This form is not to be used for reporting packer leakage tests in Southeast New Mexico

Oil Conservation Division

OCD Received 5/28/2020

Northwest New Mexico Packer-Leakage Test

Page 1 Revised June 10, 2003

Operator Hilcorp Energy Company				Lease Name LUDWICK LS							Well No. 13	
Location of We	II: Unit	Letter	G S	Sec	05	Twp	029N	Rg	ge	010W	API	# 30-045-08781
	Name of Reservoir or Pool				Type of Prod				Method of Prod			Prod Medium
Upper Completion	PC				Gas				Flow			Tubing
Lower Completion	MV				Gas				Flow			Tubing
Pre-Flow Shut-In Pressure Data												
Upper					1 1 (T) OL (1				SI Press. PSIG			Stabilized?(Yes or No)
Completion	5/22/2020				Length of Time Shut-In				192		192	Yes
Lower Completion	Hour, Date, Shut-In				133				SI Press. PSIG			Stabilized?(Yes or No)
Completion	5/2	5/22/2020								205		Yes
Flow Test No. 1												
Commenced at: 5/26/2020 Zone Producing (Upper or Lower): LOWER									WER			
Time		Lapsed Time) Since*			PRES	_		Prod Zone				
(date/time	∍)				Upper zone		zone	Tempe	erature			Remarks
5/26/2020 10:56 AM			10		192	10	01			meet 20 Percent crossover		
5/27/2020 1:38 PM 37		192		88	8							
Production rate	during	test										
Oil:	:BPOD Based on:Bbls			s. InHrs				Grav.			GOR	
GasMCFPD; Test thru (Orifice or Meter)												
Mid-Test Shut-In Pressure Data												
Upper Completion	Upper Hour, Date, Shut-In				Length of Time Shut-In			. J Data	SI Press. PSIG			Stabilized?(Yes or No)
Lower Completion								SI Press. PSIG			Stabilized?(Yes or No)	

(Continue on reverse side)

Northwest New Mexico Packer-Leakage Test

Flow Test No. 2

Commenced at:			Zone Producing (Upper or Lower)								
Time	Lapsed Time	PRES	SURE	Prod Zone Temperature							
(date/time)	Since*	Upper zone	Upper zone Lower zone			Remarks					
Production rate during	test										
Oil:BPOD	Based on:	Bbls. In	Hrs.		Grav.	GOR					
Gas	MCFPD; Test th	nru (Orifice or M	leter)								
Remarks:											
I hereby certify that the	e information herein c	ontained is true	and complete	to the best of	my knowledge.						
Approved: Sept 3		20 20	Operat	or: Hilcorp E	Energy Company	,					
New Mexico Oil Conservation Division				By: Nate Nichols							
1/1/	Ash		-	•							
-,-			Title:	Title: Multi-Skilled Operator							
Title: District III Ge	ologist		Date:	Date: Thursday, May 28, 2020							

NORTHWEST NEWMEXICO PACKER LEAKAGE TEST INSTRUCTIONS

- A packer leakage test shall be commenced on each multiply completed well within seven days after actual completion of the well, and annually thereafter as prescribed by the order authorizing the multiple completion. Such tests shall also be commenced on all multiple completions within seven days following recompletion and/or chemical or fracture treatment, and whenever remedial work has been done on a well during which the packer or the tubing have been disturbed. Tests shall also be taken at any time that communication is suspected or when requested by the Division.
- At least 72 hours prior to the commencement of any packer leakage test, the operator shall notify the Division in writing of the exact time the test is to be commenced. Offset operators shall also be so notified.
- The packer leakage test shall commence when both zones of the dual completion are shut-in for pressure stabilization. Both zones shall remain shut-in until the well-head pressure in each has stabilized, provided however, that they need not remain shut-in more than seven days.
- 4. For Flow Test No. 1, one zone of the dual completion shall be produced at the normal rate of production while the other zone remains shut-in. Such test shall be continued for seven days in the case of a gas well and for
- 24 hours in the case of an oil well. Note: if, on an initial packer leakage test, a gas well is being flowed to the atmosphere due to lack of a pipeline connection the flow period shall be three hours.

- Flow Test No. 2 shall be conducted even though no leak was indicated during Flow Test No. 1. Procedure for Flow Test No. 2 is to be the same as for Flow Test No. 1 except that the previously produced zone shall remain shut-in while the zone which was previously shut-in is produced.
- 7. Pressures for gas-zone tests must be measured on each zone with a deadweight pressure gauge at time intervals as follows: 3 hours tests: immediately prior to the beginning of each flow period, at fifteen-minute intervals during the first hour thereof, and at hourly intervals thereafter, including one pressure measurement immediately prior to the conclusion of each flow period. 7-day tests: immediately prior to the beginning of each flow period, at least one time during each flow period (at approximately the midway point) and immediately prior to the conclusion of each flow period. Other pressures may be taken as desired, or may be requested on wells which have previously shown questionable test data.
- 24-hour oil zone tests: all pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges the accuracy of which must be checked at least twice, once at the beginning and once at the end of each test, with a deadweight pressure gauge. If a well is a gas-oil or an oil-gas dual completion, the recording gauge shall be required on the oil zone only, with deadweight pressures as required above being taken on the gas zone.
- 8. The results of the above-described tests shall be filed in triplicate within 15 days after completion of the test. Tests shall be filed with the Aztec District Office of the New Mexico Oil Conservation Division on Northwest New Mexico Packer Leakage Test Form Revised 10-01-78 with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only).

5. Following completion of Flow Test No. 1, the well shall again be shut-in, in accordance with Paragraph 3