OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

October 21, 1957

COPY

Mr. Cleon B. Feight, Secretary
Utah Oil & Gas Conservation Commission
Salt Lake City, 14, Utah

Dear Sir:

According to your request dated October 15th, we are enclosing a copy of Order R-1069 issued October 9, 1957, denying Sunray Mid-Continent's request for 80-acre spacing in the Bisti Field.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

ALP:bp
Encl.

THE STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SALT LAKE CITY 14

October 15, 1957

State of New Mexico
Oil & Gas Conservation Commission
125 Mabry Hall, Capitol Building
Santa Fe, New Mexico

Gentlemen:

It would be greatly appreciated if you would send this office a copy of the Findings of Fact and Conclusions of Law, and Order for the Bisti Field Hearing which was held on September 17, 1957.

Thank you very much.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

Cleon B Feight

CLEON B. FEIGHT
SECRETARY

CBF:cn

Duplicated copies of R-1069 sent to:
10-10-57

Oliver Seth, Box 828, Santa Fe
Ross Malone, Box 867, Roswell
George Selinger, Skelly Oil Co., Box 1650, Tulsa
R. W. Sullivan, 1109 Mile High Center, Denver 2, Colo.
H. D. Bushnell, Amerada Petr. Corp., Box 2040, Tulsa 2
Jason Kellahin, Box 597, Santa Fe
Booth Kellough, Gulf, Box 2097, Denver
Clarence Hinkle, Hervey, Dow & Hinkle, Box 547, Roswell
P. S. Justice, Sun Oil Co., Box 1798, Denver 1,
W. P. Tomlinson, Atlantic Refining Co., Box 6640, Roswell
A. M. Wiederkehr, Southern Union Gas Co., Burt Bldg., Dallas 1
W. M. Wilson, Lion Oil Co., 602 W. Missouri St., Midland,
Jack Vickrey, Magnolia Petr. Co., Box 900, Dallas 21
O. F. Sebesta, The Texas Co., Box 1720, Ft. Worth 1
C. L. Kelley, Pan American Petr. Corp., Box 899, Roswell
W. C. Smith, Delhi-Taylor Oil Corp., Corrigan Tower, Dallas 1,
Standard Oil Co. of Tex., Attn. C. M. Tilley, Box 1776, Albuquerque
F. W. Nantker, Shell Oil Co., 1901 Main St., Durango, Colo.

10/14/57

Leslie Kell, Shell, Los Angeles
John Anderson, USGS, Roswell
Phil McGrath, USGS, Farmington

10/18/57

George R. Hoy, Honolulu Oil Corp., P.O. Drawer 1391, Midland, Texas
The El Dorado Refining Co., F. T. Anderson, El Dorado, Kansas
Duncan V. Patty, Anderson-Prichard Oil Corp., Liberty Bank Bldg., Okla. City 2,
Shiprock Industries, Inc., Taylor Bldg., Farmington, New Mexico
Laurence C. Kelly, Trust, 309 Bank of America Bldg., Beverly Hills, Calif.

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

October 10, 1957

COPY

Mr. Burns Errebo
Sunray Mid-Continent Oil Co.
P.O. Box 2039
Tulsa, Oklahoma

Dear Sir:

We enclose a copy of Order R-1069 issued October 9, 1957, by the Oil Conservation Commission in Case 1308.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encl.

STATEMENT ON BEHALF OF SKELLY OIL COMPANY

Case No. 1308
September 18, 1957

This case involves an application by Sunray Mid-Continent Oil Company with respect to spacing rules for the Bisti Lower Gallup Oil Pool covering portions of townships 25 and 26 North, Ranges 10, 11, 12 and 13 West, San Juan County, New Mexico. Sunray's application covers the following area:

> Township 24 North, Range 10 West, all Sections 2 & 3, Section 4 S/2; Township 25 North, Range 10 West, All Sections 19, 26, 27 & 28, Sec. 31 S/2, All Section 35; Township 25 North, Range 11 West, All Sections 7, 13, 14 & 15, Sec. 16 N/2, All Sec. 24, Sec. 27 SW/4, All Secs. 28, 29, 30, 35 & 36; Township 25 North, Range 12 West, All Sec. 3, Sec. 4 N/2, Sec. 5 NE/4, Sec. 7 SW/4, Sec. 10 E/2, all Secs. 11 & 12, Sec. 17 SW/4, All Sec. 18, Sec. 25 S/2; Township 25 North, Range 13 West, Sec. 1, All Sec. 2, Sec. 3 S/2 & NE/4, Sec. 3, All Secs 4 & 11, Sec. 12 S/2 & NW/4; Township 26 North, Range 12 West, Sec.31 N/2, All Sec. 32; Township 26 North, Range 13 West, Sec. 26 N/2, Sec. 29 S/2 NW/4 & W/2 NE/4, All Sections 30, 31 & 32, Sec. 36 NE/4.

Skelly Oil Company has three sections or 1920 acres within the area designated by red line on Exhibit one, sought to be spaced by the applicant and has 16 sections or 10,240 acres outside of the area designated by the applicant but included on Exhibit 1. Skelly has five producing wells and four drilling in the Bisti Lower Gallup Oil Pool and has a 7½% interest in the Carson Unit operated by Shell Oil Company. This acreage lies from the extreme Southeast end of the pool and more specifically in Section 33, Township 24 North, Range 10 East, to the extreme Northwest in Sections 19 & 20, Township 26 North, Range 14 West, with acreage lying in between these two extremities being in Sections 31, Township 25 North, Range 10 West, Secs. 20 & 21, 26 & 35, Township 25 North, Range 11 West, and Sections 22 & 27, Township 25 North, Range 12 West and Sections 35 & 36, Township 26 North, Range 13 West.

The Statute, Section 65-3-3 styled "waste definition" in paragraph "A" defines underground wastes as including the locating, spacing, of any well or wells and in Section 65-3-14 styled "Equitable allocation of allowable production- Pooling - Spacing" in paragraph "b" thereof states, that

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 among other things, consider the economic loss caused by the drilling of unnecessary wells and the avoidance of the augmentation of risks arising of the drilling of an excessive number of wells.

The recommendation of the applicant is briefly: (1) 80-acre units with diagonal center of fortys' within each government quarter section; (2) 330' minimum distance from lease lines; (3) the requirement of the filing of original completed bottom hole pressure tests and gas-oil ratio tests, and the filing thereafter of semi-annual tests; (4) a limiting 2000- 1 gas-oil ratio.

It is to be noted that from the evidence presented by the applicant and from the evidence presented by British American and from the evidence presented by Shell Oil Company that the field although containing from 48,000 to 49,000 possible acres, there are at the present time, only 134 wells including 9 dry holes which from a practical standpoint can be reasoned as indicating the field to be in its initial stages of development. Further, all witnesses testifing on this point indicated that there were large undeveloped portions lying between the developed portions which additional development would give information of a more definite and permanent character than the present meager interpretations by the various expert witnesses. In adopting drilling units for a reservoir particular care must be exercised in determining the maximum area that one well can efficiently and economically drain through a proper interpretation by the engineering and geological evaluation of the factual data available concerning the characteristics of the reservoir. This important question is dependent upon the nature and character of the producing formation as reflected by the porosity and permeability which properties have a thorough bearing on the determination of the area that can be efficiently and economically drained by one well influencing the proper spacing of wells. The determination of the maximum area permits the delineation of an approximately uniform system of drilling units for the reservoir. The perimeter outline of the entire pattern drilling does not necessarily mean the productive portions of the reservoir but rather an attempt to secure the proper well density during the development stage of the productive portions of

the reservoir. The diverse ownership of the various leases in this field poses one of the primary obstacles to be overcome in the development of a method that would afford the proper control of the well density within a common reservoir and the drilling unit method has provided a successful answer for both the division of surface ownership and the desired control of well density. It being a logical conclusion that the full evaluation of a field generally cannot be secured until the entire pool has been drilled and the data fully evaluated, but since this is an impossibility from a practical standpoint it is necessary for the State Regulatory Body during the development stages of the productive portions of the reservoir to use the engineering and geological data of the factual information available and in this regard attempt to establish as wide a spacing or drilling pattern in order to insure that the density is not too great for the particular reservoir. As it is well known that wells completed in too great a density within the same reservoir can only result in the inefficient use of the reservoir energies, creation of tremendous underground waste and the reduction of the quantity of recoverable hydrocarbons frequently to a point below the economic limit of development and/or production a factor that undoubtedly would result in the premature abandonment of a known source of hydrocarbons. As a result of all parties appearing in the hearing showing great interest with the objective of the institution of as soon as possible of secondary recovery as a pilot project in order to insure against the premature abandonment of the source of hydrocarbons in this field the Commission should give it great consideration particularly since the bubble point has already been reached in two of the wells.

Skelly Oil Company, therefore, feels that the establishing of a permanent spacing with 40 or 80 acres is inadvisable at this time because of the lack of sufficient geological and engineering determinations and the evaluation of the productive capacities and abilities of the various wells therein, but that the Commission should establish a temporary spacing of 80-acres in order to secure additional information upon which to base a permanent spacing order. We feel that this is the proper approach to the problem for the development in this field in which undoubtedly hundreds of additional wells will be drilled mainly through the apex of the field running from Southeast to Northwest and a gradual spread to the flanks lying Northeast and Southwest of the Apex.

Skelly at the hearing did file a suggested proposed order and we desire to attach the proposed order to the statement which we believe will answer the problem of handling a preliminary development period of the fields' history and attempt by the State Agency be made to secure proper well density until such time as further information is secured.

Attached also hereto is a list of 11 instances where the Oil Conservation Commission either has established temporary spacing or has changed the spacing during the course of development of a field.

We therefore, urge the Commission to adopt a temporary 80-acre spacing for the Bisti Field and provide that the Order shall not remain in force for a period exceeding one year from the time of the order issuance thereof and have another hearing at the end of that period upon which to make the proper determination for the field.

Respectfully submitted,

SKELLY OIL COMPANY

By_____
George W. Selinger

STATEMENT OF PHILLIPS PETROLEUM COMPANY
IN OIL CONSERVATION COMMISSION
CASE NO. 1308

Phillips Petroleum Company is the owner of interests in the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico, is a participant in the Carson Unit, operated by Shell Oil Company, and is participating in the pilot injection program for pressure maintenance in that pool.

Phillips is of the opinion that reservoir information which is available and which has been presented to the Commission in this case shows that development of the pool on 80-acre drilling and spacing units, with 80-acre proration units in the event of prorationing, is fully justified until such time as additional information is available indicating that closer spacing is necessary.

The testimony offered clearly shows that one well in the pool will effectively drain more than 80-acres, as is indicated by initial pressures in newly-completed wells substantially below original reservoir pressures. We feel it is significant that no testimony or evidence was offered to refute the contention that one well will effectively and economically drain and develop more than 80-acres.

Although it must be recognized that a technical justification for 40-acre spacing may exist in certain limited areas of the pool, the economic testimony shows the deferral of income, and reduced return as compared to development cost that would result from an intensive drilling program may, and probably would, reduce the rate of return to an unattractive level.

The institution, as a pilot program, of a new type of recovery mechanism by injection of LPG high pressure gas is a

further reason for support of 80-acre spacing, at least on a temporary basis. The recovery anticipated from this method has not been fully determined, but the evidence shows recoveries substantially in excess of recoveries under primary methods may be expected.

Development of this pool on a pattern of one well to each 40 acres would tend to result in concentration of wells in a limited area because operators would drill in-fill wells rather than step out, as would be necessary on an 80-acre development program. This result would concentrate withdrawals, inevitably lowering pressures in that area below the saturation point, jeopardizing the LPG injection program.

It has been clearly shown that the Bisti-Lower Gallup Oil Pool is at best only a fair oil reservoir producing by means of solution gas drive. While production from the pool has been limited there has already been a significant drop in reservoir pressures. In some limited areas, pressures have fallen below the bubble point. Controls are necessary if the greatest ultimate recovery from the pool is to be achieved, and are further necessary if the effectiveness of the pressure maintenance program now in a pilot stage is not to be impaired. It is imperative to the conservation of reserves of oil and gas contained in the Bisti Field that no drilling or producing program be adopted which will reduce the ultimate economic recovery from the field.

There has been some argument presented to the effect that applications for 80-acre spacing have not been entertained on pools of less than 10,000 feet in depth. We feel the argument is without merit, in light of the reservoir information and economic considerations presented. We would further call the Commission's attention to the South Blanco-Tocito Pool in Rio Arriba County, where 80-acre spacing was instituted in a 6,600 foot formation as a means of implementing a pressure maintenance

program. Primarily the factors to be considered by the Commission in determining the spacing to be instituted in any pool are those set out in the statutes--the prevention of waste, the protection of correlative rights, and the size of the tract that may be efficiently and economically drained and developed by one well. Depth of the particular formation involved is but one item which relates to economics, and evidence presented in this case shows it will probably be uneconomical to develop the pool on 40-acre spacing.

There has been some contention, also, that the correlative rights of some operators in the pool will not be protected under an 80-acre spacing program. An examination of the evidence shows the only testimony in support of this relates, first to the possible number of offset wells to a specific tract of land under the most extreme conditions, and, second, to per well drilling costs if it becomes necessary to drill fill-in wells on 40-acres after the pool has been developed on 80-acres. The argument as to offset wells under extreme conditions should not be of any weight when the pool as a whole is considered. The manner in which additional drilling costs for fill-in wells would be incurred was not made clear in the testimony and at best, such additional costs are speculative and indefinite.

Development on an 80-acre spacing pattern will actually afford the greater protection of correlative rights in that such a pattern will result in more rapid delineation of the pool. Fringe areas in the pool will thus be better protected against drainage during the early stages of development.

Since this is a relatively new pool in primary stage of development, and it has been impossible because of restricted market outlets to obtain adequate production history, it is felt that the issuance of an order creating 80-acre spacing and drilling

units for a period of one year is the best means of controlling development until further information is available. Such an order will, in our opinion, prevent waste, and protect correlative rights.

Phillips Petroleum Company therefore supports the application of Sunray Mid-Continent Oil Company, and urges the Commission grant the application.

Jason W. Kellahin
attorney

KELLAHIN and FOX
Attorneys at Law
54½ East San Francisco
P. O. Box 1713
Santa Fe, New Mexico

FORM 470 2-57

PAN AMERICAN PETROLEUM CORPORATION

Case 1308

Roswell, New Mexico
September 27, 1957

File: K-88-986.510

Subject: Case 1308, Regular Hearing
Docket, September 18, 1957

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.
Secretary-Director

Gentlemen:

In accordance with the ruling of the Commission on September 19, 1957, in connection with the proceedings of Case 1308, Pan American Petroleum Corporation hereby enters an appearance in the subject case.

Pan American Petroleum Corporation is a leasehold owner of 320 acres within the horizontal limits of the Bisti-Lower Gallup Oil Pool as proposed by Sunray Mid-Continent Oil Company. At the present time Pan American has two oil wells completed within the vertical and horizontal limits of this pool. Both of these wells were drilled on uniform 80 acre spacing following the spacing pattern established by other operators near our leases.

During the entire course of proceedings in connection with Case 1308, heard on September 19 and 20, 1957, Pan American had a qualified petroleum engineer present. This engineer heard all of the testimony and examined the exhibits presented. Based on his evaluation of the testimony and exhibits, and based on our own independent study of the Bisti-Lower Gallup Pool, it is the opinion of Pan American that a temporary 80 acre spacing order is justified covering the extended horizontal limits proposed by the applicant. Therefore, we support Sunray Mid-Continent in that part of their application.

Although there was no testimony presented during the hearing tending to justify the inclusion of a gas-oil ratio limit in special field rules, we have no objection to the 2000:1 limiting gas-oil ratio proposed by the applicant since this limiting gas-oil ratio is provided under Statewide Rule 506.

There was also no testimony presented during the hearing tending to justify the inclusion of semi-annual bottom hole pressure tests in special field rules. It is our opinion that the Commission can obtain such bottom hole pressure data as the Commission deems necessary under Statewide Rule 302 without any special provision in the field rules.

We recognize the need for obtaining additional well and pool performance data with which to determine the optimum spacing pattern and thereby permit a permanent well spacing order for the Bisti-Lower Gallup Pool. However, we urge the Commission to make maximum use of the provisions of existing Statewide Rules before incorporating special requirements in field rules. Statewide Rules 301 and 302 provide some measure of flexibility whereby bottom hole pressure and gas-oil ratio testing can be adjusted to the current need for such data. It has been our observation that such flexibility is difficult to incorporate in special field rules. We wish it understood, however, that we have no objection to obtaining and reporting valuable and necessary test data on our wells.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

C. L. Kelley
District Superintendent

CLK:js

DELHI-TAYLOR OIL CORPORATION
CORRIGAN TOWER
DALLAS I, TEXAS

W. C. SMITH
VICE PRESIDENT

Case 1505

September 27, 1957

Mr. A. L. Porter
Secretary Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

Mr. R. G. Carlin and Mr. Wallace Tucker, Petroleum Engineers representing Delhi-Taylor Oil Corporation in Dallas, Texas, attended the hearing on September 19th and 20th regarding the application for 80-acre spacing for the Bisti Lower Gallup Pool of San Juan County.

Delhi-Taylor owns working interest or royalty interest in an extremely large area in San Juan County. Some of this acreage lies in the vicinity of the proposed extension of the Bisti Lower Gallup Pool, namely in Sections 3, 4, 17, 27, 28, 29, 30, 31 and 33 of T 26 N, R 11 W. Some of this acreage has had wells drilled and completed in the Lower Gallup formation.

Considering the testimony that was presented at the hearing, it is our opinion that it has not been shown that it is economically feasible to develop the Lower Gallup formation on 40 acre spacing. We urge that the temporary one year 80-acre spacing order be adopted to allow for the gathering of additional information with which to evaluate the formation.

Yours very truly,

W. C. Smith

W. C. Smith

WCS:mbm

THE ATLANTIC REFINING COMPANY

PETROLEUM PRODUCTS

DALLAS, TEXAS

September 25, 1957

ADDRESS REPLY TO:
P. O. BOX 6640
ROSWELL, NEW MEXICO

DOMESTIC PRODUCING DEPARTMENT

The New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application of Sunray Mid-Continent for Horizontal Limits, Temporary 80-Acre Spacing, and Special Rules for the Bisti-Lower Gallup Oil Pool

Gentlemen:

The Atlantic Refining Company is the owner and operator of two 160-acre tracts included in the proposed horizontal limits for the Bisti-Lower Gallup oil pool by the Sunray Mid-Continent Oil Company. We favor establishing uniform 80-acre well spacing in the pool as proposed by the applicant. This letter is intended in lieu of an appearance at the hearing, in accordance with your request at the time of the hearing on September 19, 1957.

Yours very truly,

THE ATLANTIC REFINING COMPANY

W. P. Tomlinson

W. P. Tomlinson

WPT:pam

J. O. SETH
A. K. MONTGOMERY
OLIVER SETH
WM. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS

MAIN OFFICE OCC
1957 SEP 30 AM 9:07

SETH AND MONTGOMERY
ATTORNEYS AND COUNSELORS AT LAW
111 SAN FRANCISCO ST.
SANTA FE, NEW MEXICO

POST OFFICE BOX 828
TELEPHONE 3-7315

September 27, 1957

RE: Case No. 1308
Bisti Spacing

New Mexico Oil Conservation Commission
Capitol Building
Santa Fe, New Mexico

Gentlemen:

During the course of the hearing on Case Number 1308, certain matters relating to correspondence and gas analyses was brought up and Shell agreed to furnish to the Commission some data on these matters.

We enclose herewith a copy of the hydrocarbon analyses which was discussed during the course of this hearing. We also enclose an analyses and a graph on pressure buildup which was secured from a pressure buildup survey conducted on Carson Unit 32-20 (Sec. 20, Twp. 25 N., R. 11 W.). This was taken between September 2 and 5, 1957. This data shows that there was a draw-down pressure of 1175 psi with a production rate of 3 B/D and 1270 MCF/D. This oil is regarded as "lode oil".

Please also find herewith letters from El Paso Natural, Skelly and Phillips which were received in reply to Shell's proposed "Third Supplemental Plan of Development" for the Carson Unit.

I believe that this data covers that which was requested during the course of the hearing. If it does not, please let me know and we will be glad to obtain whatever additional data is available or requested.

Very truly yours,

OS:ms
Enc.

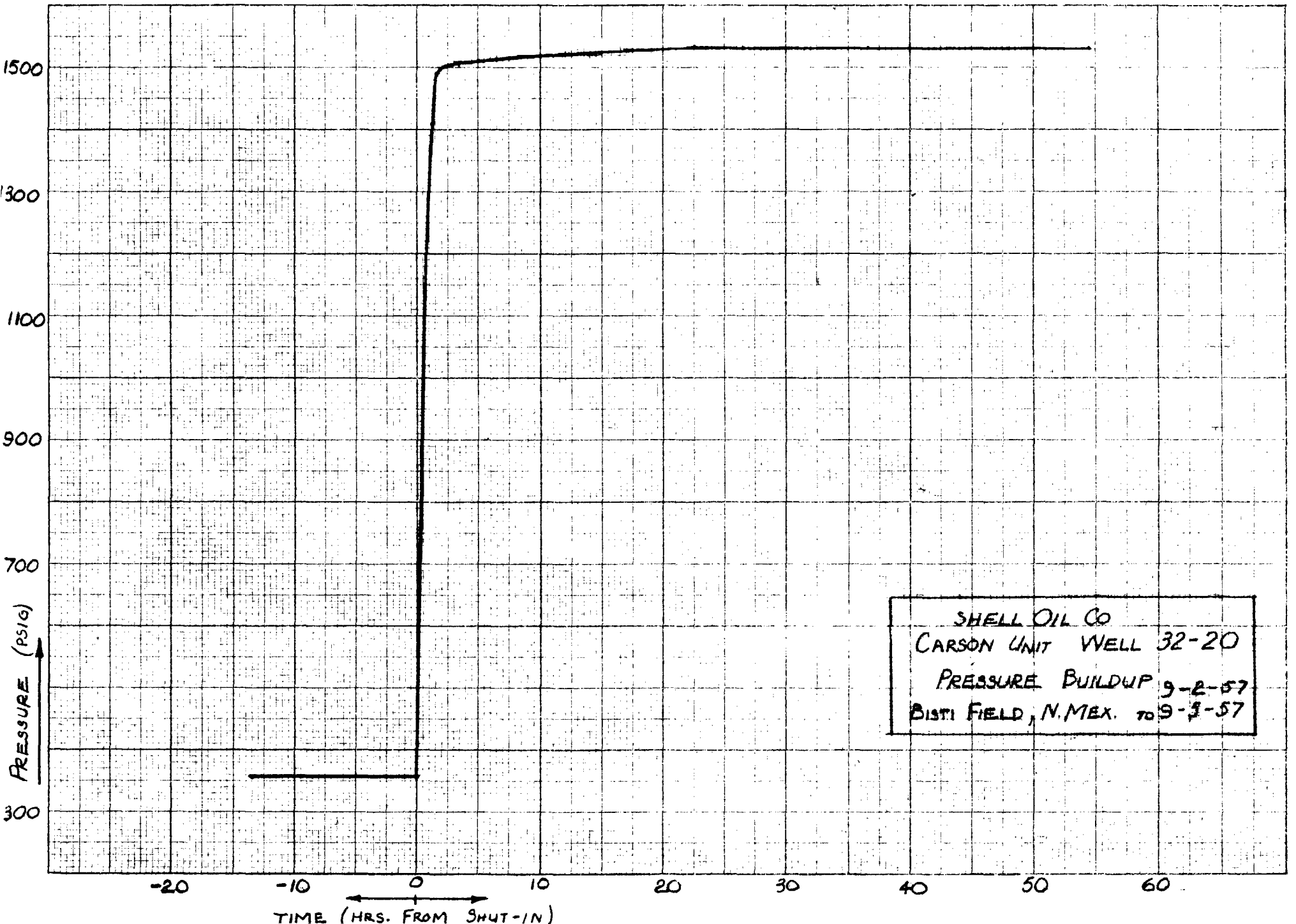
SHELL OIL CO. SAMPLE FROM: Govt. 12-15 S-15, T.25N, R.12W.

Table 6

Hydrocarbon Analyses

Component	Separator Gas Mol %	Reservoir Fluid Mol %
Methane	59.51	19.94
Ethane	15.65	10.86
Propane	16.00	11.47
Iso-Butane	1.58	1.87
Nor-Butane	3.83	6.09
Iso-Pentane	0.76	1.63
Nor-Pentane	0.61	1.68
Hexane +	1.46	2.13
Resid. Oil	-	44.33
Oxygen	-	-
Carbon dioxide	0.60	-
Nitrogen	-	-
Total	100.00	100.00

Average molecular weight of residue oil	236
Density of residue oil at 60°F gm/ml	0.8391
Average molecular weight of: Separator gas	26.7
Reservoir fluid	126
Specific gravity at S. C. of Separator gas from analysis	0.9292



SR-426-1 (Rev. 11/55)
Printed in U.S.A.

SHELL OIL COMPANY

Subsurface Pressure Survey

Producing Formation: Gallup
Elevation (CHF, DF, KB, etc.): 6429.8 (KB)
Datum _____ subsea, or ( )
Tubing Obstruction at: -
Production Packer at: -
Perforations: 4959-68, 4978-94, 5024-32, 5043-52, 5063-69

Company: Shell Oil Company
Lease: Carson Unit Well No.: 32-20
Field: Bisti State: New Mexico
Test Date: 9-2-57

Instrument Data

Company Running Survey: Shell Oil Company
Element - Range & No.: 0-2000# 12734
Clock - Range & No.: 72 hr.
Calibration Date: _____

Static Pressure Data

Pressure at Datum @) _____ psig
Shut-in Time) _____ hrs
P_i at Datum _____ psig
Shut-in Tubing Pressure _____ psig
Shut-in Casing Pressure _____ psig
Top of Oil _____
Top of Water _____
Temperature at _____ feet: ~ 140 °F
Date of Last Test _____
Pressure @ Datum, Last Test _____ psig
Shut-in Time, Last Test _____

Flow Test Data

Choke Size: O.L. in
Period of Stabilized Flow _____ hrs
Stabilized Production (q)
- Oil: 3 bbls/day
- Gas: 1270 MCF/day
- Water: - bbls/day

Flowing Tubing Pressure _____ psig
Flowing Casing Pressure _____ psig
Cumulative Production (Q)
- Oil _____ bbls
- Gas _____ MCF
- Water _____ bbls

Effect. Prod. Life, $t = 24\ Q/q$ _____ hrs

Remarks:

Operator _____

Depth D	Time	Press., P, psig	ΔP	Static Test ΔD	Static Test Gradient

Time	Press. @ 4800 ft	Build-up Test Δt hrs	Build-up Test $\frac{t}{\Delta t} + 1$	Tubing Press.	Casing Press.	Height of Fluid
0	359	-13.5				
1	356	-12.5				
2	356	-11.5				
5	356	- 8.5				
13.5	356	0				
13.75	756	0.25				
14	987	0.5				
14.25	1197	0.75				
14.5	1310	1.00				
14.75	1410	1.25				
15	1456	1.50				
16	1502	2.50				
17	1506	3.50				
20	1513	6.50				
30	1526	16.50				
36	1531	22.50				
40	1531	26.50				
50	1531	36.50				
68	1531	54.50				

SR-426-1 (Rev. 11/55)
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SHELL OIL COMPANY

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Field: Bisti State: New Mexico
Test Date: 9-2-57

Instrument Data

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Element - Range & No.: 0-2000# 12734
Clock - Range & No.: 72 hr.
Calibration Date: _____

Static Pressure Data

Pressure at Datum @) _____ psig
Shut-in Time) _____ hrs
P_i at Datum _____ psig
Shut-in Tubing Pressure _____ psig
Shut-in Casing Pressure _____ psig
Top of Oil _____
Top of Water _____
Temperature at _____ feet ~ 140 °F
Date of Last Test _____
Pressure @ Datum, Last Test _____ psig
Shut-in Time, Last Test _____

Flow Test Data

Choke Size: O.L. in
Period of Stabilized Flow _____ hrs
Stabilized Production (q)
Oil: 3 bbls/day
Gas: 1270 MCF/day
Water: - bbls/day
Flowing Tubing Pressure _____ psig
Flowing Casing Pressure _____ psig
Cumulative Production (Q)
Oil _____ bbls
Gas _____ MCF
Water _____ bbls
Effect. Prod. Life, $t = 24\ Q/q$ _____ hrs

Remarks:

Operator _____

Depth D	Time	Press., P, psig	ΔP	Static Test ΔD	Static Test Gradient

Time	Press. @ 4800 ft	Build-up Test Δt hrs	Build-up Test $\frac{t}{\Delta t} + 1$	Tubing Press.	Casing Press.	Height of Fluid
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5	356	- 8.5				
13.5	356	0				
13.75	756	0.25				
14	987	0.5				
14.25	1197	0.75				
14.5	1310	1.00				
14.75	1410	1.25				
15	1456	1.50				
16	1502	2.50				
17	1506	3.50				
20	1513	6.50				
30	1526	16.50				
36	1531	22.50				
40	1531	26.50				
50	1531	36.50				
68	1531	54.50				

SR-426-1 (Rev. 11/55)
Printed in U.S.A.

SHELL OIL COMPANY

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Calibration Date:

Static Pressure Data

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Shut-in Time) hrs
P_i at Datum psig
Shut-in Tubing Pressure psig
Shut-in Casing Pressure psig
Top of Oil
Top of Water
Temperature at _____ feet ~ 140 °F
Date of Last Test
Pressure @ Datum, Last Test psig
Shut-in Time, Last Test

Flow Test Data

Choke Size: O.L. in
Period of Stabilized Flow hrs
Stabilized Production (q)
Oil: 3 bbls/day
Gas: 1270 MCF/day
Water: - bbls/day
Flowing Tubing Pressure psig
Flowing Casing Pressure psig
Cumulative Production (Q)
Oil bbls
Gas MCF
Water bbls
Effect. Prod. Life, $t = 24\ Q/q$ hrs

Remarks:

Operator

Depth D	Time	Press., P, psig	ΔP	Static Test ΔD	Static Test Gradient

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5	356	- 8.5				
13.5	356	0				
13.75	756	0.25				
14	987	0.5				
14.25	1197	0.75				
14.5	1310	1.00				
14.75	1410	1.25				
15	1456	1.50				
16	1502	2.50				
17	1506	3.50				
20	1513	6.50				
30	1526	16.50				
36	1531	22.50				
40	1531	26.50				
50	1531	36.50				
68	1531	54.50				

El Paso Natural Gas Company

El Paso, Texas

July 22, 1957

Mr. John A. Anderson
Regional Supervisor
United States Geological Survey
P. O. Box 6721
Roswell, New Mexico

Mr. Pete Porter
New Mexico Oil Conservation Commission
125 Mabry Hall, Capitol Building
Santa Fe, New Mexico

Mr. Murray Morgan
Commissioner of Public Lands
125 Mabry Hall, Capitol Building
Santa Fe, New Mexico

Re: Proposed Third Supplemental
Plan of Development
Carson Unit Agreement
San Juan County, New Mexico

Dear Sir:

We have just received copy of the Third Supplemental Plan of Development for the above unit which has been filed for approval in your office and with the State of New Mexico Oil Conservation Commission and the Commissioner of Public Lands.

We are a working interest owner in the Carson Unit, although we do not have any acreage within the present participating area, nor are any of the proposed wells located on our lands. However, we would like to advise you that we are unable to approve the proposed Plan of Development submitted to you by Shell Oil Company for the reason that it contemplates 40 acre spacing and development. As you are no doubt well aware, the Bisti Pool has, so far, been developed on an 80 acre spacing pattern by voluntary agreement of the operators. We feel that 40 acre spacing at the present time is premature and may not be in the best interest of conservation.

COPY

As you are well aware, Sunray-Midcontinent, as operator, is commencing a pilot program for a miscible phase secondary recovery project in the Gallup Formation in the vicinity of the Carson Unit. We would like at least, to await the information to be gained by this pilot test secondary recovery program before agreeing to go to the 40 acre spacing in the Bisti Pool. As you can see, the approval and development of Shell's proposed Plan of Development will, in effect mean 40 acre spacing for the entire Bisti Pool.

Copies of this letter are being sent to Shell Oil Company, as operator, and the other working interest owners in the Carson Unit.

Yours very truly,

EL PASO NATURAL GAS COMPANY

By: R. L. Hamblin

R. L. Hamblin, Manager
Lease Department

RLH:jf

cc: Shell Oil Company
Deseret News Building
33 Richards Street
Salt Lake City 1, Utah

Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma

Humble Oil & Refining Company
Box 2180
Houston, Texas

Phillips Petroleum Company
Attention: Mr. E. J. Lewis
Bartlesville, Oklahoma

SKELLY OIL COMPANY

PRODUCTION DEPARTMENT
C. L. BLACKSHER, MANAGER

TULSA 2, OKLAHOMA

July 19, 1957

Re: Carson Area

Shell Oil Company
Deseret News Building
33 Richards Street
Salt Lake City, Utah

Gentlemen:

We acknowledge receipt of copies of correspondence that you have had with USGS and also correspondence that you have written to Humble, Skelly, El Paso and Phillips, regarding a proposed development program for the Carson Unit area, which in effect would establish further Gallup oil production in and about the Bisti Field in San Juan County, New Mexico.

If we were dealing solely with the Carson Unit, the program you outlined on May 29, proposing 40-acre spacing for the central portion of the productive trend where the microlog pay is 15' or more and 80-acre spacing where the microlog pay is less than 15', would meet with our approval as indicated in our letter of May 17. However, since that time we have come to the conclusion from the information that we have at this time that the average Bisti Gallup oil well will be less than 15' and therefore we believe that the problem transcends solely the Carson Unit and expands into the larger problem of what the proper spacing should be for not only the Bisti field, but all other Gallup oil production.

We believe it more appropriate and advisable to go on the wider spacing since the last recommendation on spacing from you was based on your present limited knowledge of the field and your continued recommendation that you would develop area of undefined sand development on 80 acres per well while exploring for commercial units and 40 acre spacing wells will be drilled on portion of the field where sand development is known. It is apparent to us that a common rule must be laid down applicable to the field and it would be illogical to attempt to develop the Gallup oil production trend on two different basis.

We believe that further consideration and study should be made by Shell in conjunction with its partners in the Carson unit and we are quite sure that there are others interested in this general problem that do not participate in the Carson Unit.

Yours very truly,

George W. Selinger

GWS:de

PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA

PRODUCTION DEPARTMENT
L. E. FITZJARRALD
MANAGER

July 19, 1957

EARL GRIFFIN
GENERAL SUPERINTENDENT
JACK TARNER
TECHNICAL ADV SER TO MGR
H. S. KELLY
CHIEF ENGINEER

In re: Carson Unit - San Juan County, New Mexico - Third Supplemental Plan of Development

Mr. J. E. Mohr
Shell Oil Company
33 Richards Street
Salt Lake City, Utah

Dear Sir:

Reference is made to your letter to Mr. John A. Anderson dated July 10, 1957, in regard to the subject unit.

The third paragraph of your letter states in part "- - - Phillips has, however, in later conversations, indicated to our Mr. MacAlister that they will go along with this final Plan of Development - - -". Inasmuch as Phillips Petroleum Company remains opposed to development of any part of the Carson Unit and Bisti Area on 40 acre spacing at this time, we consider it necessary to correct the implied approval of 40 acre spacing contained in the above quoted statement. Phillips has not and will not now approve a Plan of Development including the drilling of 40 acre spaced wells. Approval of individual 40 acre well proposals will be made only to avoid suffering the 200% penalty which may be imposed under the terms of the Unit Operating Agreement for non-joinder in the drilling of wells located within a participating area.

Phillips' letter to you dated April 15, 1957, outlined our objections to 40 acre spacing and the Plan of Development submitted with your letter of April 2, 1957. No new information has been developed which would justify a change in Phillips' position. The statements contained in the above letter are quoted herein for the information of those receiving copies of this letter:

"Although it is recognized that a technical justification for 40 acre spacing in certain areas of the Unit may exist, on the assumption of a reasonable rate of oil production, Phillips would be reluctant to approve 40 acre wells in the absence of an immediate market outlet. Deferral of income from the intensive development program you propose may reduce the rate of return on investment to an unattractive level.

"The operators in the Bisti-Gallup Pool, including your company

are at the present time attempting to negotiate an agreement to cooperatively test a new type of recovery mechanism; that is, LPG-high pressure gas injection. The recovery anticipated from this method, which may range up to 95 percent of the oil in place, and the cost of LPG injection are directly related to the stage of depletion of the reservoir at the time of initial injection. A substantial decrease in recovery efficiency and an increase in injection costs occur when the reservoir pressure falls below the bubble-point pressure of the reservoir oil. Development of certain areas in the field on 40 acre spacing will permit a more rapid depletion of the primary reserve while sacrificing as much as 50 percent of the secondary recovery reserve for the entire field.

"The money which you propose to spend in development on 40 acre spacing, a density which is not considered necessary to deplete the reservoir, may be spent to greater advantage and at a higher rate of return on investment on the early development of a pressure maintenance program. This would satisfy your needs for high uniform deliverability to the projected pipeline and the objective of all operators in the Unit and in the Bisti area to obtain the highest recovery at a maximum return on investment."

It would appear from your continuing with plans to develop a part of the Bisti Area and Carson Unit Area on 40 acre spacing that you anticipate some advantage to be accorded the 40 acre wells over the 80 acre wells in the allocations received from the pipeline purchaser since it is recognized that the difference in ultimate recovery which may be expected from the two spacing programs is of insignificant economic importance. It follows that you would anticipate producing from two 40 acre wells at a greater total rate than the capacity of one 80 acre well or there would be no economic advantage to drilling on the closer spacing. The rate of depletion of the field reserves and bottom hole pressure decline which would result from capacity production in the field would surely obviate the possibility of successful application of a field wide LPG-high pressure gas injection program. Commencement of the pilot injection program mentioned above now awaits only final approval by the interested regulatory bodies. It is imperative to the conservation of reserves of oil and gas contained in the Bisti Field that no drilling or producing program be adopted which will reduce the ultimate economic recovery from the field.

Phillips Petroleum Company again requests that you reconsider your proposed development program and defer development on 40 acre

spacing until it is clear as to how the best interests of all parties will be served.

Yours very truly,

L. E. Fitzjarrald

LEF:EFL:HD
cc: United States Geological Survey
Post Office Box 6721
Roswell, New Mexico
Attn: Mr. John A. Anderson, Supervisor

New Mexico Oil Conservation Commission
125 Mabry Hall, Capitol Building
Santa Fe, New Mexico

Mr. Murray Morgan
Commissioner of Public Lands
125 Mabry Hall, Capitol Building
Sante Fe, New Mexico

All Bisti Field Operators

LION OIL COMPANY
A DIVISION OF MONSANTO CHEMICAL COMPANY

PRODUCTION & EXPLORATION
SOUTHWESTERN REGION

602 W. MISSOURI ST.
MIDLAND, TEXAS

September 25, 1957

New Mexico Oil and Gas Commission
107 Mabry Hall - Capitol Building
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.
Secretary Director

Gentlemen:

Pursuant to your decision during the hearing of Case 1308 on September 19, 1957 to accept written statements relative to Case 1308 within ten days from that date, in lieu of making oral statements at the hearing, the following is Monsanto Chemical Company's statement relative to Case 1308.

Monsanto has four wells completed and another presently drilling in Section 34, T-25-N, R-10-W, Bisti Field, San Juan County, New Mexico.

Monsanto concurs with Sunray Mid-Continent's proposed field rules, including temporary 80 acre spacing as presented at the hearing held before you on September 19 and 20, 1957, for the following reasons:

(1) Very poor quality of sand, making development on spacing less than 80 acres per well uneconomical, according to the presently known data.
(2) At some future date, maybe a year from now, maybe longer, additional data (reservoir, engineering and producing) will be available from which more accurate conclusions may be made. A temporary 80 acre spacing rule will give needed time in which to adequately evaluate the reservoir.
(3) Unitization of this field is inevitable and imperative. It would be most regrettable, a shameful waste and an utter disregard of the knowledge and data developed with regard to the Bisti Blackrock Area and progress made during the past few decades on proper development of oil bearing reservoirs, if more wells are drilled now than are actually needed to adequately and economically recover the maximum volume of ultimate oil.
(4) In some respects, it appears now that the Bisti Field is quite similar to the Spraberry Trend in West Texas, where many operators drilled their acreage on 40 acre spacing as rapidly as possible, and regretted it later to the extent that the majori-

ty of operators requested the Texas Railroad Commission for 80 acre spacing on the basis that wells drilled on 40 acre spacings were uneconomical. Eighty acre spacing was finally approved with a tolerance of not more than 80 acres of additional unassigned lease acreage to a well on an 80 acre unit and in such event receive allowable credit for not more than 160 acres. Monsanto hopes not to again become involved in a similar situation, particularly when it is possible to preclude it.

Monsanto earnestly urges the New Mexico Oil and Gas Commission to grant Sunray Mid-Continent's application as presented in Case 1308, before you on September 19 and 20, 1957.

Very truly yours,

W. M. Wilson
Regional Manager

WMW/AWW/cb

Case file

SOUTHERN UNION GAS COMPANY
BURT BUILDING
DALLAS 1, TEXAS

September 25, 1957

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Case No. 1308

Gentlemen:

In line with the Commission's ruling at the conclusion of the testimony in the above case on September 20, 1957, Southern Union Gas Company submits the following statement with regard to the proposal of Sunray Mid-Continent Oil Company for temporary establishment of 80-acre spacing in the Bisti - Lower Gallup oil pool, San Juan County, New Mexico.

Southern Union Gas Company supports the temporary 80-acre spacing proposal. We have cored the Gallup section in one well in the presently designated Bisti - Lower Gallup oil pool and two wells outside the present pool limits but in the trend which will probably be included within them after further development. From the core data available from these three wells, it appears that recoverable reserves under a majority of the pool's acreage will not be sufficient to justify 40-acre spacing.

The allowables and production to date from presently completed Bisti - Lower Gallup wells have been so low that no reliable reserve estimates can be derived from such data. On the other hand, since it is anticpated that either during the fall of 1957 or early 1958 two additional pipelines will be taking oil from this area and consequently allowables and production will be appreciably increased, it seems most likely that within the next twelve months sufficient production information will be available to make possible a fairly accurate determination of probable recoverable reserves. Under these circumstances, entry by the Commission of the temporary 80-acre spacing order requested would appear to be wholly justified and appropriate.

Respectfully submitted,

SOUTHERN UNION GAS COMPANY

By A. M. Wiederkehr

A. M. Wiederkehr, Manager
Exploration Department

AMW:t

Date
File

MAIN OFFICE

MAGNOLIA PETROLEUM COMPANY

1957 SEP 27 AM 8:03

A SOCONY MOBIL COMPANY

LEGAL DEPARTMENT

P. O. BOX 900
DALLAS 21, TEXAS

Sept. 125, 1957

Re: Case 1308 on Application of Sunray Mid-Continent Oil Company in regard to the Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Gentlemen:

At the above hearing held September 19 and 20, 1957, at Santa Fe, New Mexico, it was suggested that any operator wishing to make a statement in regard to this case should do so in writing within ten days. The purpose of this letter is to file such a statement on behalf of Magnolia Petroleum Company and request that it be made a part of the record of Case 1308.

Within the proposed well spacing area for the Bisti-Lower Gallup Oil Pool, as designated in exhibits introduced by Sunray Mid-Continent Oil Company, Magnolia Petroleum Company is operator of leases which contain a total of 800 acres. At the present time there are three producing oil wells and one shut-in gas well completed on these leases.

As an operator in this field, Magnolia Petroleum Company concurs with the recommendations of Sunray Mid-Continent Oil Company in recommending the adoption of 80-

acre proration units. Since there is a difference of opinion between operators as to whether 40 or 80-acre units would be proper, we suggest that the New Mexico Oil Conservation Commission issue a temporary 80-acre spacing order to remain in effect for a period of one year, after which period the matter again should be set for hearing to determine whether or not 80-acre spacing should continue in effect.

As pointed out by the applicant, complete development of the Bisti Field, even to an 80-acre density, involves the drilling of a considerable number of additional wells. The productive limits of this field will be determined at a more rapid rate under 80-acre spacing then under 40-acre spacing. At the end of a one-year period the productive limits will be defined with greater accuracy and additional reservoir information will be available as a basis for a proper permanent well spacing order.

If the members of the New Mexico Oil Conservation Commission should have any doubt as to the proper well spacing program, it would appear reasonable to adopt temporary 80-acre units since at a later date it would be possible to change the spacing to a 40-acre basis. Failure to adopt temporary 80-acre units at this time would preclude the possibility of 80-acre spacing in the future, even though subsequent reservoir information might convince the Commission that 80-acre spacing would have been proper.

Very truly yours,

MAGNOLIA PETROLEUM COMPANY

By Jack Vickrey
Its Attorney

JV:jt

cc: M. V. C. Bradley
D. V. Carter

Mr. Burns H. Errebo, Attorney
Sunray Mid-Continent Oil Company
P. O. Box 2038
Tulsa 2, Oklahoma

MAIN OFFICE OCC

1957 SEP 24 AM 7:45

GULF OIL CORPORATION

LAW DEPARTMENT

DENVER, COLORADO

ARCHIE D. GRAY
VICE PRESIDENT
AND GENERAL COUNSEL
PITTSBURGH, PA.
BOOTH KELLOUGH
DIVISIONAL ATTORNEY
JOHN W. STEWART

ADDRESS ALL CORRESPONDENCE IN CARE OF
P. O. BOX 2097, LAW DEPARTMENT

September 23, 1957

Mr. A. L. Porter, Secretary-Director
New Mexico Oil and Gas Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

We neglected to leave extra copies of the map introduced by Gulf at the Bisti Spacing case as its Exhibit No. 3. For your convenience, we are enclosing two copies of this exhibit. If you have need for any further copies, please advise.

Very truly yours,

Booth Kellough

Booth Kellough

BK:MP
Enclosures (2)

SUN OIL COMPANY
ROCKY MOUNTAIN DIVISION
DENVER CLUB BUILDING
P. O. BOX 1798
DENVER 1, COLORADO

P. S. JUSTICE
MANAGER

September 23, 1957

Mr. A. L. Porter, Jr., Secretary
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Although I am sure that the very capable court reporter present at the hearing in Santa Fe last week made an accurate record of the statement that I gave to the Commission near the close of the hearing, I had intended to hand you a copy thereof but failed to do so.

I am, therefore, enclosing a copy of the statement as I had it in front of me at the time. It did occur to me that I did not point out that my name was spelled with "ice" rather than "is", and it occurred to me later that someone might possibly have confused the names and concluded that I had some connection with the Justis Gas Field, which unfortunately I do not.

Sincerely yours,

P. S. Justice

PSJ/m

Enclosure

Statement by P. S. Justice before the New Mexico Oil Conservation Commission, Santa Fe, New Mexico, Friday, September 20, 1957

Mr. Chairman:

My name is P. S. Justice. I am Manager of the Rocky Mountain Division of the Sun Oil Company, Denver, Colorado, and have jurisdiction over and responsibility for Sun's operations in the subject area. We own substantial interest in and are now operator of certain partially developed leases within the area of the Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico. I respectfully request permission to make a comparatively brief, non-technical statement bearing on this case on behalf of Sun Oil Company.

(Permission was graciously indicated by the Secretary, Acting Chairman.)

Since this is the first time that I have had the privilege and opportunity of attending a hearing before the New Mexico Oil Conservation Commission, I wish to express my sincere personal and official appreciation of the impartial, patient and efficient manner in which this hearing has been conducted by the Commission and its staff. If at first blush this appears to be apple polishing, I can assure you that you may consider yourselves unanimously polished by all of those in attendance here.

Sun Oil Company hereby fully concurs in the application of the Sunray Mid-Continent Oil Company for an Order extending the horizontal limits of the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico, and temporarily establishing uniform 80-acre well spacing, all in accordance with said application.

Furthermore in Sun's considered opinion, the extension so lucidly, ably and intelligently presented here by Sunray Mid-Continent Oil Company as applicant in this case unmistakably demonstrates the desirability, urgency and practical necessity for the prompt establishment of such 80-acre well spacing. We believe that this is necessary in order to prevent waste; that it will aid in promoting the ultimate efficient maximum economic recovery of oil from said pool with due regard for the legal, moral and just or relative rights of all interested parties.

Finally, we wish respectfully to state to the Commission and the parties opposing this application that in our opinion, the adoption or establishment of such a temporary 80-acre spacing Order would not necessarily be permanently

harmful to the premises or position of the opposition even if same later proved to be correct or advisable. On the other hand, if lesser well spacing regulations remain in force and development on 40 acres is permitted, no later action or Order could effectively prevent the waste or other inequities that have been clearly shown might result therefrom. Thank you.

THE TEXAS COMPANY
TEXACO PETROLEUM PRODUCTS

PRODUCING DEPARTMENT
WEST TEXAS DIVISION
O. F. SEBESTA, ASSISTANT DIVISION MANAGER

P. O. BOX 1720
FORT WORTH 1, TEXAS

September 23, 1957

Statement of Position
Case No. 1308
Application of Sunray Mid-Continent Oil Company
for Promulgation of Special Rules and Regulations
Bisti-Lower Gallup Oil Pool
San Juan County, New Mexico

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

In accordance with your ruling during the hearing covering the above captioned application on September 19, 1957, The Texas Company hereby submits its statement concerning this application. The Texas Company's position is outlined as follows:

The Texas Company, as lease owner and operator in the Bisti-Lower Gallup Oil Pool, concurs with the recommendations made by Sunray Mid-Continent Oil Company at the hearing covering Case No. 1308 that temporary uniform 80-acre spacing be established in this field. It is believed that sufficient evidence was presented by the applicant to show that one well will efficiently and economically drain 80 acres in the Bisti-Lower Gallup Pool reservoir. This evidence was, necessarily, based on the information presently available, which will be continually supplemented with additional data as production rates increase and development continues. While the additional data are being obtained, it would seem that the most judicial course available to the Oil Conservation Commission would be to adopt that spacing density which would be least likely to disturb correlative rights while assuring that physical and economic waste will not occur. The Texas Company believes that temporary 80-acre spacing fits these requirements far better than can be expected under the 40-acre density suggested by Shell Oil Company, whereby the drilling of many unnecessary wells seems likely to result.

Please include the above statement, or this letter in its entirety, in the official records of the hearing on the above captioned application.

Yours very truly,

THE TEXAS COMPANY

O. F. Sebesta
Assistant Division Manager

HNW-JEB

ANDERSON-PRICHARD OIL CORPORATION

PRODUCERS REFINERS

LIBERTY BANK BUILDING
OKLAHOMA CITY 2, OKLAHOMA

WESTON PAYNE
VICE PRESIDENT
PRODUCTION DEPARTMENT

September 12, 1957

In Re: Our File No. DNM-8

New Mexico Oil Conservation Commission
State Capitol Building
Santa Fe, New Mexico

Gentlemen:

Subject: Case No. 1308 -- Field Rules
Bisti Lower Gallop Oil Pool - San Juan County, New Mexico

Anderson-Prichard Oil Corporation recommends that the Commission approve the application of Sunray Mid-Continent Oil Company for an order which will (1) extend the horizontal limits of the Bisti Lower Gallop Oil Pool, (2) temporarily establish uniform 80-acre spacing for oil wells, and (3) require semiannual gas-oil ratio and bottom hole pressure tests.

Anderson-Prichard Oil Corporation further recommends that the Commission include in the field rules a volumetric withdrawal formula for computing allowables for gas wells which are completed in the gas cap portion of the Lower Gallop oil reservoir. The equities of all parties can best be preserved by permitting the operators of such wells to attribute up to 320 acres to each well for allowable purposes provided that said acreage is proven productive of gas.

Yours very truly,

Duncan V. Patty

Duncan V. Patty, Manager
Economics and Evaluation Department

DVP:nj

cc: Weston Payne
C. T. McClure
C. M. Heard

cc: Sun Oil Company
Post Office Box 1798
Denver, Colorado
Attn: Mr. Wm. Walmsley

LAURENCE C. KELLY TRUST
OIL AND GAS PRODUCERS
609 BANK OF AMERICA BUILDING
BEVERLY HILLS, CALIFORNIA

File
Case 1308

September 11, 1957

LAURENCE C. KELLY
TRUSTEE

TELEPHONES
CRestview 6-7078
BRadshaw 2-2501

Oil Conservation Commission
State Capitol
Santa Fe, New Mexico

Dear Sirs:

I have been notified that a meeting of your Commission will be held in Mabry Hall on September 18th, at 9 A.M. to consider among other things Case #1308, the application of Sunray Mid-Continent Oil Company for an order extending the horizontal limits of the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico, and temporarily establishing uniform 80-acre well spacing and promulgating special rules and regulations for said pool.

The Laurence C. Kelly Trust, of which I am Trustee, holds State of New Mexico Oil and Gas Leases Nos. E-6597, E-6644, and E-7698, aggregating a total of 4,118.59 acres. All of this acreage is in Township 25 North, Ranges 12 and 13 West, and covers all of the State owned acreage in this Township and Ranges, with the exception of 1,000 acres.

You will remember no doubt that the discovery well of the Bisti Pool was on Section 16, Township 25 North, Range 12 West, which is part of our State Lease.

As Trustee for the above Trust, I would like to make formal protest against changing from the present established 40-acre spacing to 80-acre spacing, as requested by Sunray Mid-Continent Oil Company, for the following reasons:

1. The Oil Conservation Commission of the State of New Mexico has never before found it necessary to change the spacing from 40 to 80 acres as it has no doubt found 40-acre spacing satisfactory from every angle.

2. It is the considered opinion among a great many well qualified geologists that one well cannot possibly drain in excess of 40 acres, because of the nature of the Gallup Sandstone which has been established as a very tight formation with low porosity and permeability.

3. The only sound reason in the opinion of the writer that have been advanced to date, namely, lack of market for the oil, will be completely eliminated before the end of the year when the Four Corners Oil Pipeline to California will be in operation and the Refinery of the El Paso Natural Gas Products Company will be on stream.

4. It would appear to be short-sighted policy to restrict the production of oil from the Bisti Pool at a time when there is a very strong demand for it and the Refineries of California are clamoring for it. This condition might not prevail for too long and should be taken advantage of while it does.

5. A change in the established 40-acre spacing could be very detrimental to the revenue obtained from oil by the State, which undoubtedly, like nearly every other State, needs more and more revenue every year for school purposes. It is more than likely to bring about requests from many other established areas and pools to be yet discovered for wider spacing than the present 40 acres.

In view of the above facts I cannot urge you too strongly to allow the present established spacing of 40 acres to remain in effect.

Yours truly,

LAURENCE C. KELLY TRUST

LCK:1

By Laurence C. Kelly
Laurence C. Kelly, Trustee

ELRECO

THE EL DORADO REFINING COMPANY

EL DORADO, KANSAS

September 11, 1957

file
Case 1308

Oil Conservation Commission of New Mexico
125 Mabry Hall
Capitol Building
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Re: Sunray Mid-Continent Spacing Application
Bisti Lower Gallup

Gentlemen:

Notice has been received in the matter of Sunray Mid-Continent Oil Company's application for the purpose of establishing spacing and special rules for the Bisti lower Gallup oil pool, San Juan County, New Mexico. It is our understanding that this matter has been scheduled for Wednesday, September 18, 1957, in Santa Fe, New Mexico.

This is to advise that as an operator in this area The El Dorado Refining Company supports Sunray Mid-Continent Oil Company in their request for 80 acre proration units and well spacing plus special rules and regulations for the subject pool.

Very truly yours,

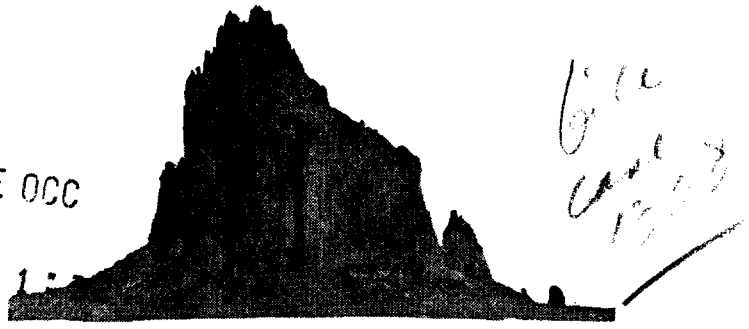
THE EL DORADO REFINING COMPANY

F. T. Anderson

F. T. ANDERSON
Vice President

FTA:jp
cc: Sunray Mid-Continent Oil Co.
P. O. Box 2039
Tulsa 2, Oklahoma
Attn: Burns H. Errebo

JACK SULLIVAN
President
3825 Willat Avenue
Culver City, California



Culver City
VErmont 8-3169
Farmington
DAvis 5-2521

SHIPROCK INDUSTRIES, INC.

TAYLOR BUILDING FARMINGTON, NEW MEXICO

September 9, 1957

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

It is our understanding that you are having a meeting on 9-18-57 to consider oil well spacing in the San Juan Basin, New Mexico.

We are the holders of thousands of acres, both proved and unproved, in this area and it is our studied opinion, after advice from our geologists, that it is quite improbable that more than forty acres of oil land can be drained by a well thereon. We therefore violently oppose changing of the laws of the State of New Mexico to allow for spacing greater than forty acres per oil well.

Yours very truly,

SHIPROCK Industries, Inc.

Jack Sullivan, President

js.c

HONOLULU OIL CORPORATION
P. O. DRAWER 1391
MIDLAND, TEXAS

MAIN OFFICE OCC
1957 SEP 5 PM 12:54

Case Hist
1308

September 3, 1957

Mr. A. L. Porter, Secretary and Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Case No. 1308, Bisti-Lower Gallup Field Rules.

Dear Mr. Porter:

Honolulu Oil Corporation owns and operates one well in this field in the area included in the notice of hearing. This well is our State of New Mexico "D", Well No. 1, located 660 feet from the North and West lines of Section 36, T 26N, R 13W, NMPM.

Because of our minor percentage of production and reserves in this field, we do not plan to be represented at the hearing. However, it is our belief that the proposed temporary 80-acre well spacing is proper for this field at this time.

Honolulu Oil Corporation respectfully requests that the Commission adopt the special rules and regulations for the Bisti-Lower Gallup Oil Pool as proposed by Sunray Mid-Continent Oil Company.

Very truly yours,

HONOLULU OIL CORPORATION

By George R. Hoy

George R. Hoy

GRH:ect
cc: Sunray Mid-Continent Oil Co.
Russell Estes
File