

KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
(Rev.8/98)

TYPE TEST:

- ☒ Open Flow
☒ Deliverability

TEST DATE: 5-22-03

API No. 15-033-20995-0000

Company Samuel Gary Jr. & Associates		Lease Jellison		Well Number 3-14	
County Comanche	Location c s/2 se sw	Section 3 333s	TWP 19w	RNG (E/W)	Acres Attributed 80
Field Colter West	Reservoir Mississippian	Gas Gathering Connection anr			
Completion Date 3/5/99	Plug Back Total Depth 5340	Packer Set at 5180			
Casing Size 5.500	Weight 15.500	Internal Diameter 4.950	Set at 5398	Perforations 5208	To 5214
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 5183	Perforations	To
Type Completion (Describe) Single	Type Fluid Production condensate-water	Pump Unit or Traveling Plunger?			
Producing Thru (Annulus/Tubing) tubing	% Carbon Dioxide .207	% Nitrogen 1.082		Gas Gravity- Gg .599	
Vertical Depth (H) 5211	Pressure Taps Flange	Meter Run Size 2.068			
Pressure Buildup: Shut in	5-19-03 @ 9:00	TAKEN	5-22-03 @ 10:00		
Well on Line: Started	5-22-03 @ 10:00	TAKEN	5-23-03 @ 11:15		

OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H ₂ O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P _w) (P _t) (P _c)		Tubing WellHead Press. (P _w) (P _t) (P _c)		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						273	287	273	287	72.0	
Flow	1.500	40.4	8.00	64		140	154	127	141	24.0	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcf/d	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR F _g	FLOWING TEMP FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcf/d	GOR	G _m
13.090	54.8	20.94	1.2921	.9962	1.0042	354		.599

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(P _c) ² = 82.6		(P _w) ² = 23.8		P _d = 14.1		% (P _c - 14.4) + 14.4 =		(P _a) ² = 0.207
								(P _d) ² = 1.63
$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$ or $\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	LOG	Backpressure Curve Slope "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcf/d	
82.39	58.76	1.402	.1468	.998	.1465	1.401	496	
80.97	58.76	1.378	.1392	.998	.1390	1.377	487	

OPEN FLOW 496 Mcfd @ 14.65 psia DELIVERABILITY 487 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 herein and that said report is true and correct. Executed this the 28 day of May, 20 03

Witness (if any)

For Company

For Commission

Checked by

[illegible]

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Form G-2
(Rev. 1/03)

Type Test:

☐ Open Flow

☐ Deliverability

(See Instructions on Reverse Side)

Test Date:

API No. 15- 033-20995-0000

Company Samuel Gary Jr. & Associates, Inc. 1670 Broadway Suite 3300 Denver, CO 80202			Lease Jellison		Well Number 3-14
County Comanche	Location S/2 SE SW	Section 3	TWP 33 S	RNG (E/W) 19 W	Acres Attributed 160
Field Colter West		Reservoir Mississippian		Gas Gathering Connection El Paso	
Completion Date 3/5/1999		Plug Back Total Depth 5340		Packer Set at None	
Casing Size 5-1/2"	Weight 15.5 #	Internal Diameter 4.95	Set at 5385	Perforations 5208	To 5280 OA
Tubing Size 2.375	Weight 4.70 #	Internal Diameter 1.995	Set at 5193	Perforations	To
Type Completion (Describe) Flowing		Type Fluid Production water & oil		Pump Unit or Traveling Plunger? Yes / No None	
Producing Thru (Annulus/Tubing) Tubing		% Carbon Dioxide		% Nitrogen	Gas Gravity - G _g
Vertical Depth (H)		Pressure Taps		(Meter Run) (Prover) Size	

Pressure Buildup: Shut in _____ 20 _____ at _____ (AM) (PM) Taken _____ 20 _____ at _____ (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	Pressure Differential in (h) Inches H ₂ O	Flowing Temperature t	Wellhead 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											
Flow											

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (F _p) Mcf/d	Circle one: Meter or Prover Pressure psig	Press Extension $\sqrt{P_m \times H_w}$	Gravity Factor F _g	Flowing Temperature Factor F _{ft}	Deviation Factor F _{pv}	Metered Flow R (Mcf/d)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = _____ : (P_w)² = _____ : P_d = _____ % (P_c - 14.4) ? 14.4 = _____ :

(P_a)² = 0.207
(P_d)² = _____

(P _c) ² - (P _a) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _a 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: $\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	Antilog	Open Flow Deliverability Equals R x Antilog Mcf/d

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 herein, and that said report is true and correct. Executed this the _____ day of _____, 20 _____

Witness (if any)

For Company

For Commission

Checked By

KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
(Rev.8/98)

TYPE TEST:

☒ Open Flow
☐ Deliverability

TEST DATE:

1-23-2000

API No.

15-033-20995-0000

Company Samuel Gary Jr. & Associates		Lease Jellison		Well Number 3-14	
County Comanche	Location c s/2 se sw	Section 3	TWP 333s	RNG(E/W) 19W	Acres Attributed 80
Field Colter West	Reservoir Mississippian	Gas Gathering Connection anr			
Completion Date 3/5/99	Plug Back Total Depth 5340	Packer Set at 5180			
Casing Size 5.500	Weight 15.500	Internal Diameter 4.950	Set at 5398	Perforations 5208	To 5214
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 5183	Perforations	To
Type Completion (Describe) Single	Type Fluid Production condensate-water	Pump Unit or Traveling Plunger?			
Producing Thru (Annulus/Tubing) tubing	% Carbon Dioxide .207	% Nitrogen 1.082		Gas Gravity- Gg .599	
Vertical Depth (H) 5211	Pressure Taps flange	Meter Run Size 2.067			
Pressure Buildup: Shut in	1-3-2000@ 11:30am	TAKEN	1-22-2000 @ 1:00pm		
Well on Line: Started	1-22-2000@ 2:45 pm	TAKEN	1-23-2000 @ 5:pm		

OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H ₂ O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P _w) (P _t) (P _c)		Tubing WellHead Press. (P _w) (P _t) (P _c)		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in								838	853	459.0	
Flow	1.500	145.0	28.00	42				665	679	26.0	1.7

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcfd	GOR	G _m
13.090	159.4	66.81	1.2921	1.0178	1.0142	1166	743255	.603

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(P _c) ² = 727.6		(P _w) ² = 487.1		Pd =		% (P _c - 14.4) + 14.4 =		(Pa) ² = 0.207
(P _c) ² - (P _a) ²		(P _c) ² - (P _w) ²		LOG		Antilog		Open Flow Deliverability = R x Antilog Mcfd
727.40		240.53		3.024		.4806		3519

OPEN FLOW 3519 Mcfd @ 14.65 psia DELIVERABILITY 5277 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 herein and that said report is true and correct. Executed this the _____ day of _____, 20 _____

Witness (if any)

For Commission

For Company

Checked by

[illegible]