

Shackelford Oil Properties

Fred Pool Drilling Inc.

OIL CONSERVATION DIVISION
RECEIVED

'92 JUL 4 AM 8 29

Sam L. Shackelford

114 E. 4th, Suite 105

P.O. Drawer H

Roswell, N.M. 88201

505-623-6036

July 8, 1992

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

10517

Attention: Mr. Mike Stogner

RE: Tomcat Unit Area

Dear Mr. Stogner:

Please find enclosed information concerning the Tomcat Unit Area we discussed in our phone conversation of July 8, 1992.

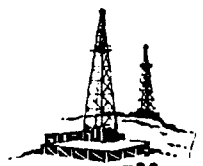
We are requesting to be put on the Docket for a hearing for approval of the captioned unit. At present we are not certain whom will be the operator, but as we discussed, it will be either Plains Radio Petroleum Company or Fred Pool, Jr.

If you need any further information or have any question, please feel free to contact me at the above number or address. Thank you for your assistance in this matter.

Sincerely,



Sam L. Shackelford
SLS/ds
Enclosures





United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Roswell District Office
P.O. Box 1397
Roswell, New Mexico 88202-1397



IN REPLY
REFER TO:

NMNM87885X
3180 (065)

JUL 07 1992

Shackelford Oil Properties
Attention: Mr. Sam L. Shackelford
P. O. Drawer H
Roswell, NM 88201

Gentlemen:

Your application of June 8, 1992, filed with the BLM on behalf of Plains Radio Petroleum Company, requests the designation of the Tomcat Unit area, embracing 1960.00 acres, more or less, Chaves County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act as amended, for all formations.

Pursuant to unit plan regulations 43 CFR 3180, the land requested as outlined on your plat marked Plains Radio Petroleum Company, Tomcat Unit, Chaves County, New Mexico, is hereby designated as a logical unit area. This designation is valid for a period of one year from the date of this letter.

The unit agreement submitted for the area designated should provide for a well to test the San Andres "P-1 K" Zone or to a depth of 4000 feet. Your proposed use of the Form of Agreement for Unproved Areas will be accepted.

If conditions are such that further modification of said standard form is deemed necessary, three copies of the proposed modifications with appropriate justification must be submitted to this office for preliminary approval.

In the absence of any type of land requiring special provisions or any objections not now apparent, a duly executed agreement identical with said form, modified as outlined above, will be approved if submitted in approvable status within a reasonable period of time. However, notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which in our opinion, does not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

When the executed agreement is transmitted to the BLM for approval, include the latest status of all acreage. In preparation of Exhibits "A" and "B", follow closely the format of the sample exhibits attached to the reprint of the aforementioned form.

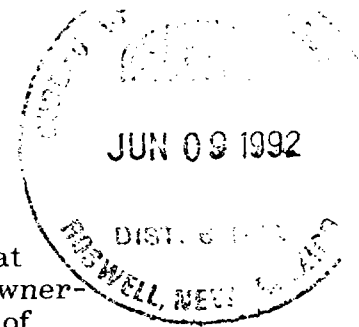
Arnold D. Lopez

Inasmuch as this unit agreement involves State land, we are sending a copy of the letter to the Commissioner of Public Lands. Please contact the State of New Mexico before soliciting joinders regardless of prior contacts or clearances from the state.

Sincerely,

Armando A. Lopez
Assistant District Manager,
Minerals

Tomcat Federal Exploratory Unit



Plains Radio Petroleum Co. requests approval of the Tomcat Federal Exploratory Unit (outlined on the accompanying lease ownership map), comprised of all of sections 32 and 33 and portions of sections 28, 29 and 31, T-8-S, R-31-E, in Chaves County, New Mexico. This request consists of a total of 1,960 acres.

An initial test, to be drilled 660' FNL and 660' FEL of section 32, will be drilled to a total depth of approximately 4,000', sufficient to test locally productive members of the lower San Andres section. The accompanying unit index shows the location of the Tomcat Federal Exploratory Unit and its proximity to producing San Andres fields.

The primary objective of the test well is the regionally named "P-1" porosity zone of the lower San Andres. This zone is the most extensive and prolific zone of the overall San Andres section.

Regionally, as illustrated by the unit index, an east-west trending belt of San Andres oil fields extends across the Northwest Shelf of Southeast New Mexico. Production occurs along a porosity and permeability pinchout where the porous carbonates grade laterally into anhydrite and halite. The trapping mechanism is believed to be pre-Tertiary structural and/or stratigraphic traps. These traps typically have tilted oil/water contacts and oil and water production relationships are not consistent with present-day structure (oil down-dip to water). It is believed that these inconsistencies are a result of diagenetic traps. Hydrocarbons were originally trapped in the pre-Tertiary traps but eastward tilting during the Tertiary opened these traps; however, the oil remained in the structurally unfavorable positions as a result of diagenetic sealing.

An interval isopach (top of San Andres to San Andres "Pi Marker") was prepared in order to identify the existence of post-San Andres structure. This paleo-structure coincides with hydrocarbon production in the Siete field (primarily in section 16, T-8-S, R-31-E) and at several smaller one and two well fields in the area. Model Cross Section XYZ identifies the interval mapped and illustrates the thinning of the upper San Andres over the pre-existing or paleo-structures.

The paleo-structure map (interval isopach) indicates a large area of thinning in the upper San Andres in the immediate area of the proposed unit. This feature also appears to be on strike and of similar size to the Siete field.

The existence of good quality reservoir rock is of equal importance to trapping in finding commercial San Andres production. The "P-1" porosity zone of the lower San Andres is the chief producing reservoir in the area. The "P-1" consists of dolomitized higher

energy packstone with good porosity and permeability that may also include secondary fracture porosity.

A detailed stratigraphic study using wireline logs further revealed that the best production in the "P-1" probably occurs in wells where a distinct highly permeable interval develops right at the base of the "P-1" section. This interval has been locally termed the lower "P-1 K" zone. Cross section A-A' (hung on a stratigraphic datum at the top of the "Pi Marker") identifies the "K" zone and illustrates the permeable nature of this zone. Excellent fluid recovery and pressures are reported in wells that DST or test this zone through pipe. Both wells on the right (southeast) of the cross section were drill stem tested (DST) over the "K" zone interval and the results on both indicate good reservoir quality. A scout ticket of the Pubco No. 14-Pubco Federal well (1650' FSL & 1980' FEL of section 33) is attached to the cross section. This well also was drill stem tested in the "K" zone and the operator reported a recovery of 3 feet of free oil along with a large amount of water. This well would appear to be near the southeast edge of the suspected hydrocarbon accumulation.

Isoporosity mapping of the "K" zone reveals the presence of reservoir quality rocks in the area of the proposed unit. This map illustrates the lenticular nature of the zone which could provide favorable conditions for stratigraphic trapping. At Siete field the best two wells have eight feet of "K" zone porosity and the less commercial wells have less than five feet. Using this as an analogy the best production in the area of the proposed unit should occur within the limits of the five foot isoporosity contour.

Secondary objectives for the Tomcat Federal Exploratory Unit include the San Andres "P-2" zone and the various thin sandstones of the Permian Queen formation. The initial test well is only a San Andres test; however, when gas market situations improve the unit area may be attractive for deeper exploration for gas in the upper Pennsylvanian carbonates and the sandstones in the Atoka and Morrow. A good show of oil was reported on a drill stem test of the Devonian in the Pennzoil No. 1 Pubco Federal (810' FSL & 1980' FEL of section 33). The operator reported a recovery of 190 feet of free oil on this drill stem test.

It is anticipated that the ultimate reserves of the proposed unit will be analogous to the Siete field. The estimated ultimate recovery at Siete is in excess of 500,00 barrels of oil. A per well average of around 40,000 barrels of oil is expected with high side recoveries of 100,00 barrels in some wells.

Initial potentials at Siete have been as high as 100 BOPD in

some of the better wells. A sustained rate of around 10 BOPD initially with a decline of not more than 30% should be considered as an approximate commercial determination. If high volumes of produced water are encountered the initial rate would need to be higher. At Siete field the water production does not seem to be a major problem. An economy of scale could be established with development wells where the cost of operating is reduced because of the number of wells involved. Even rates as low as 3 BOPD can be economic to many small operators where excessive costs (water disposal) are not encountered.

Plains Radio Petroleum Co. views this venture as an opportunity to explore for significant oil reserves (as much as 500,00 barrels). Our sub-surface geology indicates that we have a better than average (10% industry wide for wildcats) chance of this venture being successful. We feel that it is advantageous to us and the United States government to be able to unitize the proposed lands so that we can best develop and exploit the resources that potentially underlie these lands.

EXHIBIT "B"

Page 1 of 1

Schedule of Lands and Leases lying within the proposed Tomcat Unit Area, Chaves County, New Mexico

Township 8 South, Range 31 East, N.M.P.M.

TRACT NO.	LAND DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION	BASIC ROYALTY & OWNERSHIP	LESSEE OF RECORD & PERCENTAGES	ORI PERCENTAGES	W/ OWNER & PERCENTAGES
FEDERAL LANDS							
1.	T8S-R31E Section 29; S/2S/2, NE/4SE/4	200.00	NM-15016(HBP)	USA - 12.5%	EXXON CORPORATION-100%	Angie Angelosante-0.1818% Lillian Cordova-0.1818% Carolyn Giesler-0.1818% Roberta Green-0.1818% DaVerne Hanaseth-0.1818% Billie Hogan-0.1818% Marilyn Kelly-0.1818% Roberta Rand-0.1818% Patricia Tinker-0.1818% Charles C. Warren, Jr.-0.0909% Evelyn Hunsbaw-0.0909% Lois Zassin-0.1818%	Carroll W. Bellah-5.0000% J. T. Jackson, Jr.-31.6667% Loy G. Fletcher-31.6666% James E. Guy-31.6667%
2.	T8S-R31E Section 33; S/2N/2, S/2	480.00	NM-69368 10-1-92	SCHEDULE "B"	NORMAN L. STEVENS, JR.-100%	NONE	NORMAN L. STEVENS, JR.-100%
3.	T8S-R31E Section 28; S/2 Section 33; N/2N/2	480.00	NM-71776 7-1-93	USA - 12.5%	NORMAN L. STEVENS, JR.-100%	NONE	NORMAN L. STEVENS, JR.-100%
4.	T8S-R31E Section 31; SE/4	160.00	NM-81950 9-1-94	USA - 12.5%	NORMAN L. STEVENS, JR.-50% PLAINS RADIO PETROLEUM COMPANY-50%	NONE	NORMAN L. STEVENS, JR.-50% PLAINS RADIO PETROLEUM COMPANY-50%
STATE OF NEW MEXICO LANDS							
5.	T8S-R31E Section 32; ALL	640.00	V-2780 1-1-94	STATE OF NM-16.666%	PLAINS RADIO PETROLEUM COMPANY-100%	NONE	PLAINS RADIO PETROLEUM COMPANY-100%
TOTAL STATE OF NEW MEXICO LANDS, 1 TRACT, 640.0 ACRES							
FEDERAL LANDS RECAPITULATION							
FEDERAL LANDS		1,320.0 ACRES		67.4% OF UNIT AREA			
STATE LANDS		640.0 ACRES		32.6% OF UNIT AREA			
TOTAL UNIT ACREAGE		1,960.0 ACRES		100.0% OF UNIT AREA			

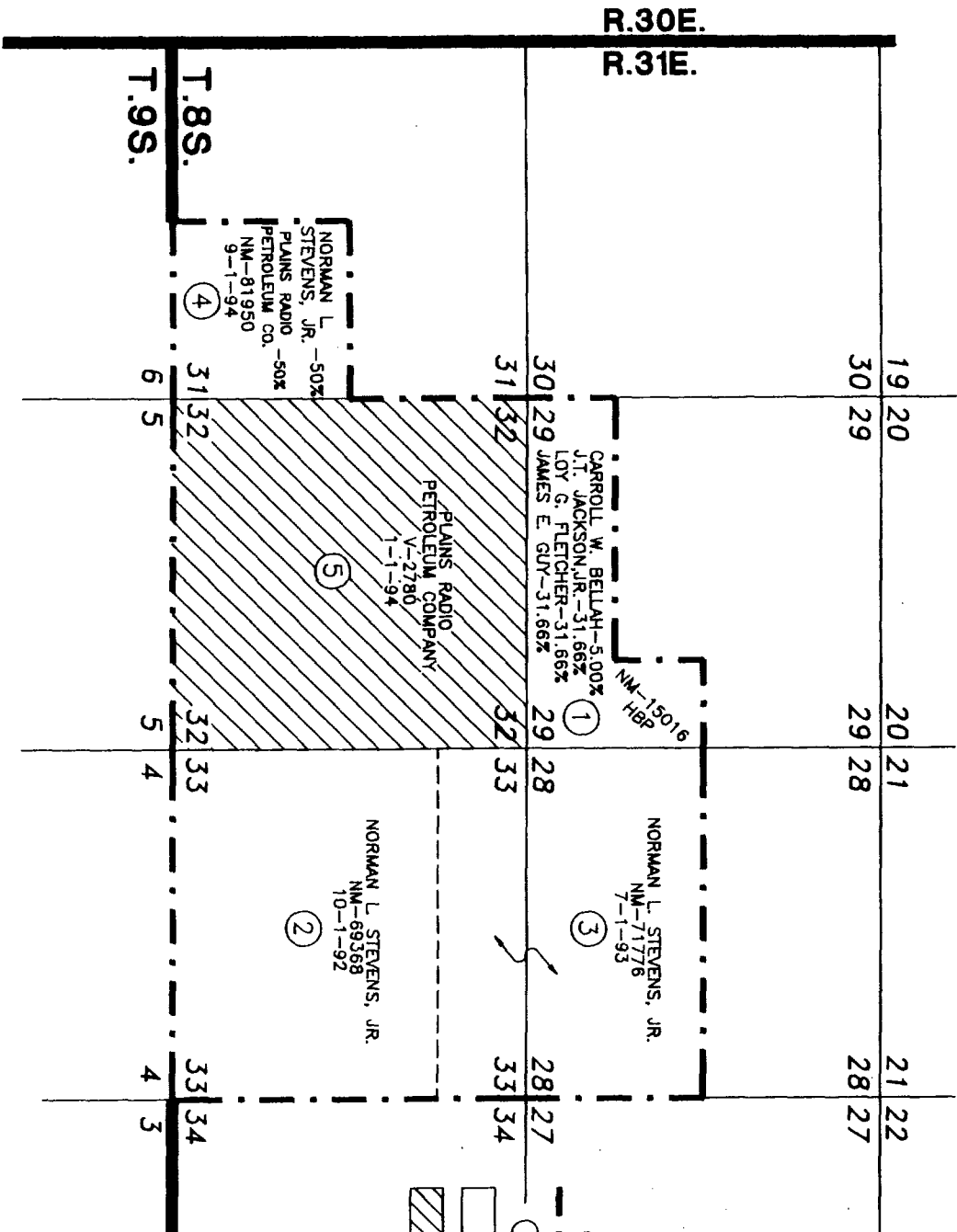


EXHIBIT "A" **TOMCAT UNIT AREA** **CHAVES COUNTY, NEW MEXICO**

UNIT OUTLINE
TRACT NUMBER

FEDERAL LANDS
1,320.0 ACRES, 67.4% OF UNIT AREA

STATE LANDS
640.0 ACRES, 32.6% OF UNIT AREA

TOTAL UNIT ACRES 1,960.0 ACRES
100% OF UNIT AREA