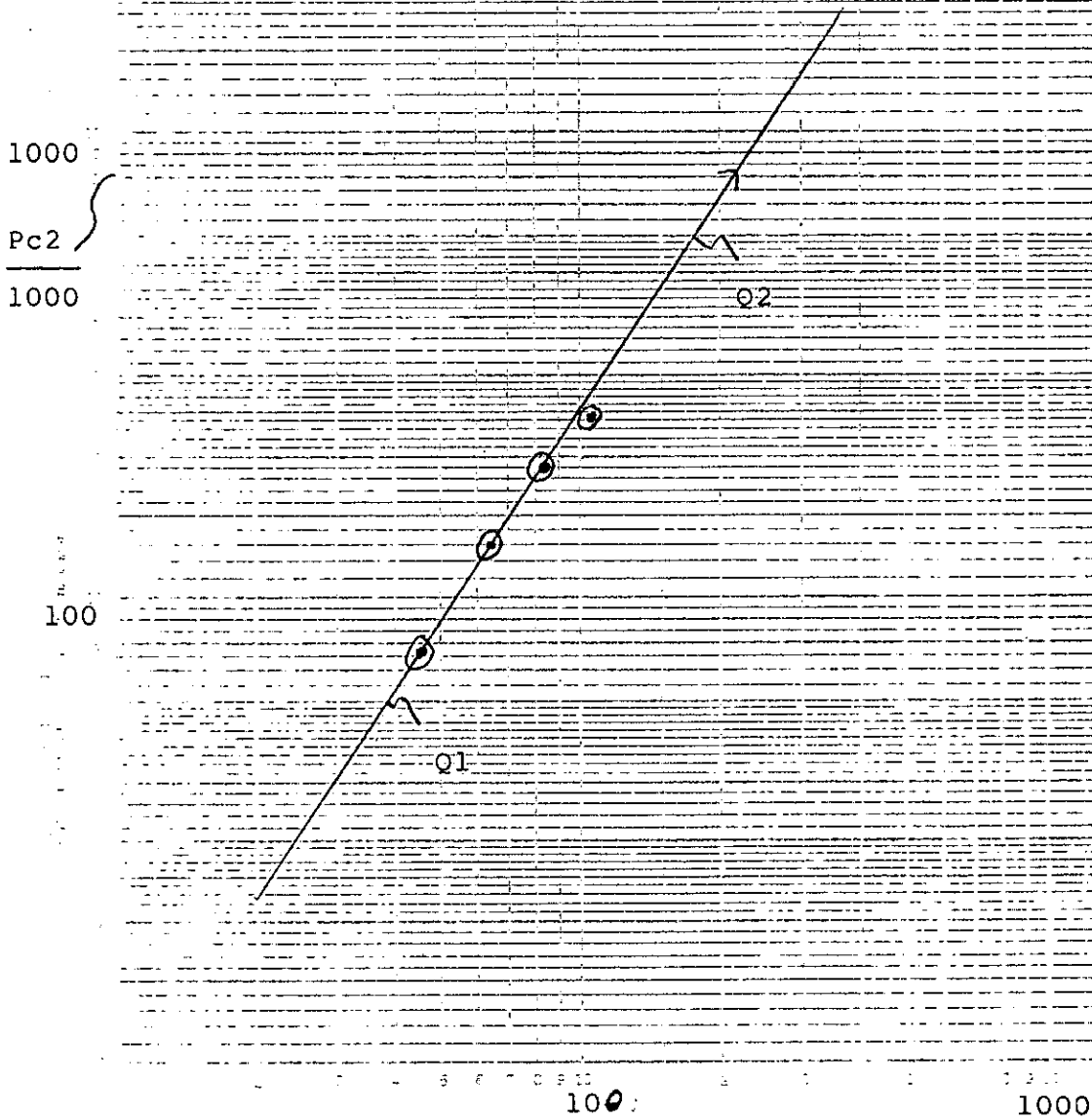
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Witness (if any)
For Commission

[Signature]
For Company
Checked By (Rev. 10/96)

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McCoy Petr. - Lewis Trust E 1-1
 61' N of SESENW 01-26S-19W
 Edwards County
 Tested 1/14/12



Q2 - 180 - Log: 2.255
 Q1 - 38 - Log: 1.579

"n" = .676

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FIELD DATA SHEET

Pumper:

Phone#:

Type Test: Initial Annual Special Test Date 11/14/12

Company McLure Perm Connection SEM GAS

API
15-047-21598-00-00

Field TITUS Reservoir MISS Location 61' N of SE SE NW

Completion Date 5/18/11 Total Depth Plug Back TD Elevation

Form of Lease Name LEWIS TRUST E
Well No. 1-1

Csg. Size 4.5 Wt. 10.3 d Set At 4718 Perforations: From 4692 To 4704

Tbg. Size 2.375 Wt. d Set At 4675 Perforations: From To

Sec. 01 Twp - Blk 26 Rge - Sw 19
County or Parish EDWARDS

Type Completion (Describe) Single Packer Set At

Producing Thru CSG Reservoir Temp. F Mean Annual Temp. F 60 Baro. Press. - P 14.4'

State KS
Prover 2" Meter Run 2" Taps FLG

G₀ .6190 % CO₂ .1372 % N₂ 4.6371 % H₂S

DATE	ELAP. TIME	WELLHEAD WORKING PRESSURE			METER OR PROVER				REMARKS (Include liquid production data) Type - API Gravity - Amount
		Tbg. Psig	Csg. Psig	Δ P	Pressure. Psig	Diff.	Temp. F	Orifice	
9:15	46		899.7						
9:45									500 COMMENCE TEST (NO LINE HEATER)
1:00			892.5		94	7.5	41		METER 1/2 MIKE FROM WELL
1:16			875.1		95	7.1	45		FLOW CONTROL W/ BALL VALVE @
1:30			856.4		95	8.0	47		SEPARATOR INLET
1:45			847.1		95	16.1	47		
1:00			832.8		96	15.8	48		2.590 877
1:15			825.6		96	15.4	48		5.070 855
1:30									7.590 832
1:30			813.1		97	25.9	48		10.070 810
1:45			805.0		98	27.0	49		12.590 787
1:00			791.7		98	26.7	49		15.070 765
1:15									17.590 742
1:15			778.3		98	43.3	49		20.070 720
1:30			767.2		99	42.3	50		25.090 675
1:45			757.5		99	41.9	50		
1:15			783.6		97	2.3	57		SET FLOW RATE FOR 1 PT TEST
9:45			744.7		94	1.9	38		24 MIP/D
0.0									
0.5									Begin 30 minute wellhead buildup
1.0									
1.5									
2.0									
3.0									
4.0									
5.0									
6.0									
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8.0									
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30.0									

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MEASUREMENT SOLUTIONS INC.

6705 East 81st Street Suite 155 Tulsa, OK 74133

Telephone 918-493-2700 Fax 918-493-2704

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5/31/2011

GAS ANALYSIS REPORT

METER NUMBER :	3114845	SAMPLE TYPE :	SPOT
METER NAME :	LEWIS TRUST	SAMPLE DATE :	05/24/2011
METER ID :	SEM GAS	SAMPLE PRES / TEMP :	93 / 62
PRODUCER :		SAMPLED BY :	MO
COMPANY	SEM GAS	EFFECTIVE DATE :	05/01/2011

<u>COMPONENT</u>		<u>PERCENT</u>	<u>BTU VALUES @ 14.65</u>		<u>BTU VALUES @ 14.73</u>	
Helium	He	0.3336	REAL DRY	1026.79	REAL DRY	1032.40
Oxygen	O2	0.0000	REAL WET	1008.83	REAL WET	1014.33
Hydrogen Sulfide	H2S	0.0000				
Carbon Dioxide	CO2	0.1372				
Nitrogen	N2	4.6371				
			<u>GPM VALUES @ 14.65</u>		<u>GPM VALUES @ 14.73</u>	
Methane	C1	89.3900	C2	0.8979	C2	0.9028
Ethane	C2	3.3777	C3	0.3172	C3	0.3189
Propane	C3	1.1583	iC4	0.0668	iC4	0.0671
I-Butane	iC4	0.2052	nC4	0.1252	nC4	0.1259
N-Butane	nC4	0.3993	iC5	0.0374	iC5	0.0376
I-Pentane	iC5	0.1027	nC5	0.0337	nC5	0.0339
N-Pentane	nC5	0.0936	C6+	0.0717	C6+	0.0721
Hexane Plus	C6+	0.1653				
TOTALS		100.0000		1.5499		1.5583

SPECIFIC GRAVITY

REAL DRY 0.6189
REAL WET 0.6190

COMPRESSIBILITY FACTOR

Z FACTOR DRY 0.9978
Z FACTOR WET 0.9978

GALLONS PER THOUSAND

GPM TOTALS @ 14.65

C2 + GPM 1.5499
C3 + PGM 0.6520
C4 + GPM 0.3348
C5 + GPM 0.1428

GPM TOTALS @ 14.73

C2 + GPM 1.5583
C3 + PGM 0.6555
C4 + GPM 0.3366
C5 + GPM 0.1436

COMMENTS :

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