



THE ATLANTIC REFINING COMPANY

INCORPORATED - 1870

PETROLEUM PRODUCTS OFFICE OCC

March 1, 1963

RECORDED MAR 6 AM 10:25

DOMESTIC PRODUCING DEPARTMENT
ROCKY MOUNTAIN DISTRICT

S. L. SMITH, MANAGER

T. S. PACE, LAND

R. O. CHILDERS, DRILLING & PRODUCTION

T. O. DAVIS, ENGINEERING

L. G. MEGASON, GEOPHYSICAL

R. P. CURRY, ADMINISTRATIVE

SUITE 760
PETROLEUM CLUB BLDG.
110 16TH STREET
DENVER 2, COLORADO
AMHERST 6-3741

Handwritten notes and signatures:
-3
[Illegible signature]
[Illegible signature]

New Mexico Oil Conservation Commission
Attention: Mr. A. L. Porter, Jr.
Post Office Box 871
Santa Fe, New Mexico

Re: Horseshoe-Gallup Unit

Gentlemen:

In accordance with Rule 11 of the findings of Case No. 2519, Order No. R-2210 concerning the Horseshoe-Gallup Unit in San Juan County, New Mexico, The Atlantic Refining Company requests approval to convert the following two producing wells to injection. These wells were not listed as future injection wells in the exhibits presented by Atlantic at the hearing.

<u>Unit Well No.</u>	<u>Former Operator</u>	<u>Lease</u>	<u>Former Well No.</u>	<u>Location</u>
143	Texaco	Navajo Ute Mountain Tribe "B"	4	NE/4 SW/4 Sec. 21 T-31-N, R-16-W
145	Texaco	Navajo Ute Mountain Tribe "B"	2	SW/4 SE/4 Sec. 21 T-31-N, R-16-W

The conversion of the No. 145 is necessary because of a directional permeability problem which has been found to exist between this well and the No. 22 injection well. The No. 22 is located in the NW/4 of the SE/4 of Section 29, T-31-N, R-16-W. The presence of communication between these two wells was established by means of an interference test and also a tracer test. This communication exists to the extent that the No. 145 will produce 100% water when opened and has a shut-in tubing pressure of about 300 psig. The tracer test confirmed that the water produced from the No. 145 is injected water from the No. 22 well. The characteristics of abnormally high pressure and production of a large amount of injected water found in the No. 145 are not present at this time in any other unit wells. Because of the communication, the No. 145 cannot be used as a unit producing well as was previously planned and, therefore, we wish to use it as an injector.

Changing the status of the No. 145 to injection necessitates a flood pattern change in the area surrounding this well. To accomplish this, the No. 143 will also have to be converted to injection and wells Nos. 144 and 146, which offset the No. 145 to the west and east, will remain as producing wells.

The changes in the flood pattern as described above were submitted to the working interest owners of the Unit for their approval on January 28, 1963. An affirmative vote of more than 65% of the working interest, which is required by the Unit Operating Agreement for this change, was received.

Texaco, Inc. is the only offset operator to the wells proposed to be converted; therefore, a copy of the letter which bears Texaco's approval vote is submitted as a waiver of objection.

The schematic sketch of the proposed physical equipment of the No. 143 and 145 is attached. As shown on this sketch, injection will be into only the upper Tocito, as the lower Tocito is not developed in this portion of the field. Also attached is a plat showing the locations of the No. 143 and 145 wells, all the wells within the project area, offset operators and offset wells.

We would appreciate approval of the conversion at your earliest convenience, as the installation of the flood project is rapidly nearing completion. Please forward a copy of your approval letter to the U. S. G. S. and the New Mexico Commissioner of Public Lands. If you need additional information, please let us know.

Yours very truly,

T. O. Davis

T. O. Davis, Chairman
Horseshoe-Gallup Operators' Committee

EMP:1b

Attachment

cc: United States Geological Survey
Post Office Drawer 1857
Roswell, New Mexico

Commissioner of Public Lands of New Mexico
State Land Office
Santa Fe, New Mexico

Texaco, Inc.
Post Office Box 2100
Denver, Colorado

THE ATLANTIC REFINING COMPANY

SCHEMATIC DRAWING

HORSESHOE GALLUP UNIT W.F.L. NO. 43
SAN JUAN COUNTY, NEW MEXICO

ELEV. OF D.F. ABOVE SEA LEVEL 1007.8

2 3/8" O.D. TUBING

7 5/8" O.D. CASING
SET AT 10' 6"

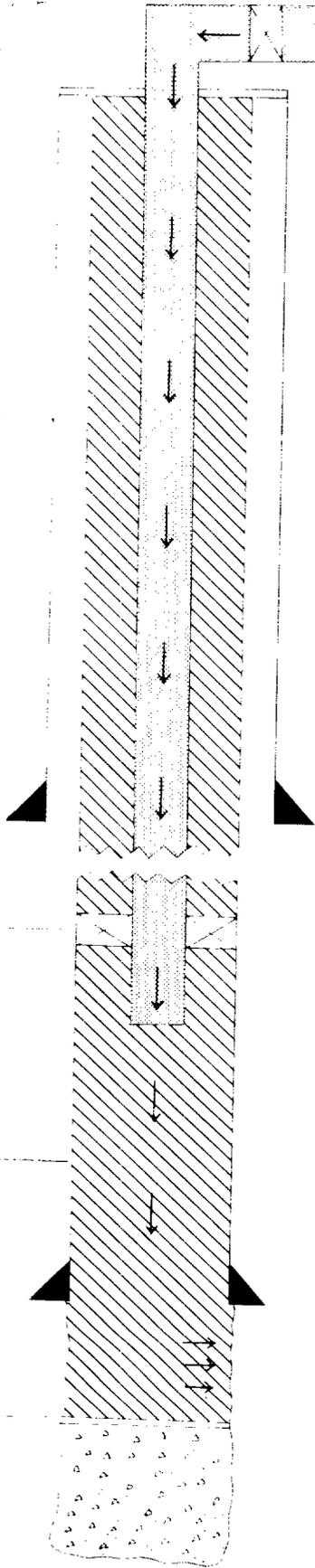
PACKER SET AT 13'

4 1/2" O.D. CASING
SET AT 16' 6"

OPEN HOLE 16' 6" - 16' 29"
BALLUF FORMATION
UPPER TOCITO

P.B.D. 16' 29"

T.D. 17' 4"



ELEV. OF D.F. ABOVE SEA LEVEL = 5744

2 3/8" O.D. TUBING

8 5/8" O.D. CASING
SET AT 124

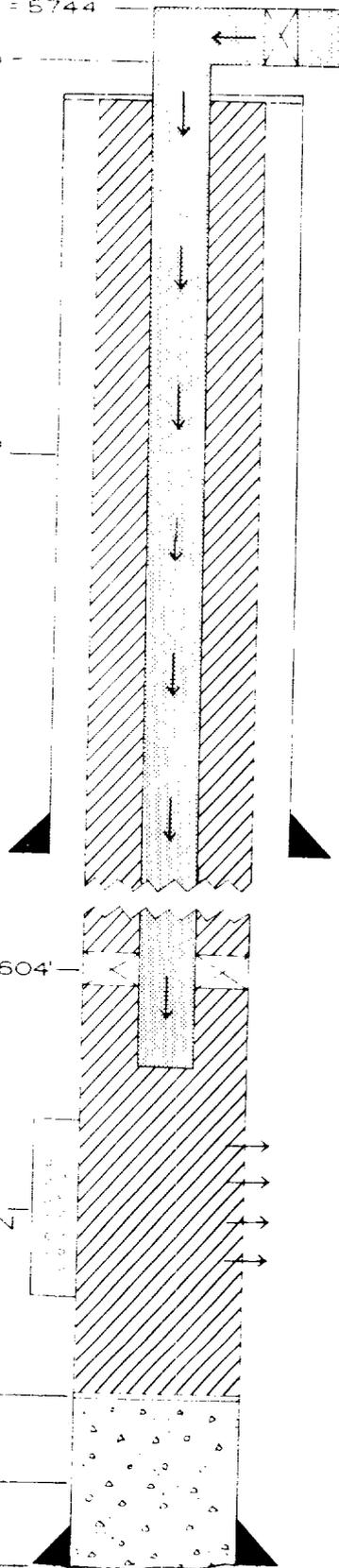
PACKER SET AT 1604'

PERFS. 1639'-1658'
GALLUP FORMATION
UPPER TOCITO

P.B.D. 1671

4 1/2" O.D. CASING
SET AT 1705'

T.D. 1705



THE ATLANTIC REFINING COMPANY

SCHEMATIC DRAWING

495ESHOF GALLUP UNIT #42 - NO. 145
SAN JUAN COUNTY, N.M. DEK 1150



THE ATLANTIC REFINING COMPANY
INCORPORATED - 1924
PETROLEUM PRODUCTS

Herb

January 28, 1963

DOMESTIC PRODUCING DEPARTMENT
 ROCKY MOUNTAIN DISTRICT

- S. L. SMITH, MANAGER
- T. S. PACE, LAND
- R. O. CHILDERS, DRILLING & PRODUCTION
- T. O. DAVIS, ENGINEERING
- L. G. MEGASON, GEOPHYSICAL
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To: Horseshoe-Gallup Operators' Committee

Re: Revision of Flood Pattern
 Horseshoe-Gallup Unit

Gentlemen:

It has become necessary that a revision in the flood pattern be made in Section 21, T-31-N, R-16-W. This revision results from the detection of direct communication between the No. 22 injection well, located in Section 29, and the No. 145 well (now shut-in) in Section 21. We mentioned in the Monthly Report of Operations for September, 1962 that an interference test between these two wells had been taken and that it showed direct pressure communication. To further substantiate the communication, a tracer survey was run. On November 29, 1962, ammonium thiocyanate was put into the upper zone of the No. 22 injection well. A small amount of water, approximately equal to the tubing capacity, was produced from the 145 well each day and checked. The tracer appeared in the No. 145 on December 16, 1962.

Because of this communication, the No. 145 cannot be used as a producing well as was previously planned but could be used as an injector. We, therefore, propose the following changes in the injection pattern:

1. Convert No. 145 to an injection well
2. Convert No. 143 to an injection well
3. Continue No. 144 as a producing well
4. Continue No. 146 as a producing well

We request your approval of these proposed well status revisions. Upon receiving the necessary approval of the working interest owners, the revisions will be submitted to the U.S.G.S. and the New Mexico Oil Conservation Commission. Please indicate your approval by signing and returning one copy of this letter to us.

Yours very truly,

J. O. Davis

T. O. Davis, Chairman
 Horseshoe-Gallup Operators' Committee

EMP:lb

Date FEB 11 1963

Approved By _____

Signed *J. Foree*

J. O. Davis

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE