

EXHIBIT "B"

SCHEDULE OF LANDS SHOWING OWNERSHIP OF  
OIL & GAS INTERESTS WITHIN PROPOSED MESAVERDE  
PARTICIPATING AREA FOR COX CANYON AREA  
RIO ARriba COUNTY, NEW MEXICO

TRACT NO.	DESCRIPTION OF LANDS	NUMBER OF ACRES	SERIAL NUMBER	BASIC ROYALTY	UNIT PARTICIPATION	WORKING INTEREST OWNER *	UNIT PARTICIPATION	TOTAL TRACT PARTICIPATION
37	T 31N, R 6W Sec. 11: All Sec. 14: All Sec. 23: All Sec. 26: All	2560.00	SF 078771	12.5%	8.773854	87.5%	61.416977	70.190831
24	T 31N, R 6W Sec. 13: All Sec. 24: All	1087.20	SF 078767	12.5%	3.726146	87.5%	26.083023	29.809169
	TOTAL	3647.20			12.500000		87.500000	100.000000

Total Federal Acreage 3,647.20 = 100.00%

\* The percentage of unit production allocated to the working interest owner of each tract is subject to all outstanding overriding interest of record against the subject lands.

Recap of Ownership

Pacific Northwest Pipeline Corporation 100%

EXHIBIT C

December 21, 1955

Geologically, sections 11, 13, 14, 23, 24 and 26 in Township 31N, R6W are recommended as an initial participating area in the Rosa Unit. These sections have four (4) Mesaverde wells located on them. These wells are as follows:

Rosa Unit #9-11 Section 11-T31N-R6W  
Rosa Unit #10-13 Section 13-T31N-R6W  
Rosa Unit #8-26 Section 26-T31N-R6W  
Colorado O & G Corp. #5, Section 26-T31N-R6W

The #5 Rosa well drilled by Colorado Oil and Gas Corp. is located 990' fnl, and fel Section 26, T31N-R6W. It was completed on December 29, 1952 for an initial potential of 548 MCF on a 3 hour test. TD is 5740'. 7" casing was set at 5309' and cemented with 275 sacks. The well was shot with 140 quarts of nito-glycerin from 5340 to 5410 in the Cliff House. The formation tops in the well are:

Cliff House	-	5387
Menefee	-	5438
Top of Pt. Lookout	-	5658

This well was completed according to our information in the Cliff House only.

The #9-11 Rosa Unit well located 1800' fsl and 1650' fwl, Section 11, T31N-R6W was drilled by Pacific Northwest and was completed September 27, 1955. The well tested 3900 MCF of gas through casing on a 3 hour potential. Formation tops are:

Cliff House	-	5298
Menefee	-	5344
Pt. Lookout	-	5576
TD	-	5740

This well was completed by cementing a production string of 5½" casing to TD at 5740' with 125 sacks of cement. After the running of casing the well was selectively perforated over the entire Mesaverde interval of Point Lookout, Menefee and Cliff House sandstone members. Perforations are:

5364	-	5376
5400	-	5416
5442	-	5454
5464	-	5478
5508	-	5514
5532	-	5548
5580	-	5610
5622	-	5665
5673	-	5682
5692	-	5697

Perforations were made so that sand fracing of the well was accomplished after perforating the Point Lookout, the Menefee and the Cliff House.

The #10-13 Rosa Unit well is located 890' fsl, and 900' fwl. The well was completed on December 12, 1955. 5½" casing was set through the Mesaverde to a TD of 5725' with 150 sacks of regular cement. Formation tops are:

Cliff House	-	5290
Menefee	-	5370
Pt. Lookout	-	5578

Well gauged through tubing 3623 MCF at the end of 3 hours. Pt. Lookout was perforated from:

5712	-	5708
5698	-	5694
5680	-	5670
5662	-	5642
5636	-	5620
5612	-	5594
5588	-	5584

Perforated Menefee	5450	-	5474
	5485	-	5490
	5496	-	5506

Perforated Cliff House	5386	-	5396
	5370	-	5350
	5326	-	5322
	5310	-	5302

Each set of perforations was followed by fracture treatment.

Rosa well #8-26 located 1100' fsl, 900' fwl, section 26, T31N, R6W. This well was completed by Pacific Northwest on August 23, 1955. 5½" casing was set at 5712' and cemented with 100 sacks. The well gauged 2099 MCF on a 3 hour blow-down through casing. Formation tops are:

Cliff House	-	5387
Menefee	-	5438
Pt. Lookout	-	5658
TD	-	5865

The Pt. Lookout was completed by open hole fracture from 5712-5865. Perforations and fracture were made in the Menefee and Cliff House from:

5406	-	5428
5446	-	5480
5548	-	5562
5574	-	5598
5610	-	5636
5656	-	5694

From the above information the geologic interpretation is that the Mesaverde horizon is capable of commercial gas production throughout the above named sections. Study of the

Gamma Ray Neutron logs and sub-surface geologic information indicates that the Mesaverde gas reservoir extends throughout the above participating area in sections 11, 13, 14, 23, 24 and 26. Sections 14, 23 and 24 are so situated that the completed wells are adjacent to the north and south of these sections. The logs and sub-surface structural information indicates that the structural dip is to the east and northeast with no local structure present that would confine the gas to the ~~area~~ of the well sites. It is apparent from the structure and from a study of the type of sand accumulations that the trap confining the gas in the Mesaverde is that of a stratigraphic trap.

VRR:bb

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

#133

August 10, 1955

file

C  
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P  
Y

Pacific Northwest Pipeline Corporation  
Simms Building  
Albuquerque, New Mexico

Attention: Mr. R. N. Richey

Re: Plan of Development  
Rosa Unit  
San Juan and Rio Arriba  
Counties, New Mexico

Gentlemen:

This is to advise the the Plan of Development for the remainder of 1955 for the Rosa Unit, dated July 19, 1955, has this date been approved by the New Mexico Oil Conservation Commission, subject to like approval by the United States Geological Survey and by the Commissioner of Public Lands of the State of New Mexico.

One approved copy of the plan is returned herewith.



Very truly yours,

W. B. Macey  
Secretary-Director

WBM:jh  
cc: USGS, Roswell  
State Land Commissioner, Santa Fe

encl.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

P. O. Box 6721  
Roswell, New Mexico

August 3, 1955

Pacific Northwest Pipeline Corporation  
Simms Building  
Albuquerque, New Mexico

*File*

Gentlemen:

The plan of development dated July 19, 1955, for the Rosa unit area, New Mexico, I-Sec. No. 587, has been approved on this date, subject to like approval by the appropriate State officials.

In addition to the proposed wells listed in the plan of development, adequate offset wells must be drilled to protect the unit area from drainage as provided in the unit agreement.

One approved copy of said plan is returned herewith.

Very truly yours,

JOHN A. ANDERSON  
Regional Oil & Gas Supervisor

Enclosure

Copy to: Cons. Div., Wash (w/1 copy of plan)  
Farmington (w/1 copy of plan)  
MOCC, Santa Fe (ltr only) ✓

*John*

RECEIVED  
JUL 27 1955

# 133

July 22, 1955

*file*

C  
O  
P  
Y

Pacific Northwest Pipeline Corporation  
Sims Building  
Albuquerque, New Mexico

Re: Plan of Development  
Rosa Unit  
San Juan and Rio Arriba  
Counties

Gentlemen:

We are enclosing copy of Plan of Development of the Rosa Unit dated July 19, 1955, which was approved by the Commissioner of Public Lands July 22, 1955. Subject to like approval by the United States Geological Survey and the Oil Conservation Commission.



Very truly yours,

E. S. WALKER  
Commissioner of Public Lands

Encl.  
cc: ~~WMA~~-Roswell  
OCC-Santa Fe  
Mtr

# PACIFIC NORTHWEST PIPELINE CORPORATION

PHONE 3-3547 • SIMMS BUILDING

ALBUQUERQUE, NEW MEXICO

July 19, 1955

RE: Plan of Development, Rosa Unit 1-  
Sec. 587 San Juan and Rio Arriba  
Counties, New Mexico.

Director, U. S. Geological Survey  
Department of Interior  
Roswell, New Mexico

Commissioner of Public Lands  
State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

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

Gentlemen:

In compliance with Sec. 9 of the Rosa Unit Agreement which was duly approved by the Director of the U. S. Geological Survey, The Commissioner of Public Lands of the State of New Mexico and by the Oil Conservation Commission of the State of New Mexico, Pacific Northwest Pipeline Corporation as Successor Unit Operator hereby submits a plan of development for the Rosa Unit for the remainder of the calendar year 1955.

The following table reflects the history of past development within the unit area by the various unit operators:

<u>Well No.</u>	<u>Location</u>	<u>Completed Date</u>	<u>Formation</u>	<u>Potentials</u>	<u>Remarks</u>
1	SE $\frac{1}{4}$ Sec. 11 31N 6W	10-12-49	Morrison	D & A	Non-commercial shows of gas.
2	SE $\frac{1}{4}$ Sec. 11 31N 6W	6-12-50	Pictured Cliffs	D & A	Non-commercial shows of gas.
3	NW $\frac{1}{4}$ Sec. 16 31N 5W	12-21-50	Pictured Cliffs	D & A	Flowed water and little gas.
4	NE $\frac{1}{4}$ Sec. 27 31N 4W	9-20-52	Pictured Cliffs	171 Mcfgpd	Flowed water with gas.

July 19, 1955

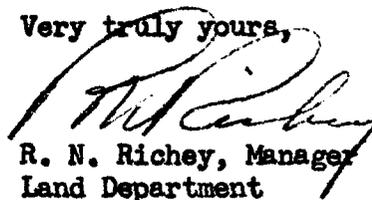
<u>Well No.</u>	<u>Location</u>	<u>Completed Date</u>	<u>Formation</u>	<u>Potentials</u>	<u>Remarks</u>
5	NE $\frac{1}{4}$ Sec. 26 31N-6W	12-29-52	Mesaverde	548 Mcfgpd	Unit Discovery
6	SW $\frac{1}{4}$ Sec. 27 31N-5W	8-11-53	Mesaverde	Abandoned	No commercial shows of gas.
7	NE $\frac{1}{4}$ Sec. 23 31N-4W	1-13-55	Pictured Cliffs	Temporary abandoned	No commercial shows of gas.

Although the drilling of the above and other wells in the vicinity has shown the Rosa Unit to be located near the lowest (geologically speaking) portion of the San Juan Basin, certain nearby wells have shown promise of commercial production. Among these are: (1) The well drilled in Sec. 33 31N-4W which flowed substantial quantities of gas and water from the Fruitland-Pictured Cliffs; (2) The well in Sec. 35 31N-6W which flowed 386 Mcfgpd from the Mesaverde on potential test; and (3) the Fruitland-Pictured Cliffs well in Sec. 35 32N-5W which potentialled 396 Mcfgpd. These, together with the unit discovery well, lead us to believe that if local "highs" can be found within the unit in combination with favorable stratigraphy and adequate reservoir porosity and permeability, commercial production of gas may be developed.

Under this proposed Plan of Development we are now drilling Well Number 8-26 in the SW $\frac{1}{4}$  of Sec. 26 31N-6W which will be carried to the Mesaverde Formation unless completed as a commercial producer in the Fruitland-Pictured Cliffs Section. Upon completion of this well we plan a similar test to be located in the SW $\frac{1}{4}$  of Sec. 11 31N-6W. Wherever appropriate and practicable, pay sections will be drilled with gas and treated with sand-oil frac. After the data gained from drilling of these two wells has been correlated with other wells in this area, we plan to prepare and submit a plan of further development for your approval.

We respectfully solicit your approval of this plan.

Very truly yours,



R. N. Richey, Manager  
Land Department

DNC/gm

Approval is hereby given to the Plan of Development for the Rosa Unit I-Section 587, San Juan and Rio Arriba Counties, New Mexico for the remainder of the calendar year 1955.

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Supervisor, United States Geological Survey.

Subject to like approval by the appropriate State officials.

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Commissioner of Public Lands.

Subject to like approval by the U.S.G.S. and Oil Conservation Commission

APPROVED: W. B. Macey DATE: 8-10-55  
Oil Conservation Commission

Subject to like approval by the U.S.G.S. and Commission of Public Lands.

**PACIFIC NORTHWEST PIPELINE CORPORATION**

PHONE 3-3547 • SIMMS BUILDING  
ALBUQUERQUE, NEW MEXICO

*File*

July 21, 1955

Re: Designation of Successor Unit  
Operator, Rosa Unit Area I-  
Section 587, San Juan and  
Rio Arriba Counties, N.M.

Mr. W. B. Macey  
Oil Conservation Commission  
of the State of New Mexico  
State Capitol Annex Building  
Santa Fe, New Mexico.

Mr. E. S. Walker  
Commissioner of Public Lands  
State Capitol Annex Building  
Santa Fe, New Mexico.

Gentlemen:

We forward herewith one photostat copy of the Designation of Pacific Northwest Pipeline Corporation as Successor Unit Operator to Stanolind Oil and Gas Company for the Rosa Unit. This Designation has been duly approved by your offices and by Arthur A. Baker as the Acting Director of the Geological Survey.

Also please find attached a photostat copy of the Resignation by Stanolind Oil and Gas Company as the Unit Operator for the Rosa Unit.

We forward these instruments to your offices for the completion of your files.

Very truly yours,

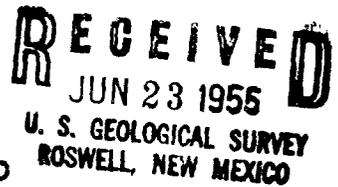
PACIFIC NORTHWEST PIPELINE CORPORATION

*D. N. Canfield*

D. N. CANFIELD,  
Land Department.

*AM*

DNC:GM  
Enclosure.



DESIGNATION OF SUCCESSOR UNIT OPERATOR  
ROSA UNIT AREA  
SAN JUAN AND RIO ARriba COUNTIES, NEW MEXICO  
I SEC. NUMBER 587

THIS INSTRUMENT, dated as of this 16 day of June, 1955, by and between PACIFIC NORTHWEST PIPELINE CORPORATION, hereinafter designated as "First Party", and the owners of unit and working interests, hereinafter designated as "Second Parties",

WITNESSETH:

WHEREAS, under the provisions of the act of February 25, 1920, 41 Stat. 437, 30 U.S.C. Secs. 181, et seq., as amended by the act of August 8, 1946, 60 Stat. 950, the Secretary of the Interior, on the 24th day of January, 1948, approved a unit agreement for the Rosa Unit Area, wherein Standard Oil and Gas Company is designated Unit Operator; and

WHEREAS, said Standard Oil and Gas Company has resigned as such operator, and the designation of a successor Unit Operator is now required pursuant to the terms thereof; and

WHEREAS, the First Party has been and hereby is designated by Second Parties as Unit Operator, and said First Party desires to assume all the rights, duties, and obligations of Unit Operator under the said unit agreement;

NOW, THEREFORE, in consideration of the premises hereinabove set forth and the provisions hereinafter stated, the First Party hereby covenants and agrees to fulfill the duties and assume the obligations of unit operator under and pursuant to all the terms of the Rosa Unit Agreement and the Second Parties covenant and agree that, effective upon approval of this instrument by the Director of the Geological Survey, First Party shall be granted the exclusive right and privilege of exercising any and all rights and privileges as Unit Operator, pursuant to the terms and conditions of said unit agreement; said unit agreement being hereby incorporated herein by reference and made a part hereof as fully and effectively as though said unit agreement were expressly set forth in this instrument.

IN WITNESS WHEREOF, the parties hereto have executed this instrument as of the date hereinabove set forth.

The effective date hereof shall be July 1, 1955.

ATTEST:

[Signature]  
Asst. Secretary

PACIFIC NORTHWEST PIPELINE CORPORATION

By [Signature]  
Vice-President

First Party

ATTEST:

[Signature]  
Assistant Secretary

STANDARD OIL AND GAS COMPANY

By [Signature]  
Vice-President



ATTEST:

[Signature]

COLORADO OIL AND GAS CORPORATION

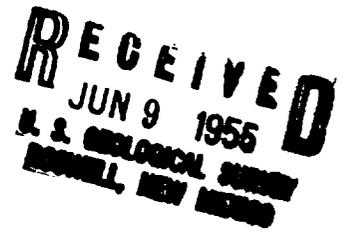
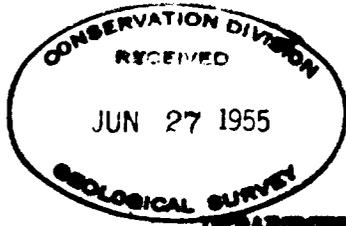
By [Signature]

The undersigned hereby approve the foregoing indenture designating Pacific Northwest Pipeline Corporation as Unit Operator under the Unit Agreement for the Ross Unit Area, as of the 1st day of July, 1955.

Arthur A. Baker  
Acting Director of the Geological Survey

W. B. Macey  
Oil Conservation Commission  
of the State of New Mexico

E. Walker  
Commissioner of Public Lands  
of the State of New Mexico



DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

In re: Unit Agreement For The Development And Operation Of The, Rosa Unit Area Counties of San Juan And Rio Arriba State of New Mexico I-Sec. No. 587

RESIGNATION OF UNIT OPERATOR

To The Honorable Director of the U. S. Geological Survey Washington, D.C.

To The Honorable The Commissioner of Public Lands State of New Mexico Santa Fe, New Mexico

To The Working Interest Owners under said Unit Agreement

Gentlemen:

Stanolind Oil and Gas Company, Unit Operator under the above described Unit Agreement, and pursuant to the provisions of Section 4, of said agreement, hereby respectfully resigns as Unit Operator under said Unit Agreement effective July 1, 1955, and gives notice of such resignation.

Proceedings have been initiated looking towards the selection of a Successor Unit Operator. If no successor Operator is designated and qualified by July 1, 1955 the provisions of Section 4 of the Unit Agreement will still be applicable.

Dated, this 6<sup>th</sup> day of June, A.D., 1955.

Attest:

STANOLIND OIL AND GAS COMPANY

[Signature] Asst. Secretary

By [Signature] Vice-President



MAIN OFFICE 000

RECORDED & INDEXED 1:13

*file*

*1:13*

February 28, 1955

Colorado Oil & Gas Corporation  
Denver Club Building  
Denver, Colorado

Re: Rosa Unit  
Rio Arriba & San Juan Counties  
New Mexico  
1955 Plan of Development

Gentlemen:

Reference is made to your letter of February 18, 1955 requesting an extension of time in which to file a Plan of Development for calendar year 1955 for the Rosa Unit.

Please be advised that the New Mexico State Land Commission has this date approved an extension of time to April 15, 1955 in which to file this Plan of Development.

This extension of time approved subject to similar approval by the United States Geological Survey and by the New Mexico Oil Conservation Commission.

Very truly yours,



E. S. WALKER  
COMMISSIONER OF PUBLIC LANDS

cc Oil Conservation Commission ✓  
Santa Fe, New Mexico

United States Geological Survey  
Roswell, New Mexico

*John*

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

February 25, 1955

*file*

Colorado Oil and Gas Corporation  
311 Equitable Building  
Denver 2, Colorado

Re: Rosa Unit  
Rio Arriba & San Juan Counties,  
New Mexico  
1955 Plan of Development

Gentlemen:

Reference is made to your letter of February 18, 1955, requesting an extension of time in which to file a Plan of Development for calendar year 1955 for the Rosa Unit.

Please be advised that the New Mexico Oil Conservation Commission has this date approved an extension of time to April 15, 1955, in which to file this Plan of Development. Said plan, when filed, should provide for the drilling of at least five wells of sufficient depth to adequately test the Mesaverde formation and such other wells as may be necessary to protect the unit from drainage.

This extension of time approved subject to similar approval by the United States Geological Survey and by the Commissioner of Public Lands of the State of New Mexico.

Very truly yours,

W. B. MACEY,  
Secretary - Director

*WBM*

WBM/lr

cc: U. S. Geological Survey - Roswell  
Commissioner of Public Lands - Santa Fe

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UNITED STATES  
 MAIN OFFICE 900  
 DEPARTMENT OF THE INTERIOR  
 GEOLOGICAL SURVEY  
 RECEIVED FEB 23 1955  
 P. O. Box 6721  
 Roswell, New Mexico

February 23, 1955

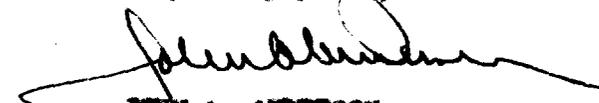
Colorado Oil and Gas Corporation  
 Denver Club Building  
 Denver, Colorado

Gentlemen:

Reference is made to your letter of February 18, requesting an extension of time until April 15, 1955, within which to file a plan of development for the calendar year 1955, for the Rosa unit area, New Mexico, I-See. No. 587. The extension of time is requested for the reason that it is contemplated that the Pacific Northwest Pipeline Corporation will assume the obligations and duties of unit operator by such date and will be in a position to coordinate its Rosa unit development with its overall program in the San Juan basin.

The extension requested is hereby approved subject to like approval by the appropriate State officials. A plan of development must be filed on or before April 15, 1955, providing for the drilling of at least five wells to the base of the Mesaverde formation unless production of unitized substances in paying quantities is found at a lesser depth. In addition, the plan must provide for the drilling of all wells necessary to protect the unitized land from drainage.

Very truly yours,

  
 JOHN A. ANDERSON  
 Regional Oil and Gas Supervisor

Copy to: Cons.Div., Wash., D.C. (w/1 copy of request for extension)  
 Farmington (w/1 copy of request for extension)  
 N.M.O.G.C. (ltr. only) ✓

*Jan*

COLORADO OIL AND GAS CORPORATION

100-100000

100-100000

February 18, 1955

Re: Rosa Unit, Rio Arriba County,  
New Mexico, Revised Development  
Program

*file*

Mr. John A. Anderson, Supervisor  
United States Geological Survey  
Roswell, New Mexico

Mr. E. S. Walker  
Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico

Mr. R. R. Spurrier  
New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

You gentlemen have heretofore approved revised development program for the captioned area submitted by Colorado Oil and Gas Corporation under date of July 8, 1954, and pursuant to such plan Colorado has completed and shut in its No. 7 Rosa Unit in Section 23-31N-4E, as a small gas well in the Pictured Cliffs, at a total depth of 3861 feet. It is unlikely that the well will ever produce gas in commercial quantities.

Colorado has reached an agreement with Pacific Northwest Pipeline Corporation under which Pacific will succeed to all of Colorado's rights in the Rosa Unit contingent, among other things, upon completion of certain financing by Pacific. News releases this past week have reported approval of Pacific's financing program by the Federal Power Commission.

In consideration of the probability that a development program for 1955, if filed at this time by Colorado, would not conform to the plans and program of Pacific after it assumes the obligation of Colorado in respect to the Rosa Unit, Colorado respectfully requests that it be permitted to withhold and postpone the filing of such a program until April 15, 1955. By such date it is expected that Pacific will have assumed the position of Operator and will be in a position

*file*

*answered Feb 25  
extension of time  
Apr. 15 approved  
providing plan when  
filed calls for  
at least 5  
MW wells*

COLORADO OIL AND GAS CORPORATION

Messrs. Anderson, Walker and Spurrier  
Page Two  
February 18, 1955

to coordinate its Basin development into its overall program in the  
San Juan Basin.

Yours very truly,

COLORADO OIL AND GAS CORPORATION

By   
Vice President

JPM:dac

July 20, 1954

Colorado Oil and Gas Corp.  
311 Equitable Building  
Denver, Colorado

Re: Revised Development  
Program, Rosa Unit  
Agreement, Rio Arriba  
County, New Mexico

Gentlemen:

Your letter dated July 8, 1954 requesting approval of a revised development program for the above captioned unit has been received by this office.

We wish to advise that we approve the revised plan of development on this date, subject to like approval by the Oil Conservation Commission and United States Geological Survey.

Yours very truly,

W. E. Walker  
Commissioner of Public Lands

cc: United States Geological  
Survey  
Roswell, New Mexico (3)

Oil Conservation Commission ✓  
Santa Fe, New Mexico (1)

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IN REPLY REFER

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

*File*

P. O. Box 6721  
Roswell, New Mexico

July 19, 1954

Colorado Oil and Gas Corporation  
311 Equitable Building  
Denver, Colorado

Gentlemen:

The revised plan of development dated July 8, 1954, for the Rosa unit area, Rio Arriba County, New Mexico, I-Sec. No. 587, has been approved this date subject to like approval by the Commissioner of Public Lands, State of New Mexico, and the New Mexico Oil Conservation Commission.

One approved copy of the revised plan is returned herewith.

Very truly yours,

JOHN A. ANDERSON  
Regional Oil and Gas Supervisor

Enclosure

Copy to: Cons.Div., Wash.D.C. (w/1 copy of plan)  
LN.M.O.C.C., Santa Fe

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

73

July 16, 1954

Colorado Oil & Gas Corp.  
311 Equitable Building  
Denver, Colorado

Re: Revised development program.  
Rosa Unit.

Gentlemen:

Reference is made to your letter of July 8, 1954 requesting approval of a revised development program for the above captioned unit.

Please be advised that the revised development program for the Rosa Unit is hereby approved by the New Mexico Oil Conservation Commission effective as of this date, subject to like approval by the U. S. G. S. and the Commissioner of Public Lands of the State of New Mexico.

Very truly yours,

W. B. Macey  
Secretary - Director

WBM:jh

cc: U. S. G. S.  
Roswell, New Mexico

State Land Office  
Santa Fe, New Mexico

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MAIN OFFICE OCC

COLORADO OIL AND GAS CORPORATION

311 EQUITABLE BUILDING

DENVER, COLORADO  
July 8, 1954

1954 JUL 9 AM 11:43

Re: Revised Development Program  
Rosa Unit  
Rio Arriba County, New Mexico

Mr. John A. Anderson, Supervisor  
United States Geological Survey  
Roswell, New Mexico

Mr. E. S. Walker  
Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico

Mr. R. R. Spurrier  
New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

On July 24, 1953, Colorado Oil and Gas Corporation filed its development program for the captioned unit for the one year period beginning August 1, 1953, to which program reference is here made, and for ready reference is attached hereto. Approval of such program was granted by your offices at varying dates thereafter.

1.) Pursuant to such program Colorado continued its efforts to clean out and successfully complete as a gas producer its No. 6 Rosa well, which had been drilled to 6300 feet and heavily shot with nitroglycerin. After adequate testing, extensive clean out operations and a total expenditure of \$157,000 on the well, gas recovery was too small to measure and operations were suspended. Clean out and other work done on the well after June 1, 1953, cost \$66,000.

2.) Well No. 5 has not yet been cleaned out and shot with nitroglycerin. Cable tool clean out operations on well No. 6 proved to be unduly expensive and less than moderately successful, and the proposed operation was postponed until rotary clean out equipment with gas as circulating medium would become available in the near vicinity. Recent completion techniques now in use in the San Juan Basin recommends sand or formation fracturing of the lower Mesa Verde section in lieu of nitroglycerin shooting, and it is our intention to make provision for this work at some later date.

Mr. John A. Anderson  
Mr. E. S. Walker  
Mr. R. R. Spurrier

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7-8-54

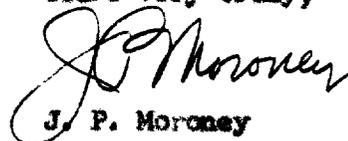
3.) Critical Mesa Verde tests drilled by other operators at close-in locations on the south, west and north sides of the Rosa unit have been disappointing, and, together with our experience in Mesa Verde drilling, has brought about a considerable revision in our thinking. Of the four wells drilled adjacent to the Rosa unit only one, Phillips Petroleum No. 1-35 in Section 35-31N-6W, could be completed as a producer in Mesa Verde, and it gauged only 32 $\frac{1}{2}$  MCF per day. The three others were dry. Phillips Petroleum Company drilled a Mesa Verde failure in Section 29-32N-4W; Stanolind's No. 2 unit in Section 35-32N-5W was plugged back and completed for a Pictured Cliffs producer after shooting and testing Mesa Verde; El Paso Natural Gas Company was unable to complete a commercial gas producer at its test in Section 33-31N-4W. Further to the east in Ranges 3W and 4W, south of the Rosa Block, Pictured Cliffs tests indicate a trend of better sand conditions and higher completion gauges, and our geologists now recommend this zone as an increasingly promising objective. Our own Rosa No. 4 well located in Section 27-31N-4W, although a mediocre completion in Pictured Cliffs, showed on drillstem test through that zone for a combined natural flow of about 1500 MCF. The poor completion is probably explained by loss of some 1600 barrels of drilling fluid between 3700 and 4000 feet, yet the good drillstem test further affirms the build-up of a better Pictured Cliffs producing trend.

We therefore request your approval of our application to modify and revise Item 2, as follows:

On or before November 1, 1954, weather permitting, move in one rotary rig to the east side of the Rosa Unit at a location to be approved by the Supervisor and by State of New Mexico authorities, and drill to a depth sufficient to test the Pictured Cliffs formation. If productive in Pictured Cliffs, move the rotary rig to a second location within 30 days, weather permitting, and drill to test Pictured Cliffs. Both wells should be completed with gas if it can be made available, and either shot with nitroglycerin or sand fractured. Following completion of the two wells, and assuming one or both will be commercially productive of gas, we will file a development plan for the ensuing year.

Will you please approve the above as our revised development plan.

Yours very truly,

  
J. P. Moroney

JFM daw

KS

STANOLIND OIL AND GAS COMPANY  
Tulsa, Oklahoma

December 1, 1953

File: GDM-41,212

Re: Rose Unit  
San Juan and Rio Arriba  
Counties, New Mexico

133

~~Mr. John Anderson  
Regional Oil and Gas Supervisor  
U. S. Geological Survey  
Roswell, New Mexico~~

Dear Sir:

Please find herewith for Departmental distribution four (4) counter-  
parts each of:

1. "Consent" by which Lewis W. Lynch commits his royalty interest under tract IX, being E. E. S. No. 282 in Section 26-31N-4W, N. M. P. M.
2. "Ratification and Joinder of Unit Agreement and Unit Operating Agreement" by which Stanclind commits the working interest under the same tract.

Please note that the Consent has been accepted by Stanclind as unit operator and working interest owner.

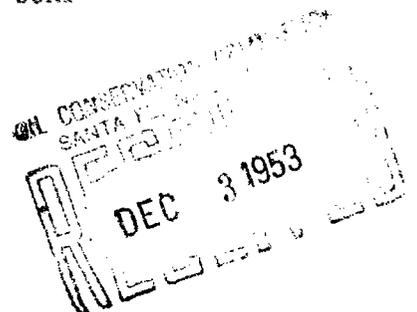
Yours very truly,

G. B. Jenkinson

By <sup>Original</sup> Signed by T. A. CORY

JM/gje  
Enclosures

cc: New Mexico Oil Conservation Commission  
Commissioner of Public Lands, State of New Mexico  
Lewis W. Lynch - Dulce, New Mexico



COPY

C O N S E N T

In consideration of the execution of the Unit Agreement for the Development and Operation of the Rosa Unit Area, Counties of San Juan and Rio Arriba, State of New Mexico, in form approved by the Secretary of the Interior, the undersigned owners of lands or interests in lands or royalties or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his particular ownership or interest, briefly described opposite his signature, consent to the inclusion of said lands within the Unit Area therein defined, approve and adopt the terms of said Unit Agreement as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Plan; agree that the drilling and development requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and of the proceeds of gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

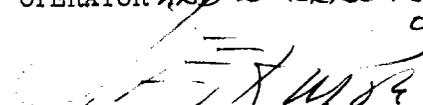
Executed this 20 day of May, 1953.

SIGNATURES	ADDRESSES	DESCRIPTIONS
 Lewis W. Lynch	Dulce New Mexico	- H. S. O. 282 Tract No. 26-31-41
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**NOTARY ACKNOWLEDGMENT---Individual**

STATE OF Colorado ~~NEW MEXICO~~,  
 County of La Plata } ss.  
 On this 20 day of May, 1953, before me personally  
 appeared Lewis W. Lynch  
 to me personally known to be the person.....described in and who executed the foregoing instrument, and acknowledged that he executed the same as his free act and deed.  
 IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.  
 My Commission expires 12-11-56

  
 Notary Public

UNIT OPERATOR AND WORKING INTEREST OWNER  
 By   
 Vice President

APPROVED  


RATIFICATION AND JOINDER OF UNIT AGREEMENT AND UNIT OPERATING AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Rosa Unit Area, Counties of San Juan and Rio Arriba, State of New Mexico, in form approved on behalf of the Secretary of the Interior, and in consideration of the execution or ratification by other working interest owners of the contemporary Unit Operating Agreement which relates to said Unit Agreement, the undersigned owners of a certain Patented land lease, viz:

Patented Land Lease, covering H. E. No. 282 in Sec. 26 - T31N - R4W, New Mexico (being Tract IX of the Rosa Unit)

hereby consents to the inclusion of said lands within the said Unit Agreement, approves and adopts each and every of the terms of said Unit Agreement, and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative, agrees that the term of said lease is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agrees that the drilling, development, and producing requirements of said lease and other contracts relating thereto shall be deemed fully performed by the performance of the provisions of said Unit Agreement, and agrees that payment for or delivery of oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the above described lands regardless of actual production therefrom shall constitute full performance of all such obligations to the undersigned existing under said lease.

For a like consideration, the undersigned does hereby expressly ratify, approve, adopt, confirm, and join in said Unit Operating Agreement to the extent of the undersigned's leasehold interest in the above described lands, and agrees to be governed by all the terms and provisions thereof as a working interest owner, as fully to all intents and purposes as though the undersigned had originally executed said Unit Operating Agreement and all counterparts thereof.

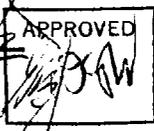
And the undersigned does especially agree to the allocation of cost as set forth in said Unit Operating Agreement and the Exhibits attached thereto.

This Agreement shall inure to the benefit of and be binding upon the successors and assigns of the undersigned.

ATTEST: DATE: STANOLIND OIL AND GAS COMPANY  
Unit Operator and Working Interest  
Owner  
By Frank Lindeman, Jr. Vice President

Ray A. McAdams  
Assistant Secretary

JUL 3 1953



STATE OF Oklahoma  
COUNTY OF  Tulsa

On this 3rd day of July, 1953, before me appeared Frank Lindeman, Jr., to me personally known, who, being by me duly sworn, did say that he is the Vice President of STANOLIND OIL AND GAS COMPANY and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said Frank Lindeman, Jr. acknowledged said instrument to be free act and deed of said corporation.

Given under my hand and seal of office this 3rd day of July, 1953

My commission expires:  
My Commission Expires October 4, 1955

Maxine McAdams  
Notary Public  
Maxine McAdams

RATIFICATION AND JOINDER OF UNIT AGREEMENT AND UNIT ACCOUNTING AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Rosa Unit Area, Counties of San Juan and Rio Arriba, State of New Mexico, in form approved on behalf of the Secretary of the Interior, and in consideration of the execution or ratification by other working interest owners of the contemporary Unit Accounting Agreement which relates to said Unit Agreement, the undersigned owner of a certain lease, viz:

STATE of New Mexico Lease covering E/2 SE/4 Sec. 16 - T 31N-R6W, New Mexico hereby consents to the inclusion of said lands within the said Unit Agreement, approves and adopts each and every of the terms of said Unit Agreement, and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative, agrees that the term of said lease is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agrees that the drilling, development, and producing requirements of said lease and other contracts relating thereto shall be deemed fully performed by the performance of the provisions of said Unit Agreement, and agrees that payment for or delivery of oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the above described lands regardless of actual production therefrom shall constitute full performance of all such obligations to the undersigned existing under said leases.

For a like consideration, the undersigned does hereby expressly ratify, approve, adopt, confirm, and join in said Unit Accounting Agreement to the extent of the undersigned's leasehold interest in the above described lands, and agrees to be governed by all the terms and provisions thereof as a working interest owner, as fully to all intents and purposes as though the undersigned had originally executed said Unit Accounting Agreement and all counterparts thereof.

And the undersigned does especially agree to the allocation of cost as set forth in said Unit Accounting Agreement and the Exhibits attached thereto, except that the undersigned shall not be charged with that part of the costs of drilling and completing the initial test well drilled on the unit area which under the terms of paragraph 8 of said Unit Accounting Agreement would be allocated to the working interest ownership in the above described lands.

This Agreement shall inure to the benefit of and be binding upon the successors and assigns of the undersigned.

ATTEST:

R. E. Arnold R. E. ARNOLD  
ASSISTANT Secretary

DATE:

7-21-53

PHILLIPS PETROLEUM COMPANY

By

[Signature]  
Vice President

R. E. ROBERTS

STATE OF Oklahoma  
COUNTY OF Washington

On this 21 day of July, 1953, before me appeared N. E. Koopman, to me personally known, who, being by me duly sworn, did say that he is the Vice President of Phillips Petroleum Company and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said N. E. Koopman acknowledged said instrument to be the free act and of said corporation.

Given under my hand and notarial seal this 21 day of July, 1953.

My Commission expires:

August 1, 1955

Martha Rinehart  
Notary Public

APPROVED

ATTEST:

DATE:

STANOLIND OIL AND GAS COMPANY  
UNIT OPERATOR

APPROVED  
JEB  
LEB

Ray A. McIntyre AUG 18 1953  
Assistant Secretary

By Frank Linderman  
Vice President

Address: P. O. Box 591, Tulsa, Oklahoma

STATE OF Oklahoma  
COUNTY OF Tulsa

On this 18th day of August, 1953, before me appeared Frank Linderman, to me personally known, who, being by me duly sworn, did say that he is the Vice President of STANOLIND OIL AND GAS COMPANY and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said Frank Linderman acknowledged said instrument to be the free act and deed of said corporation.

Given under my hand and seal of office this 18th day of August, 1953.

My commission expires:

January 26, 1955

W. L. MacCart  
Notary Public

**C. L. CONSERVATION COMMISSION**  
P. O. BOX 871  
SANTA FE, NEW MEXICO

**August 26, 1953**

**Colorado Oil and Gas Corporation**  
**P. O. Box 1087**  
**Colorado Springs, Colorado**

**Re: Development Program**  
**Rosa Unit**  
**Rio Arriba County, New Mexico**

**Gentlemen:**

**The Development Program for the above captioned unit, as set out in your letter of July 24th, is approved as of this date.**

**Very truly yours,**

**R. R. Spurrier**  
**Secretary and Director**

**RRS:vc**

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STANOLIND OIL AND GAS COMPANY

Tulsa, Oklahoma

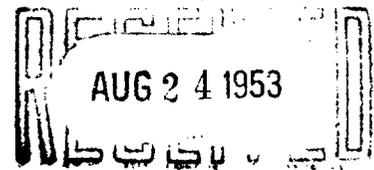
W.B.M.

August 21, 1953

File: GBJ-41.212

Re: Rosa Unit  
San Juan and  
Rio Arriba Counties,  
New Mexico

OIL CONSERVATION COMMISSION  
STATE OF NEW MEXICO



Mr. John Anderson  
Regional Oil and Gas Supervisor  
U. S. Geological Survey  
Roswell, New Mexico

Dear Sir:

Please find herewith for Departmental Distribution four (4) counterparts of a "Ratification and Joinder of Unit Agreement and Unit Accounting Agreement" by which Phillips Petroleum Company commits its full working interest in the E/2 SW/4 Section 16-T31N-R6W, New Mexico, to the Rosa Unit.

This joinder has been approved by Stanolind Oil and Gas Company as Unit Operator.

Yours very truly,

G. B. Jenkinsen

By: Original Signed by LAWRENCE E. BROCK

JM/gjj  
Enclosures

cc: Mr. E. S. Walker  
Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico

Mr. R. R. Spurrier  
Oil Conservation Commission  
State of New Mexico  
Santa Fe, New Mexico

Owen I. Jones  
Phillips Petroleum Company  
Bartlesville, Oklahoma

COPY



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

*W. J. M.*  
IN REPLY REFER TO:

*Car. 103*

P. O. Box 6721  
Roswell, New Mexico

August 17, 1953

Colorado Oil and Gas Corporation  
P. O. Box 1087  
Colorado Springs, Colorado

Gentlemen:

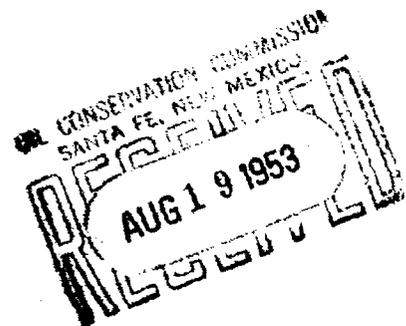
Receipt is acknowledged of the Plan of Development dated July 24, 1953, for the period beginning August 1, 1953, and ending July 31, 1954, filed pursuant to the provisions of the Ross unit agreement, New Mexico, L-Sec. No. 587, approved June 24, 1948.

The plan of development is hereby approved subject to like approval by the Commissioner of Public Lands, State of New Mexico, and the New Mexico Oil Conservation Commission, as required under the terms of the unit agreement.

Very truly yours,

JOHN A. ANDERSON  
Regional Oil and Gas Supervisor

Copy to: Commissioner of Public Lands (1tr only)  
New Mexico Oil Conservation Commission (1tr only)



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

August 3, 1953

Mr. J. P. Moroney  
Colorado Oil and Gas Corporation  
P. O. Box 1087  
Colorado Springs, Colorado

Re: Rosa Unit, Rio Arriba, N.M.  
Substitution of Page 1  
Development Program Letter

Dear Sir:

As requested by your letter of July 30th, we are returning herewith 2 copies of page 1 of the above captioned letter, dated July 24th and have substituted in lieu thereof the copies of page 1 wherein the words, "Colorado Oil and Gas" appear.

Very truly yours,

R. R. Spurrier  
Secretary and Director

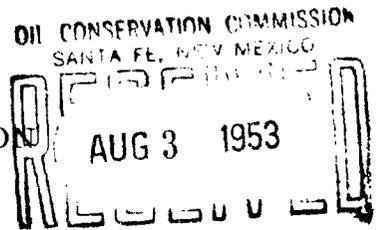
RRS:vc  
Encls.

C  
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Y

COLORADO OIL AND GAS CORPORATION

P. O. Box 1087

COLORADO SPRINGS, COLORADO



J. P. MORONEY  
VICE PRESIDENT

July 30, 1953

Re: Rosa Unit, Rio Arriba, N. Mex.  
Substitution of Page 1  
Development Program Letter

Mr. John A. Anderson, Supervisor  
United States Geological Survey  
Roswell, New Mexico

Mr. E. S. Walker  
Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico

Mr. R. R. Spurrier ✓  
New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Dear Sir:

Enclosed is page 1 of the above-captioned letter, dated July 24, 1953. We notice that in error the words, "Colorado Interstate Gas," were used instead of "Colorado Oil and Gas"; therefore we shall appreciate your returning the page 1 which you now have and substituting the enclosed.

Yours very truly,

J. P. Moroney

JPM:CN  
Enc.

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
AUG 3 1953

COLORADO OIL AND GAS CORPORATION

P. O. Box 1087

COLORADO SPRINGS, COLORADO

J. P. MORONEY  
VICE PRESIDENT

July 24, 1953

Mr. John A. Anderson, Supervisor  
United States Geological Survey  
Roswell, New Mexico

*Case 153*  
Re: Development Program  
Rosa Unit  
Rio Arriba County, New Mexico

Mr. E. S. Walker  
Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico

Mr. R. R. Spurrier ✓  
New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

*file*

Dear Sir:

On May 15, 1953, this Company requested approval of its plan of development for the captioned area for 1953, which program proposed to complete well No. 6 in the Mesaverde formation and to clean out, shut and recomplete well No. 5, also in the Mesaverde formation. Your letter of June 18, 1953, called attention to the fact that neither well was started in 1953.

Colorado Oil and Gas Corp. began operations on the Rosa unit pursuant to its agreement dated June 6, 1952. Stanolind had theretofore started well No. 4 as a cable-tool operation on September 12, 1951, and had reached a depth of 1445 feet when Colorado Oil and Gas took over operations on May 7, 1952, and replaced the cable-tool rig with a rotary. We expended \$117,455 in drilling this well to 4011 feet and in testing and shooting and completing in the Pictured Cliffs formation. Completion gauge was 171,000 CF.

Well No. 5 was spudded on September 12, 1952, and was drilled to 5740 feet in the Mesaverde. Drill-stem tests in the Fruitland and Pictured Cliffs sections made very small volumes of gas and small amounts of water, but these formations were not entirely tested. The hole was plugged back from 5740 to 5410 feet and shot with only 140 quarts in the Mesaverde between 5340 and 5350 feet and on final test gauged 548,000 CF. It was this test on which approval of discovery of commercial gas production was made by the Acting Director on April 8, 1953. While testing and completing this well, it was perforated in the Fruitland-Pictured Cliffs section between 3036 and 3142 feet

COLORADO OIL AND GAS CORPORATION  
COLORADO SPRINGS, COLORADO

Mr. John A. Anderson  
Mr. E. S. Walker  
Mr. R. R. Spurrier

Page 2

July 24, 1953

but made considerable water with small volumes of gas. The sum of expenditures in drilling this well amounted to \$114,943. A study of the samples and check of the electric log indicates sufficient development of the Mesaverde sandstone so that a heavier shot of nitroglycerin than the 140 quarts used would have been justified, and it is our intention to recomplete as heretofore outlined.

Well No. 6 was spudded November 5, 1952, and drilled to 3783 feet through the Pictured Cliffs before operations were suspended on account of winter weather on December 15, 1952. On April 28, 1953, operations were resumed and the well deepened to 6300 feet in the Mesaverde. Total expenditures to June 1, 1953, were \$125,045, but this did not include a substantial portion of the work done since April 28, 1953.

Summarizing the efforts of Colorado Oil and Gas Corp. to develop the Rosa unit, you will note that it began operations on May 7, 1952, and first deepened and completed well No. 4 from an old total depth of 1445 feet; well No. 5 was spudded on September 12, 1952, and No. 6 commenced drilling on November 5, 1952; and that total expenditures of May 1, 1953, have reached \$357,443.

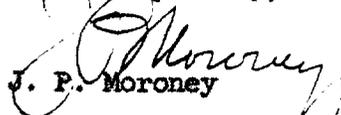
Meanwhile well No. 6 has been drilled into the Mesaverde and shot with nitroglycerin with 1380 quarts from 5865-6300, and it does not appear that it will be a commercial well.

We have reviewed your letter of June 18, 1953, and in the light of developments we now propose the following as our plan of development for the year beginning August 1, 1953, and ending July 31, 1954.

1. Continue clean-out operations on well No. 6 until this Mesaverde section has been adequately tested.
2. Clean out well No. 5 to a total depth of 5740 feet and shoot the entire Mesaverde section with nitroglycerin for recompletion in that horizon as a producing gas well.
3. Commence at least two rotary-drilled wells which will test the Mesaverde--these locations to be approved by the Supervisor--and diligently drill same to said prospective horizon unless gas in commercial quantities shall be encountered at depths shallower than the Mesaverde.
4. Commence and diligently continue drilling any well necessary to prevent drainage of oil or gas by a well or wells drilled by others on adjoining or offsetting lands.

Will you please approve the above as our plan of development.

Yours very truly,

  
J. P. Moroney

JPM:CN



IN REPLY REFER TO:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

*W. M. M.*  
*Call 33*

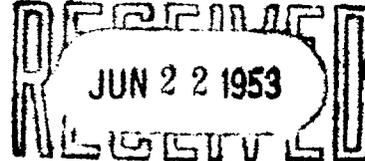
P. O. Box 997  
Roswell, New Mexico

June 18, 1953

Colorado Oil and Gas Corporation  
Colorado Springs National Bank Building  
Colorado Springs, Colorado

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO.

Attention: Mr. J. P. Murney



Gentlemen:

Reference is made to your letter of May 15, which you request be approved as the plan of development for the remainder of the calendar year 1953 for the Hama unit area, San Juan and Rio Arriba Counties, New Mexico.

Your letter proposed to complete well No. 6 in the Mesaverde formation and to clean-out, shoot, and recomple well No. 5 in the Mesaverde formation. Neither well was started in 1953.

Geological Survey records disclose that the unit agreement has been in effect since June 24, 1948, and that it embraces approximately 54,209 acres. As of this date six wells have been drilled or are in the process of drilling, only one of which, well No. 5, has been considered as having discovered gas in paying quantities.

In view of the period of time the unit agreement has been in effect and the acreage involved, it is our opinion that diligent effort to develop the unit area requires a minimum of one string of tools in continuous operation or the commencement of a minimum of two Mesaverde wells during the remainder of the calendar year 1953 in order to create sufficient reserves to justify the construction of a pipe line to market the gas.

*OK*  
*K.S.*  
*1/12/53*

You are requested to consider the above-cited drilling program and resubmit your plan of development. A copy of the plan should be submitted to the Commissioner of Public Lands, State of New Mexico, and to the New Mexico Oil Conservation Commission, as is provided under Section 9 of the unit agreement. A minimum of four copies should be submitted to this office.

Very truly yours,

(Orig. Sgd.) JOHN A. ANDERSON  
JOHN A. ANDERSON

cc: Commissioner Of Public Lands  
Regional Oil and Gas Supervisor  
New Mexico Oil Conservation Commission  
Stanford Oil and Gas Company

COLORADO OIL AND GAS CORPORATION  
COLORADO SPRINGS NATIONAL BANK BUILDING  
COLORADO SPRINGS  
COLORADO

May 15, 1953

C  
O  
P  
Y

Re: Rosa Unit, San Juan and  
Rio Arriba Counties, New Mexico

Mr. John A. Anderson  
Supervisor, U. S. Geological Survey  
Roswell, New Mexico

Dear Sir:

Under date of April 8, 1953, Thomas B. Nolan, Acting Director, U. S. Geological Survey, concurred in the determination that a valuable discovery of gas in paying quantities had been made on coveited land within the above-captioned unit area sufficient to constitute satisfactory compliance with the applicable provisions of Section 17 (b) of the Act of August 8, 1946.

We now desire to file this as our plan of development of the captioned area for 1953:

1. Well No. 6, located in 27-31N-5W, Rio Arriba County, was suspended last fall at 3710 feet after the Pictured Cliffs formation had been tested and found dry. On April 28, 1953, drilling operations were resumed; and the well is now drilling below 5450 feet with rotary. We propose to set 7-inch casing on top of the Mesaverde and drill through the Mesaverde with cable tools, shooting with nitroglycerin and completing in that formation.

2. Well No. 5, located in 26-31N-6W, was drilled to 5740 feet, plugged back to 5708 and shot between 5340-5410 with 140 quarts of nitroglycerin for a completion as a gas well, producing 548,000 of gas per day. After completion of well No. 6 as outlined in paragraph No. 1 above, the cable-tool rig will be moved over this well; it will be cleaned out to total depth; and after shooting the entire Mesaverde section with nitroglycerin, it will be recompleted in that as a producing gas well.

Will you please approve the above as our plan of development for 1953.

Yours very truly,

(s) J. P. Moreney

J. P. Moreney

JPM:CN

C O P Y

Case 133

September 22, 1952

Oil and Public Lands Commission  
Santa Fe, New Mexico  
RECEIVED  
SEP 23 1952

C  
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P  
Y

Re: Rosa Unit  
San Juan and Rio Arriba  
Counties, New Mexico  
AFE- 8234

Mr. D. B. Mason, Jr.  
Stanolind Oil and Gas Company  
Oil and Gas Building  
Fort Worth, Texas

Dear Mr. Mason:

We are in receipt of your letter dated September 10, 1952 together with the two executed copies of Application for Extension of the primary term of the Rosa Unit Agreement to December 31, 1954.

Subject to similar consent to such extension being approved by the proper officials of the Department of the Interior, I am agreeable to an extension of the agreement for two years from and after December 31, 1952.

The two copies of the application for extension are being forwarded to the United States Geological Survey for their consideration.

Very truly yours,

CHY SHEARD  
Commissioner of Public Lands

cc: U.S. Geological  
Survey, Roswell, N.M.  
Oil Conservation Commission,  
Santa Fe, N. Mex.

ct

Case  
133

OIL COMPANY  
RECEIVED  
DEC 14 1950

December 14, 1950

**Stanolind Oil and Gas Company  
Fort Worth, Texas**

**Attention: Mr. Jack W. Hamilton**

**Re: Rosa Unit I Sec. 587  
San Juan - Rio Arriba  
County, New Mexico**

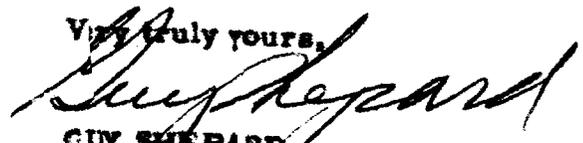
**Gentlemen:**

After discussion of the matter with Mr. Oliver Seth, Attorney of Santa Fe, New Mexico, I belatedly acknowledge receipt of your Application of November 17, 1950 for extension of the Rosa Unit Agreement for a two year period from December 31, 1950 to and including December 31, 1952.

Since you have already drilled the second well, it is believed not necessary at this time to extend the time for further drilling the same being covered by the Agreement.

Sub ect to similar consent to such extension being approved by the proper officials of the Department of Interior, I am agreeable to an extension of the Agreement as applied for under date of November 17, 1950 for a period of two years from December 31, 1950 to December 31, 1952. This approval is in the place of one dated October 27, 1950.

Very truly yours,

  
**GUY SHEPARD**  
Commissioner of Public Lands

STANOLIND OIL AND GAS COMPANY  
FORT WORTH, TEXAS

*Case 133*

November 28, 1950

Re: Contract No. 14,762  
San Juan and Rio Arriba Counties  
New Mexico

Supervisor, U. S. Geological Survey  
Roswell, New Mexico

Dear Sir:

With your letter of October 23, 1950, you returned to us our Application for Extension of the primary term and of the time in which to commence further drilling operations under the Kosa Unit Agreement.

The Application has been rewritten omitting that part referring to commencement of additional drilling inasmuch as arrangements have been made to drill a third well on the unit area.

Attached you will find six copies of Application dated November 17, 1950, and one copy is being forwarded to the Commissioner of Public Lands and another copy to the Director of the Oil Conservation Commission. If the attached Application is approved, please return to us one copy bearing such approval.

Yours very truly,

STANOLIND OIL AND GAS COMPANY

Original signed by

J. W. HAMILTON

By: J. W. Hamilton

JHT/la

cc: ~~Commissioner of Public Lands - Santa Fe, N. M.~~  
~~Director of Oil Conservation Commission - Santa Fe~~  
Geo. E. Jenkinson

COPY

November 17, 1950

Re: Rosa Unit  
Counties of San Juan and  
Rio Arriba, New Mexico  
I-Sec. No. 587

APPLICATION FOR EXTENSION

To the Honorable  
The Director of the Geological Survey of the United States  
Washington, D. C.

To the Honorable  
The Commissioner of Public Lands of the State of New Mexico  
Santa Fe, New Mexico

Gentlemen:

Stanolind Oil and Gas Company, as Unit Operator of the above described Unit under Unit Agreement dated January 6, 1946, and approved June 24, 1948, hereby respectfully makes application for a two (2) year extension of the date of expiration of the Unit Agreement or until December 31, 1952. In support thereof, your applicant shows and represents that applicant, as Unit Operator, drilled a well No. 1 under said Rosa Unit Agreement located in Section 11, Township 31, Range 6, and completed said well on June 13, 1949, to a depth of 8087' reaching the upper portion of the Morrison formation. The well was drilled at a cost of \$355,037.00. No discovery of any valuable deposit of oil or gas was made in said well. Within six months after the completion of said well, your applicant commenced well No. 2 on the same section and drilled said well to a depth of 3457' encountering the Pictured Cliff formation at an estimated cost of \$56,000.00. No valuable deposit of oil or gas was discovered in well No. 2, and on June 21, 1950, said well was shut-in and operations suspended.

The Unit Agreement requires commencement of a third well within six months from the date of completion of the second well. In default thereof, the Director and Commissioner may at their election declare the Unit Agreement terminated.

We have just made arrangements to have a third well commenced on the Unit Area. It is our opinion that such well will not and cannot be completed, and placed on production if a producer, prior to December 31, 1950.

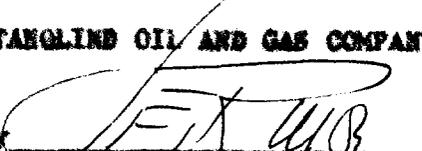
The primary or fixed term of the Unit Agreement will expire December 31, 1950. Attention is invited to the fact that from date of approval by the Secretary, this Unit Agreement has had only a primary term of two and a half years, whereas a primary term of five years is quite customary in such instance, especially where the lands are as remote and inaccessible as in this case. Even if the well could be completed an extension would be necessary if it were a dry hole, or if no ready market were available.

Wherefore, your applicant asks for a two-year extension of the primary term of the Unit Agreement.

Respectfully submitted,

STANOLIND OIL AND GAS COMPANY

By

  
Vice-President

APPROVED



STATE OF OKLAHOMA

SS.

COUNTY OF TULSA

G. B. JENKINSON, of lawful age, being first duly sworn on oath, deposes and says that he is Unitization Manager of STANCLINE OIL AND GAS COMPANY, that he has read the foregoing instrument and knows the contents thereof, and states that the matters and things therein set forth are true to the best of his knowledge, information and belief.

  
G. B. Jenkinson

Subscribed and sworn to before me this 17th day of November, A. D., 1950.

  
Notary Public

My Commission expires:

Aug. 9, 1954

October 27, 1950

**Stanolind Oil and Gas Company  
Fort Worth, Texas**

**Attention: Mr. Jack W. Hamilton**

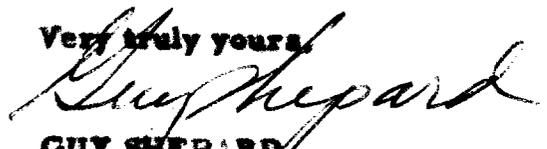
**Re: Rosa Unit I Sec. 587  
San Juan - Rio Arriba  
County, New Mexico.**

**Gentlemen:**

**This acknowledges receipt of your Application for Extension of the Rosa Unit Agreement for an additional two years and for an additional six months extension of time within which a third well may be begun.**

**Subject to similar consent to such extensions being approved by the proper officials of the Department of Interior, I am agreeable to an extension of the agreement for two years from and after June 24, 1950 and extension of the time for commencing the third well for six months from and after July 21, 1950.**

**Very truly yours,**

  
**GUY SHEPARD**  
**Commissioner of Public Lands**

**cc: U. S. Geological Survey  
Roswell, New Mexico**

**Oil Conservation Commission  
Santa Fe, New Mexico**

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STANOLIND OIL AND GAS COMPANY

FORT WORTH, TEXAS

October 19, 1950

*Case  
133*

Re: AFE-6234  
San Juan & Rio Arriba  
Counties, New Mexico

AIR MAIL SPECIAL DELIVERY

Supervisor of Oil and Gas Operations  
United States Geological Survey  
Roswell, New Mexico

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

Director, New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

We are transmitting herewith our Application for Extension of the primary term of the Rosa Unit Agreement and for an extension of six months in which to commence the drilling of an additional well on the Rosa Unit.

It will be appreciated if you will expedite the handling of this application as much as possible in order that definite plans may be made by all of the parties interested in the unit. When the application has been acted upon, please advise by telegram collect, and it will not be necessary so far as we are concerned to return to us an accepted copy of the application.

Yours truly,

STANOLIND OIL AND GAS COMPANY

Original signed by  
BY J. W. HAMILTON  
J. W. Hamilton

JHT:crs  
encl.

cc: Messrs. G. B. Jenkinson - Tulsa  
L. P. Hine - Albuquerque

**COPY**

STATE OF NEW MEXICO  
OFFICE OF STATE GEOLOGIST  
SANTA FE, NEW MEXICO

22 April 1948

Mr. J. O. Seth  
111 E. San Francisco  
Santa Fe, New Mexico

Dear Mr. Seth:

Inclosed find copy of order No. 759, Cause No. 133, in the matter of the Rosa Unit agreement.

I shall appreciate it if you will transmit this copy to petitioner.

Very truly yours,

GEORGE A. GRAHAM  
ATTORNEY  
OIL CONSERVATION COMMISSION

bsp

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*Handwritten notes:*  
111 E. San Francisco  
Santa Fe, N.M.  
Inclosed  
1948

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2 April 1948

The Santa Fe News  
Santa Fe, New Mexico

RE: Cases Nos. 133, 134, 135 & 136 -  
Notice of Publication.

RE: Case No. 133 - Notice of Publication  
Española News.

Gentlemen:

Please publish the enclosed notice once, immediately. Please proof-read the notice carefully and send a copy of the paper carrying such notice.

Also enclosed, you will find notice on Case number 133 for publication in the Espanola News in both English and Spanish.

Please be sure that this is published in your next issue, or not later than 10 April.

UPON COMPLETION OF THE PUBLICATION, PLEASE SEND PUBLISHER'S AFFIDAVIT IN DUPLICATE.

For payment please submit statement in duplicate, accompanied by voucher executed in duplicate. The necessary blanks are enclosed.

Very truly yours,

GEORGE A. GRAHAM  
ATTORNEY

GAG:bsp

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2 April 1948

The Farmington Times Hustler  
Farmington, New Mexico

RE: Case No. 133 - Notice of  
Publication

Gentlemen:

Please publish the enclosed notice once, immediately. Please proof-read the notice carefully and send a copy of the paper carrying such notice.

UPON COMPLETION OF THE PUBLICATION, PLEASE SEND PUBLISHER'S AFFIDAVIT IN DUPLICATE.

For payment please submit statement in duplicate, accompanied by voucher executed in duplicate. The necessary blanks are enclosed.

Very truly yours,

GEORGE A. GRAHAM  
ATTORNEY

CAG:bsp

March 24, 1948

File: WMB-41.212

Re: AFE 8234  
Proposed Unit, Rosa Area  
San Juan and Rio Arriba Counties,  
New Mexico

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

Director, New Mexico Oil Conservation Commission ✓  
Santa Fe, New Mexico

Gentlemen:

The attached Application for Final Approval of the Rosa Unit Agreement, San Juan and Rio Arriba Counties, New Mexico is submitted for your respective approvals. A check in the amount of \$455.00 payable to the order of the Commissioner of Public Lands is attached to cover the required filing fee.

By our previous letter dated December 10, 1947, there was submitted to your respective offices a Form of Unit Agreement and a Geological Report. Subsequent discussions between representatives of this company and the Office of the Commissioner of Public Lands resulted in agreement as to the Form of Unit Agreement which would be acceptable to the State Authorities. The Unit Agreement now being submitted for final approval is identical to that which was indicated acceptable as to form by the January 8, 1948 letter of Mr. John E. Miles. Submission of the ten executed counterpart copies of the Unit Agreement is being deferred inasmuch as we are continuing in our efforts to obtain signatures of these owners of interest who have not as yet joined in this Unitization. The Agreements as executed, however, will be submitted at the time of the hearing to be held by the Conservation Commission. Mr. J. O. Seth will contact you further to learn of the date designated for such hearing and he will advise the appropriate representatives of this company.

It is respectfully urged that a hearing on this application be held at the earliest possible date.

Yours very truly,

  
Whitney M. Elias

ROC/dt

Encl.

cc - Mr. J. O. Seth

CHL  
1947

STANOLIND OIL AND GAS COMPANY

December 11, 1947

*file*

File: WME-41.212

Re: AFE 8234  
Proposed Unit, Rosa Area  
San Juan and Rio Arriba Counties,  
New Mexico

*132*

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

Director, New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

We are enclosing a copy of our proposed form of Unit Agreement, covering the Rosa Area, San Juan and Rio Arriba Counties, New Mexico, which has been prepared by our Unitization Department in Tulsa. Attached to same is a Geological Report, dated November 13, 1947, by Mr. John G. Bartram and supporting maps.

It will be appreciated if you will give this matter your prompt attention and advise us at the earliest possible date whether or not it meets with your approval. A copy of this form is today being submitted to the Supervisor of Oil and Gas Operations, U. S. Geological Survey, Roswell, New Mexico, and we therefore ask that you notify Mr. Foster Morrell of your approval at the earliest possible date.

Yours very truly,

STANOLIND OIL AND GAS COMPANY

~~Geo. C. Mahaffy~~

By: Geo. C. Mahaffy

JHT/la  
ccs: Mr. W. M. Elmer  
Mr. L. P. Hine  
encl.

COPY

## STANOLIND OIL AND GAS COMPANY

TULSA, OKLAHOMA

December 10, 1947

File: WME-41.212

Re: AFB 8234  
 Proposed Unit, Rosa Area  
 San Juan and Rio Arriba Counties,  
 New Mexico

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

Director, New Mexico Oil Conservation Commission ✓  
 Santa Fe, New Mexico

Gentlemen:

It is proposed that an oil and gas unit be formed in the Rosa Area, San Juan and Rio Arriba Counties, New Mexico. Unitization will facilitate the drilling of a test well and, in event production is discovered, unitized operations will assure an orderly development program and enable production operations to be conducted in conformance with principles of conservation. In this connection, a form of Unit Agreement has been drafted of which a copy is attached and submitted for approval as to form.

The selection of the proposed unit outline was based upon geological and geophysical work recently completed in this area which is further discussed in an attached geological report in memorandum form dated November 13, 1947, by John G. Bartram, Geologist and Manager of Exploration for this company. Evaluation of this data indicated a structure which has favorable prospects as a petroleum reservoir. Location of a test well under unitization is tentatively being considered for the NE/4 NW/4 Sec. 22-T31N-R5W. It is contemplated that the test will be drilled to a depth of 7,000 feet which is expected to penetrate the Dakota Sand.

The proposed unit embraces Federal, State, and patented lands totaling some 54,224.07 acres of which approximately 2,116.26 acres are State of New Mexico lands. Also attached is a plat on which the Federal, State, and patented acreages are indicated by distinctive colors. Because of this diversity of ownership and since both Federal and State lands are involved in another unitization project covering the Burro Hills Area, the

COPY

## STANOLIND OIL AND GAS COMPANY

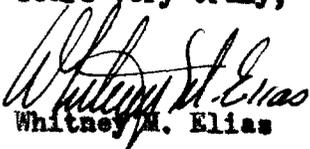
TULSA, OKLAHOMA

- 2 -

attached agreement has been largely modeled after the Burro Hills Unit Agreement. Report has been received that the Burro Hills Unit Agreement has been approved as to form by the State of New Mexico authorities and that this agreement is now expected to receive favorable consideration by the Department of Interior.

With reference to the schedule of lands and leases within the unit outline as tabulated in Exhibit "B" to the Unit Agreement, certain description and ownership data for some patented and State lands have not yet been obtained in full. Such missing data will be obtained and the schedule will be entirely complete when the agreement is drawn up in final form for signature. In order that we may further proceed with this unitization, we would appreciate that this application receive your early consideration.

Yours very truly,

  
Whitney M. Elias

Attachments

COPY

C O P Y

STANOLIND OIL AND GAS COMPANY

Tulsa, Oklahoma

November 13, 1947

Re: Rosa Area  
T 31 N, R 4, 5, & 6 W  
T 32 N, R 6 West  
Rio Arriba and  
San Juan Counties  
New Mexico

M E M O R A N D U M

The unitization of a large block of lands in the Rosa Area, Township 31 North, Ranges 4, 5, and 6 West and Township 32 North, Range 6 West, Rio Arriba and San Juan Counties, New Mexico, is recommended for the purpose of testing for oil and gas. The Rosa Area is located in the northeastern part of the San Juan Basin, a structural feature of northwestern New Mexico and southwestern Colorado. The town of Gobernador is 14 miles south of the area while the town of Rosa, from which the area is named, is eight miles northwest of the center of the area. Rosa is in the northwest corner of Rio Arriba County, New Mexico, one mile south of where the San Juan River enters New Mexico from Colorado.

The Rosa Area is a geophysical prospect. A survey with gravity meter indicated a large anomaly extending east and west a distance of about 18 miles, and north and south about six miles. A later survey with magnetometer resulted in the mapping of an anomaly coinciding remarkably with the gravity anomaly. Maps showing the results of the gravity and magnetic surveys are attached. The proposed unit area is outlined in red on both maps. Surface mapping is not conclusive because the structure as mapped on the Wasatch beds of the Tertiary is not thought to accurately reflect the structure of the underlying Cretaceous. Flat dips are, however, noted in the surface beds along the indicated axis of the geophysical anomaly. It is not considered practicable to do seismic work in the area because of the rugged nature of the terrain.

The Farmington, Pictured Cliffs and Mesa Verde formations of Upper Cretaceous Age produce gas with minor amounts of oil in San Juan County, New Mexico, west of the subject area. The Dakota basal formation of the Cretaceous produces oil in the Hogback Field. The Hermosa formation of Pennsylvanian Age produced oil in the Rattlesnake Field and the Paradox formation produces sour gas in the Barker Creek Field.

The section to be encountered by the drill in the Rosa Area is estimated as follows:

<u>Period</u>	<u>Formation</u>	<u>Estimated Depth</u>	
		<u>Top</u>	<u>Bottom</u>
Tertiary	Wasatch	0	1,000
	Animas	1,000	2,000

C O P Y

<u>Period</u>	<u>Formation</u>	<u>Estimated Depth</u>	
		<u>Top</u>	<u>Bottom</u>
Cretaceous	Kirtland	2,000	2,700
	Fruitland	2,700	2,850
	Pictured Cliffs	2,850	2,900
	Lewis	2,900	4,350
	Cliffhouse	4,350	4,450
	Menefee	4,450	4,850
	Point Lookout	4,850	4,950
	Mancos	4,950	6,750
	Dakota	6,750	7,000
Jurassic	Morrison, Navajo, Wingate	7,000	8,600
Triassic	Chinle, Shinarump, Moenkopi	8,600	9,600
Permian	DeChelly, Cutler, Rico	9,600	11,100
Pennsylvanian	Hermosa, Paradox, Molas	11,100	12,600
Mississippian	Leadville	12,600	12,850
Devonian	Ouray, Elbert	12,850	13,000
Cambrian	Ignacio	13,000	?
Pre-Cambrian	Granite	?	-

The above estimates are based on data from recently drilled deep oil tests in the Kutz Canyon, Blanco and Barker Creek Areas of San Juan County, New Mexico, and from measured sections in the San Juan Mountains to the north in Colorado and the Nacimiento Mountains to the east.

The area recommended for inclusion within the proposed unit area covers a total of approximately 54,280 acres. The outline of the unit area, shown in red on the accompanying maps, is based entirely on interpretation of the results of the geophysical surveys.

The location for a test well on the Rosa anomaly is tentatively recommended in the northeast quarter of the northwest quarter of Section 22, T 31 N, R 5 W, to be drilled to test the Dakota sand at a maximum depth of 7,000 feet. It might later be advisable after further examination of the topography to drill at some other nearby location.

/s/ John G. Bartram