

Kansas Corporation Commission One Point Stabilized Open Flow or Deliverability Test

Form G 2
(Rev. 7/03)

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date: **08/17/2010** API No. **15081218330000**

Company OXY USA Inc		Lease IHLOFF C 4		Well Number (ROWLAND C-3)	
County Haskell	Location 1950' FNL & 1650' FEL	Section 14	TWP 30S	RNG (E/W) 32W	Acres Attributed 640
Field UNASSIGNED		Reservoir Chester		Gas Gathering Connection REGENCY	
Completion Date 12/08/2008		Plug Back Total Depth 5,740'		Packer Set at	
Casing Size 5 1/2"	Weight 17.0#	Internal Diameter 4.892"	Set at 5,800'	Perforations 5,357'	To 5,456'
Tubing Size 2 3/8"	Weight 4.7#	Internal Diameter 1.995"	Set at 5,329'	Perforations	To
Type Completion (Describe) SINGLE -GAS		Type Fluid Production WATER		Pump Unit or Traveling Plunger? Yes / No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Producing Thru (Annulus / Tubing) Tubing		% Carbon Dioxide 0.243%		% Nitrogen 9.842%	
				Gas Gravity Gg 0.723	
Vertical Depth (H) 5,407'		Pressure Taps Flange		(Meter Run) (Prover) Size 3.068"	
Pressure Buildup:	Shut in 08/13 20 10 at 9:00 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	Taken 08/16 20 10 at 9:00 <input checked="" type="checkbox"/> AM <input checked="" type="checkbox"/> PM			
Well on Line:	Started 08/16 20 10 at 9:00 <input type="checkbox"/> AM <input type="checkbox"/> PM	Taken 08/17 20 10 at 9:00 <input type="checkbox"/> AM <input type="checkbox"/> PM			

OBSERVED SURFACE DATA Duration of Shut in **72** Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or Prover Pressure psig (Pm)	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						516.0	530.4	514.0	528.4	72	0
Flow	1.500	70	46.2	79	74	390.0	404.4	188.0	202.4	24	52

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (F _p) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	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
11.4100	84.4	62.44	1.1761	0.9822	1.0073	829	15,942	

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2 = 281.3$; $(P_w)^2 = 163.5$; $P_d =$ _____ % $(P_c 14.4) + 14.4 =$ _____ ; $(P_a)^2 = 0.207$
 $(P_d)^2 = 0$

(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:	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
281.1	117.8	2.3858	0.3776	0.9660	0.3648	2.3163	1920

Open Flow **1,920** 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 therein, and that said report is true and correct. Executed this the **22** day of **December** **2010**

RECEIVED **OXY USA INC**
JAN 07 2011 **Tom Acton - OXY USA Inc.**
 Witness _____ _____
 For Commission _____ _____
KCC WICHITA

**State of Kansas - Corporation Commission
Multipoint Back Pressure Test**

Form CG-1
(Rev. 10/96)

Type Test: Initial Annual Special Test Date: **08/17/2010**

Company **OXY USA Inc** Lease **IHLOFF C 4** Well Number **(ROWLAND C-3)**

County **Haskell** Location **1950' FNL & 1650' FEL** Section **14** TWP **30S** RNG (E/W) **32W** Acres Attributed **640**

API No. **15081218330000** Reservoir **Chester** Pipeline Connection **REGENCY**

Completion Date **01/00/1900** Plug Back Total Depth **5,740'** Packer Set at

Casing Size **5 1/2"** Weight **17.0#** Internal Diameter **4.892"** Set at **5,800'** Perforations **5,357'** To **5,456'**

Tubing Size **2 3/8"** Weight **4.7#** Internal Diameter **1.995"** Set at **5,329'** Perforations To

Type Completion (Describe) **SINGLE -GAS** Type Fluid Production **WATER**

Producing Thru (Annulus / Tubing) **Tubing** Reservoir Temperature °F **133** BAR PRESS -P_a **14.4 Psia**

Gas Gravity - G_g **0.723** % Carbon Dioxide **0.243%** % Nitrogen **9.842%**

Vertical Depth (H) **5,407'** Type Meter Connection **Flange** (Meter Run) (Prover) Size **3.068"**

OBSERVED DATA

Duration of Shut-in 72 Hours

Rate No	Orifice Size (inches)	Circle One: Meter 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					74	516.0	530.4	514.0	528.4	72	
1	1.500	61.8	6.9	72.2	74	492.0	506.4	485.0	499.4	1	0
2	1.500	64.1	26.5	74.9	74	467.0	481.4	250.0	264.4	1	0
3	1.500	69.5	56.4	72.2	74	439.0	453.4	219.0	233.4	1	0
4	1.500	73.1	93	71	74	410.0	424.4	153.0	167.4	1	0
5											

RATE OF FLOW CALCULATIONS

Rate No	Plate Coefficient (F _p) (F _p) Mcfd	Circle One: Meter Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F _g	Flowing Temperature F _t	Deviation Factor F _{pv}	Rate of Flow Q Mcfd	GOR (Cubic Feet/Barrel)	Flowing Fluid Gravity G _m
1	11.41	76.2	22.93	1.1761	0.9885	1.007	306		
2	11.41	78.5	45.61	1.1761	0.986	1.007	608		
3	11.41	83.9	68.79	1.1761	0.9885	1.008	919		
4	11.41	87.5	90.21	1.1761	0.9896	1.008	1207		
5									

PRESSURE CALCULATIONS

Rate No	P _i Psia	P _c Psia	P _w Psia	(P _c) ² Thousands	(P _w) ² Thousands	Plotting Points		% Shut-In (P _w - P _a) (P _c - P _a)
						(P _c) ² - (P _w) ² Thousands	Q Mcfd	
1		530.4	506.4	281.3	256.4	24.9	306	95.3%
2		530.4	481.4	281.3	231.7	49.6	608	90.5%
3		530.4	453.4	281.3	205.6	75.8	919	85.1%
4		530.4	424.4	281.3	180.1	101.2	1207	79.5%
5								

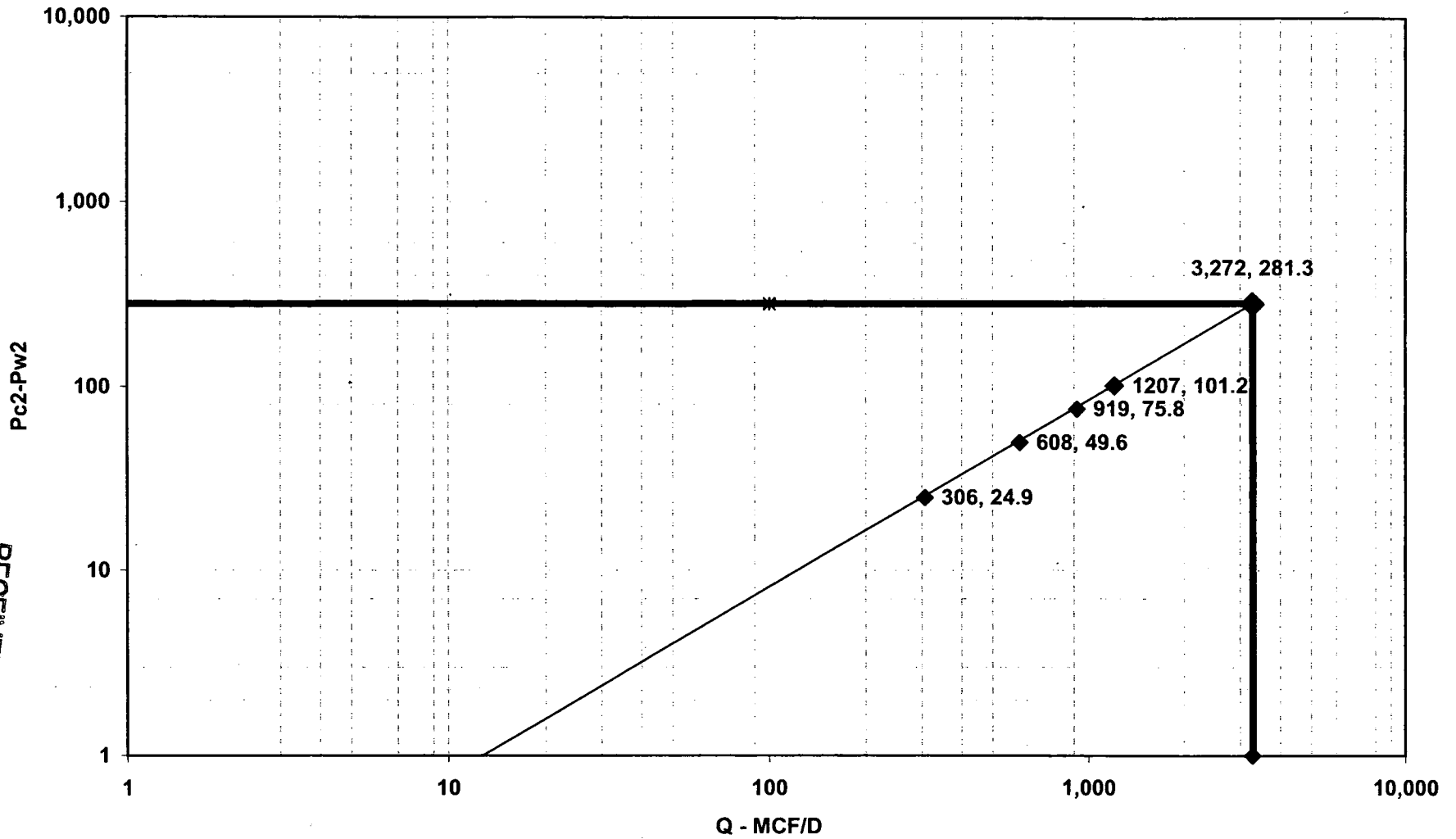
Indicated Wellhead Open Flow 3,272 Mcfd @ 14.65 psia "n" = 0.976

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 22 day of December, 2010

Witness (If any) _____ **RECEIVED** _____ **OXY USA INC.**
For Commission _____ For Company _____
JAN 07 2011 _____ **Tom Acton - OXY USA Inc**
Checked by _____

KCC WICHITA

IHLOFF C 4 Section 14, T30S, R32W Haskell County, Kansas



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Gas Analysis Certificate Report

Well Name:	IHLOFF C-4	Alternate ID:	
Analysis ID:		Company Name:	OXY USA Inc.

Effective Date:	7/14/10 11:07 AM	Saturated HV:	1087.2	Sample Date:	7/14/10
Valid Through Date:	07/15/11	As Delivered HV:		Sample ID:	
Last Update:	7/15/10 11:30 AM	Dry HV:	1087.2	Sample Type:	SPOT
Data Acquisition:		Gravity:	0.7230	Sample Pressure Base:	14.730
Data Source:		Status:	ACTIVE	Sample Temperature:	0.0
				Sample Pressure:	0.0

<u>Component</u>	<u>% Mol</u>	<u>GPM</u>	Gravity - Dry
Methane	75.4330	12.7851	Gravity - Saturated
Ethane	7.2360	1.9339	
Propane	4.1990	1.1561	
I Butane	0.6790	0.2221	
N Butane	1.2000	0.3783	
I Pentane	0.2820	0.1032	
N Pentane	0.3190	0.1155	
Hexane	0.3620	0.1488	
Heptane	0.0000	0.0000	
Octane	0.0000	0.0000	
Nonane	0.0000	0.0000	
Decane	0.0000	0.0000	
Nitrogen	9.8420	1.0825	
CO2	0.2430	0.0412	
Oxygen	0.0000	0.0000	
H2O	0.0000	0.0000	
CO	0.0000	0.0000	
H2S	0.0000	0.0000	
Hydrogen	0.0000	0.0000	
Helium	0.2050	0.0000	
Argon	0.0000	0.0000	
Total	100.0000	17.9667	

Sample Comments:

Configuration Comments: IHLIGL

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OXY USA Inc.
A subsidiary of Occidental Petroleum Corporation

5 Greenway Plaza, Suite 110, Houston, Texas 77046-0521
P.O. Box 27570, Houston, Texas 77227-7570

Tom Acton
Mid-Continent Business Unit

Phone: 713-215-7623
Fax: 713-350-4873

December 29, 2010

Jim Hemmen
Finney State Office Building
130 S. Market, Room 2078
Wichita, KS 67202-3802

Dear Mr. Hemmen:

Please find enclosed, the One Point Stabilized Open Flow/Deliverability Test, Multipoint Back Pressure Test, and Gas Analysis Certificate for the following well:

Ihloff C-4

Section 14-T30S-R32W

Regards,

Tom Acton
Gas Flow Coordinator

Enclosures: 2010 Form G-2/CG-1
Gas Analysis Certificate

Cc: New Well Test File

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