

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

FORM G-2
(Rev. 8/98)

TYPE TEST:

- Open Flow
 Deliverability

TEST DATE: 9-23-10 API No **6**- 057-20623-0000

Company Ritchie Exploration		Lease Ford Cattle Unit			Well Number 1	
County Ford	Location W/2 SE/4	Section 32	TWP 27s	RNG (E/W) 22w	Acres Attributed 640	
Field Lamb North	Reservoir Mississippian	Gas Gathering Connection Superior Pipeline				
Completion Date 6-29-10	Plug Back Total Depth 5057	Packer Set at				
Casing Size 4.500	Weight 10.500	Internal Diameter 4.052	Set at 5149	Perforations 4991	To 5012	
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 5013	Perforations	To	
Type Completion (Describe) New Well	Type Fluid Production None	Pump Unit or Traveling Plunger? NO				
Producing Thru (Annulus/Tubing) Tubing	% Carbon Dioxide 0.087	% Nitrogen 9.531			Gas Gravity- Gg 0.662	
Vertical Depth (ft) 5001	Pressure Taps Flange	Meter Run Size 3.067				
Pressure Buildup: Shut in	9-19-10	TAKEN	8:00am			
Well on Line: Started	9-22-10	TAKEN	9:15am			

OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H ₂ O	Flowing Temp. °F.	WellHead Temp. °F.	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						1186	1200	75	89	73.0	
Flow	1.500	15.5	7.50	69		1112	1126	937	951	28.0	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcf/d	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcf/d	GOR	G _m
11.410	29.9	14.97	1.2291	0.9915	1.0019	208		0.662

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(P_c)² = 1441.0 (P_w)² = 1268.8 P_d = 1.3 % (P_c - 14.4) + 14.4 = (P_a)² = 0.207
(P_d)² = 0.24

$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{[(P_c)^2 - (P_a)^2] \text{ or } [(P_c)^2 - (P_d)^2]}{[(P_c)^2 - (P_w)^2]}$	LOG []	Backpressure Curve Slope "n" ---- or ---- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability = R x Antilog Mcf/d
1440.75	172.18	8.368	0.9226	1.000	0.9226	8.368	1745
1440.72	172.18	8.367	0.9226	1.000	0.9226	8.367	1745

OPEN FLOW 1745 Mcfd @ 14.65 psia DELIVERABILITY 1745 Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is only 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 SEP 2010

Witness (if any)

For Commission

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For Company

OCT 07 2010

Checked by

KCC WICHITA

Field Measurements

Company: Ritchie Exploration
Well / Lease Name: Ford Cattle Unit 1
Unique Well ID: W/2 SE/4 32 27s 22w
Test Type: initial 4 point

Job Number:
Formation:
Field:
Pool:

			Wellhead		Gas Orifice Meter 1					
	Date	Time	Tubing Press	Casing Press	Static Press	Meter Temp	Differential Press	Plate Size	Gas Rate (Inst)	Gas Cum
	YYYY/MM/DD	HH:mm:ss	psi(g)	psi(g)	psi(g)	°F	in of H ₂ O	in	Mscfd	Mscf
1	2010/09/22	09:15:00	1075.0	1186.0	0.0	0.0	0.0	0.000	0.000	0.000
2		09:30:00	1044.0	1156.0	15.3	84.0	1.0	1.500	75.158	0.783
3		09:45:00	1020.0	1131.0	14.8	84.0	1.0		74.493	1.562
4		10:00:00	1009.0	1126.0	14.8	85.0	1.0		74.386	2.338
5		10:15:00	997.0	1118.0	14.8	87.0	1.0		74.213	3.112
6		10:15:00	1st point							
7		10:30:00	972.0	1099.0	15.1	89.0	2.6		119.856	4.122
8		10:45:00	951.0	1077.0	15.2	89.0	2.6		118.102	5.362
9		11:00:00	939.0	1071.0	15.1	90.0	2.5		116.786	6.585
10		11:15:00	927.0	1064.0	15.2	91.0	2.5		116.280	7.799
11		11:15:00	2nd point							
12		11:30:00	913.0	1050.0	15.6	89.0	5.0		165.810	9.268
13		11:45:00	896.0	1038.0	15.6	89.0	5.7		176.704	11.052
14		12:00:00	890.0	1032.0	15.0	89.0	5.6		173.518	12.876
15		12:15:00	879.0	1021.0	15.7	89.0	7.2		199.189	14.817
16		12:15:00	3rd point							
17		12:30:00	846.0	993.0	16.6	84.0	15.6		299.138	17.413
18		12:45:00	827.0	978.0	16.6	84.0	14.7		290.553	20.484
19		13:00:00	822.0	962.0	16.5	84.0	14.6		288.726	23.501
20		13:15:00	816.0	955.0	16.5	84.0	14.6		288.925	26.510
21		13:15:00	4th point							
22	2010/09/23	14:20:00	937.0	1112.0	15.5	69.0	7.5		206.937	285.632
23			1 point							

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From 2010/09/22 09:15:00 **To** 2010/09/23 06:00:00
Gas Cum 0.200 MMscf **Gas Cum** 0.200 MMscf
Oil Cum bbl **Oil Cum** bbl
Water Cum bbl **Water Cum** bbl
Cond Cum bbl **Cond Cum** bbl

Plot 1

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Well / Lease Name: Ford Cattle Unit 1
Unique Well ID: W/2 SE/4 32 27s 22w
Test Type: initial 4 point

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