

ClayDesta National Bank Bldg. Suite 5250 6 Desta Drive Midland, Texas 79705 915-682-9756 Leonard Kersh District Production Manager Dane Hendley District Petroleum Engineer Sammy Reed Production Superintendent West Texas District Production Division

June 29, 1988

OIL CONSERVATION DIVISION

Re: Application for Down-Hole Commingling Enserch Exploration, Inc. Pearl Jordan No. 3 North Peterson Field Roosevelt County, New Mexico

Gentlemen:

Enserch Exploration, Inc. requests authority for down-hole commingling of production from the Pennsylvanian and Mississippian formations in the above referenced well located in Roosevelt County, New Mexico.

In accordance with Rule 303-A of the Oil Conservation Division Rules and Regulations, information requested upon application of a permit for downhole commingling of two oil zones is attached.

Yours truly,

ne fendley Wm, Dane Hendley

WDH:jd

Attachment

New Mexico Department of Energy & Minerals Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

1.	Operator:	Enserch Exploration, Inc. ClayDesta National Bank Bldg., Suite 5250 6 Desta Drive Midland, Texas 79705
2.	Lease Name: Well Number: Well Location:	Pearl Jordan 3 Section 17, T-4-S, R-33-E 660' FSL, 660' FEL Roosevelt County, New Mexico
	Pools to be Commingled:	North Peterson (Penn) Pool Undesignated (Miss) Pool

3. A lease plat showing the acreage dedicated to the well and ownership of offsetting leases has been attached. Accordingly, Enserch Exploration, Inc. operates all surrounding leases having a 45% working interest in the acreage allocated to the subject well.

The Pennsylvanian and Mississippian formations have a common royalty interest within the acreage allocated to the subject well.

 Attached is a production observation report showing the volumes of oil, gas, and water produced from the Penn formation during a 24 hour test.

Prior to completing the Penn, the Mississippian was perforated and swabbed for three days with a total recovery of 42 STB of oil and 192 bbl. of water. This zone was not potentialed.

5. The subject well was perforated in an interval of the Mississippian formation from 8160' to 8180' (Total: 37 holes) and acidized with 4000 gallons of 15% NEFE HCL acid. A three day swab test yielded 18 STB of oil and 70 bbls. of water. The Mississippian was re-acidized with 8000 gallons of MOD-202 acid with 500 SCF of nitrogen per barrel. Another three day swab test yielded 42 STB of oil and 192 bbls, of water. The well was temporarily abandoned and recompleted to the Penn (Cisco) interval. The perforations within this interval exist between 7830' and 7852' (Total: 46 holes). The Penn (Cisco) was acidized with 5000 gallons of NEFE HCL acid. A potential test was run on June 16, 1981 recovering 120 STB of oil, 170 MCF of gas, and 10 bbls. of water in a 24 hour test period. During August, 1987 the well was reworked by adding the Penn (Detrital) interval with perforations from 8016' to 8056' (Total: 46 holes).

This interval was acidized with 2300 gallons of 15% NEFE HCL acid. A potential test was run on August 18, 1987 including production from both zones completed in the Pennsylvanian formation. In a 24 hour test period the well produced 51 STB of oil, 91 MCF of gas, and 39 bbls. of water on pump. Currently, the well is producing approximately 14 BOPD, 14 MCFGPD and 7 BWPD on pump.

A decline curve showing the production history of the Pennsylvanian completion has been attached.

- 6. A bottomhole pressure survey was not run on the subject well. However, a pressure buildup test was run on two offsetting Penn wells (i.e. Amoco State No. 2: 2633 psi; and, Pearl Jordan No. 2: 2350 psi). The bottomhole pressure from the Mississippian has been estimated to be 2752 psi based on the drill stem test results from the Collier "A" No. 1, which is located approximately 2 miles south of the subject well.
- 7. The fluid characteristics of oil samples taken from the Pennsylvanian indicated an oil gravity of 45.3° API. The gravity of the oil recovered while swabbing the Mississippian completion was not determined; however, Mississippian oil recovered from the Collier "A" No. 1 has a gravity of 43.0° API.
- 8. Estimated production from the Penn formation: 14 BOPD Estimated production from the Miss formation: 14 BOPD Sum of Individual Flow Streams: 28 BOPD

According to Order No. R-6882 (Dated February 1, 1982), commingled production from zones, with the lowermost pool existing between 8,000' and 8,999', may not exceed 60 BOPD.

- 9. The Pearl Jorden No. 3 is currently producing 14 BOPD from the Penn formation. Any production over 14 BOPD will be allocated to the production from the Mississippian formation.
- 10. Enserch Exploration, Inc. is operator of all offsetting production, and operates the subject well with a 45% working interest.



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