CASE 3422: Application of PAN AM.

for a new oil pool, special rules
and 4 non-standard proration units.

Case Number

3422

Application Transcripts.

Small Exhibits

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE No. 3422 Order No. R-3103 NOMENCIATURE

APPLICATION OF PAN AMERICAN PETROLEUM CORPORATION FOR CREATION OF A NEW POOL, SPECIAL POOL RULES AND FOUR NON-STANDARD PRORATION UNITS, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 29, 1966, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NCW, on this 11th day of August, 1966, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by plaw, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Pan American Petroleum Corporation, seeks the creation of a new oil pool for Gallup production in Jan Juan County. New Mexico, and the gammigation of special rules and regulations governing said pool, including a provision for 160-acre spacing units and appointed wall locations.
- (3) That the applicant further reduce approved to the Kolkering none-standard oil provaling uples in becambing to tooth. Start 12 heat, WMM, ban down Comply, the continue

a 764.44-acre unit compare by Lette 5, 3, and 4 and the $\pi/2$ Sh/4 of suction 5;

-2-CASE No. 3422 Order No. R-3103

A 176.14-acre unit comprising Lot 1 and the 8/2 BB/4 of Section 9 and Lot 4 and the SW/4 SW/4 of Section 107

A 163.29-acre unit comprising Lots 1, 2, and 3 and the SW/4 SE/4 and SE/4 SW/4 of Section 10; and

A 175.14-acre unit comprising the SE/4 SE/4 of Section 10 and the S/2 SH/4 and Lots 3 and 4 of Section 11.

- (4) That the evidence fails to establish that one well in the proposed pool can efficiently and economically drain and develop 160 acres.
- (5) That the evidence does indicate that one well in the proposed pool can efficiently and economically drain and develop 80 acres.
- (6) That the horizontal limits, as requested by the applicant for the subject pool, have not been adequately established by wells producing from the Gallup formation in the subject area.
- (7) That the application for 160-acre spacing and pool limits, as defined by the applicant, should be denied.
- (8) That inasmuch as the Commission finds that the application for 160-acre spacing should be denied, it becomes unnecessary at this time for the Commission to rule upon the applicant's request for approval of the above-described four non-standard proration units.
- (9) That the tan American Detrology Corporation Calleges Canyon Unit Wall No. 250, localed in Main 6 of Faction 14, Tourship 20 Morth, Range 12 West, HMPH, San Juan County, New Marico, has discovered a separate desson source of cupyly which should be designated the Cinon-Sallup Oil Pool; that the vertical limits of said year classif he are Wallup researcher; and that the horizontal limits of a list most should consist of:

Jam Judi Jome 7, 355 15 Nicola <u>ROTHERTS 20 MORTS. Rights 15 1556. House</u> Baction 16: 49/4 NE/4, 5/2 NW/6. 54/5, 15:4 N/2 52/4 Section 15: 24/4 NM/6 and E/2 18/4 Section 23: 12/2 NM/6 and 8/2 18/4

- (10) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, special rules and regulations providing for 80-acre spacing units should be promulgated for the Piñon-Gallup Oil Pool.
- (11) That the special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

IT IS THEREFORE ORDERED:

- (1) That the applicant's request for 160-acre spacing is hereby denied.
- (2) That the application for pool limits, as defined by the applicant, is hereby denied.
- (3) That a new pool in San Juan County, New Maxico, classified as an oil pool for Gallup production, is hereby exeated and designated the Piñon-Gallup Oil Pool, with vertical limits comprising the Gallup formation, and horizontal limits comprising the following-described area:

SAN JUAN COUNTY, NEW MSXICO TOWNSHIP 28 NORTH, RANGE 12 WEST, NMEM Section 14: SW/4 NE/4, S/2 NM/4, Ss/4, and W/2 SE/4 Section 15: SE/4 ME/4 and E/2 SE/4 Section 23: N/2 NM/4 and E/2 SE/4

(4) What Special Rules and Esgulations for the chief Address Oil Fool are hereby promulgated as follows:

SOMOZAL ROCKS ACO RESOURCESS VOIC ROS LANGUES MARCHES ENTRE SOL

AUGE 1. Back woll completed or accompleted in the Fibone Gallup Oil book or in the delite forcession within our mike these of and not magger to or within the limite of another designated Gallup oil pook, shall be agained, delited, operated, and produced in

-4-CASE No. 3422 Order No. R-3103

accordance with the Special Rules and Regulations hereinafter set forth.

- RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of the N/2, S/2, B/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.
- RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a governmental quarter-quarter section or lot or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.
- RULE 4. Each well shall be located within 150 feet of the center of either governmental guarter-guarter section or lot.
- RULE 5. The Secretary-Director may grant an apportion to the requirements of Rule 4 without notice and hearing whan an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously defiled to another horizon. All operation of a well previously defiled to another horizon. All operation of awail previously defiled to another horizon. All operation of awail previously proposed location shall be notified of the condition by registered or costilities sail, and the reclinities problem to the application upon received. The December of the operation of the proposed location of the notified of the application to proposed location of the beautiful to ear to be the beautiful of the proposed location of the beautiful to ear to be the beautiful of the proposed location depth of the capture the beautiful dear to be a proposed to the beautiful to ear to be a beautiful the capture the beautiful dear to be a proposed to be the beautiful to ear to be a beautiful the capture the beautiful dear to be a proposed to the beautiful the capture the beautiful dear to be a proposed to the beautiful the capture the beautiful dear the bea
- PUBLIES. I DESCRIBED PROVIDED CALL [To theory or over) shall be analyzed an Survey, proper count to an order of the analyzed and an entering the second or an expense propertion being, the agreement may profuse the allowable abin applicable to the mail for a like or the order. The propertion.

-5-CASE No. 3422 Order No. R-3103

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

- (1) That the locations of all wells presently drilling to or completed in the Pinon-Gallup Oil Fool or in the Gallup formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Aztec District Office of the Commission in writing of the name and location of the well on or before September 1, 1966.
- (2) That each well presently drilling to or completed in the Pinon-Gallup Oil Pool or in the Gallup formation within one mile thereof shall receive a 40-acre allowable until a Form C-102 dedicating 80 acres to the well has been filed with the Commission.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fo, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO

JACK M. CAMPBELL, Chairman

GUYTON & HAYS, Member

A. A. FORTER, Jr., Burlyer & Sacrebas,

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico

Bil Conservation Commission

LAND COMMISSIONER GUYTON B. HAYS MEMBER



STATE GEOLOGIST A. L. PORTER, JR. SECRETARY - DIRECTOR

August 11, 1966

Mr. Louis Ross Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202 Case No. 3422
Order No. R-3103
Applicant:

Pan American Petroleum Corp.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

Re:

A. L. PORTER, Jr. Secretary-Director

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Hobbs OCC Artesia OCC		-					
Aztec CCC _		,					
OTHER	Mr.	John	W.	Bassett	, Jr.,	Atwood	& Malone
	Ros	well,	New	Mexico			

OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

Da	te_8/3/66
CASE 342Z Hearing Date_	9am 6/29/66
My recommendations for an order in the above number	red cases are as follows:
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request for 160-acre spa	eng and for
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That one well will drain 160 acres, but that it does indicate that me will alequately & efficiently drain 80 acres.

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DOCKET: EXAMINER HEARING - WEENESDAY - JUNE 29, 1966

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM, STATE LAND OFFICE BUILDING - SANCE FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

- CASE 3418: Application of Ashmun & Hilliard for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the dual completion (conventional) of its J. E. Stokes Well No. 1, located in Unit G of Section 26, Township 16 South, Range 35 East, Lea County, New Mexico, to produce oil from the Wolficanp and Pennsylvanian formations, Shoe Bar Field, through parallel strings of tubing.
- CASE 3419: Application of B. M. Jackson for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation through one well located in Unit H of Section 4, Township 18 South, Range 32 East, Pearsall Queen Pool, Lea County, New Mexico.
- CASE 3420: Application of Standard Gil Company of Texas for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox location 1650 feet from the North line and 990 feet from the East line of Section 15, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico.
- CASE 3421: Application of Hanson Oil Company for an exception to Commission Order No. R-lll-A, Lea County, New Mexico. Applicant, in the above-styled cause, cacks an exception to the potash-oil area casing and dementing rules as set forth in Commission Order No. R-lll-A. Applicant proposes to deill and complete a well in Unit G of Section 21, Township 20 South, Range 34 East, Middle Lynch Yates Pool, Lea County, New Mexico, and to drill, case, and dement said well as toldows:

Drill to 65 feet and circulate dement on 13 3/8-inch casing; deepen to 800 feet and mod-in 18 3/4-inch casing; deepen to 1600 feet and mod-in 8 5/8-inch casing; drill into the Seven Rivers formation and tack 5 1/2-inch casing with at least 25 sacks of cement; drill into and test the Seven Rivers pay. If production is obtained, pull the 16 3/4-inch and 8 5/8-inch casing and cement 5 1/2-inch casing to surface. (Note: All depths are approximate.) The well would be plugged and abandoned in accordance with Commission Order No R-111-A.

Application of Pan American Petroleum Corporation for creation of a new pool, special pool rules and four non-standard proration units, San Juan County, New Nexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Gallup production discovered by its Gallegos Canyon Unit Well No. 250 located in Ends No. 250 loca

- 2 -June 29, 1966, Examiner Hearing

CASE 3422 Continued:

Range 12 West, San Juan County, New Mexico, and for the promulgation of special pool rules therefor, including a provision for 160-acre proration units and specified well locations. Applicant further seeks the approval of four non-standard proration units as follows in Township 28 North, Range 12 West:

A 164.44-acre unit comprising lots 2, 3, and 4 and the S/2SW/4 of Section 9;

A 176.14-acre unit comprising lot 1 and the S/2 SE/4 of Section 9 and lot 4 and the SW/4 SW/4 of Section 10;

A 163.29-acre unit comprising lots 1, 2, and 3 and the SW/4 SE/4 and SE/4 SW/4 of Section 10;

A 175-14-acre unit comprising the SE/4 SE/4 of Section 10 and the S/2 SW/4 and lots 3 and 4 of Section 11.

CASE 3423: Application of Pan American Petroleum Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Seven Rivers Reef formation, Scarborough Yates-Seven Rivers Pool through the open hole interval from 3029 to 3080 feet in its C. M. Farnsworth "B" Well No 9, located in Unit N of Section 7, Township 26 South, Range 37 East, Lea County, New Mexico.

ATWOOD & MALONE LAWYERS

P. O. DRAWER 700 TELEPATONE 505 622-6221 ROSWELL, NEW MEXICO 86201

JEFF D ATWOOD (1883-1960)
ROSS L MALONE
CHARLES F MALONE
RUSSELL D. MANN
PAUL A. COOTER
BOB F, TURNER
ROBERT A. JOHNSON JOHN W. BASSETT, JR.

June 13, 1966

Oil Conservation Commission of the State of New Mexico Post Office Box 2088 Santa Fe, New Mexico

In the Matter of the Application of Pan American Petroleum Corporation for the creation of a new Re: oil pool and the establishment of special rules and regulations, San Juan County, New Mexico.

Gentlemen:

Enclosed herewith please find an Entry of Appearance, by the terms of which our firm enters an appearance of behalf of Pan American Petroleum Corporation in the above captioned matter. We would appreciate very much your placing this in the proper file.

Thank you very much, and with best regards, I am,

Yery truly yours,

John W. Sossall, J.

MOT AT WOOD & MALONE

JWB:md

encl.

DOCKET MAILED

Dale

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF)
PAN AMERICAN PETROLEUM CORPORATION)
FOR THE CREATION OF A NEW OIL POOL AND)
THE ESTABLISHMENT OF SPECIAL RULES AND)
REGULATIONS, SAN JUAN COUNTY, NEW)
MEXICO)

No. 3

ENTRY OF APPEARANCE

The undersigned, Atwood & Malone, of Roswell, New Mexico, a firm of attorneys, all of whose members are duly licensed to practice law in the State of New Mexico, hereby enters its appearance in the above styled and numbered cause as New Mexico counsel for Pan American Petroleum Corporation, Petitioner.

DATED at Roswell, New Mexico, this 13th day of June, 1966.

ATWOOD & MALONE

Post Office Drawer 700

Roswell, New Mexico

FORM 1397 1-66

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

PRODUCING DEPARTMENT H. T. HUNTER
DIVISION PRODUCTION
MANAGER

DENVER, COLORADO 80202

DISTRICT SUPERINTENDENTS
W. M. JONES
A. E. PIPER
T. M. CURTIS
JOINT INTERPED S. B. RICHARDS

June 8, 1966

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Fils: SBR-278-986.511

Application of Pan American Patroleum Corporation For an Order Approving the Creation of a New Oil Pool And the Establishment of Rules and Regulations, Proposed Pinon Gallup Oil Pool, San Juan County, New Mexico

Mr. A. L. Porter, Jr. (3) Sacretary Director of the New Mexico Oil Conservation Commission P. O. Box 2098 Santa Fs, New Mexico

Dear Sir:

Attached are three copies of Pan American Petroleum Corporation's application for an order approving the creation of a new oil pool and the establishment of special rules and regulations, proposed Pinon Gallup Oil Pool, San Juan County, New Maxico. Pan American requests that the Cil Conservation Commission set this matter for hearing and give notice thereof as required by law and the rules of the Commission.

Yours very truly,

S. B. Tidianh -

Attachments

CKET MAILED

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF PAN AMERICAN PETROLEUM CORPORATION FOR THE CREATION OF A NEW OIL POOL AND THE ESTABLISHMENT OF SPECIAL RULES AND REGULATIONS SAN JUAN COUNTY, NEW MEXICO

(1) KI.

APPLICATION

COMES NOW Pan American Petroleum Corporation and respectfully presents this Application to the Oil Conservation Commission of the State of New Mexico for an Order approving the creation of a new oil pool and the establishment of special rules and regulations, San Juan County, New Mexico. In support of this Application, Pan American Petroleum Corporation states:

- 1. That the Applicant, Pan American Petroleum Corporation, (hereinafter called Pan American), is a Delaware Corporation duly authorized to transact business in, and is transacting business in the State of New Mexico.
- 2. That the Applicant, Pan American Petroleum Corporation, seeks an order creating a new oil pool for Gallup production to be designated the Pinon Gallup Oil Pool consisting of the following described acreage in San Juan County, New Mexico:

Township 28 North, Range 11 West

Section 19: All

Section 20: W/2, SE/4

Township 28 North, Range 12 West

Section 9: Lots 1, 2, 3, 4 (N/2 S/2), S/2 S/2 Section 11: Lots 3 & 4 (N/2 SW/4) Section 10: Lots 1, 2, 3, 4 (N/2_S/2), S/2 S/2 and S/2 SW/4

Section 13: S/2

Section 14: All

Section 15: N/2, SE/4

Section 23: NE/4

Section 24: N/2, SE/4

Township 29 North, Range 12 West

Section 30: S/2

Section 31: N/2 Section 32: All

Section 33: SW/4

That the requested Order contain the following proposed special rules and regulations for the Pinon Gallup Oil Pool:

RULE 1, Each well completed or recompleted in the Pinon Gallup Oil Pool or in the Gallup formation within one mile of the Pinon Gallup Oil Pool, and not nearer to or within the limits of another designated Gallup Oil Pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth,

- RULE 2. Each well completed or recompleted in the Pinon Gallup Oil Pool shall be located on a standard proration unit containing approximately 160 acres, and which consist of a single governmental quarter section. For purposes of these Rules, a unit containing between 157 through 163 continguous surface acres shall be considered a standard unit.
- RULE 3. Each well projected to or completed in the Pinon Gallup Oil Pool shall be located no closer than 500 feet to any quarter section line.
- RULE 4. The allowable assigned to any non-standard provation unit shall bear the same ratio to a standard allowable in the Pinon Gallup Oil Pool as the acreage in the non-standard unit bears to 160 acres.
- RULE 5. A standard proration unit in the Pinon Gallup Oil Pool shall be assigned a 160-acre proportional factor of 4.33 for allowable purposes, and in the event there is more than one well on a standard proration unit, the operator may produce the allowable assigned to a unit from said wells in any proportion.
- 4. That the Pinon Gallup Oil Pool was discovered by Pan American's Gallegos Canyon Unit Well No. 250, located 990' FSL and 1800' FWL of Section 14, T28N-R12W, San Juan County, New Mexico.
- 5. From the evidence now available it appears that the well in the Finon Gallup Oil Pool can efficiently and economically drain 160 acres.
- 6. That to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the special rules and regulations described above will afford to the owner of each property in the Pool the opportunity to produce his just and equitable share of the oil in the Pool.

That there exists within the requested pool limits four non-standard units consisting of more than 163 acres. Applicant requests approval of the following described four non-standard drilling units as part of this application:

Township 28 North, Range 12 West

1. 18 . Jack

S/2 SW/4 Lots 3 and 4, Section 11 and SE/4 SE/4 Section 10

175,14 Acres

Lots 1, 2, and 3, SW/4 SE/4, and SE/4 SW/4, Section 10

163,29 Acres

Lot 4 and SW/4 SW/4 Section Lot 1, S/2 SE/4 Section 9

176,14 Acres

Lots 2, 3, and 4 and S/2 SW/4 Section 9

164,44 Acres

WHEREFORE, Pan American requests that the Oil Conservation Commission set this matter for hearing and give notice thereof as required by law and the rules of the Commission.

Respectfully submitted,

PAN AMERICAN PETROLEUM CORPORATION

Its Attorney-in-Fact

FORM 1337 1-66

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

DENVER, COLORADO 80202

PRODUCING DEPARTMENT
H. T. HUNTER
DIVISION PRODUCTION
MANAGER

DISTRICT SUPERINTENDENTS
W. M. JONES
A. E. PIPER
T. M. CURTIS JOINT INTEREST SUPERINTENDENT S. B. RICHARDS

June 30, 1966

File: SBR-314-986.511

Re: Case No. 3422 Application of Pan American Petroleum Corporation For an Order Approving the Creation of a New Oil Pool and the Establishment of Rules and Regulations, Proposed Pinon Gallup Oil Pool,

Mr. A. L. Porter, Jr. (3) Secretary Director of the New Mexico Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico

Dear Sir:

Attached please find a tabulation of the pressures used to establish the points shown on Exhibit No. 5 in the above named case heard on June 29, 1966, as requested by the Examiner, Mr. Daniel S. Nutter.

Yours very truly,

S. B. Kidamile

San Juan County, New Mexico

Attachment

BOTTOM HOLE PRESSURE DATA SIMPSON GALLUP OIL POOL SAN JUAN COUNTY, NEW MEXICO BOTTOM HOLE PRESSURE, PSIA

Well Name and No.	January 1963	April 1963	October 1963	June 1966
Gallegos Canyon Unit Well No. 83		1201	989	
Gallegos Canyon Unit Well No. 123	1390	1296	867	
Gallegos Canyon Unit Well No. 125	1299	1155	841	
Gallegos Canyon Unit Well No. 128	1508	1372	944	485

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. . P. O. BOX 1092 . PHONE 243-6691 . ALBUQUERQUE, NEW MEXICO

EXAMINER HEARING IN THE MATTER OF: Application of Pan American Petroleum Corporation for creation of a new pool, special pool rules and four non-standard proration

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico June 29, 1966

Case No. 3422

BEFORE: DANIEL S. NUTTER, Examiner

units, San Juan County, New Mexico.

TRANSCRIPT OF HEARING



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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATE MENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS 120 SIMMS BLDG, • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUEROUE, NEW MEXICO 203 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO

MR. NUTTER: Call Case 3422.

MR. HATCH: Application of Pan American Petroleum Corporation for creation of a new pool, special pool rules and four non-standard proration units, San Juan County, New Mexico.

MR. ROSS: Gentlemen, I am Louis C. Ross of the Law
Department, Denver Division Pan American Petroleum Corporation.
I believe the record should show that Atwood and Malone have
entered their appearance in this case for Pan American.

MR. NUTTER: We have a letter of appearance in the file.

MR. ROSS: Yes, that's the Roswell firm. We have one witness that I would like to have sworn at this time, Mr. John R. Kennedy.

(Witness sworn.)

JOHN R. KENNEDY, called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ROSS:

- Q Would you please state your name?
- A John R. Kennedy.
- Q Have you ever testified before the Commission before?
- A No, sir, I have not.
- Q What school did you go to and what is your profession?
- A Texas A and M University, with a B.S. degrees in



petroleum engineering and geological engineering.

- What is your present employment?
- I work for Pan American Petroleum Corporation as
- a petroleum engineer in the Denver Division Office.
- What has been your experience, how long have you been with Pan American?
 - 10 years with Pan American in various phases of Α petroleum engineering.
 - Do you have any prior experience?
 - Α
 - Are you familiar with this particular case, the facts No, sir. and the application that we have filed in this cause?

MR. ROSS: Are the witness' qualifications satis-Yes, sir. factory to the Commission?

MR. NUTTER: They are.

(Whereupon, Applicant's Exhibits 1 through 6 marked for identification.)

(By Mr. Ross) First of all, I would like to present our Exhibit 1, which is a vicinity map showing the location of the area in question. We have prepared small facsimilies to make it a little easier to handle the Exhibits.

Mr. Kennedy, would you please explain the purpose of this Exhibit 1 and what it is?



DEALTHEY - MEIET (STOCKES) STATE MENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS SPECIALIZING IN. DEPOSITIONS, HEARINGS, STATE MENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS 1120 SIMMS BIDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUEROUE, NEW MEXICO

A Exhibit Number 1 is merely a location map showing a portion of the San Juan Basin and the Four Corners area with the town of Farmington noted in red in approximately the center of the Exhibit. Colored in green are the various Gallup reservoirs in the San Juan Basin. The pool in question is outlined in an orange color with the pool name that we propose indicated to the upper right of the pool. The green areas shown to be Gallup reservoirs indicate that the majority and almost without exception, the Gallup reservoirs are long, then sandbars extending from northwest to southeast. In the proximity of the Pinon Pool, which we are proposing to the south is the Simpson-Gallup Pool, which will enter into our later discussion.

Q I would like to now introduce Applicant's Exhibit 2 and I want to point out that there is a slight discrepancy in this Exhibit from the Application, for the reason that we have included the northwest quarter of Section 23, and that section is not named in the application.

MR. NUTTER: What township, please?

A 28, 12.

MR. ROSS: 28, 12.

- Q (By Mr. Ross) What is the purpose of this Exhibit, Mr. Kennedy, and would you please explain why we added the additional quarter section?
 - A The additional quarter section was inadvertently



dearnley-meier reperting service

- It would, however, have been included in any temporary order that this Commission might enter on this application, would it not? A well would have to be drilled in compliance with the special order?
 - Yes, sir. Α
- Do you particularly desire that this be included or Q did you just do it, for what purpose was it done?
- We feel that it should be included since it does show some Gallup net pay and it also lies immediately between the proposed Pinon Pool and the Simpson Pool which lies to the south. Later, we will enter evidence that will show that this particular tract has sand which is equivelent to the Pinon sand.
 - At this point I think you should bring out why you are able to make this Exhibit so complete when you have only one well and then please discuss the Exhibit in detail.
 - This Exhibit is a net pay isopach of the Gallup formation, and we were able to do this by virtue of the fact Α that Pan American is presently developing the Dakota formation which is located beneath the Gallup and in so doing we penetrated the Gallup in drilling through to the Dakota.

The yellow triangles shown at various well locations on the plat are wells which penetrated the Gallup, but were



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completed in the Dakota. The green square areas are wells presently completed in the Gallup formation, the discovery well indicated by an arrow pointing to it. In so drilling through the Gallup, we logged it and were therefore able to determine the pay that existed through the Gallup.

This is a means by which we were able to draw a net pay isopach map of the Gallup. The orange area that you see surrounding the isopach is the requested pool limits that we have asked for. As you will note, at each end, beginning at the northwest and the southeast end, we have not closed the contours although the pay is approaching the zero line.

As you will note, on wells in those particular areas, we did not close it for with the small amount of information that we had from the available Dakota Wells that had penetrated the Gallup, we couldn't tell exactly where the zero line would close, therefore we did not close them at either end, and this is the reason, but we do feel that the crange area indicated does enclose any possible development tract in this particular pool.

Also shown on this particular plat is a cross sectional line AA prime which extends down throughthe proposed Pinon Pool and also into the Gallup Pool which is located to the south. Also indicated on the map is an area colored in red, within this red area are the four unorthodox locations which



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1120 SIAMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALSUQUEROUE, NEW MEXICO 1203 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO we have requested in our application.

It should be noted that they are dotted between each of the four units, so that you can distinguish them on the plat.

Of note is the fact that this particular isopach shows that the pool is a long, thin, narrow sandbar and that the pay is thin, also. This is one of the reasons for our request for 160 acre spacing, as well as a relaxing of the location requirements of a well within the 160 so that we might be able to drill in the best possible location to obtain the maximum pay due to the thinness of the pay and the narrow length, or width, I should say, of the pool.

MR. ROSS: Does the Commission have any particular questions on this particular Exhibit?

MR. NUTTER: Not at this time.

Q (By Mr. Ross) We would like to introduce our Exhibit
Number 3, which is a cross section map. Would you please
explain this, the purpose of this map and what it's intended
to show?

A This is cross section AA prime as indicated on Exhibit Number 2. As you will note, this particular isopach was based on the datum of the base of the green horn which is located at the lower part of the plat. Where wells penetrated the Dakota those wells which do not penetrate the Dakota were



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based on the top, or I should say, the datum on them was the top of the lower Gallup member, which is the second line from the top drawn on the plat, and with the particular well being lined up with the nearest well to it. The discovery well in this pool is indicated at the top of the Exhibit. There are two sands which we have colored in this particular Exhibit. The Pinon Sand is colored in yellow. The sand from which the Simpson-Gallup Pool is producing is colored in blue.

As you will note, the blue line does not extend all the way across this particular Exhibit, the reason being that the porosity in the formation ends at approximately between the two wells where the blue line ends, but we were able to trace this particular zone through the remainder of the wells in order to show that the two sands are separate and therefore, the Pinon and the Simpson Pool are producing from two distinct sands.

- Q The characteristics of these two formations are similar, are they not?
 - A Yes, sir, we will cover that in a later Exhibit.
 - Q All right.
- A You might also note from the Pinon Sand that it is not very thick and that it's areal extent is very small.
- Q Our next Exhibit is a comparison of pertinent reservoir data as between the Simpson and Pinon Gallup Oil



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Pools. I have an extra copy of this Exhibit. I would like to introduce Exhibit 4.

A This is a comparison between the reservoir characteristics of the Simpson Pool, which I pointed out as being just south of the Pinon Pool, and the Pinon Pool itself. Data from the Simpson Pool was derived from the six wells producing from the pool, whereas in the case of the Pinon Pool, these characteristics, with the exception of the porosity were determined from the one core analysis we have from the discovery well. The average porosity shown is also utilizing the log data that we have in the Pinon Pool.

Of note in this comparison are two things that stand out, one being that the original reservoir pressure is much less in the Pinon than in the Simpson. The Pinon reservoir pressure is also somewhat lower than in other Gallup reservoirs pressure is also somewhat lower than in other Gallup reservoirs nearby, such as Cha-Gallup and Totah-Gallup. The second item that is noteworthy in this comparison is the average permeability in Simpson being around permeability. The average permeability in Simpson being around 45 millidarcies, where it is only 15 in the Pinon.

As you will note, I showed the range of permeability indicated by the core analysis to be from 1.2 to 35 milliminates. This has per cent after it, which is an error. It should be millidarcies. As you will note, the best permeability should be core analysis of 35 millidarcies in the Pinon Pool



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is less than the average in the Simpson Pool, or 45. The other item which I might want to point out is the average pay thickness in the Simpson being around six feet as compared to four in the Pinon.

Q Applicant's Exhibit 5 is a graph showing a calculation of an area being drained in the Simpson-Gallup Fool.

We would like to introduce that at this time. Would you please explain this Exhibit, Mr. Kennedy?

which is being affected by production from the six wells producing in the Simpson-Gallup Oil Pool. As I pointed out earlier, the Simpson-Gallup Pool is adjacent to the Pinon Pool but producing from a separate sand, however, we feel that the sands are similar enough that such a comparison as this can be made. The Exhibit shows that a bottom hole pressure versus cummulative oil production data, which is based on material balance projection of performance in conjunction with the calculation of oil in place from pore volume data and the family of curves shown represent different areas of drainage or of a 1000 acres, 1500 acres and 2,000 acres.

The red points which you see superimposed on the graph are actual measured data. The first three points show that the six producing wells in the field are draining somewhere in the range of 12 to 1300 acres, or approximately 200 acres



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per well. A recent pressure point shown at the extreme right bottom of the graph taken in this month indicates that the six wells are draining in excess of 2,000 acres, or approximately 300 or better acres per well.

This Exhibit and the data shown thereon shows that without a doubt that the wells in the Simpson Pool are draining in excess of 160 acres per well. This is the spacing which we have requested in the adjacent pinon pool. We feel that these two pools are similar enough that such a comparison as this could be made and that we could expect drainage in the Pinon Pool to be of the nature of this Simpson Pool.

On Exhibit Number 2, which is a plat showing the outline proposed for the Pinon-Gallup and to the south it shows the present outline of the Simpson Pool, you'll note that the Simpson Pool is developed on essentially 160 acres spacing and that this graph adequately shows that those six wells are draining the reservoir.

Applicant's Exhibit 6 is a comparison of the Q economics which are based on 11 feet of net pay in the proposed formation to be developed. I would like to introduce Exhibit 6 at this time. Mr. Kennedy, would you please explain the Exhibit 6 to the Commission?

Α Exhibit 6 is a comparison of developing this particular pool on 80 and against 160 acres. It's based on



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well. Where the average pay in the pool is somewhat less than this ll feet, we felt that such a comparison as this based on the discovery well would adequately show that developing this pool on 80 acres is a marginal proposition from an economic standpoint. As you will note, the profit per well, which is the third to the last item shows a profit of only \$22,100.00 for a well on 80 acres. This assumes, of course, that there is going to be 11 feet of pay throughout the entire 80 acres and in a pool such as the one that I have described, it's unlikely that 80 acres would contain this amount of pay over the entire area.

However, against 160 acres, you will see that a profit of approximately \$125,000.00 would be gained from drilling these wells 160 acre spacing.

On an 80 acre basis it would require at least 6 to 7 feet of net pay over the entire 80 acres, in order to recover the drilling and lease equipment cost of \$70,000.00. On the 160 acre basis a well could penetrate as little as four feet of net pay and still recover the drilling and lease equipment cost of \$70,000.00. We feel that 160 acres spacing will give us a margin of doubt in drilling where we might possibly encounter less pay than anticipated from this less pay map, or where we might run into some difficulties where completing



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the well or losing a well.

We feel this gives us a margin there where we could possibly make some money whereas on an 80 acre basis, one small slipup could cost us the entire profit from a well and that's on 11 feet of net pay from the net pay isopach. There's no doubt in our mind that this is a marginal pool and that only if we're allowed to drill these wells on 160 acre spacing with the relaxing of the location within the 160 so that we could move it around to get the maximum amount of pay, can Pan American make any money from the development of this pool, and it's unlikely that we will develop it to any great extent if we're not allowed to develop it on 160 acre spacing.

Will this order adversely affect any other owners in the area?

No, sir. The plat that you have there indicates the outline of the Gallegos-Canyon Unit although I doubt that it is marked on the plat, but it indicates that Pan American is the operator of this Gallegos-Canyon Unit and that the majority of the pool is located within the Gallegos-Canyon Unit. What small amount of acreage which is approximately 1 section and three quarter that lies outside the Gallegos-Canyon Unit is Pan American controlled working interest acreage and therefore, we adequately control the majority of the pool.

I note that your Exhibit 6 shows that you are going



tc produce a little bit of gas. Will you be able to dispose of the gas?

A Yes, sir, we are in the process of getting a contract so that no gas will be flared in this pool. All casinghead gas will be sold.

Q Would you tell the Commission whether or not in your opinion if this order were to be favorably considered by the Commission, would it prevent waste and protect correlative rights?

A Yes, sir.

MR. ROSS: At this time, Mr. Commissioner, I would like to move for the admission of Applicant's Exhibits 1 through 6, conclusive.

MR. NUTTER: Applicant's Exhibits 1 through 6 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 6 offered and admitted in evidence.)

MR. ROSS: I believe that concludes our direct testimony.

MR. NUTTER: I would like to run through these. I don't have my copies of the miniatures.

Are there any questions of the witness?



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Q Exhibit Number 2, the isopach map, is this net pay or gross pay in the Gallup?

CROSS EXAMINATION

A Net pay.

BY MR. NUTTER:

- Q Now, I note that some of these Dakota wells have penetrated a pretty fair section of Gallup sand. Have you formulated any plans within your company for the dual completion of any of these Dakota Wells in the Gallup?
- A No, sir. We do not anticipate dual completing any wells. It will be individual completion.
- Q Which six wells on Exhibit Number 2 are the wells that are producing from the Simpson-Gallup Pool?
- A The outline of the Simpson Pool limits is shown by a cross-haired type of line that goes around.
 - Q Well, there are five green wells within that boundary.
- A There's one to the right there maybe that you don't have. It's outside the Gallegos-Canyon and it's the Rhodes lease. There's one well out there.

MR. ROSS: Is that the well in the southwest quarter of 24?

- Q (By Mr. Nutter) The one in Section 30?
- A Yes, sir.
- Q How about the well in Section 23, is that within the



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Simpson?

- A Yes, sir.
- $\ensuremath{\mathbb{Q}}$ What pool are these other three wells just west of there?
 - A It's an undesignated Gallup.
- Q In preparing Exhibit Number 5, this point right here in January of 1962 that represented how many wells' bottom hole pressure?
- A Four wells. Each of the three points in '62 and '63 represent four wells. Those were the four flowing wells in the Simpson Pool where we could run a bomb in.
 - Q And June of '66 pressure is an average?
 - A That's only one well.
 - Q That's a one well pressure?
 - A Yes, well 28 that's still flowing.
- Q So that had a pressure of slightly less than 500 pounds?
 - A Yes, sir, 480.
- Q What was the range of pressures in January of '62 for those four wells, just give me the four pressures, if you have them.
- A I thought I had them with me. I don't see them. I had the pressures but I didn't bring them with me.

MR. ROSS: Can you furnish this?



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1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 1203 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO A Yes.

Q (By Mr. Nutter) If you will furnish me with the individual wells' pressure for each of the three points, and we have the one point for June of '66?

A Yes.

Q And you don't have any pressure on the other five wells in June of '66, they're pumping wells?

A Yes.

Q No attempt was made to obtain the pressure?

A No, sir.

Q Well, now, Mr. Kennedy, if we assume that a well in the Simpson Gallup will drain a 160 acres, or in excess of 160 acres, we're also taking into consideration the fact that permeability is 45 millidarcies there and the average permeability as near as you can determine in the Pinon-Gallup is 15 millidarcies. This wouldn't be conducive to as good a drainage as you would have in the Simpson, would it?

A No, sir, it wouldn't but we feel that even 15 millidarcies is adequate to drain 160's. Even though that's converse to the question that you asked mo, true.

Q It might drain it but it would have a little more difficulty draining it?

A That's right, true.

Q It might take a little longer. 620 is the solution



gas oil ratio?

- Yes, sir.
- With respect to these four non-standard units that you have asked for, how many of those include enough net pay that Pan American would drill a well?
- I would say that at least three of them have sufficient pay if we're allowed the relaxation of the location requirements we are asking.
- You stated that if you had 160 acres, you could drill a well with four feet of net pay?
- That's right, and recover merely the cost of drilling and developing.
 - Well, would the two easternmost units have an average of four feet of net pay?
 - It's unlikely that the easternmost one would have, yes, sir. The next one would have around, it would be my guess, somewhere around four.
 - You have one well right in the middle of it that has Q one foot of pay?
 - Yes, sir. The reason for taking in the entire four was because of the configuration of the acreage there, and it was the particular configuration that we gave to each one of these four actually fitted better and came nearer to 160 acre in the manner in which I have them outlined there.



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Q You were just trying to use up the acreage across the pool?

MR. ROSS: I believe that was drawn across geographical lines.

Q (By Mr. Nutter) While this is highly irregular to consider the creation of a pool of this magnitude with only one well, but you feel that with all the Dakota wells that have been drilled, you have fairly defined the area of where the sandbar lays and the thickness of the sandbar?

A Yes, sir.

MR. ROSS: If you just had your information from your discovery well, Mr. Kennedy, you couldn't very well do this, could you?

A No, sir.

MR. NUTTER: I believe that's all. Are there any other questions of the witness? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Ross?

MR. ROSS: No, I believe that concludes our presentation.

MR. NUTTER: Does anyone have anything they wish to offer --

MR. ROSS: Except this one thing; on the 160 acretract, it wouldn't matter materially if it were left our, Mr.



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Kennedy, because it would still have to be drilled on the same spacing, am I correct? Would you want us to file an amended application to include that land?

MR. NUTTER: No.

MR. ROSS: I believe that concludes our case.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3422? If there's nothing further, we will take the Case underadvisement and the Hearing is adjourned.

> (Whereupon, the Hearing was adjourned.)



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EXHIBIT	MARKE FOR IDENTIF	FICATION OFFERED	ADMITTED
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STATE OF NEW MEXICO	}	
	,	SS
COUNTY OF BERNALILLO)	

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 7th day of July, 1966.

NOTARY PUBLIC

My Commission Expires:

June 19, 1967.



I do hereby certify that the foregoing is a complete record of the proceedings in the Exercise hearing of Case No. 3422 heard by no on 1956

Sanainer New Mexico Oil Conservation Commission

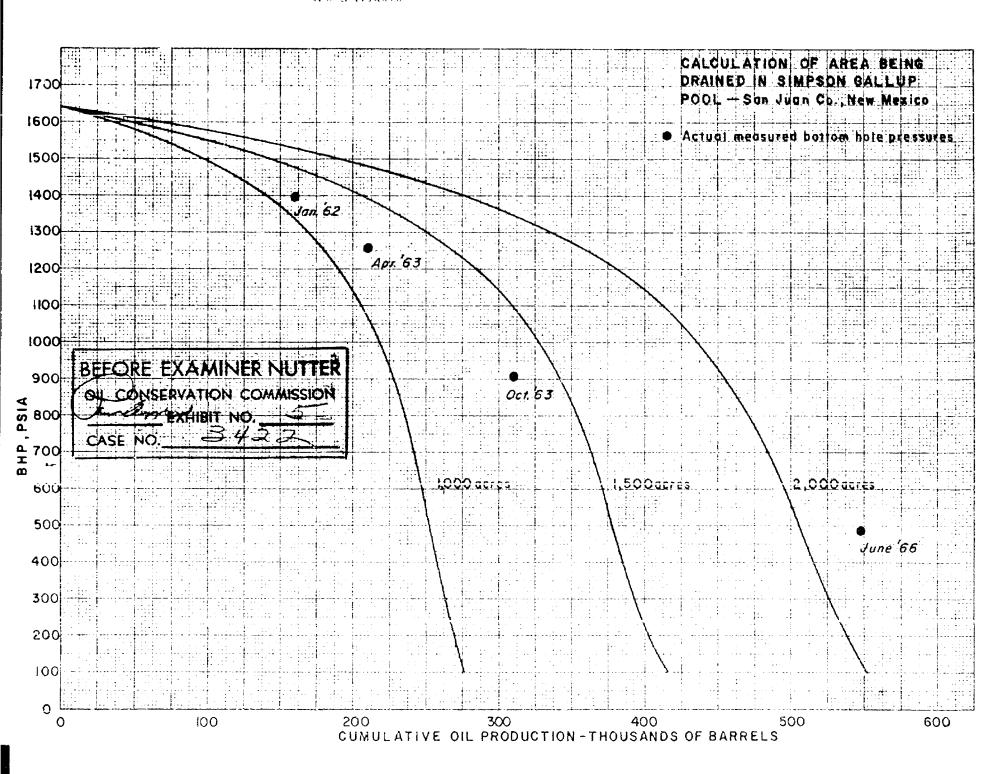
COMPARISON OF PERTINENT RESERVOIR DATA SIMPSON AND PINON GALLUP OIL POOLS SAN JUAN COUNTY, NEW MEXICO

	Simpson Gallup Pool	Pinon Gallup Pool
Original Reservoir Pressure, psig	1640	1470
Reservoir Temperature, ° F.	158	158
Saturation Pressure, psig	1640	1470
Solution Gas-Oil Ratio, Cu. Ft./Bbl.	678	620
Formation Volume Factor	1.406	1.38
Crude Viscosity at Bubble Point Pressure, cp.	0.418	0.44
Average Crude Gravity, O API	40.8	41 - 43
Producing Mechanism	Solution Gas Drive	Solution Gas Dri v e
Average Porosity, %	11.6	10 (Range 9.0 - 13.6%)
Average Permeability, Md	45.0	15 (Range 1.2 - 35%)
Average Water Saturation, %	30.0	25
Average Net Pay Thickness, Ft.	6.0	4
Type Accumulation	Sand Bar	Sand Bar

HEFORE EXAMINER MUTTER

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ECONOMICS BASED ON 11 FT. OF NET F.

	80 Acres	160 Acres
Well Spacing	102,000	204,000
Gross Recovery/Well: MCF Gas Bbls Oil	51,000	102,000
Net Recovery (Less .125 Royalty)		
MCF Gas	89,250	178,500
Bbls Oil	44,600	89,200
Gross Income (Gas @ 13 Cents MCF)	\$11,600	\$23,200
(Oil @ \$2.40/Bbl - FOR Lease)	\$107,000	\$214,000
	\$118,600	\$237,200
Total Gross Income	\$70,000	\$70,000
Drilling and Lease Equipment	4 years	6 years
Estimated Life of Well	\$12,000	\$18,000
Operating Costs @ \$3,000/year	\$5,000	\$5,000
Workover Costs	\$ 9,500	\$19,000
Taxes @ 8.0% of Gross Income	\$96,500	\$112,000
Total Costs	\$22,100	\$125,200
Profit per Well	,32	1.79
ROI (Before Federal Taxes) ,		8 montas
*Payout @ 285 MCF and 120 BOPD	8 months	0 months
	201	304
*Allowable	164	
Penalized Allowable (High GOL)	138	256
Limited Capacity Allowable	120**	120**

^{**}Well will produce only 120 BOPD and 285 MCFD (COR 2875 CF/Bbl)

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