HEARING SEPTEMBER 19 & 20, 1957

Sunray Exhibits 1 thru 13, incl.
Shell Exhibits 1 thru 17, incl.
Gulf Exhibits 1 thru 3, incl.
Amerada Exhibits 1

HEARING DECEMBER 18, 19 & 20, 1957

British American Exhibits 1, 1-A, 2, & 2-A
Sunray Exhibits 1-R thru 9-R, incl.
10-R thru 12-R, incl., entered by Sinclair but marked Applicant's
Phillips Exhibits 1-R thru 6-R
Amerada Exhibits 1-R thru 5-R
Shell 1-R thru 14-R

HEARING MARCH 13, 1958

Sunray 2nd Rehearing Exhibits 1 - 20, incl.
Shell 2nd Rehearing Exhibits 1 - 4, incl.

COPY

STATEMENT BY AMERADA PETROLEUM CORPORATION
CASE NO. 1308
SEPTEMBER 18, 1957

I refer you to an article published in the July 1957 issue of World Oil titled "Exploratory Costs Soar to New High During 1956," by H. J. Struth.

Mr. Struth summarizes his findings as follows:

Period 1936-56

"1) Oil finding costs increased 596 percent, while crude prices were advanced 160 percent.

"2) Exploration expenditures increased 1045 percent, while the net value of crude oil rose 410 percent.

"3) Exploratory drilling increased 266 percent, while reserves discoveries are only 64 percent greater.

"4) The cost per well increased 218 percent, but reserves discovered per well declined 56 percent.

"5) Annual crude production increased 125 percent, while annual additions to reserves are only 31 percent greater.

"6) Producers are plowing back 41.2 percent of their gross income from crude, while the depletion allowance has remained at the World War I level of 27-1/2 percent."

Further he points out the average cost of finding oil in 1956 was $1.11 per barrel.

I also refer you to an article in the August 5, 1957 issue of the Oil and Gas Journal, titled "In Oklahoma and Kansas Replacement Costs Top Crude Prices." This is an analysis of a study by The Carter Oil Company. The article points out "Replacement costs caught up with and passed crude oil prices by 1955. In dollars and cents the crude oil price in 1955 was $2.78 per barrel, while the replacement cost per barrel was $3.07, a red ink spread of 29 cents."

What does all this have to do with the Four Corners Area, the Bisti Field and this case in particular?

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Amerada's Exhibit No. 1

To answer this it is necessary to consider several factors. The first of these is the market demand picture. At the present time the demand is low due to limited pipe line facilities. This situation will be corrected or improved when the Four Corners Pipe Line and Texas-New Mexico Pipe Line enter the area. The initial capacity of the two lines is reported to be 60 and 50 thousand barrels, respectively. A third line with a capacity of 25,000 is under discussion but no contracts have been reported as having been let. El Paso will also increase its capacity. The Four Corners Pipe Line is scheduled for completion in the spring. Presumably the Texas-New Mexico line will be completed some time later. It has been reported (World Oil, August 1957) the Four Corners Pipe Line will take approximately 85% of its capacity from New Mexico. Therefore, if you assume a 15,000-barrel outlet and further assume a 37-barrel per well allowable, it would require only 405 wells. The area outlined in Sunray Mid-Continent's application would provide 384 80-acre units which would be adequate to supply a market demand of 15,000 barrels. The news article indicates there is now or will be shortly, some 50,000 barrels of sustained productive capacity in Southeast Utah. Therefore, it would appear the first major line to be completed will not lack for full capacity for long. For the present, at least, it would appear 80-acre density would provide sufficient oil, and such a pattern may ultimately prove ample which would result in a large saving in investment. Continual orderly development on wide spacing should provide sufficient productive capacity to meet the market demand of the other pipe lines scheduled for completion on later dates. It is a fact that the West Coast is the only area not having enough crude to supply its demand. Except for the capacity to move crude west, there seems to be no urgent need to provide production capacity for the other pipe lines. Increasing the runs from this area toward the already

congested area could only reduce the take from other areas (Southeast New Mexico, for example) until such time as the market demand improves.

A second economic factor which should be considered is the probability of successful secondary operations. If experiments now under way or contemplated prove feasible it is conceivable that substantially the same volume of oil can be produced on 80-acre spacing as on 40-acre. In all probability some form of secondary recovery will be necessary to obtain maximum recovery whether on 40-acre or 80-acre. If 80-acre spacing is proper, then the additional cost required for 40-acre spacing would be diverted to secondary recovery. The operators need time to evaluate.

In addition to the two above mentioned economic considerations, there are other factors which might well influence a spacing program, such as:

1) Under the Statutes (65-3-13) the Oil Conservation Commission can prorate a field and can assign any allowable, taking into account prevention of waste, which it deems necessary to fulfill current demand requirements; therefore, an allowable from 80-acre tracts could be assigned to fulfill market demand.

2) Sufficient oil has not been produced from the Bisti reservoir to evaluate reservoir performance and 80-acre spacing will develop the area more quickly. As has often been pointed out, if future performance indicates one well will not effectively and efficiently drain 80 acres, the density can always be increased but never decreased.

3) Money not spent for unnecessary wells can be used to find new reserves.

4) Development to date indicates there will be a number of tracts on which it will not be economical to drill to a 40-acre density; hence, in effect, we would have two density patterns.

5) In the more permeable areas if one well will drain 80 acres, two wells are not needed; if one well will drain 80 acres only, the probabilities are it will be uneconomical.

6) Until all outlet facilities are completed the crude demand will be limited; therefore, there is no present urgency for close spacing.

Other more or less intangible factors are:

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7) All pipe-lines cannot be completed at the same time which will result in non-ratable take to a greater degree if wells are drilling on 40-acre tracts.

8) A 40-acre drilling boom could conceivably increase costs. (Costs in this area are higher than average.)

9) A 40-acre development program may cause a waste of more gas until facilities become available to handle all the gas.

In conclusion, I would like further to remind the Commission the unit allowable has decreased in the past several years from 56 to 37 barrels daily which is approximately 33% decrease, in spite of the fact the overall demand for crude has increased. The reason, of course, for this decrease is too many wells. If the market demand can be supplied with fewer wells, then it is in the interest of the operators as well as the public that fewer wells be drilled. In the final accounting the public pays the bill for unnecessary wells in the cost of petroleum products.

The Commission has the authority under the Statutes (Sec. 65-3-14(b)) to promulgate any spacing order that can be substantiated by evidence, said section herein quoted:

> "b) The Commission may establish a proration unit for each pool, such being the area that can be efficiently and economically drained and developed by one well, and in so doing the Commission shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, including those of royalty owners, the prevention of waste, the avoidance of the augmentation of risks arising from the drilling of an excessive number of wells, and the prevention of reduced recovery which might result from the drilling of too few wells."

Keeping in mind the contents of the article quoted above, under the present market demand situation integrated companies may make a profit but independent companies and individual operators will have difficulty staying in business if they are required to drill unnecessary wells now and in the future.

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many companies can show a profit only because they are producing oil that [illegible] than $0.15 a barrel as first 20 years ago.

The Regulatory Bodies of the various producing states would do [illegible] industry a great service if they would approve wider spacing where the [illegible] and the majority of the operators favor wider spacing, such as in this case. Such action would certainly lower development costs, tend to maintain higher per well allowables and eventually we hope obviate pipe line proration. Possible physical waste would be prevented, economical waste would be eliminated and correlative rights would be better protected. It would also help in slowing down inflation.

For the reasons above stated, Amerada Petroleum Corporation [illegible] requests the application of Amerada Mid-Continent be approved.

By: /s/ E. E. Christie

AMERADA PETROLEUM CORPORATION

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