Submit 3 Copies To Appropriate District Office	State of New Mexico		Form C-103	
District I	Energy, Minerals and Natural Resources		Revised March 25, 1999 WELL API NO.	
1625 N. French Dr., Hobbs, NM 88240 District II			30-045-30271	
811 South First, Artesia, NM 88210	OIL CONSERVATION		5. Indicate Type of	of Lease
District III	2040 South Pac	heco	STATE X	
1000 Rio Brazos Rd., Aztec, NM 87410 District IV	Santa Fe, NM 8	7505	6. State Oil & G	
2040 South Pacheco, Santa Fe, NM 87505			NA	us Bouso (40.
(DO NOT USE THIS FORM FOR PROPOSALS DIFFERENT RESERVOIR. USE "APPLICATION PROPOSALS.)  1. Type of Well:	ON FOR PERMIT" (FORM C-101)	or such	7. Lease Name or FLUSH (2	Unit Agreement Name: 26049)
Oil Well Gas Well	Other Y SWD	- The William William	2	
2. Name of Operator	Fo		8. Well No. 1	
Merrion Oil & Gas		DE: 5	9. Pool name or	Wildoot
<ol> <li>Address of Operator</li> <li>610 Reilly Ave, Farmington, NA</li> </ol>	4 87401	%. A	SWD, Mesaverde	Wildcat
4. Well Location	1 0/401	<del>((3) - 1509))</del>	S VV D, IVICSAVCIUC	
4. Well Location		Carlo Carlo		
Unit Letter <u>F</u> : 1910	feet from the <u>north</u>	line and1	765 feet from	the <u>west</u> line
Section 2	Township 26N	Range 13W	NMPM San Ju	an County
	. Elevation (Show whether L			
6047' GR				
	opriate Box to Indicate N			
NOTICE OF INTE			SEQUENT <u>R</u> EI	
PERFORM REMEDIAL WORK D PL	UG AND ABANDON []	REMEDIAL WOR	K 🗆	ALTERING CASING
TEMPORARILY ABANDON   CH	HANGE PLANS	COMMENCE DR	ILLING OPNS. 🗌	PLUG AND ABANDONMENT
	JLTIPLE [] DMPLETION	CASING TEST A	ND	
OTHER: Perform Step Rate Test	x	OTHER:		
12. Describe proposed or completed of	perations. (Clearly state all pe	ertinent details, and	give pertinent dates,	including estimated date
of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion				
or recompilation.				
	<u> </u>	1 1.1	. 11 ' 1-	
Merrion Oil & Gas proposes to perform a step rate test on the subject well in accordance with the				
attached procedure.				
			<del></del>	
I hereby certify that the information above is true and complete to the best of my knowledge and belief.				
SYCHATIVE /	TITLE	Production En	gineer DA	TE 6/10/ <u>02</u>
SIGNATURE	III LE	Production En	gilleet DA	115 0/10/02
Type or print name Con	nie S. Dinning	W <b>a</b> w a a a a a a a a a a a a a a a a a a	Tele	ephone No. 327-9801
(This space for State use)	1771	TY GOL & GAS INSTE	CIER, BAIL, PR	
•				JUN 1 1 2002
APPPROVE Conditions of approval, if any:	TITLE			DATE

# Merrion Oil & Gas Corporation

## Step Rate Test Procedure

June 10, 2002

Well:

Flush No. 1

Field:

Mesaverde

Location:

1910' fnl & 1765'fwl (se nw)

San Juan County, New Mexico

Elevation:

6047' *G*R 6053' RKB

Sec. 2, T26N, R13W

By:

Connie Dinning

### **Background Information**

- 1. The rig up diagram and mechanical configuration of the wellbore are attached.
- 2. A step rate test was performed on May 2, 2002. The results are on file with the NMOCD. The pump rate was not sufficient to provide accurate information about the frac pressure of the well.

### Procedure

#### Run Bottom Hole Pressure Monitor

- 1. Notify NMOCD minimum of 24 hours prior to testing.
- 2. Shut in well 24 hrs prior to test.
- 3. Move-in, rig up Cobra Slickline.
- 4. RIH w/ Electronic pressure gauge and set at ±2065' KB.
- 5. Fill 7 tanks on location w/ produced water.

## Perform Step Rate Test

- 1. Install pressure gauges on bradenhead and casinghead.
- 2. MIRU pump truck.
- 3. Install paper chart recorder on pump discharge to record surface pressure and rate.
- 4. Load hole w/ produced water.
- 5. Begin step rate test at 0.25 BPM. If possible, pump three steps below current pressure limit of 422 psi. Hold each step for 15 minutes. Increase rate in increments of 0.5 BPM up to an estimated 12.25 BPM. Three steps above breakover point must be established for a valid test. Continue pumping in .5 bbl increments if the required data is not obtained by the 12.25 BPM step. Haul in more city water as necessary.
- 6. Record casing and bradenhead pressures at each step.
- 7. Record ISIP at end of test.
- 8. Rig down pump.
- 9. Retrieve bottom hole pressure tool, rig down slickline.
- 10. Put well on to injection.
- 11. Provide all pressure/rate charts, field notes and bottom hole pressure data to Connie Dinning at the MOG office.



## Procedure For Step Rate Test:

- 1. Pump produced water at 0.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 2. Pump produced water at 0.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 3. Pump produced water at 1.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 4. Pump produced water at 1.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 5. Pump produced water at 2.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 6. Pump produced water at 2.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 7. Pump produced water at 3.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 8. Pump produced water at 3.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 9. Pump produced water at 4.25 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 10. Pump produced water at 4.75 bpm for exactly 15 minutes and record all of the rates and pressure. Use a choke assembly to pinch back the rate and adjust to the desired rate.
- 11. Pump produced water at 5.25 bpm for exactly 15 minutes and record all of the rates and pressure.
- 12. Pump produced water at 5.75 bpm for exactly 15 minutes and record all of the rates and pressure.

1:40 PM Page 6 6/4/02

- 13. Pump produced water at 6.25 bpm for exactly 15 minutes and record all of the rates and pressure.
- 14. Pump produced water at 6.75 bpm for exactly 15 minutes and record all of the rates and pressure.
- 15. Pump produced water at 7.25 bpm for exactly 15 minutes and record all of the rates and pressure.
- 16. Pump produced water at 7.75 bpm for exactly 15 minutes and record all of the rates and pressure.
- 17. Pump produced water at 8.25 bpm for exactly 15 minutes and record all of the rates and pressure.
- 18. Pump produced water at 8.75 bpm for exactly 15 minutes and record all of the rates and pressure.
- 19. Pump produced water at 9.25 bpm for exactly 15 minutes and record all of the rates and pressure.
- 20. Pump produced water at 9.75 bpm for exactly 15 minutes and record all of the rates and pressure.
- 21. Pump produced water at 10.25 bpm for exactly 15 minutes and record all of the rates and pressure.
- 22. Pump produced water at 10.75 bpm for exactly 15 minutes and record all of the rates and pressure.
- 23. Pump produced water at 11.25 bpm for exactly 15 minutes and record all of the rates and pressure.
- 24. Pump produced water at 11.75 bpm for exactly 15 minutes and record all of the rates and pressure.
- 25. Pump produced water at 12.25 bpm for exactly 15 minutes and record all of the rates and pressure.

BHP required to fracture the formation = 1,707 psi

(based on ISIP from pump-in) ISDP = 1,087

Frac Gradient From ISDP = 0.8265 psi/ft

### wellbore schematic

### Flush No. 1, SWD

### Current Wellbore Configuration





