

W A I V E R

Conservation Commission
Mabry Hall
State Capitol
Santa Fe, New Mexico

Re: Case No. 2019

Dear Sir:

Southern Union Oil Company consents to the correction of Continental's application for triple completion on its Northeast Haynes Well Apache 9-1 set down as Case No. 2019.

Southern Union Oil Company hereby waives notice for the corrected application of Continental Oil Company.

SOUTHERN UNION OIL COMPANY

By

[Signature]
[Signature]
(Title)

RECEIVED
JUL 11 1961
SANTA FE, N.M.

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

TRIPLE
APPLICATION FOR DUAL COMPLETION

7-3-58

see corrected appl. *Case 2019* *gas gas gas triple*

Field Name West Lindrita		County Rio Arriba	Date 7/5/60
Operator Continental Oil Company		Lease Northeast Haynes Apache	Well No. 9-1
Location of Well	Unit	Section 9	Township 24 North
		Range 5 West	

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES _____ NO X
2. If answer is yes, identify one such instance: Order No. _____; Operator, Lease, and Well No.:

3. The following facts are submitted:	Upper Zone Upper Zone	Lower Zone	Deepest Zone XXXXXXX Dakota
a. Name of reservoir	Mesa Verde	Gallup	Greenhorn
b. Top and Bottom of Pay Section (Perforations)	3910 to 4700 (proposed)	5655 to 6250 (proposed)	6590 to 6650 (proposed)
c. Type of production (Oil or Gas)	Gas	Gas	Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing	Flowing	Flowing

4. The following are attached. (Please mark YES or NO)

yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.

yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

_____ c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*

_____ d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

1. Gulf Oil Company - P. O. Box 1589 - Durango, Colorado

2. Southern Union Oil Company - Burt Building - Dallas, Texas

3. Skelly Oil Company - P. O. Box 4083-Station A - Albuquerque, New Mexico

4. El Paso Natural Gas Products Co. - P. O. Box 977 - Farmington, New Mexico

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO _____. If answer is yes, give date of such notification July 5, 1960.

CERTIFICATE: I, the undersigned, state that I am the attorney of the Continental Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

William M. Luff
Signature

* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a standard perforation unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

ADDITIONAL DATA FOR TRIPLE COMPLETION

This well will be located in the C NW SW Section 9, T24N, R5W, Rio Arriba County, New Mexico. The well will produce gas from the Mesa Verde, Gallup, and Greenhorn formations. Attached is a sketch of the proposed completion. Basically, the program will consist of the following:

1. Drill a 16" hole to 200'.
2. Run 200' of 13 3/8" surface pipe and cement to surface.
3. Drill a 12" hole to the base of the Gallup formation or approximately 6000'.
4. Drill a 7" hole from the base of the Gallup to TD at the base of Dakota formation.
5. Run and hang 4 1/2" OD casing to the base of the Dakota.
6. Run and hang 2 7/8" OD casing to the base of the Mesa Verde.
7. Run and hang 4 1/2" OD casing to the base of the Gallup.
8. Cement the Dakota formation through a cement shoe on the Dakota string.
9. Cement the Gallup formation through a cement shoe on the Gallup string.
10. Cement the Mesa Verde formation through a stage collar in the Dakota string of 4 1/2" OD casing.
11. Cement the Pictured Cliffs formation through a stage collar in the Gallup string of 4 1/2" OD casing.
12. Perforate each productive zone (Dakota, Gallup and Mesa Verde) separately utilizing a gun which can be oriented to perforate only one string at a time.
13. Selectively sand-oil treat each producing zone and complete each string for production through a casing head which will prevent commingling of the hydrocarbons.

Mesa Verde

Transgressive-regressive deposits consisting of sandstone, shales, silts, and coals. The sands are fine-grained, well sorted and interbedded with the shales and silts. The common source of supply for the Mesa Verde sands is based upon environment of deposition. The productive zones in the Mesa Verde may or may not have a common source of supply with respect to each other.

This point depends entirely upon the deposition. In any case the supply source or sources are separate from those of the Dakota, Greenhorn, and Gallup. In the case of the Mesa Verde, we will probably have to segregate it as the source of supply after the well is drilled.

Gallup

A sequence of fine-grained beach sands interbedded in a matrix of fractured marine shales and siltstones. This formation is considered to have a common source of supply separate from that of the formations immediately above and below. The marine shales are considered the source beds and this formation is bounded above and below by impermeable shale.

Greenhorn

A series of interbedded fractured marine limestone and limey shale. This formation is considered as having a common source of supply separate from that of the Dakota, due to its environment of deposition.

We believe this proposed type of completion is necessary to economically develop the Northeast Haynes Apache lease. This type of completion will prevent waste of the resources of the State of New Mexico by the use of proper production practices. It will also protect the correlative rights of everyone concerned by providing separate production facilities for each of the three producing formations which will prevent the commingling of the hydrocarbons.