

KANSAS CORPORATION COMMISSION  
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2  
(Rev. 8/98)

TYPE TEST:

- Open Flow  
 Deliverability

TEST DATE: 12/3/03 API No. 15-023-20455-00-00

Company Priority Oil & Gas LLC		Lease MOM			Well Number 2-19	
County Cheyenne	Location N/2 NE NE	Section 19	TWP 4	RNG (E/W) 41W	Acres Attributed	
Field Cherry Creek	Reservoir Niobrara	Gas Gathering Connection Kinder Morgan				
Completion Date 4/3/03	Plug Back Total Depth 1359	Packer Set at				
Casing Size 4.500	Weight 10.500	Internal Diameter 4.052	Set at 1359	Perforations 1174	To 1210	
Tubing Size NONE	Weight	Internal Diameter	Set at	Perforations	To	
Type Completion (Describe) co2 Frac	Type Fluid Production none	Pump Unit or Traveling Plunger?				
Producing Thru (Annulus/Tubing) casing	% Carbon Dioxide .170	% Nitrogen 5.110			Gas Gravity- Gg .590	
Vertical Depth (H) 1192	Pressure Taps Flange	Meter Run Size 2.067				
Pressure Buildup: Shut in	11-28-03 @ 17:16	TAKEN	12-2-03 @ 13:25			
Well on Line: Started	12-2-03 @ 13:25	TAKEN	12-2-03 @ 09:30			

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OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H <sub>2</sub> O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P <sub>w</sub> ) (P <sub>t</sub> ) (P <sub>c</sub> )		Tubing WellHead Press. (P <sub>w</sub> ) (P <sub>t</sub> ) (P <sub>c</sub> )		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						151	165			92.0	
Flow	.750	61.7	14.30	48		136	150			24.0	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F <sub>b</sub> ) Mcf/d	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP FACTOR F <sub>t</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R Mcf/d	GOR	G <sub>m</sub>
2.779	76.1	32.99	1.3019	1.0117	1.0058	121		.590

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

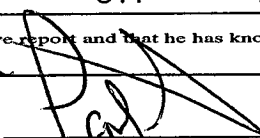
(P<sub>c</sub>)<sup>2</sup> = 27.4      (P<sub>w</sub>)<sup>2</sup> = 22.6      P<sub>d</sub> = 45.9      % (P<sub>c</sub> - 14.4) + 14.4 =      (P<sub>a</sub>)<sup>2</sup> = 0.207  
(P<sub>d</sub>)<sup>2</sup> = 5.78

$(P_c)^2 - (P_a)^2$ 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 $\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_w)^2}$	LOG	Backpressure Curve Slope "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcf/d
27.15	4.73	5.735	.7585	.948	.7189	5.235	635
21.58	4.73	4.558	.6588	.948	.6244	4.211	511

OPEN FLOW 635 Mcfd @ 14.65 psia      DELIVERABILITY 511 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 4 day of Dec, 20 03

\_\_\_\_\_  
Witness (if any)  
\_\_\_\_\_  
For Commission

  
\_\_\_\_\_  
For Company  
\_\_\_\_\_  
Checked by

# EMPACT ANALYTICAL SYSTEMS INC

365 SOUTH MAIN STREET  
BRIGHTON, CO 80601  
303-637-0150

RECEIVED

DEC 05 2003

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## NATURAL GAS ANALYSIS

PROJECT NO. : 0312006  
COMPANY NAME : PRIORITY OIL & GAS  
ACCOUNT NO. :  
PRODUCER : PRIORITY OIL & GAS  
LEASE NO. : 2-19  
NAME/DESCRIP : M.O.M.

ANALYSIS NO. : 02  
ANALYSIS DATE: DECEMBER 2, 2003  
SAMPLE DATE : NOVEMBER 20, 2003  
TO:  
CYLINDER NO. : 0389  
LOCATION : SEC. 19-4S-41 W

\*\*\*FIELD DATA\*\*\*

SAMPLED BY : K ANDREWS  
SAMPLE PRES. : 90#  
SAMPLE TEMP. : 50F  
COMMENTS : PROBE

AMBIENT TEMP.:  
GRAVITY : 0.591  
VAPOR PRES.:

COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.10	-	-
HYDROGEN	0.02	-	-
OXYGEN/ARGON	0.07	-	-
NITROGEN	5.11	-	-
CO2	0.17	-	-
METHANE	92.62	-	-
ETHANE	1.34	0.356	0.358
PROPANE	0.39	0.107	0.108
ISOBUTANE	0.07	0.023	0.023
N-BUTANE	0.07	0.022	0.022
ISOPENTANE	0.02	0.007	0.007
N-PENTANE	0.01	0.004	0.004
HEXANES+	0.01	0.004	0.004
<b>TOTAL</b>	<b>100.00</b>	<b>0.523</b>	<b>0.526</b>

BTU @ 60 DEG F	<u>14.65</u>	<u>14.73</u>
GROSS DRY REAL =	974.2	979.5
GROSS WET REAL =	957.1	962.5

DENSITY ( AIR=1 @14.696 PSIA 60F) : 0.5905

COMPRESSIBILITY FACTOR : 0.99805

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS