

15-095-30249-00-00

STATE OF KANSAS - CORPORATION COMMISSION
 PRODUCTION TEST & GOR REPORT

Conservation Division Form C-5 Revised

TYPE TEST: Initial (Annual) Workover Reclassification TEST DATE: 8-23-91

Company BHP Petroleum Lease Russell Well No. 2

County Kingman Location Section 36 Township 30 Range 7 Acres

Field Maple Grove Reservoir Mississippi Pipeline Connection Texas

Completion Date Type Completion(Describe) Plug Back T.D. Packer Set At

Production Method: Type Fluid Production API Gravity of Liquid/Oil

Flowing Pumping Gas Lift oil-water

Casing Size Weight I.D. Set At Perforations To

Tubing Size Weight I.D. Set At Perforations To

2 7/8

Pretest: Starting Date Time Ending Date Time Duration Hrs.

Test: Starting Date 8-22-91 Time Ending Date 8-23-91 Time Duration Hrs. 24

OIL PRODUCTION OBSERVED DATA

Producing Wellhead Pressure Separator Pressure Choke Size

Casing: Tubing:

Bbls./In.	Tank		Starting Gauge			Ending Gauge			Net Prod. Bbls.	
	Size	Number	Feet	Inches	Barrels	Feet	Inches	Barrels	Water	Oil
1.67										
Pretest:										
Test:	200	93414	5	1	101.72	5	1 1/4	118.78	500	17
Test:										

GAS PRODUCTION OBSERVED DATA

Orifice Meter Connections Orifice Meter Range

Pipe Taps: Flange Taps: Differential: Static Pressure:

Measuring Device	Run-Prover-Tester Size	Orifice Size	Meter-Prover-Tester Pressure			Diff. Press. (hw) or (hd)	Gravity Gas (Gg)	Flowing Tempo. (t)
			In. Water	In. Merc.	Psig or (Pd)			
Orifice Meter	2	.750			262	12	.720	66°
Critical Flow Prover								
Orifice Well Tester								

GAS FLOW RATE CALCULATIONS (R)

Coeff. (Fb)(Fp)(OWTC)	Meter-Prover Press. (Psia) (Pm)	Extension $\sqrt{hw \times Pm}$	Gravity Factor (Fg)	Flowing Temp. Factor (Ft)	Deviation Factor (Fpv)	Chart Factor (Fd)
2.779	276.4	57.6	1.179	.9943	1	

Gas Prod. MCFD Oil Prod. Gas/Oil Ratio (GOR) = 11 Cubic Ft. per Bbl.

Flow Rate (R): 187.6 bbls./day: 17

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 30 day of December 19 91

MAR 3 1992

Carl W. Durr
 Carl W. Durr
 For Company

For Offset Operator

CONSERVATION DIVISION
 WICHITA, KS

For State

STATE OF KANSAS - CORPORATION COMMISSION 15-095-30249-00-00
 PRODUCTION TEST & GOR REPORT

Conservation Division Form C-5 Revised
 TYPE TEST: Initial Annual Workover Reclassification TEST DATE: 8-4-97
 Company U.M.C. Petro Lease RUSSELL Well No. 2
 County KM Location Section 36 Township 30 Range 7 Acres
 Field MAPLE GROVE Reservoir MISS Pipeline Connection TRUCK
 Completion Date Type Completion (Describe) SINGLE Plug Back T.D. Packer Set At
 Production Method: Type Fluid Production GAS-OIL-WATER API Gravity of Liquid/OIL
 Flowing Pumping Gas Lift Casing Size Weight I.D. Set At Perforations To
 Tubing Size 2 7/8 Weight I.D. Set At Perforations To

Pretest: Starting Date Time Ending Date Time Duration Hrs.
 Test: Starting Date 8-4-97 Time Ending Date 8-5-97 Time Duration Hrs. 24 HRS

OIL PRODUCTION OBSERVED DATA

Producing Wellhead Pressure		Separator Pressure		Choke Size					
Casing:	Tubing:								
Bbls./In.	Tank	Starting Gauge			Ending Gauge			Net Prod. Bbls.	
	Size Number	Feet	Inches	Barrels	Feet	Inches	Barrels	Water	Oil
Pretest:									
Test:	200 104321	4	9 1/2	95.90	5	6	110.04	645	14.14
Test:									

GAS PRODUCTION OBSERVED DATA

Orifice Meter Connections			Orifice Meter Range				
Pipe Taps:	Flange Taps:	Differential:			Static Pressure:		
Measuring Device	Run-Prover-Tester Size	Orifice Size	Meter-Prover-In. Water	Tester Pressure In. Merc.	Diff. Press. (hw) or (hd)	Gravity Gas (Gg)	Flowing Temp. (t)
Orifice Meter	2"	.750			140	13	.720 60
Critical Flow Prover							
Orifice Well Tester							

GAS FLOW RATE CALCULATIONS (R)

Coeff. MCFD (Fb)(Fp)(OWTC)	Meter-Prover Press. (Psia)(Pm)	Extension $\sqrt{hw \times Pm}$	Gravity Factor (Fg)	Flowing Temp. Factor (Ft)	Deviation Factor (Fpv)	Chart Factor (Fd)
2.779		42.66	1.179			

Gas Prod. MCFD Flow Rate (R): 139.77 Oil Prod. Bbls./Day: 14.14 Gas/Oil Ratio (GOR) = 9.88 Cubic Ft. per Bbl.

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 24 day of Nov 1997

For Offset Operator

For State

For Company

STATE OF KANSAS - CORPORATION COMMISSION 15-095-30249-00-00
 PRODUCTION TEST & GOR REPORT

Form C-5 Revised

Conservation Division
 TYPE TEST: Initial (Annual) Workover Reclassification TEST DATE: 8-11-95
 Company: U.M.C. PETRO. Lease: RUSSELL Well No. 2
 County: KM Location: 36 Township: 30 Range: 7 Acres: TOTAL
 Field: MAPLE GROVE Reservoir: MISS Pipeline Connection: TOTAL
 Completion Date: Type Completion (Describe): SINGLE Plug Back T.D.: Packer Set At:
 Production Method: Flowing (Pumping) Gas Lift Type Fluid Production: GAS-OIL-WATER API Gravity of Liquid/Oil:
 Casing Size: Weight: I.D.: Set At: Perforations: To:
 Tubing Size: 2 3/8 Weight: I.D.: Set At: Perforations: To:
 Pretest: Starting Date: Time: Ending Date: Time: Duration Hrs.:
 Test: Starting Date: 8-10-95 Time: Ending Date: 8-11-95 Time: Duration Hrs.: 24 HRS

OIL PRODUCTION OBSERVED DATA

Producing Wellhead Pressure		Separator Pressure			Choke Size					
Casing:	Tubing:									
Bbls./In.	Tank	Starting Gauge			Ending Gauge		Net Prod. Bbls.			
	Size	Number	Feet	Inches	Barrels	Feet	Inches	Barrels	Water	Oil
Pretest:										
Test:	200	97428	7	4 1/4	147.08	8	0 1/4	140.40	645	13.32
Test:										

GAS PRODUCTION OBSERVED DATA

Orifice Meter Connections				Orifice Meter Range			
Pipe Taps:	Flange Taps:	Differential:		Static Pressure:			
Measuring Device	Run-Prover-Tester Size	Orifice Size	Meter-Prover-Tester Pressure In. Water	Diff. Press. (hw) or (hd)	Gravity Gas (Gg)	Flowing Temp. (t)	
Orifice Meter	2"	.750		240	12	.720	
Critical Flow Prover							
Orifice Well Tester							

GAS FLOW RATE CALCULATIONS (R)

Coeff. (Fb)(Fp)(OWTC)	Meter-Prover Press. (Psia) (Pm)	Extension $\sqrt{hw \times Pm}$	Gravity Factor (Fg)	Flowing Temp. Factor (Ft)	Deviation Factor (Fpv)	Chart Factor (Fd)
2.779		53.67	1.179			

Gas Prod. MCFD Flow Rate (R): 175.85 Oil Prod. Bbls./Day: 13.32 Gas/Oil Ratio (GOR) = 13.20 Cubic Ft. per Bbl.

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 19 day of Sept 1995

For Offset Operator

For State

For Company

STATE OF KANSAS - CORPORATION COMMISSION 15-095-30249-00-00
 PRODUCTION TEST & GOR REPORT

Form C-5 Revised

Conservation Division

TYPE TEST: Initial (Annual) Workover Reclassification TEST DATE: 9-23-94

Company Lease Well No.
 G.A.B.I. Russell 2

County Location Section Township Range Acres
 Km. 36 30 7

Field Reservoir Pipeline Connection
 Maple Grove Mississippi Texaco

Completion Date Type Completion (Describe) Plug Back T.D. Packer Set At
 Single

Production Method: Type Fluid Production API Gravity of Liquid/Oil
 Flowing Pumping Gas Lift Gas Oil Water

Casing Size Weight I.D. Set At Perforations To

Tubing Size Weight I.D. Set At Perforations To
 2 7/8

Pretest: Duration Hrs.

Starting Date Time Ending Date Time

Test: Duration Hrs.
 Starting Date 9-22-94 Time Ending Date 9-23-94 Time 24

OIL PRODUCTION OBSERVED DATA

Producing Wellhead Pressure		Separator Pressure		Choke Size					
Casing:	Tubing:								
Bbls./In.	Tank	Starting Gauge			Ending Gauge			Net Prod. Bbls.	
1.67	Size Number	Feet	Inches	Barrels	Feet	Inches	Barrels	Water	Oil
Pretest:									
Test:	200	93412	4	11	98.39	5	8	113.37	625 15
Test:									

GAS PRODUCTION OBSERVED DATA

Orifice Meter Connections			Orifice Meter Range					
Pipe Taps:	Flange Taps: X	Differential:	Static Pressure:					
Measuring Device	Run-Prover-Tester Size	Orifice Size	Meter-Prover-Tester Pressure In. Water	In. Merc.	Psig or (Pd)	Diff. Press. (hw) or (hd)	Gravity Gas (Gg)	Flowing Temp. (t)
Orifice Meter	2"	.750			120	23	.720	60
Critical Flow Prover								
Orifice Well Tester								

GAS FLOW RATE CALCULATIONS (R)

Coeff. (Fb)(Fp)(OWTC)	Meter-Prover Press. (Psia)(Pm)	Extension $\sqrt{hw \times Pm}$	Gravity Factor (Fg)	Flowing Temp. Factor (Ft)	Deviation Factor (Fpv)	Chart Factor (Fd)
2.779		52.54	1.179			

Gas Prod. MCFD Flow Rate (R): 172.14 Oil Prod. Bbls./Day: 15 Gas/Oil Ratio (GOR) = 11.48 Cubic Ft. per Bbl.

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 24 day of Oct 1994

For Offset Operator For State For Company

15-095-30249-00-00

STATE OF KANSAS - CORPORATION COMMISSION
 PRODUCTION TEST & GOR REPORT

Conservation Division Form C-5 Revised

TYPE TEST: Initial Annual Workover Reclassification TEST DATE: 8-20-93

Company G.A.R.I. Lease Russell Well No. 2

County Am. Location 36 Township 30 Range 7 Acres

Field Maple Grove Reservoir Mississippi Pipeline Connection Total (truck)

Completion Date Type Completion (Describe) Plug Back T.D. Packer Set At

Production Method: Type Fluid Production API Gravity of Liquid/Oil

Flowing Pumping Gas Lift Casing Size Weight I.D. Set At Perforations To

Tubing Size Weight I.D. Set At Perforations To

2 7/8

Pretest: Starting Date Time Ending Date Time Duration Hrs.

Test: Starting Date 8-19-93 Time Ending Date 8-20-93 Time Duration Hrs. 24

OIL PRODUCTION OBSERVED DATA

Producing Wellhead Pressure Separator Pressure Choke Size

Casing: Tubing:

Bbls./In.	Tank		Starting Gauge			Ending Gauge			Net Prod. Bbls.	
	Size	Number	Feet	Inches	Barrels	Feet	Inches	Barrels	Water	Oil
<u>1.67</u>										
Pretest:										
Test:	<u>200</u>	<u>97428</u>	<u>3</u>	<u>6 3/4</u>	<u>71.34</u>	<u>4</u>	<u>3 3/4</u>	<u>86.32</u>	<u>455</u>	<u>15</u>
Test:										

GAS PRODUCTION OBSERVED DATA

Orifice Meter Connections Orifice Meter Range

Pipe Taps: Flange Taps: Differential: Static Pressure:

Measuring Device	Run-Prover-Tester Size	Orifice Size	Meter-Prover-Tester Pressure		Diff. Press. (hw) or (hd)	Gravity Gas (Gg)	Flowing Temp. (t)
			In. Water	In. Merc. Psig or (Pd)			
Orifice Meter	<u>2"</u>	<u>.750</u>		<u>2.50</u>	<u>9</u>	<u>.720</u>	<u>60</u>
Critical Flow Prover							
Orifice Well Tester							

GAS FLOW RATE CALCULATIONS (R)

Gcoeff. (Fb)(Fp)(OWTC)	Meter-Prover Press. (Psia) (Pm)	Extension $\sqrt{hw \times Pm}$	Gravity Factor (Fg)	Flowing Temp. Factor (Ft)	Deviation Factor (Fpv)	Chart Factor (Fd)
<u>2.779</u>	<u>264.4</u>	<u>48.8</u>	<u>1.179</u>	<u>1</u>	<u>1</u>	

Gas Prod. MCFD Flow Rate (R): 159.8 Oil Prod. Bbls./Day: 15 Gas/Oil Ratio (GOR) = 10.6 Cubic Ft. per Bbl.

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 31 day of January 19 94

For Offset Operator

For State

For Company

STATE OF KANSAS - CORPORATION COMMISSION
 PRODUCTION TEST & GOR REPORT

15-095-30249-00-00

Form C-5 Revised

Conservation Division

TYPE TEST: Initial (Annual) Workover Reclassification TEST DATE: 9-20-90
 Company: BHP Petroleum Lease: Russell Well No.: 2
 County: Kingman Location: Section 36 Township 30 Range 7 Acres
 Field: Maple Grove Reservoir: Mississippi Pipeline Connection: T-space
 Completion Date: Type Completion (Describe): Plug Back T.D. Packer Set At

Production Method: Pumping Type Fluid Production: API Gravity of Liquid/Oil:
 Flowing Casing Size: 2 7/8 Weight: I.D.: Set At Perforations: To:
 Tubing Size: 2 7/8 Weight: I.D.: Set At Perforations: To:

Pretest: Starting Date: Time: Ending Date: Time: Duration Hrs.:
 Test: Starting Date: 9-20-90 Time: Ending Date: 9-21-90 Time: Duration Hrs.: 24

OIL PRODUCTION OBSERVED DATA

Producing Wellhead Pressure	Separator Pressure	Choke Size		
Casing: Tubing:				
Bbls./In.	Tank	Starting Gauge	Ending Gauge	Net Prod. Bbls.
1.67	Size Number	Feet Inches Barrels	Feet Inches Barrels	Water Oil
Pretest:				
Test:	200 97428	8 9 3/4 175.80	9 7 3/4 192.86	500 17
Test:				

GAS PRODUCTION OBSERVED DATA

Orifice Meter Connections	Orifice Meter Range					
Pipe Taps: Flange Taps: Differential: Static Pressure:						
Measuring Device	Run-Prover-Tester Size	Orifice Size	Meter-Prover-Tester Pressure	Diff. Press.	Gravity	Flowing Temp.
Orifice Meter	2"	.750	In. Water In. Merc. Psig or (Pd)	(hw) or (hd)	Gas (Gg)	(t)
Critical Flow Prover				184	16	.712 60
Orifice Well Tester						

GAS FLOW RATE CALCULATIONS (R)

Coeff. MCFD (Fb)(Fp)(CWTC)	Meter-Prover Press. (Psia)(Pm)	Extension $\sqrt{hw \times Pm}$	Gravity Factor (Fg)	Flowing Temp. Factor (Ft)	Deviation Factor (Fpv)	Chart Factor (Fd)
2.779	198.4	56.3	1.185	1	1	

Gas Prod. MCFD: 185.5 Oil Prod. Bbls./Day: 17 Gas/Oil Ratio (GOR) = 10.9 Cubic Ft. per Bbl.

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 15 day of NOV 19 90

For Offset Operator: For State: Carl W. Durr For Company:

STATE OF KANSAS - CORPORATION COMMISSION
 PRODUCTION TEST & GOR REPORT

15-095-36249-00-00

Form C-5 Revised

Conservation Division
 TYPE TEST: Initial Annual Workover Reclassification TEST DATE: 8-19-89
 Company BHP Petroleum Lease Russell Well No. 2
 County Kingman Location Section 36 Township 130 Range 7 Acres
 Field Maple Grove Reservoir Pipeline Connection Texaco
 Completion Date Type Completion(Describe) Plug Back T.D. Packer Set At

Production Method: Pumping Type Fluid Production API Gravity of Liquid/Oil
 Flowing Casing Size 2 7/8 Weight I.D. Set At Perforations To
 Tubing Size Weight I.D. Set At Perforations To

Pretest: Starting Date Time Ending Date Time Duration Hrs.
 Test: Starting Date 8-18-89 Time 9:00 Ending Date 8-19-89 Time 9:00 Duration Hrs. 24

OIL PRODUCTION OBSERVED DATA

Producing Wellhead Pressure			Separator Pressure			Choke Size				
Casing:	Tubing:									
Bbls./In.	Tank Size	Number	Starting Gauge Feet	Inches	Barrels	Ending Gauge Feet	Inches	Barrels	Net Prod. Bbls. Water	Oil
1.67										
Pretest:										
Test:	200	93414	2	9 3/4	55.93	3	8 3/4	74.67	500	19
Test:										

GAS PRODUCTION OBSERVED DATA

Orifice Meter Connections			Orifice Meter Range				Static Pressure:	
Pipe Taps:	Flange Taps:	Differential:						
Measuring Device	Run-Prover-Tester Size	Orifice Size	Meter-Prover In. Water	Tester Pressure In. Merc.	Pressure Psig or (Pd)	Diff. Press. (hw) or (hd)	Gravity Gas (G ₂)	Flowing Temp. (t)
Orifice Meter	2"	.750			250	12		
Critical Flow Prover								
Orifice Well Tester								

GAS FLOW RATE CALCULATIONS (R)

Coeff. MCFD (F _b)(F _p)(C _{WTC})	Meter-Prover Press. (P _{sia})(P _m)	Extension $\sqrt{hw \times P_m}$	Gravity Factor (F _g)	Flowing Temp. Factor (F _t)	Deviation Factor (F _{pv})	Chart Factor (F _d)
2.779		56.33	1.195			

Gas Prod. MCFD Flow Rate (R): 187. Oil Prod. Bbls./Day: 19 Gas/Oil Ratio (GOR) = 9.8 Cubic Ft. per Bbl.

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 19 day of 9 1989

For Offset Operator: Steve Anderson For State: Robert W. Eggert For Company: