South Central Region

P. O. Box 26124

Albuquerque, New Mexico 87125

2 17 151 81 1551

Amoco Production Company Attention: G. J. Ross Amoco Building - 17th & Bdwy. Denver, Colorado 80202

Gentlemen:

An approved copy of your 1981 plan of development for the Gallegos Canyon Pictured Cliffs unit area, San Juan County, New Mexico is enclosed. Such plan, proposing to continue present completion operations and to monitor initial well production, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SGD.) JAMES W. SHELTON

FOR Cene F. Daniel
Deputy Conservation Manager
Oil and Gas

Hiclosure

CC:

N:OCD, Santa Fe

Comm of Pub Lands, Santa Fe DS, Farmington (w/enclosure)



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

July 1, 1981

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO B7501 (505) 827-2434

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

Attention: G. J. Ross

Re: Case No. 247

Gallegos Canyon Unit 1981 Plan of Development

Gentlemen:

We hereby approve the 1981 Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Plan of Development are returned herewith.

Yours very truly,

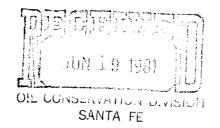
JOE D. RAMEY Director

JDR/EP/fd
enc.

cc: U.S.G.S. - Albuquerque Commissioner of Public Lands Energy Reserves Group, Inc.



G. J. Ross Division Operations Superintendent



Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 Western Division 303 - 830-4040

24-

J.W. Sutherland Area Oil and Gas Supervisor U.S.G.S. P.O. Box 26124 Albuquerque, N.M. 87125

Oil Conservation Commission State of New Mexico Attn: Mr. Joe Ramey Santa Fe, N.M. 87501

RE: 1981 Plan of Development

San Juan County, New Mexico

Gallegos Canyon Pictured Cliffs Unit

Commissioner of Public Land State of New Mexico Attn: Mr. Roy D. Graham P.O. Box 1148 Santa Fe, N.M. 87501

Office of District Engineer U.S.G.S.
Attn: Mr lim Sims

Attn: Mr. Jim Sims Farmington, N.M. 87401

- E/22/8

Gentlemen:

AMOCO Production Company, as Operator of the Gallegos Canyon Unit, on behalf of the Sub-Operator of the Pictured Cliffs Formation, Energy Reserves Group, Inc., proposes a plan of development for 1981 as follows:

Brief History

The Gallegos Canyon Unit was approved effective July 25, 1951. The current Pictured Cliffs Formation has been productive, and the unit area for said formation was contracted to the current Pictured Cliffs Participating Area.

AMOCO designated Energy Reserves Group as Sub-Operator from the surface down to the base of the Pictured Cliffs Formation, which you acknowledged in your June 19, 1980 letter.

1980 Drilling and Current Activity

Reference is made to the 1980 Revised Plan of Development filed and the nineteen (19) development locations proposed by Energy Reserves Group, Inc. Six of those locations are shut-in and waiting on pipeline. The remaining thirteen locations have all been drilled but we are waiting on completion tools. Two of the the wells were completed as producers but dually completed for disposal in the Mesaverde. The status of each well is as follows:

Location		Well No.	TOTAL DEPTH		STATUS
NW4SE4SE4	7-28N-12W	308	1578'		WOCT
NW4SE4SW4	9-28N-12W	309	1500'		WOCT
SEIANWIASEIA	9-28N-12W	310	1500'		WOCT
NE4SW4SW4	14-28N-12W	311	1800'	SI	IP 465MCF/135BWPD
SW4NW4NE4	16-28N-12W	312	1420'	SI	IP 177MCF/386BWPD
SW4NE4SW4	16-28N-12W	313	1607'		WOCT
NW4SE4NW4	17-28N-12W	314	1716'		WOCT
NW4SE4NW4	21-28N-12W	315	1535'	SI	IP 205MCF/150BWPD
NW14SE14NW14	27-28N-12W	317	1650'	SI	IP 319MCF/1BWPD
$E_{2}^{1}W_{2}^{1}SE_{4}^{1}$	28-28N-12W	318	1635'	SI	IP 40MCF/37BWPD
NW14SE14NW14	30-28N-12W	319	1595'		WOCT
SW14NE14SE14	30-28N-12W	320	1440'		WOCT
NE ¹ 4SW ¹ 4SE ¹ 4	12-28N-13W	321	1582'		WOCT
NW14SE14NE14	31-29N-12W	322	1651'	SI	IP 414MCF/131BWPD
NE4SW4SW4	32-29N-12W	323	1630'		WOCT
NE ¹ 4SW ¹ 4NE ¹ 4	32-29N-12W	324	1466'		WOCT
NE4SW4NW4	35-29N-13W	325	1772'		WOCT
NW4SE4NW4	36-29N-13W	326	1535'		WOCT
NW4SE4NE4	36-29N-13W	327	1385'	SI	IP 388MCF/304BWPD

Total cumulative and 1980 production from the Pictured Cliffs formation are as follows:

This production is from a total of 88 wells classified as unit producers.

You will please take note that the 1980 Plan of Development was revised to delete the SE/4NW/4SE/4 of Sec 21-T28N,R12W location. The unit working interest owners have since clarified the questioned ownership of the well and the well is a producing unit well.

The dually completed wells are as follows:

#306 --- Fruitland Producer -- Mesaverde Disposal

#307 --- Pictured Cliffs Producer -- Mesaverde Disposal

#328 --- Fruitland Producer -- Mesaverde Disposal

These wells have aided the handling of the increased water production.

1981 Plan of Development

The early months of 1981 have been spent completing the drilling of the nineteen locations as proposed in 1980. The next few months will be spent on completion operations. The Sub-Operator feels it is advisable to closely watch the initial production from the wells being completed before any additional wells are proposed. The water volume will also

be reviewed to determine the necessity of any additional water disposal wells. If production warrants drilling, the Sub-Operator will then consider which of the few remaining locations would be most advisable.

We respectfully request your approval of this Plan of Development. Please notify both AMOCO and Energy Reserves Group as to your approval.

Very truly yours,

AMOCO Production Company

cc: ERG

Working Interest Owners

Approved

Director
Oil Conservation Division

Energy and Minerals Department

BLING GRANTED BY THE UNITED STATES GEOLOGICAL SURVEY AND BY THE COMMISSIONER OF PUBLIC LANDS OF THE STATE OF NEW MEXICO.

State of New Mexico







Commissioner of Public Lands

June 24, 1981

24/

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

Re: 1981 Plan of Development

San Juan County, New Mexico

Gallegos Canyon Pictured Cliffs Unit

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved your 1981 Plan of Development for the Gallegos Canyon Unit, Pictured Cliffs formation, San Juan County, New Mexico. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy of the plan.

Please remit a Three (\$3.00) Dollar filing fee.

We are also in receipt of a copy of the Designation of Sub-Operator which reflects Energy Reserves Group as sub-Operator of the Pictured Cliffs Formation. We have this date accepted for record purposes.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY:

FLOYD O. PRANDO, Assistant Director Oil and Gas Division AC 505-827-2748

AJA/FOP/s encl.

cc:

OCD-Santa Fe, New Mexico * USGS-Roswell, New Mexico

Energy Reserves Group, Inc Denver, Colorado 80201



G. J. Ross Division Operations Superintendent

Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 Western Division 303 - 830-4040

J.W. Sutherland Area Oil and Gas Supervisor U.S.G.S. P.O. Box 26124 Albuquerque, N.M. 87125

Oil Conservation Commission State of New Mexico Attn: Mr. Joe Ramey Santa Fe, N.M. 87501

RE: 1981 Plan of Development

San Juan County, New Mexico

Gallegos Canyon Pictured Cliffs Unit

Commissioner of Public Land State of New Mexico Attn: Mr. Roy D. Graham P.O. Box 1148 Santa Fe, N.M. 87501

Office of District Engineer U.S.G.S. Attn: Mr. Jim Sims Farmington, N.M. 87401

Gentlemen:

AMOCO Production Company, as Operator of the Gallegos Canyon Unit, on behalf of the Sub-Operator of the Pictured Cliffs Formation, Energy Reserves Group, Inc., proposes a plan of development for 1981 as follows:

Brief History

The Gallegos Canyon Unit was approved effective July 25, 1951. The current Pictured Cliffs Formation has been productive, and the unit area for said formation was contracted to the current Pictured Cliffs Participating Area.

AMOCO designated Energy Reserves Group as Sub-Operator from the surface down to the base of the Pictured Cliffs Formation, which you acknowledged in your June 19, 1980 letter.

1980 Drilling and Current Activity

Reference is made to the 1980 Revised Plan of Development filed and the nineteen (19) development locations proposed by Energy Reserves Group, Inc. Six of those locations are shut-in and waiting on pipeline. The remaining thirteen locations have all been drilled but we are waiting on completion tools. Two of the the wells were completed as producers but dually completed for disposal in the Mesaverde. The status of each well is as follows:

Location		Well No.	TOTAL DEPTH		STATUS
NW4SE4SE4	7-28N-12W	308	1578'	WOCT	
NW4SE4SW4	9-28N-12W	309	1500'		WOCT
SE1NW1SE1	9-28N-12W	310	1500'		WOCT
NE4SW4SW4	14-28N-12W	311	1800'	SI	IP 465MCF/135BWPD
SWINWINEI	16-28N-12W	312	1420'	SI	IP 177MCF/386BWPD
SWIANEIASWIA	16-28N-12W	313	1607'		WOCT
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NE4SW4NW4	35-29N-13W	325	1772'		WOCT
NW4SE4NW4			1535'		WOCT
NW4SE4NE4	36-29N-13W	327	1385'	SI	IP 388MCF/304BWPD

Total cumulative and 1980 production from the Pictured Cliffs formation are as follows:

This production is from a total of 88 wells classified as unit producers.

You will please take note that the 1980 Plan of Development was revised to delete the SE/4NW/4SE/4 of Sec 21-T28N,R12W location. The unit working interest owners have since clarified the questioned ownership of the well and the well is a producing unit well.

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These wells have aided the handling of the increased water production.

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The early months of 1981 have been spent completing the drilling of the nineteen locations as proposed in 1980. The next few months will be spent on completion operations. The Sub-Operator feels it is advisable to closely watch the initial production from the wells being completed before any additional wells are proposed. The water volume will also

be reviewed to determine the necessity of any additional water disposal wells. If production warrants drilling, the Sub-Operator will then consider which of the few remaining locations would be most advisable.

We respectfully request your approval of this Plan of Development. Please notify both AMOCO and Energy Reserves Group as to your approval.

Very truly yours,

AMOCO Production Company

cc: ERG

Working Interest Owners

C



Amoco Production Company (USA)

Denver Region Amoco Building 17th & Broadw Denver 303 339 60 OIL CONSERVATION DIVIS! SANTA 15

January 29, 1981

Mr. J. W. Sutherland (5) Area Oil and Gas Supervisor United States Geological Survey P. O. Box 1148 P. O. Box 26124 Albuquerque, NM 87125

Commissioner of Public Lands State of New Mexico Santa Fe, NM 87501

NM Oil Conservation Div (3) State of New Mexico Box 2088 Santa Fe, NM 87501

Working Interest Owners (See Attached List)

File: SPT-293-416

Dear Mr. Sutherland:

1982 Plan of Development and Operation Gallegos Canyon Unit - Dakota Formation San Juan County, New Mexico

Amoco Production Company, Unit Operator of the Gallegos Canyon Unit, submits for your consideration and approval the following Plan of Development for the year 1982.

The Gallegos Canyon Unit was formed in November, 1950, for the development of the West Kutz Pictured Cliffs and Gallup Pools. The Dakota zone was later established to be productive in 1952. Since that time the Dakota participating area has been enlarged several times and presently contains 41,529 acres. The first Gallegos Canyon Unit Dakota well, the Gallegos Canyon Unit No. 8 was drilled in January, 1952, on a 320 acre well spacing. In 1961, 13 additional Gallegos Canyon Unit Dakota wells were drilled. From 1963 through 1966, 119 Dakota wells were drilled, of which five were dry holes. In December, 1970, the Gallegos Canyon Unit No. 264 was drilled, completing development of the Unit on single well-320 acre spacing. This completion made a total of 128 producing wells.

J. W. Sutherland, et al., January 29, 1982 Page 2

Through December 31, 1981, 61 Dakota infill wells have been drilled in GCU. Of these 61 wells, 24 were drilled in 1981. Nine wells which were on the 1981 plan of development but not drilled have been carried over to the 1982 plan of development. Thirteen wells on the 1981 plan of development have been deferred until the Dakota infill drilling program has been fully evaluated. However, it is understood that changing conditions may require modification of this program during 1982. The deferred wells are shown on Attachment #1. Production in GCU is currently averaging 28.4 MMSCFD from 163 producing Dakota wells.

Plan of Action

On May 22, 1979, the New Mexico Oil Conservation District approved the drilling of an additional well on each 320 acre spacing unit in the Basin Dakota Field (Order No. R-1670-V). Since that time, Amoco has initiated infill drilling within the Gallegos Canyon Unit. During 1982, 11 infill wells will be drilled in the Gallegos Canyon Unit. These well names, including their location, are shown on Attachment #2. Amoco Production Company, as Unit Operator, hereby proposes the attached list of Basin Dakota infill wells for 1982 drilling in the Gallegos Canyon Unit. Your early approval of this Plan of Development for 1982 would be deeply appreciated.

Sincerely,

R. A. Sheppard

Tupped

MBK/mlt

Attachments

LTR545

GALLEGOS CANYON UNIT AREA WELLS DEFERRED FROM 1981 PLAN OF DEVELOPMENT SAN JUAN COUNTY, NEW MEXICO

GCU	139E	SW/4	Sec 18-T28N-R11W
GCU	159E	SW/4	Sec 31-T28N-R12W
GCU	165E	SE/4	Sec 29-T28N-R12W
GCU	191E	NE/4	Sec 32-T28N-R12W
GCU	198E	SE/4	Sec 20-T28N-R12W
GCU	215E	SE/4	Sec 16-T28N-R12W
GCU	230E	SE/4	Sec 23-T28N-R12W
GCU	231E	NW/4	Sec 27-T28N-R12W
GCU	193E	SW/4	Sec 30-T28N-R12W
GCU	85E	SE/4	Sec 19-T28N-R12W
GCU	177E	NE/4	Sec 31-T28N-R12W
GCU	224E	SE/4	Sec 18-T28N-R12W
GCU	176E	NE/4	Sec 25-T28N-R13W

Attachment #2

GALLEGOS CANYON UNIT AREA 1982 PLAN OF DEVELOPMENT SAN JUAN COUNTY, NEW MEXICO

GCU			95E	SE/4	Sec	31-T28N-R11W
GCU			158E	NE/4	Sec	36-T28N-R13W
GCU			192E	NE/4	Sec	30-T28N-R12W
GCU			239E	SE/4	Sec	24-T28N-R13W
GCU			246E	SE/4	Sec	35-T28N-R12W
GCU			241E	SW/4	Sec	29-T28N-R12W
GCU			164E	NW/4	Sec	35-T29N-R13W
GCU	Com	E	161E	SW/4	Sec	23-T29N-R13W
GCU			190E	SW/4	Sec	32-T28N-R12W
GCU			174E	NW/4	Sec	28-T28N-R12W
GCU	Com	Η	180E	SW/4	Sec	28-T29N-R12W

MBK/tle 012882 LTR545

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas
P. O. Box 2159
Dallas, TX 75221
Attention: Mr. Elmer T. Ireton
Production Department

Atlantic Richfield Company Outside Operating Unit Box 2819 Dallas, TX 75221

Southland Royalty Co. Suite 1000 410 17th Street Denver, CO 80202

Featherstone Farms Ltd. 1717 West Second Street Roswell, NM 88201

A. C. Pegg P. O. Box 66067 Chicago, IL 66066

E. I. Rydin P. O. Box 66067 Chicago, IL 66066

L. B. Hodges P. O. Box 489 Roswell, NM 88201

Sun Gas Company
P. O. Box 20
Dallas, TX 75221
Attention: Manager, Unitization
& Joint Operations

Nicole Huve Trust c/o First National Bank Trustee Trust Department P. O. Box 1331 Amarillo, TX 79180 National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, IL 60630

Getty Oil Company 1515 Arapahoe, Suite 700 Tower 3 Denver, CO 80202

Texaco, Inc. P. O. Box 2100 Denver, CO 80202

Wood Oil Company 320 South Boston, Suite 518 Tulsa, OK 74103

Supron Energy Corporation Building V Fifth Floor 10300 North Central Expressway Dallas, TX 75231

Texon Energy Corporation A/W A. W. Dugan 1212 Main Street, Suite 1400 Houston, TX 77002

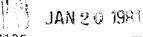
Mesa Petroleum Company P. O. Box 2009 Amarillo, TX 79189

Patricia Kalvestrand 115 Conifer Lane Walnut Creek, CA 94598



United States Department of the Interior

GEOLOGICAL SURVEY South Central Region P. O. Box 26124 Albuquerque, New Mexico 87125 ______



OIL COLLS BYATITY DIVISION

SANTA FE

3 5 JAN 1981

Amoco Production Company Attention: G. J. Ross Amoco Building 17th & Broadway Denver, Colorado 80202

Gentlemen:

Three approved copies of your 1980 amended plan of development for the Gallegos Canyon unit area, San Juan County, New Mexico, are enclosed. Such plan, proposing to drill well No. 217 E in the NW4 sec. 13, T. 28 N., R. 12 W., to test the Dakota formation was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

Gene F. Daniel Deputy Conservation Manager Oil and Gas

Enclosures

cc:

NMOCD, Santa Fe

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

December 8, 1980

Amoco Production Company Amoco building 17th & Broadway Denver, Colorado 80202

Attention: G. J. Ross

Re: Case No. 247
Gallegos Canyon Unit
Corrected Revised Plan of
Development for the
Pictured Cliffs Formation

Gentlemen:

We hereby approve the Corrected Revised Plan of Development for 1980 for the Pictured Cliffs Formation for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Corrected Plan of Development are returned herewith.

Yours very truly,

Jue U. RAMEY Director

3DR/EP/fd enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands





Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 Western Division 303 - 830-4040

G. J. Ross Division Operations Superintendent

September 25, 1980

J.W. Sutherland Area Oil and Gas Supervisor U.S.G.S. P.O. Box 26124 Albuquerque, N.M. 87125

Oil Conservation Commission State of New Mexico Attn: Mr. Joe Ramey P.O. Box 2088 Santa Fe, N.M. 87501

File: DFK- 1214-416

RE: Corrected Revised Plan of Development - 1980 Gallegos Canyon Pictured Cliffs Unit

San Juan County, New Mexico

Commissioner of Public Lands State of New Mexico Attn: Mr. Roy D. Graham P.O.Box 1148 Santa Fe, N.M. 87501

Office of District Engineer U.S.G.S. Attn: Mr. Jim Sims P.O. Box 959 Farmington, N.M. 87401

12-11180

Gentlemen:

Amoco Production Company, as operator of the Gallegos Canyon Unit, on behalf of the suboperator of the Gallegos Canyon Pictured Cliffs Unit, Energy Reserves Group, Inc., herewith submits pages 1 and 2 for the captioned plan which have been revised to correct certain well locations which Energy has been required to change.

Please insert the enclosures into that revised plan of development which was submitted for your approval on August 1, 1980.

Very truly yours,



G. J. Ross Division Operations Superintendent

Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 Western Division 303 - 830-4040

J. W. Sutherland (5)
Area Oil and Gas Supervisor
U.S.G.S.
P. O. Box 26124
Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attn: Mr. Joe Ramey P. O. Box 2088 Santa Fe, NM 87501 Commissioner of Public Lands (3)
State of New Mexico
Attn: Mr. Roy D. Graham
P. O. Box 1148
Santa Fe, NM 87501

Office of District Engineer
United States Geological Survey
Attn: Mr. Jim Sims
P. O. Box 959
Petroleum Club Plaza Bldg.
Farmington, NM 87401

File: DFK-744-416

RE: Revised Plan of Development - 1980
Gallegos Canyon Pictured Cliffs Unit
San Juan County, New Mexico

Gentlemen:

Amoco Production Company, as operator of Gallegos Canyon Unit, on behalf of the suboperator of the Gallegos Canyon Pictured Cliffs Unit, Energy Reserves Group, Inc., proposes a plan of development for 1980 which provides for the drilling of five wells within the Pictured Cliffs participating area to be used for disposal of produced water from the Pictured Cliffs formation. It is proposed to drill through and complete in the Mesa Verde zone. Three of these wells will be new wells, the other two will be re-entry of previously plugged and abandoned wells (Unit Wells No. 260 and No. 225).

The proposed new well locations will be in the SW $\frac{1}{2}$ of Sec. 30-T29N-R12W, the SE $\frac{1}{2}$ of Sec. 19-T29N-R12W, and the SE $\frac{1}{2}$ SW $\frac{1}{2}$ of Sec. 33-T29N-R12W. Dual completions are planned for both wells utilizing the Pictured Cliffs for production and the Mesa Verde for disposal on the former and the Fruitland for production and the Mesa Verde for disposal on the latter two.

The following Pictured Cliff development wells are planned for the remainder of 1980:

revised 9/25/80



Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 Western Division 303 - 830-4040

PROPOSED DEPTH

G. J. Ross Division Operations Superintendent

LOCATION

NW\zse\zse\z	7-28N-12W	1610'
NW\SE\SW\	9-28N-12W	1620'
SEŁNWŁSEŁ	9-28N-12W	1530'
ne½sw½sw½	14-28N-12W	1590'
SWIZNWIZNEIZ	16-28N-12W	1620'
SW\ne\sw\	16-28N-12W	1570'
nwiseinwi	17-28N-12W	1850'
nm/zse/znw/z	21-28N-12W	1820'
	-omitted-	
nw/se/nw/	27-28N-12W	1680'
E ¹ 2W ¹ 2SE ¹ 4	28-28N-12W	1630'
nwiseinwi	30-28N-12W	1630'
SW\ne\se\	30-28N-12W	1540'
ne½sw½se½	12-28N-13W	1700'
nwiselnei	31-29N-12W	1600'
ne½sw½sw½	32-29N-12W	1655'
ne _z swzne _z	32-29N-12W	1620'
nezswznwz	35-29N-13W	1890'
nwizseiznwiz	36-29N-13W	1650'
nwizseizneiz	36-29N-13W	1510'

Operations during 1979 in the Gallegos Canyon Pictured Cliffs Unit involved the following wells:

Drilled	and	Comp	leted	waiting	on	pipeline	2	 17
Drilled	and	not	comple	eted				 7
Producin	ıg						<i>.</i>	 60
Shut-in.								 11

Total cumulative and most recent production for the Gallegos Canyon Pictured Cliffs Unit are tabulated as follows:

Cumulative	(1/1/80)	48.9	BCF
Production	(1/79)	137	MMCF/Mo.

Discussion

The Gallegos Canyon Pictured Cliffs Unit has produced significant quantities of gas since its discovery and has been able to maintain a high rate of production over the past several years. Energy Reserves Group, Inc., the suboperator of the unit, proposes to drill the new wells listed earlier, to provide a solution to handling part of the increased water production and also plans

OIL CONSERVATION DIVISION P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

December 8, 1980

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

Attention: G. J. Ross

Re: Case No. 247
Gallegos Canyon Unit
1981 Plan of Development
and Operation for the
Dakota Formation

Gentlemen:

We hereby approve the 1981 Plan of Development and Operation for the Dakota Formation for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Plan of Development and Operation are returned herewith.

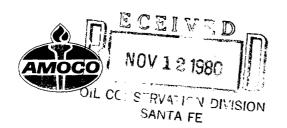
Yours very truly,

JOE D. RAMEY Director

JDR/EP/fd
enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands

247



October 29, 1980

Mr. Curtis J. Little (5) Area Oil and Gas Supervisor United States Geological Survey P. O. Box 2487 Farmington, NM 87401

N. M. Oil Conservation Div. (1) State of New Mexico Box 2088 Santa Fe, NM 87501

File: RAT-654-416

Dear Mr. Little:

1981 Plan of Development and Operation Gallegos Canyon Unit-Dakota Formation San Juan County, New Mexico

Amoco Production Company, Unit Operator of the Gallegos Canyon Unit, submits for your consideration and approval the following Plan of Development for the year 1981.

The Gallegos Canyon Unit was formed in November, 1950, for the development of the West Kutz Pictured Cliffs and Gallup Pools. The Dakota zone was later established to be productive in 1952. Since that time the Dakota participating area has been enlarged several times and presently contains 41,529 acres. The first Gallegos Canyon Unit Dakota well, the Gallegos Canyon Unit No. 8 was drilled in January, 1952, on a 320 acre well spacing. In 1961, 13 additional Gallegos Canyon Unit Dakota wells were drilled. From 1963 though 1966, 119 Dakota wells were drilled, of which five were dry holes. In December, 1970, the Gallegos Canyon Unit No. 264 was drilled, completing development of the Unit on single well-320 acre spacing. This completion made a total of 128 producing wells. Average daily production for the Gallegos Canyon Unit Dakota was 16,046 MCFD or an average of 125 MCFD/well during the month of July, 1980.

Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 303 -830-4040

Commissioner of Public Lands (1) State of New Mexico P. O. Box 1148 Santa Fe, NM 87501

Working Interest Owners (See attached list)

Mr. Curtis J. Little, et al, October 29, 1980 Page Two

Plan of Action

On May 22, 1979, the New Mexico Oil Conservation District approved the drilling of an additional well on each 320 acre spacing units in the Basin Dakota Field (Order No. R-1670-V). Since this time, Amoco has initiated infill drilling within the Gallegos Canyon Unit. During 1980, 48 infill wells will be drilled in the Gallegos Canyon Unit as outlined in our 1980 Plan of Development. For these reasons, Amoco Production Company, as Unit Operator, hereby proposes the attached list of Basin Dakota infill wells for 1981 drilling in the Gallegos Canyon Unit. Your early approval of this Plan of Development for 1981 would be deeply appreciated.

Sincerely,

RAS/bmk

Attachments

AB285

80

Energy and minutely Department

Gallegos Canyon Unit Area 1981 Plan of Development (San Juan County, New Mexico)

GCU	Com	"D"	No.	160E	SW/4-S27-m29N-R12W
GCU	Com	"H"	No.	180E	SW/4-S28-T29N-R12W
GCU	Com	"I"	No.	181E	NE/4-S34-T29N-R12W
GCU	No.	1391	Ε		SW/4-S18-T28N-R11W
GCU	No.	1671	Ē		NE/4-S18-T28N-R11W
GCU	No.	1681	Ξ		NW/4-S19-m28N-R11W
GCU	No.	2121	Ξ		SE/4-S3?-T29N-R1?W
GCU	No.	1821	Ξ		SW/4-S19-T28N-R11W
GCU	No.	1971	Ξ		NE/4-S36-m29N-R13W
GCU	Com	"F"	No.	162E	NE/4-S36-T29N-R12W
GCU	No.	1931	Ξ		SW/4-S30-m28N-R12W
GCU	No.	85E			SE/4-S19-T28N-R12W
GCU	No.	1921	Ξ		NE/4-S30-T28N-R1?W
GCU	No.	2411	Ξ		SW/4-S29-T28N-R12W
GCU	No.	1771	3		NE/4-S31-T28N-R12W
GCU	No.	1591	Ξ		SW/4-S31-T28N-R12W
GCU	No.	1581	Ξ		NE/4-836-m28N-R13W
GCU	No.	1631	2		SW/4-S26-T29N-Rl3W
GCU	No.	1641	3		NW/4-S35-T29N-R13W
GCU	No.	2241	Ξ -		SE/4-S18-T28N-R12W

GCU No.	209E	NW/4-S15-T28N-R12W
GCU No.	189E	SW/4-S36-m20N-R13W
GCU No.	239E	SF/4-S24-m28N-R13W
GCU No.	176E	NE/4-S25-m28N-R13W
GCU No.	215E	SE/4-S16-m28N-R12W
GCU No.	198E	SE/4-S20-T28N-R12W
GCU No.	86E	SE/4-S35-T29N-R13W
GCU No.	226E	NW/4-S18-T28N-R12W
GCU No.	161E	SW/4-S23-T29N-R13W
GCU No.	190E	SW/4-S32-m28N-R12W
GCU No.	165E	SE/4-S29-T28N-R12W
GCU No.	191E	NE/4-S32-T28N-R12W
GCU No.	231F	NW/4-S27-T28N-R12W
GCU No.	230E	SE/4-S23-T28N-R12W

RAS:bmk 110580 AB285

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

December 8, 1930

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

Attention: G. J. Ross

Re: Case No. 247
Gallegos Canyon Unit
Second Supplement to 1980
Plan of Development and
Operation for the Dakota

Formation

Gentlemen:

We hereby approve the Second Supplement to the 1980 Plan of Development and Operation for the Dakota Formation for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissionor of Public Lands.

Two approved copies of the Second Supplement are returned herewith.

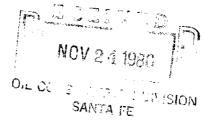
Yours very truly,

JOE D. RAHEY Director

JDR/EP/fd enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands





247

Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 Western Division 303 - 830-4040

G. J. Ross Division Operations Superintendent

November 10, 1980

Mr. J. W. Sutherland (5) Area Oil and Gas Supervisor United States Geological Survey P. O. Box 26124 Albuquerque, NM 87125 Commissioner of Public Lands (3) State of New Mexico P. O. Box 1148 Santa Fe, NM 87501

New Mexico Oil Conservation Division (3)
State of New Mexico
Box 2088 Worki
Santa Fe, NM 87501 (See

Working Interest Owners (See Attached List)

File: DFK-1094-416

Gentlemen:

Second Supplement - 1980 Plan of Development and Operation Gallegos Canyon Unit - Dakota Formation San Juan County, New Mexico

Our original 1980 Plan of Development and Operation for the above referenced unit was approved by your office on December 12, 1979. Our First Supplement consisted of two additional wells.

We would like to add the well listed below to our original Plan of Development and we submit this Second Supplement to our original Plan of Development for your consideration and approval.

Well No.

Location

Depth

Gallegos Canyon Unit No. 217E NW/4 Sec. 13-T28N-R12W 6500'

Sincerely,

HLM/lp

JCN149

80

State of New Mexico







Commissioner of Public Lands
December 2, 1980

247

P. O. BOX 1148 SANTA FE, NEW MEXICO 87501

Amoco Production Company 17th. & Broadway Denver, Colorado 80202

Re: Second Supplement-1980 Plan of Development and Operation for the

Gallegos Canyon Unit-Dakota Formation

San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved the Second Supplement-1980 Plan of Development and Operation for the Canyon Unit, Dakota Formation, San Juan County, New Mexico. Such supplement calls for an additional well, the No. 217E NW/4 Section 13-Township 28 North, Range 12 West, to be added to your original Plan of Development. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY:

FLOYD O. PRANDO, Assistant Director Oil and Gas Division AC 505-827-2748

AJA/FOP/s encl.

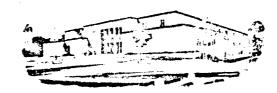
cc:

OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

State of New Mexico



ALEX J. ARMIJO



Commissioner of Public Lands
November 17, 1980

P. O. BOX 1148 SANTA FE, NEW MEXICO 87501

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

> Re: 1981 Plan of Development and Operation Gallegos Canyon Unit-Dakota Formation San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved your 1981 Plan of Development and Operation for the Gallegos Canyon Unit, Dakota Formation, San Juan County, New Mexico. Such plan proposes the drilling of 34 infill wells during 1981. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY:

FLOYD O. PRANDO, Assistant Director-Oil and Gas Division AC 505-827-2748

AJA/RDG/s encls.

cc:

OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

(AMOCO)

Nov 10 9 31 M1'80

Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 303 -830-4040

October 29, 1980

Mr. Curtis J. Little (5)
Area Oil and Gas Supervisor
United States Geological Survey
P. O. Box 2487
Farmington, NM 87401

Commissioner of Public Lands (1) State of New Mexico P. O. Box 1148 Santa Fe, NM 87501

N. M. Oil Conservation Div. (1) State of New Mexico Box 2088 Santa Fe, NM 87501 Working Interest Owners (See attached list)

File: RAT-654-416

Dear Mr. Little:

1981 Plan of Development and Operation Gallegos Canyon Unit-Dakota Formation San Juan County, New Mexico

Amoco Production Company, Unit Operator of the Gallegos Canyon Unit, submits for your consideration and approval the following Plan of Development for the year 1981.

The Gallegos Canyon Unit was formed in November, 1950, for the development of the West Kutz Pictured Cliffs and Gallup Pools. The Dakota zone was later established to be productive in 1952. Since that time the Dakota participating area has been enlarged several times and presently contains 41,529 acres. The first Gallegos Canyon Unit Dakota well, the Gallegos Canyon Unit No. 8 was drilled in January, 1952, on a 320 acre well spacing. In 1961, 13 additional Gallegos Canyon Unit Dakota wells were drilled. From 1963 though 1966, 119 Dakota wells were drilled, of which five were dry holes. In December, 1970, the Gallegos Canyon Unit No. 264 was drilled, completing development of the Unit on single well-320 acre spacing. This completion made a total of 128 producing wells. Average daily production for the Gallegos Canyon Unit Dakota was 16,046 MCFD or an average of 125 MCFD/well during the month of July, 1980.

Mr. Curtis J. Little, et al, October 29, 1980 Page Two Nov 10 9 31 AH '80

Plan of Action

On May 22, 1979, the New Mexico Oil Conservation District approved the drilling of an additional well on each 320 acre spacing units in the Basin Dakota Field (Order No. R-1670-V). Since this time, Amoco has initiated infill drilling within the Gallegos Canyon Unit. During 1980, 48 infill wells will be drilled in the Gallegos Canyon Unit as outlined in our 1980 Plan of Development. For these reasons, Amoco Production Company, as Unit Operator, hereby proposes the attached list of Basin Dakota infill wells for 1981 drilling in the Gallegos Canyon Unit. Your early approval of this Plan of Development for 1981 would be deeply appreciated.

Sincerely,

RAS/bmk

Attachments

AB285

November 17, 1980

COMMISSIONER OF PUBLIC LANDS

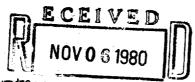
SUBJECT TO LIKE APPROVAL BY THE UNITED STATES GEOLOGICAL SURVEY AND THE NEW MEXICO OIL CONSERVATION DIVISION.

Gallegos Canyon Unit Area 1981 Plan of Development (San Juan County, New Mexico)

GCU	Com	"D"	No.	160E	SW/4-S27-T29N-R12W
GCU	Com	"H"	No.	180E	SW/4-S28-T29N-R1.2W
GCU	Com	"I"	No.	181E	NE/4-S34-T29N-R12W
GCU	No.	1391	Ε		SW/4-S18-T28N-R11W
GCU	No.	1671	Ε		NE/4-S18-T28N-R11W
GCU	No.	1681	E		NW/4-S19-m28N-R11W
GCU	No.	2121	Ε		SE/4-S3?-T29N-R1?W
GCU	No.	1821	Ε		SW/4-S19-T28N-R11W
GCU	No.	197	Ε		NE/4-536-m29N-R13W
GCU	Com	"F"	No.	162E	NE/4-S36-T29N-R12W
GCU	No.	1931	E		SW/4-S30-T28N-R12W
GCU	No.	85E			SE/4-S19-T28N-P12W
GCU	No.	192	Ē,	•	NE/4-S30-T28N-R12W
GCU	No.	241	Ε .	,	SW/4-S29-T28N-R12W
G CU	No.	177	E	-	NE/4-S31-T29N-R12W
GCU	No.	159	E		SW/4-S31-T28N-R12W
GCU	No.	158	E		NE/4-S36-m28N-RL3W
GCU	No.	163	E		SW/4-S26-m29N-R13W
GCU	No.	164	E		NW/4-S35-T29N-R13W
GCU	No.	224	E		SE/4-S18-T28N-R12W

GCU	No.	209E	NW/4-S15-T28N-R12W
GCU	No.	189E	SW/4-S36-m20N-Pl2W
GCU	No.	239E	SE/4-S24-M28N-R13W
GCU	No.	176E	NE/4-S25-m28N-R13W
GCU	No.	215E	SE/4-S16-m28N-P12W
GCU	No.	198E	SE/4-S20-T28N-R12W
GCU	No.	86E	SE/4-S35-T29N-R13W
GCU	No.	226E	NW/4-S18-T28N-R12W
GCU	No.	161E	SW/4-S23-T29N-R13W
GCU	No.	190E	SW/4-S32-m28N-R12W
GCU	No.	165E	SE/4-S29-T28N-R12W
GCU	No.	191E	NE/4-S32-T28N-R12W
GCU	No.	231E	NW/4-S27-m28N-R12W
GCU	No.	230E	SE/4-S23-T28N-R12W

RAS:bmk 110580 AB285



Energy Reserves Group Inc CONSERVATION DIVISION P.O. Box 1407, Zip 80201
First of Denver Plaza, Suite 3200 SANTA FE

633 Seventeenth Street Denver, Colorado Phone 303 572 3323



November 3, 1980

J. A. Sutherland (5)
Area Oil and Gas Supervisor
U.S.G.S.
P. O. Box 26124
Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attention: Mr. Joe Ramey P. O. Box 2088 Santa Fe, NM 87501 Commissioner of Public Land (3) State of New Mexico Attention: Mr. Roy D. Graham P. O. Box 1148 Santa Fe, NM 87501

Office of District Engineer United States Geological Survey Attention: Mr. Jim Sims P. O. Box 959 Petroleum Club Plaza Building Farmington, NM 87401

File: DFK-744-416

RE: Revised Plan of Development - 1980
Gallegos Canyon Pictured Cliffs Unit
San Juan County, New Mexico

Gentlemen:

Amoco Production Company as operator of the Gallegos Canyon Unit, has recently submitted on behalf of Energy Reserves Group, Inc. as sub-operator of the Gallegos Canyon Pictured Cliffs Unit, the revised plan of development for the Pictured Cliffs Unit for 1980. A typographical error was made in the description for the location of one of the wells to be drilled in Section 16, T28N-R12W. The description which read:

T28N-R12W Section 16: SW\nE\sW\

should be changed to read:

T28N-R12W Section 16: SW4NE4SE4

I've enclosed, herewith, a copy of form C-107 for the permitting of said well which shows the correct location.

Energy herewith also requests to be informed, by the State of New Mexico Oil and Gas Conservation Commission and the District Engineer for the USGS,

J. A. Sutherland Commissioner of Public Land Oil Conservation Commission Office of District Engineer November 3, 1980 Page 2



of the status of the captioned application. To date we have received approval from the Commissioner of Public Lands and the Office of Area Oil and Gas Supervisor.

Sincerely yours,

ENERGY RESERVES GROUP, INC.

Susan J. Alfson

Contracts Landman

Western Region

cc: G. J. Ross w/attach Amoco Production Co.

> R. M. Wakefield Lee McLean

attach SJA/jb

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-107 Revised 10-1-7

All distances must be from the cuter boundaries of the Section.

Operator	···				Lease			·		<u>_</u>	Well No.
ENERGY RESERVES GROUP						GALLEGOS CANYON UNIT				313	
Unit Letter Section Township						nge		County		···	
I 16 28N						12	Ŋ	San	Juan		
Actual Footage Loc	ation of We	eil:									
1850	feet from	n the Son	uth	line and	11	10	feet	from the	East		line
Ground Level Elev:	Pro	ducing For	nation		P∞l						ated Acreage:
5537										<u> </u>	Acres
1. Outline th	e acrea	ge dedica	ted to th	ne subject w	ell by	color	ed pencil o	r hachur	e marks on	the pla	at below.
	2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).										
	3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling.etc?										
Yes	☐ No	If ar	swer is	"yes;" type o	of cons	olida	tion				
If answer this form i			owners a	nd tract desc	cription	s wh	ich have a	ctually b	een consoli	dated.	(Use reverse side of
No allowal	ole will h	e assign									tization, unitization, oved by the Commis-
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State of New Mexico



ALEX J. ARMIJO COMMISSIONER



Commissioner of Public Lands

October 14, 1980

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

> Re: Corrected Revised Plan of Development for 1980 Gallegos Canyon Pictured Cliffs Unit San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

We are in receipt of three copies each of revised pages 1 and 2 for the captioned plan which have been revised to correct certain well locations.

These pages have been inserted into the revised plan of development which you submitted August 1, 1980.

Enclosed is one copy each of the revised pages reflecting the date they were received in this office.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY:

RAY D. GRAHAM, Director Oil and Gas Division AC 505-827-2748

AJA/RDG/s enc1.

cc:

OCD-Santa Fe, New Mexico USGS-Roswell, New Mexico USGS-Albuquerque, New Mexico



GEOLOGICAL SURVEY
South Central Region
P. O. Box 26124
ALICA DEVISION

GEOLOGICAL SURVEY
SOUTH STORY

ALICA DEVISION

GEOLOGICAL SURVEY

New Mexico 87125

0 7 OCT 1980

Amoco Production Company Attention: Mr. Ross 17th and Broadway Denver, Colorado 80202

Gentlemen:

Two approved copies of your 1980 corrected revised plan of development for the Gallegos Canyon unit area, San Juan County, New Mexico are enclosed. Such plan, proposing to drill five wells to be used for disposal of produced water from the Pictured Cliffs formation with three new locations and re-entry of unit wells No. 260 and No. 225, and the drilling of 19 Pictured Cliffs development wells as delineated in the plan, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

CRIGINAL SIGNED BY:

Jack Willock
Acting Deputy Conservation
Manager, Oil and Gas

Enclosures

cc: NMOCD, Santa Fe

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

September 24, 1980

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

Attention: G. J. Ross

Re: Case No. 247

Gallegos Canyon Pictured

Cliffs Unit

1980 Revised Plan of

Development

Gentlemen:

We hereby approve the 1980 Revised Plan of Development for the Gallegos Canyon Pictured Cliffs Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Revised Plan are returned herewith.

Yours very truly,

JOE D. RAMEY Director

JDR/EP/fd enc.

cc: U.S.G.S. - Roswell Commissioner of Public Lands Energy Reserves Group, Inc.



247

Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202 Western Division 303 - 830-4040

Santa Fe, NM 87501

G. J. Ross Division Operations Superintendent

August 1, 1980

J. W. Sutherland (5) Area Oil and Gas Supervisor U.S.G.S. P. O. Box 26124 Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attn: Mr. Joe Ramey P. O. Box 2088 Santa Fe, NM 87501

File: DFK-744-416

RE: Revised Plan of Development - 1980

Gallegos Canyon Pictured Cliffs Unit
San Juan County, New Mexico

Gentlemen:

Amoco Production Company, as operator of Gallegos Canyon Unit, on behalf of the suboperator of the Gallegos Canyon Pictured Cliffs Unit, Energy Reserves Group, Inc., proposes a plan of development for 1980 which provides for the drilling of five wells within the Pictured Cliffs participating area to be used for disposal of produced water from the Pictured Cliffs formation. It is proposed to drill through and complete in the Mesa Verde zone. Three of these wells will be new wells, the other two will be re-entry of previously plugged and abandoned wells (Unit Wells No. 260 and No. 225).

The proposed new well locations will be in the SW $\frac{1}{2}$ of Sec. 30-T29N-R12W, the SE $\frac{1}{2}$ of Sec. 19-T29N-R12W, and the NE $\frac{1}{2}$ SW $\frac{1}{2}$ of Sec. 33-T29N-R12W. Dual completions are planned for both wells utilizing the Pictured Cliffs for production and the Mesa Verde for disposal on the former and the Fruitland for production and the Mesa Verde for disposal on the latter two.

The following Pictured Cliff development wells are planned for the remainder of 1980:

Commissioner of Public Lands (3) State of New Mexico Attn: Mr. Roy D. Graham P. O. Box 1148

Office of District Engineer United States Geological Survey Attn: Mr. Jim Sims P. O. Box 959 Petroleum Club Plaza Bldg. Farmington, NM 87401

9/15/80

LOCA	TION	PROPOSED DEPTH
cul aml cul.	7 20N 10H	1710!
SW\\\NE\\\SW\\\	7-28N-12W	1610'
NW4SE4SW4	9-28N-12W	1620'
NW\xNW\zSE\x	9-28N-12W	1530'
NE¼SW¼SW¼	14-28N-12W	1590'
SWINWINE'Z	16-28N-12W	1620'
NEWNWYSEY	16-28N-12W	1570'
NE ¹ ZSW ¹ ZNW ¹ Z	17-28N-12W	1850'
NW\SE\NW\	21-28N-12W	1820'
SELNWLSEL	21-28N-12W	1770'
NW ¹ 2SE ¹ 2NW ¹ 2	27-28N-12W	1680'
NW4NE4SE4	28-28N-12W	1630'
SELNELNWL	30-28N-12W	1630'
SW4NE4SE4	30-28N-12W	1540'
NE\SW\SE\	12-28N-13W	1700'
SW4SE4NE4	31-29N-12W	1600'
NE ¹ 4SW ¹ 4SW ¹ 4	32-29N-12W	1655'
NW4SE4NE4	32-29N-12W	1620'
SE\SW\\NW\\	35-29N-13W	1890'
NW ¹ 4SE ¹ 4NW ¹ 4	36-29N-13W	1650'
SELSWLNEL	36-29N-13W	1510'

Operations during 1979 in the Gallegos Canyon Pictured Cliffs Unit involved the following wells:

Drilled	and	Comp	oleted	waiting	on	pipe	line	٠	 	 	17
Drilled	and	not	comp1	eted					 	 	7
Produci	ng								 	 	60
Shut-in									 	 	11

Total cumulative and most recent production for the Gallegos Canyon Pictured Cliffs Unit are tabulated as follows:

Discussion

The Gallegos Canyon Pictured Cliffs Unit has produced significant quantities of gas since its discovery and has been able to maintain a high rate of production over the past several years. Energy Reserves Group, Inc., the suboperator of the unit, proposes to drill the new wells listed earlier, to provide a solution to handling part of the increased water production and also plans

to re-enter the plugged and abandoned wellbores of Gallegos Canyon Unit well numbers 260 and 225. These wells also will be perforated in the Mesa Verde for disposal after drilling out the cement plugs.

Well number 126, a shut-in Gallup well, will also be used for water disposal in the Mesa Verde after squeezing and plugging the Gallup perfs.

We respectfully request your approval of our Revised 1980 Plan of Development and the 1979 Review of Operations. Please notify both Amoco and Energy Reserves Group as to your decision.

Very truly yours,

Amoco Production Company

cc: Energy Reserves Group, Inc. Attn: Susan J. Alfson

Oil Conservation Phylisian

Energy and Minerals Department

State of New Mexico

247



ALEX J. ARMIJO COMMISSIONER



Commissioner of Public Lands
September 9, 1980

P. O. BOX 1148 SANTA FE, NEW MEXICO

Amoco Production Company Amoco Building 17th & Broadway Denver, Colorado 80202

Re: Revised Plan of Development-1980
Gallegos Canyon Pictured Cliffs Unit
San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved your Revised Plan of Development for 1980 for the Gallegos Canyon Pictured Cliffs Unit, San Juan County, New Mexico. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY:

RAY D. GRAHAM, Director Oil and Gas Division

AJA/RDG/s encls.

cc:

OCD-Santa Fe, New Mexico USGS-Roswell, New Mexico USGS-Albuquerque, New Mexico

Energy Reserves Group, Inc. 601 Jefferson-Suite 1900 Houston, Texas 77002



RECEIVED

SEP 2 9 43 AM '80

STATE LAND IFFICE SANTA FE, N. M.

G. J. Ross Division Operations Superintendent

August 1, 1980

Amoco Production Company

Denver Region Amoco Building 17th & Broadway Denver, Colorado 80202

Western Division 303 - 830-4040

J. W. Sutherland (5) Area Oil and Gas Supervisor U.S.G.S. P. O. Box 26124 Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attn: Mr. Joe Ramey P. O. Box 2088 Santa Fe, NM 87501 Commissioner of Public Lands (3) State of New Mexico Attn: Mr. Roy D. Graham P. O. Box 1148 Santa Fe, NM 87501

Office of District Engineer United States Geological Survey Attn: Mr. Jim Sims P. O. Box 959 Petroleum Club Plaza Bldg. Farmington, NM 87401

File: DFK-744-416

RE: Revised Plan of Development - 1980

Gallegos Canyon Pictured Cliffs Unit
San Juan County, New Mexico

Gentlemen:

Amoco Production Company, as operator of Gallegos Canyon Unit, on behalf of the suboperator of the Gallegos Canyon Pictured Cliffs Unit, Energy Reserves Group, Inc., proposes a plan of development for 1980 which provides for the drilling of five wells within the Pictured Cliffs participating area to be used for disposal of produced water from the Pictured Cliffs formation. It is proposed to drill through and complete in the Mesa Verde zone. Three of these wells will be new wells, the other two will be re-entry of previously plugged and abandoned wells (Unit Wells No. 260 and No. 225).

The proposed new well locations will be in the SW $\frac{1}{4}$ of Sec. 30-T29N-R12W, the SE $\frac{1}{4}$ of Sec. 19-T29N-R12W, and the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Sec. 33-T29N-R12W. Dual completions are planned for both wells utilizing the Pictured Cliffs for production and the Mesa Verde for disposal on the former and the Fruitland for production and the Mesa Verde for disposal on the latter two.

The following Pictured Cliff development wells are planned for the remainder of 1980:

SEP 2 3 43 5 180

STATE LINE : E SANTA DI N =

LOCAT	rion	PROPOSED DEPTH
SWINE SWI	7-28N-12W	1610'
NW12SE12SW12	9-28N-12W	1620'
NWINWISEI	9-28N-12W	1530'
NE\SW\zSW\z	14-28N-12W	1590'
SWŁNWŁNEŁ	16-28N-12W	1620'
NEZNWZSEZ	16-28N-12W	1570'
NELSWINWI	17-28N-12W	1850'
NWISELNWI	21-28N-12W	1820'
SELNWLSEL	21-28N-12W	1770'
NWISELNWI	27-28N-12W	1680'
NW\\NE\\SE\	28-28N-12W	1630'
SELNELNWL	30-28N-12W	1630'
SWINELSEL	30-28N-12W	1540'
NE\SW\SE\	12-28N-13W	1700'
SW12SE12NE12	31-29N-12W	1600'
NE SW SW	32-29N-12W	1655'
NW LSE LNE L	32-29N-12W	1620'
SEZSWZNWZ	35-29N-13W	1890'
NW ZSE ZNW Z	36-29N-13W	1650'
SEZSWZNEZ	36-29N-13W	1510'

Operations during 1979 in the Gallegos Canyon Pictured Cliffs Unit involved the following wells:

Drilled and Compl	eted waiting on p.	ipeline	17
Drilled and not o	completed		7
Producing			60
Shut-in			11

Total cumulative and most recent production for the Gallegos Canyon Pictured Cliffs Unit are tabulated as follows:

Cumulative	(1/1/80)	48.9 BCF
Production	(1/79)	137 MMCF/Mo.

Discussion

The Gallegos Canyon Pictured Cliffs Unit has produced significant quantities of gas since its discovery and has been able to maintain a high rate of production over the past several years. Energy Reserves Group, Inc., the suboperator of the unit, proposes to drill the new wells listed earlier, to provide a solution to handling part of the increased water production and also plans

SEP 2 9 43 AH '80

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to re-enter the plugged and abandoned wellbores of Gallegos Canyon Unit well numbers 260 and 225. These wells also will be perforated in the Mesa Verde for disposal after drilling out the cement plugs.

Well number 126, a shut-in Gallup well, will also be used for water disposal in the Mesa Verde after squeezing and plugging the Gallup perfs.

We respectfully request your approval of our Revised 1980 Plan of Development and the 1979 Review of Operations. Please notify both Amoco and Energy Reserves Group as to your decision.

Very truly yours,

Amoco Production Company

cc: Energy Reserves Group, Inc.

Attn: Susan J. Alfson

COMMISSIONER OF PUBLIC LANDS



GEOLOGICAL SURVEY

South Central Region
P. 0. Box 26124
Albuquerque, New Mexico 87125

APR 16 1980

-47

Amoco Production Company A SON Attention: G. J. Ross Security Life Building Denver, Colorado 80202

Gentlemen:

On this date, your 1980 plan of development and operation for the Gallegos Canyon unit area, San Juan County, New Mexico, wherein you propose to drill a Pictured Cliffs-Mesaverde well and a Fruitland-Mesaverde well, was approved. Such approval is subject to like approval by the appropriate State officials. Two approved copies are enclosed.

Sincerely yours,

(ORIG. SGD.) JACK WILLOCK

Jack Willock
Acting Deputy Conservation Manager
Oil and Gas

Enclosures 2

cc:
BIA, Navajo Area (w/enclosure)
NMOCD, Santa Fe/
Comm. Public Lands, Santa Fe



ONE HUNDRED YEARS OF EARTH SCIENCE IN THE PUBLIC SERVICE

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

April 2, 1980

Amoco Production Company Security Life Building Denver, Colorado 802@2

Attention: G. J. Ross

Re: Case No. 247
Gallegos Canyon Unit
1980 Plan of Development

Gentlemen:

We hereby approve the 1980 Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Plan of Development are returned herewith.

Yours very truly,

JOE D. RAMEY Director

JDR/EP/fd enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands
Energy Reserves Group, Inc.



G. J. Ross
Division Operations
Superintendant



Amoco Production Company

Denver Region Security Life Building Denver, Colorado 80202 Western Division 303 - 820-4040

247

3 March 1980

J. W. Sutherland (5) Area Oil and Gas Supervisor U.S.G.S. P.O. Box 26124 Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attn: Mr. Joe Ramey P.O. Box 2088 Santa Fe, NM 87501

File: WDF-282-416

Re: Plan of Development - 1980 Review of Operation - 1979

Gallegos Canyon Pictured Cliffs Unit

San Juan County, New Mexico

Commissioner of Public Lands (3) State of New Mexico Attn: Mr. Roy D. Graham P.O. Box 1148 Santa Fe, NM 87501

Office of District Engineer United States Geological Survey Attn: Mr. Jim Sims P.O. Box 959 Petroleum Club Plaza Bldg Farmington, NM 87401

1M 87401

(2 127

(2) 127

(2) 130

(3) 130

(4) 130

Gentlemen:

Amoco Production Company, as operator of Gallegos Canyon Unit, on behalf of the suboperator of the Gallegos Canyon Pictured Cliffs Unit, Engergy Reserves Group, Inc., proposes a plan of development for 1980 which provides for the drilling of four wells within the Pictured Cliffs participating area to be used for disposal of produced water from the Pictured Cliffs formation. It is proposed to drill through and complete in the Mesa Verde zone. Two of these wells will be new wells, the other two will be re-entry of previously plugged and abandoned wells (Unit Wells No. 260 and No. 225).

The proposed new well locations will be in the SW $_4$ of Sec. 30-T29N-R12W and the SE $_4$ of Sec. 19-T29N-R12W. Dual completions are planned for both wells utilizing the Pictured Cliffs for production and the Mesa Verde for disposal on the former and the Fruitland for production and the Mesa Verde for disposal on the latter. No further Pictured Cliffs development is planned at this time.

Page 2

3 March 1980

J.W. Sutherland, Commissioner of Public Lands, NM, Oil Conservation Commission, Office of District Engineer

Operations during 1979 in the Gallegos Canyon Pictured Cliffs Unit involved the following wells:

Drilled and Completed waiting on pipeline	 17
Drilled and not completed	 7
Producing	 60
Shut-in	 11

Total cumulative and most recent production for the Gallegos Canyon Pictured Cliffs Unit are tabulated as follows:

Cumulative	(1/1/80)	48.9BCF
Production	(1/79)	137 MMCF/Mo.

Discussion

The Gallegos Canyon Pictured Cliffs Unit has produced significant quantities of gas since its discovery and has been able to maintain a high rate of production over the past several years. Energy Reserves Group, Inc., the suboperator of the unit, proposes to drill the new wells listed earlier, to provide a solution to handling part of the increased water production and also plans to re-enter the plugged and abandoned wellbores of Gallegos Canyon Unit well numbers 260 and 225. These wells also will be perforated in the Mesa Verde for disposal after drilling out the cement plugs.

Well number 126, a shut-in Gallup well, will also be used for water disposal in the Mesa Verde after squeezing and plugging the Gallup perfs.

We respectfully request your approval of our 1980 Plan of Development and the 1979 Review of Operations. Please notify both Amoco and Energy Reserves Group as to your decision.

Mery truly yours,

Amoco Production Company

Cil Conser altha Dixigion

Energy and Minerals Department

cc: Energy Reserves Group, Inc.

Attn: D.E. Butler

State of New Mexico



ALEX J. ARMIJO COMMISSIONER



Commissioner of Public Lands
March 20, 1980

P. O. BOX 1148 SANTA FE, NEW MEXICO 87501

Amoco Production Company Security Life Building Denver, Colorado 80202

Re: Plan of Development - 1980

Review of Operation - 1979

Gallegos Canyon Pictured Cliffs Unit
San Juan County, New Mexico

247

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved your 1980 Plan of Development and the 1979 Review of Operations to the Gallegos Canyon PICTURED CLIFFS unit, San Juan County, New Mexico. Such plan provides for the drilling of <u>four</u> wells within the Pictured Cliffs participating area to be used for disposal of produced water from the Pictured Cliffs formation, and is proposed to drill through and complete in the Mesa Verde zone. Two wells will be new wells and two will be re-entry of previously plugged and abandoned wells (Unit Wells No. 260 and No. 225. Well No. 126, will also be used for water disposal in the Mesa Verde after squeezing and plugging the Gallup perfs. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy of the plan.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY:

RAY D. GRAHAM, Director Oll and Cas Division AC 505-827-2748

AJA/RDG/s encls.cc:

OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

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STATE LAND FIRE SANTA FE, N. M.

Amoco Production Company

Denver Region Security Life Building Denver, Colorado 30202 Western Division 303-820-4040

G. J. Ross Division Operations Superintendent

3 March 1980

J. W. Sutherland (5) Area Oil and Gas Supervisor U.S.G.S. P.O. Box 26124 Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attn: Mr. Joe Ramey P.O. Box 2088 Santa Fe, NM 87501

File: WDF-282-416

Re: Plan of Development - 1980

Gallegos Canyon Pictured Cliffs Unit

San Juan County, New Mexico

Review of Operation - 1979

Gentlemen:

Amoco Production Company, as operator of Gallegos Canyon Unit, on behalf of the suboperator of the Gallegos Canyon Pictured Cliffs Unit, Engergy Reserves Group, Inc., proposes a plan of development for 1980 which provides for the drilling of four wells within the Pictured Cliffs participating area to be used for disposal of produced water from the Pictured Cliffs formation. It is proposed to drill through and complete in the Mesa Verde zone. Two of these wells will be new wells, the other two will be re-entry of previously plugged and abandoned wells (Unit Wells No. 260 and No. 225) - 5 w D - 219 LSWD-220

The proposed new well locations will be in the SW4 of Sec. 30-T29N-R12W and the SE4 of Sec. 19-T29N-R12W. Dual completions are planned for both wells utilizing the Pictured Cliffs for production and the Mesa Verde for disposal on the former and the Fruitland for production and the Mesa Verde for disposal on the latter. No further Pictured Cliffs development is planned at this time.

Commissioner of Public Lands (3) State of New Mexico Attn: Mr. Roy D. Graham P.O. Box 1148 Santa Fe, NM 87501

Office of District Engineer United States Geological Survey Attn: Mr. Jim Sims P.O. Box 959 Petroleum Club Plaza Bldg Farmington, NM 87401

Page 2

3 March 1980

J.W. Sutherland, Commissioner of Public Lands, NM, Oil Conservation Commission, Office of District Engineer

Operations during 1979 in the Gallegos Canyon Pictured Cliffs Unit involved the following wells:

Drilled and	Completed waiting on pipeline	17
Drilled and	not completed	7
	·	

Total cumulative and most recent production for the Gallegos Canyon Pictured Cliffs Unit are tabulated as follows:

Cumulative	(1/1/80)	48.9BCF
	(1/79)	

Discussion

The Gallegos Canyon Pictured Cliffs Unit has produced significant quantities of gas since its discovery and has been able to maintain a high rate of production over the past several years. Energy Reserves Group, Inc., the suboperator of the unit, proposes to drill the new wells listed earlier, to provide a solution to handling part of the increased water production and also plans to re-enter the plugged and abandoned wellbores of Gallegos Canyon Unit well numbers 260 and 225. These wells also will be perforated in the Mesa Verde for disposal after drilling out the cement plugs.

Well number 126, a shut-in Gallup well, will also be used for water disposal in the Mesa Verde after squeezing and plugging the Gallup perfs.

We respectfully request your approval of our 1980 Plan of Development and the 1979 Review of Operations. Please notify both Amoco and Energy Reserves Group as to your decision.

Hery truly yours,

Amodo Production Company

COMMISSIONER OF PUBLIC LANDS

cc: Energy Reserves Group, Inc.

Attn: D.E. Butler



GEOLOGICAL SURVEY
P. 0. Box 26124
Albuquerque, New Mexico 87125

MAR 0 3 1980

Amoco Production Company Security Life Building Denver, Colorado 80202 247

Gentlemen:

Three approved copies of your 1980 amended plan of development for the Gallegos Canyon unit area, San Juan County, New Mexico, are enclosed. Such plan, proposing to drill two additional wells in 1980, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

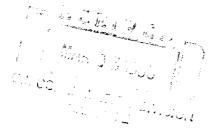
Sincerely yours,

(ORIG. SGD.) JACK WILLOCK

James W. Sutherland
0 011 and Gas Supervisor. SRMA

Enclosures 3

cc: NMOCD, Santa Fe/ Comm. Public Lands, Santa Fe





ONE HUNDRED YEARS OF EARTH SCIENCE IN THE PUBLIC SERVICE

State of New Mexico







Commissioner of Public Lands

January 21, 1980 .

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Amoco Production Company Security Life Building Denver, Colorado 80202

Re: 1st Supplement-1980 Plan of Development and Operation-Gallegos Canyon Unit Dakota Formation San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved the 1st Supplement-1980 Plan of Development and Operation for the Gallegos Canyon Unit- Dakota Formation, San Juan County, New Mexico. We have also approved the revised locations for wells No. 106E and 111E. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files. In the future please submit Three copies to this office.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY: RAY D. GRAHAM, Director Oil and Gas Division AC 505-827-2748

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AJA/RDG/s encl.

cc:

OCD-Santa Fe, New Mexico USGS-Roswell, New Mexico USGS-Albuquerque, New Mexico

Oil Conservation



RECEIVED

JAN 17 9 20 AM 80 STATE LAM AFFICE SANTA FE. N. M.

Amoco Production Company

Denver Region Security Life Building Denver, Colorado 80202 303 - 820-4040

January 9, 1980



Mr. Curtis J. Little (5) Area Oil and Gas Supervisor United States Geological Survey P. O. Box 2487 Farmington, NM 87401 Commissioner of Public Lands (1) State of New Mexico P. O. Box 1148 Santa Fe, NM 87501

New Mexico Oil Conservation Division (1)
State of New Mexico
Box 2088 Worki
Santa Fe, NM 87501 (See

Working Interest Owners (See Attached List)

File: WDF-17-416

Gentlemen:

lst Supplement - 1980 Plan of Development and Operation
Gallegos Canyon Unit - Dakota Formation
San Juan County, New Mexico

Our original 1980 Plan of Development and Operation for the above referenced unit was approved by your office on December 12, 1979.

We would like to add the wells listed below to our original Plan of Development and we submit this 1st Supplement to our original Plan of Development for your consideration and approval.

Well No.					Lo	Depth	
_	-				•	25-T29N-R12W 26-T29N-R12W	

In addition to the above 1st Supplement to our 1980 Plan of Development, the following wells approved on our original 1980 Plan of Development require location revisions as indicated below. We request that your approval of this 1st Supplement to our 1980 Plan of Development also be our approval for the location changes.

Mr. Curtis J. Little, et al., January 9, 1980 Page Two

Well No.						Depth		
Gallegos	Canyon	Unit	No.	106E	From:		24-T29N-R13W	6200'
					To:	NW/4 Sec.	24-T29N-R13W	
Gallegos	Canyon	Unit	No.	111E	From:		20-T29N-R13W	6350'
					To:	NW/4 Sec.	20-T29N-R13W	

Very truly yours,

HLM:jl

BJX633

.

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas
P. O. Box 2159
Dallas, Texas 75221
Attention: Mr. Elmer T. Ireton
Production Department

Atlantic Richfield Company Outside Operating Unit Box 2819 Dallas, Texas 75221

Southland Royalty Co. Suite 1000 410 17th Street Denver, Colorado 80202

Brookhaven Oil Company
P. O. Box 1267
Scottsdale, Arizona 85252

Featherstone Farms Ltd. 1717 West Second Street Roswell, New Mexico 88201

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

E. I. Rydin
P. O. Box 66067
Chicago, Illinois 66066

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

Elma R. Jones and Maryan Klinger Joint Tenants 242 E. Downs Stockton, California 95204

National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Mary Roberts Berry 1111 South Nevada Street Carson City, Nevada 89701 Getty Oil Company 1515 Arapahoe, Suite 700 Tower 3 Denver, Colorado 80202

Texaco, Inc. P. O. Box 2100 Denver, Colorado 80202

Texas Pacific Oil Company, Inc. 1700 One Main Place Dallas, Texas 75250 Attention: Mr. L. B. Jeffers

Wood Oil Company 320 South Boston, Suite 518 Tulsa, Oklahoma 74103

Supron Energy Corporation Building V Fifth Floor 10300 North Central Expressway Dallas, Texas 75231

Texon Energy Corporation A/W A. W. Dugan 1212 Main Street, Suite 1400 Houston, Texas 77002

Mesa Petroleum Company P.O. Box 2009 Amarillo, Texas 79189

Sun Gas Company
P. O. Box 20
Dallas, Texas 75221
Attention: Manager,
Unitization and
Joint Operations

Patricia Kalvestrand 115 Conifer Lane Walnut Creek, California 94598

Nicole Huve Trust c/o First National Bank Trustee Trust Department P. O. Box 1331 Amarillo, Texas 79180



247

Amoco Production Company

Denver Region Security Life Building Denver, Colorado 80202 303 - 820-4040

January 9, 1980

Mr. Curtis J. Little (5)
Area Oil and Gas Supervisor
United States Geological Survey
P. O. Box 2437
Farmington, NM 87401

Commissioner of Public Lands (1) State of New Mexico P. O. Box 1148 Santa Fe, NM 87501

New Mexico Oil Conservation Division (1)
State of New Mexico
Box 2088 Worki
Santa Fe, NM 87501 (See

Working Interest Owners (See Attached List)

File: WDF-17-416

Gentlemen:

lst Supplement - 1980 Plan of Development and Operation
Gallegos Canyon Unit - Dakota Formation
San Juan County, New Mexico

Our original 1980 Plan of Development and Operation for the above referenced unit was approved by your office on December 12, 1979.

We would like to add the wells listed below to our original Plan of Development and we submit this 1st Supplement to our original Plan of Development for your consideration and approval.

Well	No.	 Lo	Depth	
Gallegos Canyon Gallegos Canyon		•		

In addition to the above 1st Supplement to our 1980 Plan of Development, the following wells approved on our original 1980 Plan of Development require location revisions as indicated below. We request that your approval of this 1st Supplement to our 1980 Plan of Development also be our approval for the location changes.

Mr. Curtis J. Little, et al., January 9, 1980 Page Two

Well No.				Location			<u>Depth</u>	
Gallegos	Canyon	Unit	No.	106E	From:		24-T29N-R13W	6200'
					To:	NW/4 Sec.	24-T29N-R13W	
Gallegos	Canyon	Unit	No.	111E	From:	•	20-T29N-R13W	6350'
					To:	NW/4 Sec.	20-T29N-R13W	

Very truly yours,

HLM:jl

BJX633

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas
P. O. Box 2159
Dallas, Texas 75221
Attention: Mr. Elmer T. Ireton
Production Department

Atlantic Richfield Company Outside Operating Unit Box 2819 Dallas, Texas 75221

Southland Royalty Co. Suite 1000 410 17th Street Denver, Colorado 80202

Brookhaven Oil Company P. O. Box 1267 Scottsdale, Arizona 85252

Featherstone Farms Ltd. 1717 West Second Street Roswell, New Mexico 88201

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

E. I. Rydin
P. O. Box 66067
Chicago, Illinois 66066

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

Elma R. Jones and Maryan Klinger Joint Tenants 242 E. Downs Stockton, California 95204

National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Mary Roberts Berry 1111 South Nevada Street Carson City, Nevada 89701 Getty Oil Company 1515 Arapahoe, Suite 700 Tower 3 Denver, Colorado 80202

Texaco, Inc. P. O. Box 2100 Denver, Colorado 80202

Texas Pacific Oil Company, Inc. 1700 One Main Place Dallas, Texas 75250 Attention: Mr. L. B. Jeffers

Wood Oil Company 320 South Boston, Suite 518 Tulsa, Oklahoma 74103

Supron Energy Corporation Building V Fifth Floor 10300 North Central Expressway Dallas, Texas 75231

4

Texon Energy Corporation A/W A. W. Dugan 1212 Main Street, Suite 1400 Houston, Texas 77002

Mesa Petroleum Company P.O. Box 2009 Amarillo, Texas 79189

Sun Gas Company
P. O. Box 20
Dallas, Texas 75221
Attention: Manager,
Unitization and
Joint Operations

Patricia Kalvestrand 115 Conifer Lane Walnut Creek, California 94598

Nicole Huve Trust c/o First National Bank Trustee Trust Department P. O. Box 1331 Amarillo, Texas 79180

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

January 7, 1980

Amoco Production Company Security Life Building Denver, Colorado 80202

Attention: G. J. Ross

Re: Case No. 247
Gallegos Canyon Unit
1979 Amended Plan of
Development

Gentlemen:

We hereby approve the 1979 Amended Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Two approved copies of the Amended Plan are returned herewith.

Yours very truly,

JOE D. RAMEY Director

JDR/EP/fd enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands
Energy Reserves Group, Inc.



G. J. Ross Division Operations Superintendent

29 November 1979

Amoco Production Company

Denver Region Security Life Building Denver, Colorado 80202 Western Division 303 - 820-4040

247

J. W. Sutherland (5) Area Oil and Gas Supervisor United States Geological Survey P. O. Box 26124 Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attn: Mr. Joe Ramey P. O. Box 2088 Santa Fe, NM 87501

File: WDF-757-416

Re: Approval Requested For Revised

Plan of Development -- 1979

Gallegos Canyon Pictured Cliffs Unit

San Juan County, New Mexico

Commissioner of Public Lands (3) State of New Mexico Attn: Mr. Roy D. Graham P. O. Box 1148 Santa Fe, NM 87501

Office of District Engineer United States Geological Survey Attn: Mr. Jim Sims P. O. Box 959 Petroleum Club Plaza Building Farmington, NM 87401

Gentlemen:

Reference is made to Amoco Production Company's original 1979 Plan of Development Letter dated April 19, 1979, relative to the captioned unit, and subsequently approved by your respective offices. All twelve (12) of the wells originally proposed and approved (wells numbered 277 through 238) have now been drilled and completed.

Because of rig availability, Energy Reserves Group, Inc., suboperator of the Pictured Cliffs Unit, has now proposed drilling seventeen (17) additional wells within the PC Participating Area during the remainder of 1979 and/or early 1980. The location and projected total depth of each of these proposed additional wells is as follows:

Well Number	Location	Depth
293 \ \	NMASWA 8-T28N-R12W NMASEA 15-T28N-R12W NMASEA 23-T28N-R12W SONWA 30-T29N-R12W SWANWA 32-T29N-R12W NWASEA 32-T29N-R12W	1725' 1670' 1800' 1400' 1620' 1600'

Page two

29 November 1979

J. W. Sutherland Commissioner of Pulbic Lands Oil Conservation Commission Office of District Engineer

Well Number	Location	<u>Depth</u>
295	SW4SW4 17-T28N-R12W	1600'
296	S₩¼S₩¼ 15-T28N-R12W	1650'
297	NW4NE4 15-T28N-R12W	1650'
298	NEINWI 24-T28N-R12W	1800'
299	NW14NW14 31-T28N-R12W	1850'
300	NE4SE4 19-T29N-R12W	1600'
301	NE4SE4 20-T29N-R12W	1700'
302	SW4SE4 29-T29N-R12W	1600'
303	SE1NW1 33-T29N-R12W	1600'
304	SE12SW12 24-T29N-R13W	1550'
305	SW4SE4 36-T29N-R13W	1650'

Amoco, as Gallegos Canyon Unit Operator, respectfully requests your approval of the drilling of these additional wells by Energy Reserves Group, Inc. and this letter as a revision of the original Plan of Development submitted for 1979.

Because of the time factor involved in scheduling and permitting, we would appreciate your early consideration of this request. Please notify both Amoco and Energy Reserves Group as to your decision. Our thanks for your continued courtesy and assistance in this matter.

Approved

Very truly yours,

HLM/jdb

Energy Reserves Group, Inc.

Attn: Mr. D. E. Butler

Oil Conservation Division **Energy** and Minerals Department

Director

THIS APPROVAL GRANTED SUBJECT TO LIKE APPROVAL BEING CRAMTED BY THE UNITED STATES CEOLOGICAL SURVEY AND BY THE COMMISSIONER OF PUBLIC LANDS OF THE STATE OF NEW MEXICO.

State of New Mexico



ALEX J. ARMIJO COMMISSIONER



Commissioner of Public Lands
December 28, 1979

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Amoco Production Company Security Life Building Denver, Colorado 80202 247

Re: Approval Requested For Revised Plan of Development- 1979 Gallegos Canyon Pictured Cliffs Unit San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved your Revised Plan of Development for the year 1979, for the Gallegos Canyon Pictured Cliffs Unit San Juan County, New Mexico. Such Revised Plan calls for the drilling of seventeen (17) additional wells within the PC Participating Area during the remainder of 1979 and/or 1980. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Commission.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY: RAY D. GRAHAM, Director Oil and Gas Division AC 505-827-2748

AJA/RDG/s

cc:

OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico



GEOLOGICAL SURVEY

P. 0. Box 26124 Albuquerque, New Mexico 87125

DEC 12 1979

247

Amoco Production Company Attention: Mr. A. M. Roney Security Life Building Denver, Colorado 80202

Gentlemen:

The 1980 plan of development submitted for the Gallegos Canyon unit area, San Juan County, New Mexico, was approved on this date subject to like approval by the appropriate State officials.

Such plan proposes the drilling of 48 Dakota wells.

Three approved copies are enclosed.

Sincerely yours,

James W. Sutherland
Oll and Gas Supervisor, SRMA

Enclosures 3

cc:

NMOCD, Santa Fe Comm. Public Lands, Santa Fe



GEOLOGICAL SURVEY

P. O. Box 26124 Albuquerque, New Mexico 87125

DEC 12 1979

2×7

Amoco Production Company Attention: G. J. Ross Security Life Building Denver, Colorado 80202

Gentlemen:

Three approved copies of your 1979 revised plan of development for the Gallegos Canyon unit area, San Juan County, New Mexico, are enclosed. Such plan, proposing the drilling of 17 additional Pictured Cliffs wells, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SGD.) JAMES W. SUTHERLAND

James W. Sutherland Oll and Gas Supervisor, SRMA

Enclosures 3

cc: NMOCD, Santa Fe Comm. Public Lands, Santa Fe



GEOLOGICAL SURVEY

P. 0. Box 26124 Albuquerque, New Mexico 87125

DEC 12 1979

247

Amoco Production Company Attention: G. J. Ross Security Life Building Denver, Colorado 80202

Gentlemen:

Three approved copies of your 1979 revised plan of development for the Gallegos Canyon unit area, San Juan County, New Mexico, are enclosed. Such plan, proposing the drilling of 17 additional Pictured Cliffs wells, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SGD.) JAMES W. SUTHERLAND

James W. Sutherland Oil and Gas Supervisor, SRMA

Enclosures 3

cc: NMOCD, Santa Fe / Comm. Public Lands, Santa Fe

State of New Mexico



ALEX J. ARMIJO COMMISSIONER



Commissioner of Public Lands
November 14, 1979

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

THE METERS OF

Amoco Production Company Security Life Building Denver, Colorado 80202

> Re: 1980 Plan of Development and Operations Gallegos Canyon Unit-Dakota Formation

San Juan County, New Mexico

ATTETNION: Mr. A. M. Roney

Gentlemen:

The Commissioner of Public Lands has this date approved your 1980 Plan of Development and Operation for the Gallegos Canyon Unit, Dakota Formation, San Juan County, New Mexico. Such plan calls for the drilling of 48 Basin Dakota infill wells. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Commission.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY: RAY D. GRAHAM, Director Oil and Gas Division AC 505-827-2748

AJA/RDG/s encl.

cc:

OCD-Santa Fe, New Mexico USGS-Roswell, New Mexico USGS-Albuquerque, New Mexico

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

November 13, 1979

Amoco Production Company Security Life Building Denver, Colorado 80202

Attention: A. M. Roney

Re: Case No. 247
Gallegos Canyon Unit
1980 Plan of Development

Gentlemen:

We hereby approve the 1980 Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

One approved copy of the Plan of Development is returned herewith.

Yours very truly,

JOE D. RAMEY Director

JDR/EP/fd enc.

cc: U.S.G.S. - Roswell Commissioner of Public Lands



A. M. Roney Division Production

October 26, 1979

Amoco Production Company

Denver Region Security Life Building Denver, Colorado 80202 Western Division 303 - 820-4040

Mr. Curtis J. Little (5)
Area Oil & Gas Supervisor
United States Geological Survey
P.O. Box 2487
Farmington, New Mexico 87401

New Mexico Oil Conservation Division (1)
State of New Mexico
Box 2088
Santa Fe, New Mexico 87501

File: JLK-622-416

Dear Mr. Little:

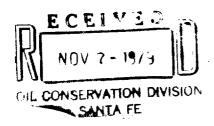
1980 Plan of Development and Operation Gallegos Canyon Unit - Dakota Formation San Juan County, New Mexico Commissioner of Public Lands (1) State of New Mexico P.O. Box 1148 Santa Fe, New Mexico 87501

Working Interest Owners (See Attached List)

Case 247

Amoco Production Company, Unit Operator of the Gallegos Canyon Unit, submits for your consideration and approval the following Plan of Development for the year 1980.

The Gallegos Canyon Unit was formed in November, 1950 for the development of the West Kutz Pictured Cliffs and Gallup Pools. The Dakota zone was later established to be productive in 1952. Since that time the Dakota participating area has been enlarged several times and presently contains 41,529 acres. The first Gallegos Canyon Unit Dakota well, the Gallegos Canyon Unit No. 8 was drilled in January, 1952 on a 320 acre well spacing. In 1961 13 additional Gallegos Canyon Unit Dakota wells were drilled. From 1963 through 1966, 119 Dakota wells were drilled, of which five were dry holes. No Basin Dakota drilling has occurred in the Gallegos Canyon Unit since December, 1970 when the Gallegos Canyon Unit No. 264 was drilled. This completion made a total of 128 producing wells. Average daily production for the Gallegos Canyon Unit Dakota was 25,200 MCFD or an average of 197 MCFD/well during the month of September, 1979.



Page 2

October 26, 1979 File: JLK-622-416

Future Plan of Operation

On May 22, 1979 the New Mexico Oil Conservation District approved the drilling of an additional well on each 320 acre spacing unit in the Basin Dakota Field (Order No. R-1670-V). For this reason, Amoco Production Company, as Unit Operator, hereby proposes the attached list of Basin Dakota infill wells for drilling in the Gallegos Canyon Unit in 1980. Your approval of this Plan of Development for 1980 is requested.

Yours very truly,

TDB/cem

Attachments

Feersy and Alberta department

A STATE OF THE STA

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PROPOSED 1980 GALLEGOS CANYON UNIT DRILLING

Well No. Location	Depth
Gallegos Canyon Unit #110E SE/4 Section 19, T29N, R12W	6090'
Gallegos Canyon Unit #263E NE/4 Section 20, T29N, R12W	6380'
Gallegos Canyon Unit #111E SW/4 Section 20, T29N, R12W	6350'
Gallegos Canyon Unit #134E SE/4 Section 17, T29N, R12W	6370'
Gallegos Canyon Unit #172E SW/4 Section 25, T29N, R13W	6090 '
Gallegos Canyon Unit #188E NE/4 Section 30, T29N, R12W	6040'
Gallegos Canyon Unit #187E SW/4 Section 30, T29N, R12W	6100 '
Gallegos Canyon Unit	
Gas Com 94E NE/4 Section 23, T29N, R13W	6010'
Gallegos Canyon Unit #96E NE/4 Section 18, T29N, R12W	6250'
Gallegos Canyon Unit #106E SE/4 Section 24, T29N, R13W	
Gallegos Canyon Unit #108E SW/4 Section 13, T29N, R13W	6210 '
Gallegos Canyon Unit #133E NW/4 Section 17, T29N, R12W	6370 '
Gallegos Canyon Unit #204E SE/4 Section 34, T28N, R12W	
Gallegos Canyon Unit #173E NW/4 Section 29, T29N, R12W	6130 '
Gallegos Canyon Unit #200E SE/4 Section 29, T29N, R12W	6130 '
Gallegos Canyon Unit #153E NW/4 Section 28, T29N, R12W	6140'
Gallegos Canyon Unit #154E NW/4 Section 27, T29N, R12W	6240'
Gallegos Canyon Unit #151E NW/4 Section 21, T29N, R12W	6340 '
Gallegos Canyon Unit #152E SE/4 Section 21, T29N, R12W	6340'
Gallegos Canyon Unit #150E SE/4 Section 22, T29N, R12W	6350 '
Gallegos Canyon Unit #145E NW/4 Section 26, T29N, R12W	6300 '
Gallegos Canyon Unit #93E SW/4 Section 36, T29N, R12W	6360 '
Gallegos Canyon Unit #169E NE/4 Section 35, T29N, R12W	6160 '
Gallegos Canyon Unit #170E NW/4 Section 35, T29N, R12W	6160 '
Gallegos Canyon Unit #199E SW/4 Section 34, T29N, R12W	<i>6180'</i>
Gallegos Canyon Unit #202E NW/4 Section 33, T29N, R12W	6140 '
Gallegos Canyon Unit #195E SE/4 Section 33, T29N, R12W	6140'
Gallegos Canyon Unit #211E NW/4 Section 32, T29N, R12W	6320'
Gallegos Canyon Unit #221E SE/4 Section 31, T29N, R12W	6360 '
Gallegos Canyon Unit #210E NW/4 Section 31, T29N, R12W	6360 '
Gallegos Canyon Unit #203E SE/4 Section 13, T28N, R12W	6330'
Gallegos Canyon Unit #217E NW/4 Section 13, T28N, R12W	6300'
Gallegos Canyon Unit #207E NW/4 Section 14, T28N, R12W	6400'
Gallegos Canyon Unit #216E SE/4 Section 14, T28N, R12W	6510'
Gallegos Canyon Unit #218E NW/4 Section 22, T28N, R12W	6310'
Gallegos Canyon Unit #208E SE/4 Section 15, T28N, R12W Gallegos Canyon Unit #196E NW/4 Section 19, T28N, R12W	6300'
	6350'
Gallegos Canyon Unit #227E NW/4 Section 20, T28N, R12W Gallegos Canyon Unit #229E SE/4 Section 21, T28N, R12W	6150 ' 6175 '
Gallegos Canyon Unit #229E SE/4 Section 21, 128N, R12W Gallegos Canyon Unit #228E NW/4 Section 21, T28N, R12W	6200'
Gallegos Canyon Unit #220E NW/4 Section 21, 120N, K12W Gallegos Canyon Unit #219E NW/4 Section 23, T28N, R12W	6490'
Gallegos Canyon Unit #242E SW/4 Section 24, T28N, R12W	6550'
Gallegos Canyon Unit #243E SE/4 Section 24, T28N, R12W	6450 '
Gallegos Canyon Unit #174E NW/4 Section 28, T28N, R12W	6240'
Gallegos Canyon Unit #184E SE/4 Section 28, T28N, R12W	6240'
Gallegos Canyon Unit #185E NE/4 Section 33, T28N, R12W	6245'
Gallegos Canyon Unit #186E SW/4 Section 33, T28N, R12W	6220 '
Gallegos Canyon Unit #166E NW/4 Section 34, T28N, R12W	6360 '

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas
P. O. Box 2159
Dallas, Texas 75221
Attention: Mr. Elmer T. Ireton
Production Department

Atlantic Richfield Company Outside Operating Unit Box 2819 Dallas, Texas 75221

Southland Royalty Co. Suite 1000 410 17th Street Denver, Colorado 80202

Brookhaven Oil Company P. O. Box 1267 Scottsdale, Arizona 85252

Featherstone Farms Ltd. 1717 West Second Street Roswell, New Mexico 88201

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

E. I. Rydin
P. O. Box 66067
Chicago, Illinois 66066

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

Elma R. Jones Plymouth Square, Apt. 405 1319 North Madison Street Stockton, California 95202

Mr. Harold K. Johnson 1118 Laurel Drive Lafayette, California 94549 National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Pubco Petroleum Corporation P. O. Box 1419 Albuquerque, New Mexico 87103

Getty Oil Company 1515 Arapahoe, Suite 700 Tower 3 Denver, Colorado 80202

Southern Union Gas Company First International Building Suite 1800 Dallas, Texas 75270

Texaco, Inc.
P. O. Box 2100
Denver, Colorado 80202

Texas Pacific Oil Company, Inc. 1700 One Main Place Dallas, Texas 75250 Attention: Mr. L. B. Jeffers

Wood Oil Company 320 South Boston, Suite 518 Tulsa, Oklahoma 74103

Supron Energy Corporation Building V Fifth Floor 10300 North Central Expressway Dallas, Texas 75231

Texon Energy Corporation A/W A. W. Dugan 1212 Main Street, Suite 1400 Houston, Texas 77002

Mesa Petroleum Company P.O. Box 2009 Amarillo, Texas 79189 Sun Gas Company
P. O. Box 20
Dallas, Texas 75221
Attention: Manager,
Unitization and
Joint Operations

Patricia Kalvestrand 115 Conifer Lane Walnut Creek, California 94598

Nicole Huve Trust c/o First National Bank Trustee Trust Department P. O. Box 1331 Amarillo, Texas 79180

Rip C. Underwood Estate
First National Bank of Amarillo
and Hugh Russel Co. Exrs.
P. O. Box 2588
Amarillo, Texas 79105

State of New Mexico







Commissioner of Public Lands

P. O. BOX 1148 SANTA FE, NEW MEXICO 87501

Amoco Production Company Security Life Building Denver, Colorado 80202

Re:Federal Com. No. 2-R
Gallegos Canyon Unit Area
Lot 4 SW/4SW/4
Sec. 12, T28N R13W N.M.P.M.
San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

We are in receipt of a copy of a letter, dated June 13, 1979, to the United States Geological Survey together with one copy of a Designation of Agent, whereby, Amoco as operator of the Gallegos Canyon Unit designates Curtis J. Little as agent to drill a Dakota formation well in the above described portion of the Unit area.

The Designation of Agent is accepted and we are retaining the one copy for our files.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY: RAY D. GRAMHAM, Director Oil and Gas Division

AJA/RDG/s

cc:

OCD-Santa Fe, New Mexico USGS-Roswell, New Mexico





Amoco Production Company

Denver Region Security Life Building Denver, Colorado 80202 Western Division 303 - 820-4040

G. J. Ross Division Operations Superintendent

June 13, 1979

U. S. Geological Survey P. O. Box 959 Parmington, MM 87401

Attention: P. T. McGrath

File: WDF-597-416

Federal Com. No. 2-R
Gallegos Canyon Unit Area
Lot 4 SW/4 SW/4
Sec. 12, T28H-R13W H.M.P.M.
San Juan County, Hew Hexico

We submit herewith for your approval six copies of a designation of agent. Amoco as operator of the Gallegos Canyon Unit designates Curtis J. Little as agent to drill a Dakota formation well in the above described portion of the Unit area.

G. J. ROSS By JLK

BLM/alm

Enclosures

CC: Curtis J. Little
Box 2487
Farmington, RM 87401

New Mexico Oil Conservation Division State of New Mexico Box 2088 Santa Fe, New Mexico 87501

Commissioner of Public Lands State of New Mexico P. O. Box 1148 Santa Fe, New Mexico 87501 AYB400 Case 200

DESIGNATION OF AGENT

This indenture dated as of the gaday of June, 1979, by and between AMOCO Production Company, a Delaware corporation, whose address is Security Life Building, Denver, Colorado 80202, and CURTIS J. LITTLE, an individual, whose address is P. O. Box 2487, Farmington, New Mexico 87401;

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 Acting Secretary of the Interior on the 25th day of July 1951 approved the Unit Agreement for the Development and Operation of the Gallegos Canyon Unit Area dated November 1, 1950, I-Sec. No. 844, and the Commissioner of Public Lands of the State of New Mexico on April 24, 1951, consented to and approved said Unit Agreement by authority of Chapter 88 of the Laws of the State of New Mexico, 1943, approved April 14, 1943, and the State of New Mexico Oil Conservation Commission on April 4, 1951, approved said Unit Agreement by authority of Act of the Legislature (Chapter 72, Laws 1935), wherein Earl A. Benson and William V. Montin were designated as Unit Operator; and

WHEREAS, Earl A. Benson and William V. Montin have resigned as such Operator and, in accordance with the termsof the Gallegos Canyon Unit Agreement, Stanolind Oil and Gas Company, now AMOCO Production Company, was appointed and has accepted and assumed the duties of the successor Unit Operator; and

WHEREAS, AMOCO Production Company now desires to appoint CURTIS J. LITTLE as Agent, and CURTIS J. LITTLE desires to accept and assume the duties of Agent, as set forth below.

NOW, THEREFORE, it is mutually agreed as follows:

1. AMOCO Production Company, as Unit Operator of the Callegos Canyon Unit Agreement, hereby designates Curtis J. Little as Agent to drill, test, complete, operate and/or plug and abandon a Dakota Formation well in the following described portion of the Unit area:

Township 28 North, Range 13 West, N.M.P.M. Section 12: Lot 4, SW/4 SW/4 containing 68.92 acres, more or less

- 2. AMOCO Production Company hereby covenants and agrees to comply or secure compliances with all obligations of the Unit Agreement with respect to the above described portion of the Unit area and to file all applications required or necessitated by the terms of such Agreement.
- 3. It is specifically understood that this Designation of Agent does not relieve AMOCO Production Company of its responsibilities as Unit Operator of the Gallegos Canyon Unit Area.
- 4. It is further understood and agreed that AMOCO Production Company, as Unit Operator of the Gallegos Canyon Unit area, may, at its option, revoke this Designation of Agent by giving written notice of such revocation to Curtis J. Little, the Commissioner of Public Lands of the State of New Mexico, and the Regional Oil and Gas Supervisor, United States Geological Survey.

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

AMOCO PRODUCTION COMPANY

Ву

CURTIS J. LITTLE



United States Department of the Interior

GEOLOGICAL SURVEY P. O. Box 26124 Albuquerque, New Mexico 87125

MAY 1 1 1979

Case 2 M 7, le

Amoco Production Company Attention: Mr. G. J. Ross Security Life Building

Denver, Colorado 80202

Gentlemen:

On this date, your 1979 plan of development and operation of the Gallegos Canyon unit area, San Juan County, New Mexico, wherein you propose to drill 12 wells within the Pictured Cliffs participating ares was approved. Such approval is subject to like approval by the appropriate State officials.

Three approved copies are enclosed.

Sincerely yours,

(ORIG. SGD.) GENE F. DANIEL

Acting Oil & Gas Supervisor, SRMA

Enclosures

NMOCD, Santa Fe (1tr. only) < \tri This Copy for

OIL CONSERVATION DIVISION SANTA FE

State of New Mexico







Commissioner of Public Lands
May 1, 1979

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Amoco Production Company Security Life Building Denver, Colorado 80202

> Re: 1979-Plan of Development 1978-Review of Operations Gallegos Canyon Pictured Cliffs Unit

San Juan County, New Mexico

ATTENTION: Mr. G. J. Ross

Gentlemen:

The Commissioner of Public Lands has this date approved your 1979 Plan of Development, which you submitted on behalf of Energy Reserves Group, Inc., Suboperator for the Gallegos Canyon Pictured Cliffs Unit. Such plan proposes the drilling of twelve (12) wells within the Pictured Cliffs Participating Area. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY: RAY D. GRAHAM, Director Oil and Gas Division

AJA/RDG/s encls.

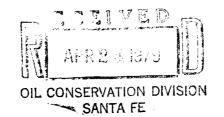
cc:

OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico



G. J. Ross Division Operations Superintendent

April 19, 1979



Amoco Production Company

Denver Region Security Life Building Denver, Colorado 80202 Western Division 303 - 820-4040

J. W. Sutherland (5) Area Oil and Gas Supervisor United States Geological Survey P. O. Box 26124 Albuquerque, NM 87125

Oil Conservation Commission (3) State of New Mexico Attention: Mr. Joe Ramey P. O. Box 2088 Santa Fe, NM 87501

File: WDF-385-416

Gentlemen:

Plan of Development - 1979 Review of Operations - 1978 Gallegos Canyon Pictured Cliff Unit San Juan County, New Mexico

Commissioner of Public Lands (3) State of New Mexico Attention: Mr. Roy D. Graham P. O. Box 1148 Santa Fe, NM 87501

> Case 2!1approved 1,1979 may 2/2

Amoco Oil Company, as Operator of Gallegos Canyon Unit, on behalf of the Suboperator of the Gallegos Canyon Pictured Cliff Unit, Energy Reserves Group, Inc., proposes a Plan of Development for 1979 which provides for the drilling of 12 wells within the Pictured Cliff participating area. The location and projected total depth of each well are listed below.

Well Number	Location				Depth
277		SW	NM	15-28N-12W	1670'
278		SW	SE	17-28N-12W	1600'
279		SW	NW	23-28N-12W	1800'
280		NW	SE	24-28N-12W	1800 '
281		NE	SW	25-28N-12W	1950 '
282		NW	SE	31-28N-12W	1500'
283		NW	NE	29-29N-12W	1450'
284		SW	SE	30-29N-12W	1470'
285		SW	SW	31-29N-12W	1675'
286	NW	SE	SE	24-29N-13W	1400'
287		SW	SE	35-29N-13W	1850 '
288	NE	SW	NW	19-29N-12W	1400'

J. W. Sutherland et al Page Two April 19, 1979

Operations during 1978 in the Gallegos Canyon Pictured Cliff Unit involved the following wells.

Drilling 0 Producing 63 Shut-In 8

Total cumulative and most recent production for the Gallegos Canyon Pictured Cliff Unit are tabulated as follows:

Cumulative (1-1-79) 47.7 BCF Production (12-78) 153 MMCF/mo.

Discussion

The Gallegos Canyon Pictured Cliff Unit has produced significant quantities of gas since its discovery and has been able to maintain a high rate of production over the past several years. Energy Reserves Group, Inc., the Suboperator of the Unit, proposes to drill the infill wells listed earlier, to provide increased recovery from the Unit.

We respectfully request your approval of our 1979 Plan of Development and 1978 Review of Operations.

Yours very truly,

HLM:pk

Attachment

JG480

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Amoco Production Company

nr. 217

Security Life Building Denver, Colorado 80202

Division Production
Manager
A. M. Roney
Division Operations
Superintendent
T. M. Curtis
W. M. Jones
Production Coordination
Superintendents

February 16, 1978

New Mexico Oil Conservation Commission P. O. Box 2088 Santa Fe, NM 87501

Attention: Mr. Joe D. Ramey

File: RAS-251-416

Gentlemen:

Gallegos Canyon Unit Gallup Well No. 87, NW SE NW Section 35-T29N-R13W and Well No. 105, NE SE SE Section 12-T28N-R13W San Juan County, NM

Energy Reserves Group of Casper, Wyoming requested approval from us, as Operator of the Gallegos Canyon Unit, to use the above referenced plugged and abandoned wells to reenter and attempt completion in the Pictured Cliffs formation.

We have secured the approvals of the other working interest owners in these wells, and by attachment we, as Operator of the referenced Unit, are furnishing our approval of Engergy Reserves Group's letter to reenter the above referenced wells.

Very truly yours,

DED/fet

cc: w/Attachments

L. O. Speer, Jr. - Farmington

Energy Reserves Group, Inc.

P. O. Box 3280 Casper, WY 82601



February 2, 1978

- COMBENYATE A CC.

Amoco Production Company

Security Life Building Denver, Colorado 80202

M. S. Kraemer Division Production Manager A. M. Roney Division Operations Superintendent T. M. Curtis W. M. Jones Production Coordination Superintendents

National Drilling Company 4810 North Kenneth Avenue Chicago, IL 60530

File: RAS-33-416

Gentlemen:

Gallegos Canyon Unit-Gallup Well No. 87 NW SE NW Section 35, T29N-R13W San Juan County, New Mexico

Gallegos Canyon Unit-Gallup Well No. 105 NE SE SE Section 12, T28N-R13W San Juan County, New Mexico

We are in receipt of a letter from Energy Reserves Group, Inc. of Casper, Wyoming, requesting approval to re-enter the above referenced abandoned wells to attempt a Pictured Cliffs gas well completion. They are the operators of the Pictured Cliffs unit.

As operator of the above reference units, we request your approval of Energy Reserves request. For your information we attach a copy of Energy Reserves' notice to the USGS.

If you approve of our giving approval for Energy Reserves to re-enter the above referenced wells, please sign on the space provided below and return to this office as soon as possible.

Very truly yours,

DED: 1jf

Attachment

National Drilling Company February 2, 1978 Page 2

Approved this _____ day of ______, 1978

NATIONAL DRILLING COMPANY

Ву

DD325



United States Department of the Interior

Conservation Division
Western National Bank Building
505 Marquette, NW, Suite 815
Albuquerque, New Mexico 87102

November 10, 1976

Amoco Production Company Attention: Mr. T.M. Curtis Security Life Company Denver, Colorado 80202

Gentlemen:

Your letter of August 16, 1976, advises that as unit operator of the Gallegos Canyon unit agreement, San Juan County, New Mexico, you have determined that the Gallegos No. 4 well in the SWANNA sec. 22, T. 28N., R. 12h., N.M.P.M., Federal lease Santa Fe 078106, is not capable of producing unitized substances in paying quantities from the Fruitland formation.

The Gallegos No. 4 well was completed on March 17, 1976, for an absolute open flow of 246 MCF of gas per day. During the period from first sales in April, 1976 through August, 1976, said well has produced 2,125 MCF of gas in 128 days of operation for an average of 16.60 MCF of gas per day.

This office concurs with your determination that the Gallegos No. 4 well is not capable of producing unitized substances in paying quantities. under existing conditions.

Sincerely yours,

JAMES W. SUTHERLAND Area 011 and Gas Supervisor

Farmington (w/cy notice)
Com. Pub. Lands, Santa Fe (ltr. only)
NMOCC, Santa Fe (ltr. only)
Accounts

ARStall:dlk:11/1/76



United States Department of the Interior

GEOLOGICAL SURVEY

Prawer 1857 Roswell, New Mexico 88201

July 17, 1972

247

Amoco Production Company Security Life Building Denver, Colorado 80202

Attention: Mr. T. M. Curtis

Gentlemen:

Your notice of June 28, 1972, advises that as operator of the Gallegos Canyon unit, San Juan County, New Mexico, you have determined that unit well No. 257 in the NEISSE sec. 19, T. 28 N., R. 11 W., N.M.P.M., lease Santa Pe 060644-A, is not capable of producing unitized substances in paying quantities from the Pruitland formation.

Unit well No. 257 was completed as a water injection well in the Gallup formation in 1967. Your subsequent recompletion in the Fruitland interval 1,312 to 1,327 fact was tessed July 20, 1971, for an initial absolute open flow of 1,050 NEFD. First sales was on January 27, 1972, and cumulative production through May was 12,614 MCF with May production averaging 61 MCFD. Your estimate from procesure and decline data indicate an ultimate recovery of 75,000 MCF.

This office concurs with your determination that well No. 257 is not capable of producing unitiesd substances in paying quantities.

Sincerely yours,

CARL C. TRAYWICK COCK
Acting Area Oil and Gas Supervisor

cc:

Washington (w/cy notice)
Farmington (w/cy notice)
Com. Pub. Lands, Santa Fe (ltr only)
NMOCC, Santa Fe (ltr only)
Accounts

JAG111ham:da

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

May 28, 1971

Amoco Production Company Security Life Building Denver, Colorado 80202

Attention: Mr. T. M. Curtis

Re: 1971 Plan of Development Gallegos Canyon Unit, San Juan County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1971 Plan of Development dated March 12, 1971, for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell Commissioner of Public Lands - Santa Fe



Amoco Production Company

Security Life Building Denver, Colorado 80202 H. T. Hunter Division Production Manager

W. M. Jones T. M. Curtis District Superintendents

Producing Department

March 12, 1971

File: TMC-61-416

Re:

1971 Plan of Development

Gallegos Canyon Unit

San Juan County, New Mexico

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands (3) The State of New Mexico State Land Office Building Santa Fe, New Mexico 87501

Oil Conservation Commission of (3) The State of New Mexico P. O. Box 2088 Santa Fe, New Mexico 87501 All Working Interest Owners Gallegos Canyon Unit (See Attached Addressee List)

Gentlemen:

In compliance with Section 9 of the Gallegos Canyon Unit Agreement dated November 1, 1950, designated I-Sec. No. 844, Amoco Production Company, as Unit Operator, respectfully submits for your approval a Plan of Development for the calendar year of 1971. The proposed plan has been approved by the Working Interest Owners as provided by the Unit Operating Agreement.

History of Past Development - There has been a total of 255 wells drilled in the Gallegos Canyon Unit. Of these, 60 are Pictured Cliffs producers, 27 are Gallup-Dakota duals, 128 are single Dakotas, 18 are Gallup oil, 1 is a Gallup gas, 6 are Fruitland completions, 32 wells are dry holes and abandoned and 8 are water injectors.

Participating areas have been formed for the Pictured Cliffs, Dakota, four separate Gallup pools and the Fruitland formation. Two water injection projects are in operation on acreage comprising Gallup Areas "C" and "D".

The two following Dakota wells were drilled and completed as producers during 1970:

Well No. 264 1630' FNL, 1150' FWL, Section 17, T28N, R12W Completed 12-30-70 3 hr. test, 1,792 MCFD on 3/4" choke. SIP 1,310 psig

Attachments

Well No. 265 790' FSL, 790' FEL, Section 25, T28N, R12W Completed 8-6-70 3 hr. test, 2,590 MCFD on 3/4" choke. SIP 1,980 psig

No other development in the Gallup, Pictured Cliffs or Fruitland is anticipated at this time.

Offset Obligation - Appropriate measures will be taken to prevent drainage of unitized substances from lands subject to the Gallegos Canyon Unit Agreement or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided in Section 15 of the Unit Agreement.

<u>Further Development</u> - This Plan of Development shall constitute the drilling obligation of the Unit Operator under terms of the Gallegos Canyon Unit Agreement for the period ending December 31, 1971.

<u>Modifications</u> - It is understood that this plan is dependent upon certain information to be obtained prior to and subsequent to drilling; therefore, it may be modified from time to time to meet changing conditions.

Effective Date - This Plan of Development shall be effective January 1, 1971.

Yours very truly,

APPROVED:

Director, United States Geological Survey
(Subject to like approval by appropriate
State Officials)

APPROVED:

Commissioner of Public Lands
(Subject to like approval by U.S.G.S.
and Oil Conservation Commission)

APPROVED:

Oil Conservation Commission

(Subject to like approval by U.S.G.S. and Commissioner of Public Lands)

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas
P. O. Box 2159
Dallas, Texas 75202
Attention: Mr. L. M. Thompson
Prod. Dept.

American Petrofina Co. of Texas P. O. Box 2159
Dallas, Texas 75202
Attention: Mr. Deewall
Land Dept.

The Atlantic Refining Company (3) P. O. Box 1978 Roswell, New Mexico 88201

Aztec Oil and Gas Company 2000 First National Bank Building Dallas, Texas 75202 Attention: Mr. P. R. Watts, Jr.

Brookhaven Oil Company
P. O. Box 1267
Scottsdale, Arizona 85252

Featherstone Farms Ltd. 1717 West Second Street Roswell, New Mexico 88201

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

E. I. Rydin
P. O. Box 8852
Chicago, Illinois 60680

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

Elma R. Jones 3526 Pacific Avenue Stockton, California 95201

Mr. J. R. Jones 711 Petroleum Life Building Midland, Texas 79701 National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico 87103

Skelly Oil Company 1860 Lincoln Street Denver, Colorado 80203 Attention: Mr. Leland Franz

Southern Union Production Company Fidelity Union Tower Building Dallas, Texas 75201 Attention: Mr. L. S. Muennink

Texaco, Inc.
P. O. Box 2100
Denver, Colorado 80202

Texas Pacific Oil Company
P. O. Box 747
Dallas, Texas 75221
Attention: Mr. L. B. Jeffers

Rip C. Underwood Box 2588 First National Bank Building Amarillo, Texas 79101

Wood Oil Company Thurston National Bank Building Tulsa, Oklahoma 74103

El Paso Natural Gas Company P. O. Box 1492 El Paso, Texas 79999 Attention: Land Dept.

Mr. R. D. Fitting 504 Vaughn Building Midland, Texas 79701

Financial Technology, Inc. 7501 Carpenter Freeway Dallas, Texas 75247

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

Mr. Arthur B. Johnson 1114 Laurel Drive Lafayette, California 94549

Mr. Harold K. Johnson 1118 Laurel Drive Lafayette, California 94549

Mis Marie C. Anderson 372 Euclid Avenue Oakland, California 94610

Miss Agnes L. Fulsaas 1903 Adams Court Mountain View, California 94040

Mr. J. J. Christmann Great Plains Building Lubbock, Texas 79401 Estate of Ralph Fitting, Jr. P. O. Box 782 Midland, Texas 79701

Redfern & Herd, Inc. P. O. Box 1747 Midland, Texas 79701

Sun Oil Company
DX Division
1101 Wilco Building
Midland, Texas 79701
Attention: Mr. V. N. Williams

Mr. J. Markham Great Plains Building Lubbock, Texas 79401

Mary Roberts Berry 208 East Washington Street Washington, Iowa 52353

Drawer 1857 Roswell, New Mexico 88201

April 6, 1971

247

Amoco Production Company Security Life Building Desmar, Colorado 80202

Attention: Mr. T. M. Curtis

Gentlemen:

Your 1971 plan of development for the Gallegos Conyon unit area, San Juan County, Hew Mexico, proposing the drilling of no additional walls, has been approved on this data subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIG. SGD.) N. O. FREDERICK

N. O. FREDERICK Regional Oil and Gas Supervisor

ce:

Washington (w/cy of plan)
Farmington (w/cy of plan)
MMOCC, Santa Fe (ltr. only)
Com. of Pub. Lands, Santa Fe (ltr. only)

March 17, 1971

Assoco Producti za Company security Like milding Denver, Colorado 80202

> Pay 1971 Plan of Pavelament Gallegns Carron Pait San Juan County, New Mexico

ATTENTION: Mr. T. M. Curtan

Gentleman:

The Commissioner of Public Lands has this lete a recoved your 1971 Plan of Development for the Gallegoe Cangon Unit. San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Please remit a three (\$3.00) pollar filler for

Sincerely comme.

GURDON G. MARCUM, II, Director uil and Gas

AJA/GGM/s encl.

CC 2

UBGS-Roswell, New Mexico OCC- Santa Pe, New Mexico



UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

Drawer 1857 Roswell, New Mexico 88201

November 18, 1970

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Attention: Mr. H. T. Hunter

RECEIVED BUREAU OF LAND ALL THE BETTY LAND CETTER - C.

NOV 19 1971

Gentlemen:

HOUSE DESIGNAM.

Your letter of October 12 transmits three copies of an instrument entitled "Designation of Agent" dated July 1, 1970, whereby Pan American Petroleum Corporation, as unit operator of the Gallegos Canyon unit agreement. San Juan County, New Maxico, designates Clinton Oil Company as its agent to drill and operate Pictured Cliffs formation wells in the Pictured Cliffs participating area embracing 27,794.68 scres as described in the instrument. Such instrument also designates Clinton sa agent to operate noncommercial unit well No. 140 completed in the Gallup and non-commercial unit wells Hos. 77 and 82 completed in the Fruitland. Your supplemental letter of November 11 states that such properties are considered marginal by Pan American. The Designation of Agent states that Pan American will not be relieved of any of its responsibilities as unit operator of the Gallegos Canyon unit area.

Copies of the Designation of Agent are being distributed to the appropriate Pederal offices.

> (ORIG. SGD.) CARL C. TRAYWICK CARL C. TRAYWICK Acting Oil and Gas Supervisor

Washington (w/cy desig.) Farmington (w/cy desig.) BLM, Santa Fe (w/cy desig.) NMOCC, Santa Fe (ltr. only) Com. Pub. Lands, Santa Fe (1tr. only)

SUB-OPERATING AGREEMENT

Gallegos Canyon Unit Area San Juan County, New Mexico I - Sec. No. 844

THIS AGREEMENT, entered into as of the first day of July, 1970, by and between PAN AMERICAN PETROLEUM CORPORATION, a Delaware corporation, authorized to do business in the State of New Mexico and hereinafter referred to as "Pan American" or "Unit Operator," and AZTEC OIL & GAS COMPANY, a corporation, authorized to do business in the State of New Mexico, hereinafter referred to as "Aztec" or "Sub-Operator;"

WITNESSETH:

WHEREAS, Pan American is the designated Unit Operator under the Unit Agreement for the development and operation of the Gallegos Canyon Unit Area, County of San Juan, State of New Mexico, dated November 1, 1950, and also under the companion Unit Operating Agreement, dated January 15, 1951, which agreements are hereinafter referred to respectively as the "Unit Agreement" and "Unit Operating Agreement," or collectively as "said agreements;" and,

WHEREAS, the parties hereto desire to provide for the operation by Sub-Operator of the Gallup "C" Participating Area within the said unit area, subject to said agreements and all of the terms and conditions hereof;

NOW, THEREFORE, in consideration of the premises, it is mutually agreed by and between the parties hereto as follows:

1. Pan American hereby designates Aztec as its agent, with full authority to act in its behalf as Sub-Operator in complying with the terms of the Unit Agreement and regulations applicable thereto and on whom the Supervisor or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to:

The Gallup "C" Participating Area, as established by fourth enlargement effective August 1, 1963 (sometimes referred to as the sub-operated formation).

- 2. Sub-Operator hereby agrees and consents to accept the duties and responsibilities and to discharge all the rights, privileges, powers and obligations of the Unit Operator under the Unit Agreement and also under the Unit Operating Agreement, as to the sub-operated formation, and as to the unitized substances in and produced from the sub-operated formation.
- 3. Nothing in this agreement shall be construed or shall operate to relieve Unit Operator from its obligations and responsibilities under said agreements. To the extent, however, that Sub-Operator assumes the obligations and responsibilities of Unit Operator by reason of the provisions of this agreement, Sub-Operator shall indemnify and hereby agrees to indemnify Unit Operator against any loss, obligation or responsibility arising from any action or inaction of Sub-Operator under said Unit Agreement or Unit Operating Agreement.
- 4. This agreement is not intended, and shall not be construed, as vesting in Sub-Operator any working interest or royalty interest or other interest in or to land or lands which are not otherwise owned by Sub-Operator.
- 5. So long as this agreement shall remain effective, Sub-Operator shall perform, subject to the terms and conditions of this agreement, any and all things which may be required of him or of the Unit Operator by the United States Geological Survey or the State of New Mexico or any other governmental agency or authorized representative thereof pertaining to the sub-operated formation. Sub-Operator's said duties with respect to the reports and actions to said governmental authorities shall extend to and include reports or actions due by reason of Sub-Operator's activities hereunder. Sub-Operator shall furnish to Unit Operator a copy of all reports made, shall notify Unit Operator of all actions taken, and shall keep Unit Operator fully and currently advised with respect to Sub-Operator's activities hereunder.

- 6. Sub-Operator shall conduct its operations with respect to the suboperated formation through its own employees or through independent contractors selected by it. Neither the Sub-Operator nor any party performing
 services for Sub-Operator as either agent or employee or as independent
 contractor, or otherwise, shall be an employee or agent of the Unit Operator for any purpose. Sub-Operator shall comply with all of the provisions
 of the Unit Agreement and Unit Operating Agreement affecting its activities
 hereunder in the same manner and to the same extent as though Sub-Operator
 were the designated Unit Operator, including but not limited to the provisions relating to insurance. Sub-Operator shall furnish to Unit Operator,
 on Unit Operator's forms, certificates in duplicate evidencing such insurance.
- 7. This agreement shall become effective as of 7:00 o'clock a.m.,
 July 1, 1970, and shall remain in force and effect so long as unitized substances are produced from the properties described in Section 1 hereof; provided, that either party hereto may terminate this agreement by giving not less than 30 days written notice thereof to the other party. Unit Operator agrees promptly to notify the Oil and Gas Supervisor, the Commissioner of Public Lands, and the Oil Conservation Commission of any change in the designated agent.
- 8. The attached Exhibit A to this agreement, containing the Equal Employment Opportunity and Non-discrimination Provision of Section 202 of Executive Order 11246 is made a part hereof by reference.

IN WITNESS WHEREOF, this agreement has been duly executed and delivered as of the day and year above stated.

PAN AMERICAN PETROLEUM CORPORATION

Its Attorney in Fact

- UNIT OPERATOR -

AZTEC OIL & GAS COMPANY

By Dustman Sacret

- SUB-OPERATOR
STATE OF COLORADO

STATE OF COLORADO

The foregoing instrument was acknowledged before me this 30 day of fine 1970, by H. T. Hunter, as attorney infact on behalf of PAN AMERICAN PETROLEUM CORPORATION.

WITNESS my hand and official seal.

Agraldine B Book

Notary Public

My Commission expires:

STATE OF Legal:
SS.

COUNTY OF Ablas:

SS.

The foregoing instrument was acknowledged before me this day of the foregoing instrument was acknowledged before me this day of the foregoing day of the foregoing instrument was acknowledged before me this day of day of the foregoing instrument was acknowledged before me this day of day of the foregoing day of the foregoin

WITNESS my hand and official seal.

My Commission expires:

une /, 1971

PEGGY TAPP

NOTARY PUBLIC, DALLAS COUNTY, TEXAS
MY COMMISSION EXPIRES JUNE 1, 19.2/_

-4-

PROVISIONS OF SECTION 202 OF EXECUTIVE ORDER 11246

- "(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- "(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- "(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- "(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- "(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- "(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by Law.
- "(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of Sept. 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING
DENVER, COLORADO 80202

Re:

ing 로 - 477

June 30, 1970

File: HTH-300-950.5

Sub-Operating Agreement

Gallegos Canyon Unit Gallup "C" Participating Area San Juan County, New Mexico

Mr. Carl C. Traywick
Acting Oil and Gas Supervisor
United States Geological Survey
P.O. Drawer 1857
Roswell, New Mexico 88201

Dear Sir:

Pan American, as unit operator of the Gallegos Canyon Unit, has entered into an agreement with Astec Oil and Gas Company, whereby Aztec is designated Pan American's agent for the operation of the Gallegos Canyon Unit Gallup "C" Participating Axes. The effective date of the agreement is July 1, 1970.

We are enclosing three (3) copies of the agreement for your information and records. By copy of this letter, we are also furnishing copies of the agreement to the state of New Mexico.

JIMITT

Attachments

cc: Mr. Alex Armije, Land Commissioner Gil Conservation Commission P.O. Box 2088 Santa Fe, New Mexico 87501

bcc: Aztec Oil Gas Company 2000 First National Bank Building Dallas, Texas 75202

Mr. L. O. Speer, Jr. Farmington

ORIGINAL SIGNED BY H. T. HUNTER

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

PRODUCING DEPARTMENT H. T. HUNTER Division Production
Manager

DENVER, COLORADO 80202 April 15, 1970 File: HTH- 205-950-5

DRILLING J. E. Fox, Jr. GAS SALES A. H. BARRETT

Re:

Resignation as Operator

ADMINISTRATION S. G. BAKER

TO ALL WORKING INTEREST OWNERS (See List Attached)

Gentlemen:

DATE

Effective at 7:00 a.m. on December 31, 1969, Pan American Petroleum Corporation sold all its interest in the following joint interest property to Clinton Oil Company of Wichita, Kansas. Pan American is presently serving as Operator of the property pursuant to the terms and provisions of the Unit and Unit Operating Agreement.

Property

Location

Gallegos Canyon Unit Well No. 77

West Kutz - Pictured Cliffs San Juan County, New Mexico

In accordance with the terms of the Agreement, Pan American hereby resigns as Unit Operator of the above property. It is Pan American's desire that a new Operator be selected and approved so that its resignation may become effective at 7:00 a.m. on July 1, 1970.

As a matter of information and to help facilitate the selection of a successor Operator, Clinton Oil Company has expressed a desire to succeed Pan American as Unit Operator of the joint property on July 1, 1970.

If the selection of Clinton Oil Company, as new Operator, is agreeable with you, please signify your approval by signing and returning one copy of this letter to our office.

Yours very truly, APPROVED COMPANY

MAILING LIST Gallegos Canyon Unit Well No. 77

American Petrofina Co. of Texas P. O. Box 2159
Dallas, Texas 75221

Aztec Oil and Gas Company 2000 First National Bank Building Dallas, Texas 75202

Southern Union Production Company Fidelity Union Tower Building Dallas, Texas 75201 Sunray DX Oil Company 1101 Wilco Building Midland, Texas 79701

Texaco, Inc. P. O. Box 2100 Denver, Colorado 80201 E. A. Hanson P. O. Box 852 Roswell, New Mexico

H. K. Riddle
P. O. Box 11537
Albuquerque, New Mexico 87112

Summit Oil Company Burt Building Dallas, Texas

The Director
United States Geological Survey
Washington, D. C.

Through: Mr. Carl C. Traywick

Acting Oil and Gas Supervisor United States Geological Survey

P. O. Drawer 1857

Roswell, New Mexico 88201

Mr. Alex Armijo, Land Commissioner Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

PAN AMERICAN PETROLEUM CORPORATION

OUCING DEPARTMENT
T. HUNTER
DIVISION PRODUCTION
MANAGER

DENVER, COLORADO 80202

April 15, 1970

File: HTH-203-950.5

DRILLING
J. E. Fox, Jr.

GAS SALES
A. H. BARRETT

ADMINISTRATION

Re:

Resignation as Operator

S. G. BAKER

TO ALL WORKING INTEREST OWNERS
(See List Attached)

Gentlemen:

DATE

Effective at 7:00 a.m. on December 31, 1969, Pan American Petroleum Corporation sold all its interest in the following joint interest property to Clinton Oil Company of Wichita, Kansas. Pan American is presently serving as Operator of the property pursuant to the terms and provisions of the Unit and Unit Operating Agreement.

Property

Location

Gallegos Canyon Unit Well No. 140 Cha Cha Gallup Field San Juan County, New Mexico

In accordance with the terms of the Agreement, Pan American hereby resigns as Unit Operator of the above property. It is Pan American's desire that a new Operator be selected and approved so that its resignation may become effective at 7:00 a.m. on July 1, 1970.

As a matter of information and to help facilitate the selection of a successor Operator, Clinton Oil Company has expressed a desire to succeed Pan American as Unit Operator of the joint property on July 1, 1970.

If the selection of Clinton Oil Company, as new Operator, is agreeable with you, please signify your approval by signing and returning one copy of this letter to our office.

APPROVED______COMPANY

MAILING LIST GALLEGOS CANYON UNIT WELL NO. 140

The Director United States Geological Survey Washington, D. C.

Through: Mr. Carl C. Traywick

Acting Oil and Gas Supervisor United States Geological Survey

P. O. Drawer 1857

Roswell, New Mexico 88201

Mr. Alex Armijo, Land Commissioner Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

Texaco, Inc.
P. O. Box 2100
Denver, Colorado

Southern Union Production Company Fidelity Union Tower Building Dallas, Texas 75201 Aztec Oil and Gas Company 2000 First National Bank Building Dallas, Texas 75202

PAN AMERICAN PETROLEUM CORPORATION

PRODUCING DEPARTMENT
H. T. HUNTER
DIVISION PRODUCTION
MANAGER

DENVER, COLORADO 80367

April 15, 1970

File: HTH-206-950.5

DRILLING
J. E. Fox, Jr.

GAS SALES
A. H. BARRETT

Re:

Resignation as Operator

ADMINISTRATION S. G. BAKER

TO ALL WORKING INTEREST OWNERS
(See List Attached)

Gentlemen:

DATE

Effective at 7:00 a.m. on December 31, 1969, Pan American Petroleum Corporation sold all its interest in the following joint interest property to Clinton Oil Company of Wichita, Kansas. Pan American is presently serving as Operator of the property pursuant to the terms and provisions of the Unit and Unit Operating Agreement.

Property

Location

Gallegos Canyon Unit (Pictured Cliffs) West Kutz - Pictured Cliffs San Juan County, New Mexico

In accordance with the terms of the Agreement, Pan American hereby resigns as Unit Operator of the above property. It is Pan American's desire that a new Operator be selected and approved so that its resignation may become effective at 7:00 a.m. on July 1, 1970.

As a matter of information and to help facilitate the selection of a successor Operator, Clinton Oil Company has expressed a desire to succeed Pan American as Unit Operator of the joint property on July 1, 1970.

If the selection of Clinton Oil Company, as new Operator, is agreeable with you, please signify your approval by signing and returning one copy of this letter to our office.

APPROVED_______COMPANY______

MAILING LIST PICTURED CLIFFS PARTICIPATING AREA GALLEGOS CANYON UNIT

The Director United States Geological Survey Washington, D. C.

Through: Mr. Carl C. Traywick

Acting Oil and Gas Supervisor United States Geological Survey

P. O. Drawer 1857 Roswell, New Mexico

Aztec Oil and Gas Company 2000 First National Bank Building Dallas, Texas 75202 Attn: Mr. P. R. Watts, Jr.

Bloomfield Royalty Corporation 1935 National Bank Building 1507 Pacific Avenue Dallas, Texas 75201

Southern Union Production Company Fidelity Union Tower Building 1507 Pacific Avenue Dallas, Texas 75201 Attn: Mr. L. S. Muennink

Texaco, Inc.
P. O. Box 2100
Denver, Colorado 80201

American Petrofina Co. of Texas P. O. Box 2159 Dallas, Texas Attn: Mr. L. M. Thompson

Pubco Petroleum Corporation P. O. Box 869 Albuquerque, New Mexico 87103

Featherstone Farms, Ltd. 1717 West Second Roswell, New Mexico

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

Brookhaven Oil Company
P. O. Box 1267
Scottsdale, Arizona 85252

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

Mr. Alex Armijo, Land Commissioner Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico

Elma R. Jones c/o R. H. Klinger P. O. Box 1741 Stockton, California 95201

National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Wood Oil Company Room 800 - Midstates Building Tulsa, Oklahoma 74103

Sunray DX Oil Company 1101 Wilco Building Midland, Texas 79701 Attn: Mr. V. M. Williams

Texas Pacific Oil Company P. O. Box 747 Dallas, Texas 75221 Attn: Mr. L. B. Jeffers

E. I. Rydin P. O. Box 8852 Chicago, Illinois

Marie C. Anderson 359 Vernon Street Oakland, California 94610

Agnes L. Fulsaas 1903 Adams Court Mountain View, California 94040

Arthur B. Johnson 1114 Laurel Drive Lafayette, California 94549

Harold K. Johnson 1118 Laurel Drive Lafayette, California 94549 Boswell, New Menico 88201

Marca 4, 1970

Fan American Patroleum Corporation Security Life Building Denver, Colorado 80202

Attention: Nr. T. M. Curtis

Contlemen:

Your 1970 plan of development for the Gallegos Canyon suit area, San Juan County, New Mexico, proposing the drilling of no additional wells, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

CARL C. TRAYMICK Acting Oil and Gas Supervisor

cc:

Washington (w/cy of plan)
Farmington (w/cy of plan)
NMOCC, Santa Fe (ltr. only)
Com. Of Pub. Lands, Santa Fe (ltr. only)

OIL CONSERVATION COMMISSION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

Marah 4, 1970

247

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Attention: Mr. T. M. Curtis

Re: 1970 Plan of Development Gallegos Canyon Unit, San Juan County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1970 Plan of Development dated February 18, 1970, for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell Commissioner of Public Lands - Santa Fe •

MAIN OFFICE OF

February 24, 1970

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

> Re: 1970 Plan of Development Gallegos Canyon Unit San Juan County, New Mexico

ATTENTION: Mr. T. M. Curtis

Gentlemen:

The Commissioner of Public Lands has this date approved your 1970 Plan of Development for the Gallegos Canyon Unit, san Juan County, New Mexico, Subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Very truly yours,

Ted Bilberry, Director Oil and Gas Department

TB/ML/s encl. 1.

cc: USGS-Roswell, New Mexico OCC- Santa Fe, New Mexico

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

PRODUCING DEPARTMENT
H. T. HUNTER
DIVISION PRODUCTION

MANAGER

DENVER, COLORADO 80202

DISTRICT SUPERINTENDENTS
W. M. JONES
T. M. CURTIS

February 18, 1970

File: TMC-62-416

Re:

1970 Plan of Development

Gallegos Canyon Unit

San Juan County, New Mexico

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

P. O. Drawer 1857
Roswell, New Mexico 88201
Oil Conservation Commission of (3

Oil Conservation Commission of (3)
The State of New Mexico
P. O. Box 2088
Santa Fe. New Mexico 87501

Commissioner of Public Lands (3) The State of New Mexico State Land Office Building Santa Fe, New Mexico 87501

All Working Interest Owners Gallegos Canyon Unit (See Attached Addressee List)

Gentlemen:

In compliance with Section 9 of the Gallegos Canyon Unit Agreement dated November 1, 1950, designated I-Sec. No. 844, Pan American Petroleum Corporation, as Unit Operator, respectfully submits for your approval a Plan of Development for the calendar year of 1970. The proposed plan has been approved by the Working Interest Owners as provided by the Unit Operating Agreement.

History of Past Development - There has been a total of 253 wells drilled in the Gallegos Canyon Unit. Of these, 60 are Pictured Cliffs producers, 27 are Gallup-Dakota duals, 126 are single Dakotas, 18 are Gallup oil, 1 is a Gallup gas, 6 are Fruitland completions, 32 wells are dry holes and abandoned and 8 are water injectors.

Participating areas have been formed for the Pictured Cliffs, Dakota, four separate Gallup pools and the Fruitland formation. Two water injection projects are in operation on acreage comprising Gallup Areas "C" and "D".

During 1969, Well No. 238, which had been abandoned in the Dakota since 1966, was re-entered and the Gallup formation perforated and tested. Production was non-commercial and the well has been temporarily abandoned. The well is located within the Gallup Participating Area "C".

The attached tabulation furnishes a statistical review of operations in the Gallegos Canyon Unit.

<u>Proposed Additional Wells</u> - The Dakota development program is now essentially complete.

File: TMC-62-416 - 2 - February 18, 1970

No other development in the Gallup, Pictured Cliffs or Fruitland is anticipated at this time.

Offset Obligation - Appropriate measures will be taken to prevent drainage of unitized substances from lands subject to the Gallegos Canyon Unit Agreement or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided in Section 15 of the Unit Agreement.

Further Development - This Plan of Development shall constitute the drilling obligation of the Unit Operator under terms of the Gallegos Canyon Unit Agreement for the period ending December 31, 1970.

Modifications - It is understood that this plan is dependent upon certain information to be obtained prior to and subsequent to drilling; therefore, it may be modified from time to time to meet changing conditions.

Effective Date - This Plan of Development shall be effective January 1, 1970.

Yours very truly.

APPROVED:

DATE:

Director, United States Geological Survey
(Subject to like approval by appropriate
State Officials)

APPROVED:

Commissioner of Public Lands
(Subject to like approval by U.S.G.S.
and Dil Conservation Commission)

DATE:

DATE:

Commissioner of Public Lands
(Subject to like approval by U.S.G.S.
and Dil Conservation Commission)

(Subject to like approval by U.S.G.S. and Commissioner of Public Lands)

STATISTIC REVIEW OF OPERATIONS GALLEGOS CANYON UNIT

January 1, 1970

Total wells drilled in Unit area Total Unit acreage	253 43,146.82 acres
Pictured Cliffs Statistics	
Pictured Cliffs Participating Area	27,496.46 acres
Total wells drilled	78
Producing wells	60
Current production:	100, 000, 1/07
November 1969	102,800 MCF
December 1969	109,613 MCF
Cumulative production to 1/1/70	36,766,261 MCF
Dakota Statistics	
Dakota Participating Area	43,146.62 acres
Total wells drilled	130 (includes 4 duals)
Producing wells	128 (includes 2 duals)
Current production:	
November 1969	3,085,136 MCF
December 1969	3,209,934 MCF
Cumulative production to 1/1/70	144,401,507 MCF
Gallup Statistics	
Gallup Participating Area "A"	880 acres
Gallup Participating Area "B"	715.40 acres
Gallup Participating Area "C"	2,148.75 acres
Gallup Participating Area "D"	2,396.88 acres
Producing Wells	21 (includes 2 duals,
	& 1 Gallup gas)
Total wells drilled	43
Current production:	
November 1969	4,990 Bbls.
December 1969	4,633 Bbls.
Cumulative production to 1/1/70	1,826,770 Bbls.
Fruitland Statistics	
Fruitland Participating Area	1,275.68 acres
Total wells drilled	6
Producing wells	6
Current production:	
November 1969	45,134 MCF
December 1969	47,093 MCF
Cumulative production to 1/1/70	1,917,816 MCF

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas
P. O. Box 2159
Dallas, Texas 75202
Attention: Mr. L. M. Thompson
Prod. Dept.

American Petrofina Co. of Texas P. O. Box 2159
Dallas, Texas 75202
Attention: Mr. Deewall
Land Dept.

The Atlantic Refining Company (3)
P. O. Box 1978
Roswell, New Mexico 88201

Aztec Oil and Gas Company 2000 First National Bank Building Dallas, Texas 75202 Attention: Mr. P. R. Watts, Jr.

Mary Roberts Berry 208 East Washington Street Washington, Iowa 52353

Bloomfield Royalty Corporation 1902 Houston National Gas Building Houston, Texas 77002

Brookhaven Oil Company
P. O. Box 1267
Scottsdale, Arizona 85252

Olen F. Featherstone Roswell Petroleum Building Roswell, New Mexico 88201

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

E. I. Rydin
P. O. Box 8852
Chicago, Illinois 60680

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

Elma R. Jones c/o R. H. Klinger P. O. Box 1741 Stockton, California 95201 National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico 87103

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico 88240
Attention: Mr. H. E. Aab

Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma 74102
Attention: B. W. Ratliff

Southern Union Production Company Fidelity Union Tower Building Dallas, Texas 75201 Attention: Mr. L. S. Muennink

Texaco, Inc.
P. 0. Box 2100
Denver, Colorado 80202

Texas Pacific Oil Company
P. O. Box 747
Dallas, Texas 75221
Attention: Mr. L. B. Jeffers

Rip C. Underwood Box 2588 First National Bank Building Amarillo, Texas 79101

Wood Oil Company
Room 800 - Midstates Building
Tulsa, Oklahoma 74103

El Paso Natural Gas Company P. O. Box 1492 El Paso, Texas 79999 Attention: Land Dept.

Mr. R. D. Fitting 504 Vaughn Building Midland, Texas 7970.

Mr. J. R. Jones
711 Petroleum Life Building
Midland. Texas 79701

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

Mr. Arthur B. Johnson
1114 Laurel Drive
Lafayette, California 94549

Mr. Harold K. Johnson 1118 Laurel Drive Lafayette, California 94549

Miss Marie C. Anderson 372 Euclid Avenue Oakland, California 94610

Miss Agnes L. Fulsaas 1903 Adams Court Mountain View, California 94040

Mr. J. J. Christmann Great Plains Building Lubbock, Texas 79401 Estate of Ralph Fitting, Jr. P. O. Box 782 Midland, Texas 79701

Redfern & Herd, Inc. P. O. Box 1747 Midland, Texas 79701

Sun Oil Company, DX Division 1101 Wilco Building Midland, Texas 79701 Attention: Mr. V. N. Williams

Mr. J. Markham Great Plains Building Lubbock, Texas 79401



UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

Drawer 1857 Roswell, New Mexico 88201

March 13, 1969

Pan American Petroleum Corporation Security Life Building Denver, Colorade 80202

Attention: Mr. T. M. Curtis

Gentlemen:

Your 1969 plan of development for the Gallegos Canyon unit area, San Juan County, New Mexico, proposing the drilling of no additional wells, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIG. SED.) CARL C. TRAYWICK

GARL C. TRAYWICK Acting Oil and Gas Supervisor

cc:
Washington (w/cy of plan)
Farmington (w/cy of plan)
NMOCC, Santa Fe (ltr. only)
Com. of Pub. Lands, Santa Fe (ltr. only)

OIL CONSERVATION COMMISSION P. O. BOX 2088

SANTA FE. NEW MEXICO 87501

February 6, 1969

24/

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Attention: Mr. T. M. Curtis

Re: 1969 Plan of Development Gallegos Canyon Unit, San Juan County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1969 Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the plan are returned herewith.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/JEK/og Enclosures

cc: Commissioner of Public Lands Santa Fe, New Mexico

United States Geological Survey Roswell, New Mexico

269 JAN 28 AA S 09

January 27, 1969

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

> Re: 1969 Plan of Development Gallegos Canyon Unit San Juan County, New Mexico

ATTEMPION: Mr. T. M. Curtis

Gentlemen:

The Commissioner of Public Lands has this date approved your 1969 Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Very truly yours,

ALEX J. ARMIJO COMMISSIONER OF PUBLIC LANDS

BY: Ted Bilberry, Director Oil and Gas Department

AJA/TB/ML/s encl.

CC: USGS-Roswell, New Mexico QCC - Santa Fe, New Mexico PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

DENVER, COLORADO 80202

District Superintendents W. M. Jones A. E. Piper

T. M. CURTIS
JOINT INTEREST
SUPERINTENDENT

S. B. RICHARDS

January 21, 1969

File: TMC-21-416

Re: 1969 Plan of Development

Gallegos Canyon Unit

San Juan County, New Mexico

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Oil Conservation Commission of (3) The State Of New Mexico P. O. Box 2088 Santa Fe, New Mexico 87501 Commissioner of Public Lands (3) The State of New Mexico State Land Office Building Santa Fe, New Mexico 87501

All Working Interest Owners Gallegos Canyon Unit (See Attached Addressee List)

Gentlemen:

PRODUCING DEPARTMENT

DIVISION PRODUCTION MANAGER

H. T. HUNTER

In compliance with Section 9 of the Gallegos Canyon Unit Agreement dated November 1, 1950, designated I-Sec. No. 844, Pan American Petroleum Corporation, as Unit Operator, respectfully submits for your approval a Plan of Development for the calendar year of 1969. The proposed plan has been approved by the Working Interest Owners as provided by the Unit Operating Agreement.

History of Past Development - There has been a total of 253 wells drilled in the Gallegos Canyon Unit. Of these, 61 are Pictured Cliffs producers, 3 are Gallup-Dakota duals, 125 are single Dakotas, 24 are Gallup oil, 1 is a Gallup gas, 6 are Fruitland completions, 25 wells are dry holes and abandoned and 8 are water injectors.

Participating areas have been formed for the Pictured Cliffs, Dakota, four separate Gallup pools and the Fruitland formation. Two water injection projects are in operation on acreage comprising Gallup Areas "C" and "D".

During 1968, two Dakota wells were successfully completed. These wells, Unit Nos. 262 and 263, tested 3400 MCFD and 6150 MCFD, respectively, on completion.

The attached tabulation furnishes a statistical review of operations in the Gallegos Canyon Unit.

<u>Proposed Additional Wells</u> - The Dakota development program is now essentially complete.

No other development in the Gallup, Pictured Cliffs or Fruitland is anticipated at this time.

of unitized substances from lands subject to the Gallegos Canyon Unit Agreement or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided in Section 15 of the Unit Agreement.

<u>Further Development</u> - This Plan of Development shall constitute the drilling obligation of the Unit Operator under terms of the Gallegos Canyon Unit Agreement for the period ending December 31, 1969.

Modifications - It is understood that this plan is dependent upon certain information to be obtained prior to and subsequent to drilling; therefore, it may be modified from time to time to meet changing conditions.

Effective Date - This Plan of Development shall be effective January 1, 1969.

Yours very truly,

Attachments APPROVED: DATE: Director, United States Geological Survey (Subject to like approval by appropriate State Officials) APPROVED: DATE: Commissioner of Public Lands (Subject to like approval by U.S.G.S. and 011 Conservation Commission) DATE: Feb. 6, 1969 APPROVED: Conservation Commission (Subject to like approval by U.S.G.S. and Commissioner of Public Lands)

GALLEGOS CANYON UNIT WORKING INTEREST OWNERS

American Petrofina Company of Texas P. O. Box 2159
Dallas, Texas 75202
Attn: Mr. Deewall, Land Department

American Petrofina Company of Texas P. O. Box 2159
Dallas, Texas 75202
Attn: Mr. L. M. Thompson, Prod. Dept.

The Atlantic Refining Company (3) P. O. Box 1978 Roswell, New Mexico

Aztec Oil & Gas Company 2000 First National Bank Building Dallas, Texas 75202 Attn: Mr. H. L. Snider, Jr.

Mary Roberts Berry 208 E. Washington Street Washington, Iowa 52353

Bloomfield Royalty Corporation 916 San Jacinto Building Houston, Texas 77002

Brookhaven Oil Company P. O. Box 1267 Scottsdale, Arizona 85252

B. H. and Dyvena Crawford Bloomfield, New Mexico 87413

El Paso Natural Gas Company P. O. Box 1492 El Paso, Texas 79999 Attn: Land Department

Olen F. Featherstone Roswell Petroleum Building Roswell, New Mexico 88201

E. A. Hanson P. O. Box 1515 Roswell, New Mexico 88201

Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma 74101
Attn: Mr. B. W. Ratliff

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

Arthur B. Johnson 1114 Laurel Drive Lafayette, California 94549

Harold K. Johnson 1118 Laurel Drive Lafayette, California 94549

Marie C. Anderson 357 Vernon Street Oakland, California 94610

Agnes L. Fulsaas 1903 Adams Court Mountain View, California 94040

Elma R. Jones c/o R. H. Klinger P. O. Box 1741 Stockton, California 95201

Locke-Taylor Drilling Company 801 Second Avenue Durango, Colorado 81301

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

E. I. Rydin
P. O. Box 66067
Chicago, Illinois 66066

National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico 87103

John J. Christman Great Plains Building Lubbock, Texas 79401 Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico 88240
Attn: Mr. H. E. Aab

Texaco, Inc.
P. O. Box 2100
Denver, Colorado 80202

Wood Oil Company Room 800 Midstates Building Tulsa, Oklahoma 74103

Jack Markham Great Plains Building Lubbock, Texas 79401

Robert D. Fitting 504 Vaughn Building Midland, Texas 79701

Redfern & Herd P. O. Box 1747 Midland, Texas 79701

Southern Union Production Company Fidelity Union Tower Building 1507 Pacific Avenue Dallas, Texas 75201 Attn: Mr. A. M. Wiederkehr Sun Oil Company, DX Division 1101 Wilco Building Midland Texas 79701 Attn: Mr. D. N. Williams

Texas Pacific Oil Company P. O. Box 747 Dallas, Texas 75221

M. H. and Eula Stark Route 3 Farmington, New Mexico 87401

J. Robert Jones
711 Petroleum Life Building
Midland, Texas 79701

Estate of Ralph Fitting P. O. Box 782 Midland, Texas 79701

Rip C. Underwood P. O. Box 2588 First National Bank Building Amarillo, Texas 79101

STATISTIC REVIEW OF OPERATIONS GALLEGOS CANYON UNIT

December 1, 1968

Total wells drilled in Unit area Total Unit acreage	253 43,146.82 acres
Pictured Cliffs Statistics	
Pictured Cliffs Participating Area Total wells drilled Producing wells Current production:	27,496.46 acres 78 60
October 1968 November 1968 Cumulative production to 12/1/68	60,835 MCF 80,980 MCF 35,490,187 MCF
Dakota Statistics	
Dakota Participating Area Total wells drilled Producing wells Current production: October 1968 November 1968 Cumulative production to 12/1/68	43,146.62 acres 130 (includes 2 duals) 128 (includes 4 duals) 3,328,806 MCF 3,782,861 MCF 114,894,504 MCF
Gallup Statistics	
Gallup Participating Area "A" Gallup Participating Area "B" Gallup Participating Area "C" Gallup Participating Area "D" Producing Wells (includes 13 Non-Commercial)	880 acres 715.40 acres 2,148.75 acres 2,396.88 acres 28 (includes 3 duals, & 1 Gallup gas)
Total wells drilled Current production: October 1968 November 1968	43 6,777 Bbls. 7,021 Bbls.
Cumulative production to 12/1/68	1,755,273 Bbls.
Fruitland Statistics	
Fruitland Participating Area Total wells drilled Producing wells (includes 1 Non-Commercial) Current production:	1,275.68 acres 6 6
October 1968 November 1968 Cumulative production to 12/1/68	46,606 MCF 51,453 MCF 1,328,776 MCF

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

24.7

July 24, 1968

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Attention: Mr. T. M. Curtis

Re: 1968 Plan of Development,

Gallegos Canyon Unit,

San Juan County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1968 Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

One approved copy of the plan is returned herewith.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell Commissioner of Public Lands - Santa Fe



UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

Drawer 1857 Roswell, New Mexico 88201

April 29, 1968

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Attention: Mr. T. M. Curtis

Gentlemen:

Your 1968 plan of development for the Gallegos Canyon unit area, San Juan County, New Mexico, proposing the drilling of no additional wells has been approved on this date subject to like approval by the appropriate State officials.

4711 1111

"68 APR 30 AH 8

Three approved copies of the plan are enclosed.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

CARL C. TRAYWICK Acting Oil & Gas Supervisor

cc:

Washington (w/cy. of plan)
Farmington (w/cy. of plan)
NMOCC - Santa Fe (ltr. only)
Com. of Public Lands - Santa Fe (ltr. only)

State of New Mexico



Commissioner of Public Lands



April 4, 1968

P. O. BOX 1148 SANTA FE, NEW MEXICO

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202 A1. 1 1 1 1 1

'68 APR 5 AM 8 38

Re: Gallegos Canyon Unit San Juan County, New Mexico 1968 Plan of Development

ATTENTION: Mr. T. M. Curtis

Gentlemen:

GUYTON B. HAYS

COMMISSIONER

The Commissioner of Public Lands has this date approved your 1968 Plan of Development for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Wery truly yours,

GUYTON B. HAYS CONCISSIONER OF PUBLIC LANDS BY: Eddie Lopes, Supervisor Unit Division

GRH/TR/ML/s
encl. 1.
cc: USGS-Roswell, New Mexico
occ- Santa Fe, New Mexico

FORM-1397 1-66

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

PRODUCING DEPARTMENT
H. T. HUNTER
DIVISION PRODUCTION
MANAGER

DENVER, COLORADO 80202

March 4, 1968

File: TMC-82-416

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

Re: 1968 Plan of Development Gallegos Canyon Unit

San Juan County, New Mexico

Director (6)
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

Oil Conservation Commission of (3) The State of New Mexico P. O. Box 2088 Santa Fe, New Mexico 87501 Commissioner of Public Lands (3) The State of New Mexico State Land Office Building Santa Fe, New Mexico 87501

All Working Interest Owners Gallegos Canyon Unit (See Attached Addressee List)

Gentlemen:

In compliance with Section 9 of the Gallegos Canyon Unit Agreement dated November 1, 1950, designated I-Sec. No. 844, Pan American Petroleum Corporation, as Unit Operator, respectfully submits for your approval a Plan of Development for the calendar year of 1968. The proposed plan has been approved by the Working Interest Owners as provided by the Unit Operating Agreement.

<u>History of Past Development</u> - There has been a total of 251 wells drilled in the Gallegos Canyon Unit. Of these, 61 are Pictured Cliffs producers, 3 are Gallup-Dakota duals, 123 are single Dakotas, 24 are Gallup oil, 1 is a Gallup gas, 6 are Fruitland completions, 25 wells are dry holes and abandoned, and 8 are water injectors.

Participating areas have been formed for the Pictured Cliffs, Dakota, four separate Gallup pools and the Fruitland formation. Two water injection projects are in operation on acreage comprising Gallup Areas "C" and "D".

During 1967, four water injection wells were drilled and completed in Gallup Area "D" and injections were begun on May 24, 1967. This area contains 5 Gallup producing wells.

The initial Fruitland participating area and the first, second, and third revisions thereof were approved during 1967. One Fruitland well was completed during 1967.

The attached tabulation furnishes a statistical review of operations in the Gallegos Canyon Unit.

TMC-82-416 Page 2 March 4, 1968

<u>Proposed Additional Wells</u> - The Dakota development program is now essentially complete. Evaluation of the remaining locations is underway and these will be submitted if deemed necessary and economical.

No other development in the Gallup, Pictured Cliffs or Fruitland is anticipated at this time.

Well Casing Program - The well casing program will generally follow current programs used in similar wells in the San Juan Basin. Included will be surface casing and other casing as required by the United States Geological Survey and the State of New Mexico.

Offset Obligation - Appropriate measures will be taken to prevent drainage of unitized substances from lands subject to the Gallegos Canyon Unit Agreement, or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided in Section 15 of the Unit Agreement.

<u>Further Development</u> - This Plan of Development shall constitute the drilling obligation of the Unit Operator under terms of the Gallegos Canyon Unit Agreement for the period ending December 31, 1968.

<u>Modifications</u> - It is understood that this plan is dependent upon certain information to be obtained prior to and subsequent to drilling; therefore, it may be modified from time to time to meet changing conditions.

Yours very truly,

Effective Date - This Plan of Development shall be effective January 1, 1968.

APPROVED:

Director, United States Geological Survey
(Subject to like approval by appropriate
State Officials)

APPROVED:

Commissioner of Public Lands
(Subject to like approval by U.S.G.S. and
Oil Conservation Commission)

APPROVED:

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

Commissioner of Public Lands)

MAILING LIST OF WORKING INTEREST OWNERS GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas P. O. Box 2159
Dallas, Texas 75202
Attn: Mr. Deewall, Land Dept.

American Petrofina Co. of Texas P. O. Box 2159 Dallas, Texas 75202 Attn: Mr. L. M. Thompson, Prod. Dept.

The Atlantic Refining Co. (3) P. O. Box 1978 Roswell, New Mexico 88201

Aztec Oil & Gas Company 2000 First National Bank Building Dallas, Texas 75202 Attn: Mr. H. L. Snider, Jr.

Mary Roberts Berry 208 E. Washington Street Washington, Iowa 52353

Bloomfield Royalty Corporation 916 San Jacinto Building Houston, Texas 77002

Brookhaven Oil Company P. O. Box 1267 Scottsdale, Arizona 85252

B. H. and Dyvena Crawford Bloomfield, New Mexico 87413

E1 Paso Natural Gas Company P. O. Box 1492 E1 Paso, Texas 79999 Attn: Land Department

Olen F. Featherstone Roswell Petroleum Building Roswell, New Mexico 88201

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P. O. Box 1515
Roswell, New Mexico 88201

L. B. Hodges
P. O. Box 489
Roswell, New Mexico 88201

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Harold K. Johnson 1118 Laurel Drive Lafayette, California 94549

Marie C. Anderson 357 Vernon Street Oakland California 94610

Agnes L. Fulsaas 1903 Adams Court Mountain View, California 94040

Elma R. Jones c/o R. H. Klinger P. O. Box 1741 Stockton, California 95201

Locke-Taylor Drilling Company 801 Second Avenue Durango, Colorado 81301

A. C. Pegg P. O. Box 66067 Chicago, Illinois 66066

E. I. Rydin
P. O. Box 8852
Chicago, Illinois 60680

National Drilling Company, Inc. 4810 North Kenneth Avenue Chicago, Illinois 60630

Pubco Petroleum Corporation P. O. Box 1419 Albuquerque, New Mexico 87103 Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma 74101
Attn: Mr. B. W. Ratliff

Skelly Oil Company
P. O. Box 730
Hobbs, New Mexico 88240
Attn: Mr. H. E. Aab

Southern Union Production Company Fidelity Union Tower Building 1507 Pacific Avenue Dallas, Texas 75201 Attn: Mr. A. M. Wiederkehr

Sunray DX 0il Company 1101 Wilco Building Midland, Texas 79701 Attn: Mr. D. N. Williams

Texaco, Inc.
P. O. Box 2100
Denver, Colorado 80202

Texas Pacific Oil Company P. O. Box 747 Dallas, Texas 75221

Rip C. Underwood P. O. Box 2588 First National Bank Building Amarillo, Texas 79101

Wood Oil Company Room 800 Midstates Building Tulsa, Oklahoma 74103

M.H. and Eula Stark
Route 3
Farmington, New Mexico 87401

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Jack Markham Great Plains Building Lubbock, Texas 79401

J. Robert Jones 711 Petroleum Life Building Midland, Texas 79701

Robert D. Fitting 504 Vaughn Building Midland, Texas 79701

Estate of Ralph Fitting P. O. Box 782 Midland, Texas 79701

Redfern & Herd P. O. Box 1747 Midland, Texas 79701

STATISTICAL REVIEW OF OPERATIONS GALLEGOS CANYON UNIT DECEMBER 1, 1967

Total wells drilled in Unit area Total Unit acreage	251 43,146.82 acres
Pictured Cliffs Statistics	
Pictured Cliffs Participating Area Total wells drilled Producing wells Current production:	27,496.46 acres 78 61
October 1967 November 1967 Cumulative production to 12/1/67	68,061 MCF 47,595 MCF 34,423,591 MCF
Dakota Statistics	
Dakota Participating Area Total wells drilled Producing wells	43,146.62 acres 128 (includes 2 duals) 127 (includes 3 duals)
Current production: October 1967 November 1967 Cumulative production to 12/1/67	994,724 MCF 1,723,541 MCF 76,749,768 MCF
Gallup Statistics	
Gallup Participating Area "A" Gallup Participating Area "B" Gallup Participating Area "C" Gallup Participating Area "D" Producing Wells (includes 13 Non-Commercial)	880 acres 715.40 acres 2,148.75 acres 2,396.88 acres 28 (includes 3 duals, & 1 Gallup gas)
Total wells drilled Current production: October 1967 November 1967 Cumulative production to 12/1/67	39 8,224 Bbls. 7,228 Bbls. 1,682,121 Bbls.
Fruitland Statistics	
Fruitland Participating Area Total wells drilled Producing wells (includes 1 Non-Commercial) Current production:	1,275.68 acres 86 26
October 1967 November 1967 Cumulative production to 12/1/67	68,948 MCF 46,785 MCF 656,105 MCF

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

247

April 2, 1968

Pan American Petroleum Corporation Security Life Building Denver, Colorado

Attention: Mr. T. M. Curtis

Re: Non-Commercial Determination

Gallegos Canyon Unit Well No. 82, San Juan County, New Mexico

Gentlemen:

The New Mexico Oil Conservation Commission concurs with your determination that Gallegos Canyon Unit Well No. 82 is not capable of producing in paying quantities under the conditions set forth in your letter dated February 1, 1968. The approval of non-commercial determination is subject to like approval by the United States Geological Survey.

Two approved copies of the determination are returned herewith.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell Commissioner of Public Lands - Santa Fe



UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

Drawer 1857 Roswell, New Mexico 88201

February 15, 1968

Fan American Petroleum Corp. Security Life Building Denver, Colorado 80202

Gentlemen:

cc:

Mour notice of February 1 advises that as operator of the Gallagos Canyon unit, San Juan County, New Mexico, you have determined that unit well No. 82 in the SWMSWk sec. 28, T. 29 N., R. 12 W., N.M.P.M. is not capable of producing unitimed substances in paying quantities from the Fruitland formation. Such well is located on fee land but within a proration unit including Federal leases Santa Fe 078209-E and 078209-B.

Unit well No. 82 was completed as a nonproductive lictured Cliffs well in 1957. It was subsequently recompleted in the Fruitland formation in 1966 and tested August 30, 1966, for an initial absolute open flow potential of 1,472 MCF of gas per day from the interval 950 - 964 feet. Cumulative production from the well was 14,107 MCF through December 1967 with December production averaging 33 MCF per producing day. Your plot of cumulative gas production versus shut in pressure indicates an ultimate recovery of 47,037 MCF of gas, while 200,000 MCF would be required to pay the cost of a well to this depth.

This office concurs with your determination that the well is not capable of producing unitized substances in paying quantities under [N OFFICE (12)] existing conditions, subject to like concurrence from the New Mexico Oil Conservation Commission.

*68 FEB 19 AH 8 1

Sincerely yours,

(LAIGLOCE) CARL C TRAYWICK

CARL C. TRATWICK Acting Oil and Cam Supervisor

Washington (w'cy. notice)
Com of Pub. Lands, Santa Fe (ltr. only)
MMOCC, Santa Fe (ltr. only)
Farmington (w/cy. notice)
Accounts

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

PRODUCING DEPARTMENT H. T. HUNTER DIVISION PRODUCTION MANAGER

DENVER, COLORADO 80202

February 1, 1968

T. M. CURTIS

IOINT INTEREST

BUS BERICHARDS AM 8 07

DISTRICT SUPERINTENDENTS

File: AMR-325-416

Re:

Non-Commercial Determination Gallegos Canyon Unit No. 82 San Juan County, New Mexico

Regional Oil and Gas Supervisor (4) United States Geological Survey P. O. Drawer 1857 Roswell, New Mexico 88201

Oil Conservation Commission (3) State of New Mexico

P. O. Box 2088

Santa Fe, New Mexico 87501

Gentlemen:

Pan American Petroleum Corporation as Unit Operator of the Gallegos Canyon Unit has determined that the subject well is encapable of producing unitized substances in paying quantities from the Fruitland formation.

Well No. 82 was originally drilled to the Pictured Cliffs formation in 1957. The Pictured Cliffs zone was found to be non-productive and the well was permanently abandoned with the casing being left in the ground. In 1966 the well was re-entered and opened in the Fruitland formation. We have attached hereto a summary of the completion work performed on this well and the production obtained since the well was placed on line in March, 1967.

Because of the low initial producing rate, the steep decline through December, 1967, and the low ultimate recovery anticipated as indicated by the attached plot of shutin pressure versus cumulative production, Pan American is of the opinion that this well is encapable of producing in paying quantities and should be declared non-commercial. Based on performance to date an ultimate recovery of 47,000 MCF may be expected to an abandonment line pressure of 100 psi. At least 70,000 MCF would be required to pay out the cost of recompleting this well, and a minimum of 200,000 MCF would be necessary to pay for the cost of a new well drilled to this shallow formation.

In accordance with Section 12 of the Unit Agreement of the Gallegos Canyon Unit, Pan American respectfully requests your approval of a non-commercial determination for Gallegos Canyon Well No. 82. Since both Federal and Fee lands are included in the quarter section on which this gas well is located, we are requesting approval of this determination from both the Supervisor and the Conservation Commission as specified in Section 10 of the Unit Agreement. If you approve of this determination, please execute one copy of this letter in the space provided and return to Pan American Petroleum Corporation, Security Life Building, Denver, Colorado.

Yours very truly,

Jul. Us

Attachment

Approved

COMPLETION AND PRODUCTION DATA GALLEGOS CANYON UNIT NO. 82 UNDESIGNATED FRUITLAND

Completion:

- 1. Drilled out surface plug and cleaned out casing to 1100' (PBD).
- 2. Perforated Fruitland 950'-964' and sand-water fraced with 18,438 gallons of water and 20,000 pounds of sand at 71 barrels per minute.
- 3. Preliminary 3 hour test 8-30-66 gauged 900 MCFD with 3/4" choke, CPF 75 and TPC 85.
- 4. Nine day shut-in pressure measured 399 psia and well potentialed for 1472 AOF.
- 5. During 1967 deliverability test from 4-22-67 to 5-7-67 well flowed 87 MCFD (Q) against 200 psia wellhead pressure ($P_{\rm w}$). Seven day shut-in pressure was 287 psia ($P_{\rm c}$).
- 6. Seven day shut-in pressure on 1-1-68 was 247 psia (P_c) .

Production:

Month	Total MCF	Days	MCFD
March, 1967	1,463	6	245
April	3,556	30	118
May	1,480	18	82
June	1,405	24	58
July	1,535	32	48
August	661	19	35
September	992	14	66
October	1,163	19	61
November	829	23	36
December	1,023	31	33
	14,037		

Cumulative Production - MMCF



UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Drawer 1857 Roswell, New Mexico 88201

December 26, 1967

MAIN OFFICE IN

'67 DEC 28 PH 1 21

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Attention: Mr. S. B. Richards

Gentlemen:

The initial Pruitland participating area and first, second, and third revisions thereof, Gallegos Canyon unit agreement, San Juan County, New Maxico, were approved by the Acting Director, Geological Survey, on December 15, 1967, effective as of June 14, 1966; October 1, 1966; January 1, 1967; and May 1, 1967, respectively.

Nine approved copies of the application are enclosed. You are requested to furnish the State of New Mexico and any other interested party with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGD.) JOHN A. ANDERSON

JOHN A. ANDERSON Regional Oil and Gas Supervisor

cc:

Washington (ltr. only)
Farmington (w/cy approved appln.)
NMOCC - Santa Fe (ltr. only)
Com. of Pub. Lands - Santa Fe (ltr. only)

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

The Copie of the Sure

November 20, 1967

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Re: Initial Perticipating Area and Three Enlargements, Fruitland Permetion Gallegos Canyon Unit

San Juan County, New Mexico

Attention: Mr. S. B. Richards

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Initial Participating Area and First, Second, and Third Enlargements, Fruitland Formation, for the Gallegos Canyon Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Twelve approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/JEK/1r

cc: Commissioner of Public Lands Santa Fe, New Mexico

> United States Geological Survey Drawer 1857 Roswell, New Mexico 88201

State of New Mexico



Commissioner of Public Lands

GUYTON B. HAYS COMMISSIONER



P. O. BOX 1148 SANTA FE, NEW MEXICO

Pan American Petroleum Corporation Security Life Building Denver, Colorado 80202

Re: Proposed Initial Participating
Area and First, Second and
Third Enlargements for the
Fruitland Formation
Gallegos Canyon Unit
San Juan County, New Mexico

ATTENTION: Mr. S. B. Richards

Gentlemen:

The Commissioner of Public Lands has this date approved the captioned Participating Areas, in lieu of the one previously filed, for the Gallegos Canyon, Unit, San Juan County, New Mexico this approval being subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are retaining one copy and handing twelve (12) copies to the Oil Conservation Commission for their approval and requesting that they forward eleven (11) copies to the United States Geological Survey for their consideration.

Very truly yours,

QUYTON B. HAYS COMMISSIONER OF PUBLIC LANDS BY:

Ted Bilberry, Director Oil and Gas Department

GBH/TB/RL/s cc: USGS-Roswell, New Mexico OCC- Santa Fe, New Mexico FORM 1397 1-66

OCC CAPIT

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

PRODUCING DEPARTMENT
H. T. HUNTER
DIVISION PRODUCTION
MANAGER

DENVER, COLORADO 80202

November 10, 1967

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

9 (2.3) 22

File: AMR-2410-416

Re:

Proposed Initial Participating Area and First, Second and Third Enlargements for the Fruitland Formation

Gallegos Canyon Unit

San Juan County, New Mexico

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

Dear Sir:

Attached herewith is Pan American Petroleum Corporation's proposed participating area for the Fruitland formation in the Gallegos Canyon Unit. If this proposal meets with your approval, please execute all copies and send them to the Oil Conservation Commission of the State of New Mexico.

Our previous application, dated February 16, 1967 was returned by the Geological Survey with a request for establishment of an initial 320 acre participating area effective on completion of Well No. 220 and additional 320 acre enlargements effective the first day of the month following completion of each of the subsequent wells, Nos. 255, 256, and 261.

By copy of this letter to the Oil Conservation Commission, we request that upon their approval, they in turn execute all copies and send them to the Oil and Gas Supervisor, United States Geological Survey.

By copy of this letter to the United States Geological Survey, we request that upon approval, they return to Pan American Petroleum Corporation, Security Life Building, Denver, Colorado 80202, Attention: Mr. S. B. Richards, four fully executed copies. We will then transmit one fully signed copy of the proposal to the Commissioner of Public Lands and to the Oil Conservation Commission. In this manner, the files for each agency will be complete.

Yours very truly,

Attachments

cc: Oil Conservation Commission Santa Fe, New Mexico Regional Oil & Gas Supervisor United States Geological Survey Roswell, New Mexico

5. B. Richard

PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING

PRODUCING DEPARTMENT H. T. HUNTER
DIVISION PRODUCTION MANAGER

DENVER, COLORADO 80202

November 10, 1967

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

DISTRICT SUPERINTENDENTS

AMR-2411-986.511 File:

Re:

Application for Approval of Initial Participating Area and First, Second and Third Enlargements for the Fruitland Formation, Gallegos Canyon Unit, San Juan County, New Mexico

Director (6) United States Geological Survey Washington 25, D. C. THROUGH: Regional Oil & Gas Supervisor United States Geological Survey P. O. Box 1857

Roswell, New Mexico

Oil Conservation Commission (3) State of New Mexico Capital Annex Building Santa Fe, New Mexico

Commissioner of Public Lands (3) State of New Mexico Capital Annex Building Santa Fe, New Mexico

All Working Interest Owners Gallegos Canyon Unit (See Attached Addressee List)

Gentlemen:

Pan American Petroleum Corporation, as Unit Operator for the Gallegos Canyon Unit Agreement, approved by the Director of the U. S. Geological Survey, effective July 25, 1951, pursuant to the provisions of Section 10 thereof, respectfully submits for the approval of said Director the selection of the following described lands to constitute the Initial Participating Area and First, Second, and Third Enlargements thereof for the Fruitland Formation, to wit:

Initial Participating Area: E/2 Section 13 - T28N - R12W W/2 Section 18 - T28N - R11W First Enlargement 1 Second Enlargement W/2 Section 13 - T28N - R12W : E/2 Section 18 - T28N - R11W Third Enlargement

Area	Effective Date	Acres In Revision	Total Acres	
Initial	June 14, 1966	320	320	
lst Enlargement	October 1, 1966	315.68	635.68	
2nd Enlargement	January 1, 1967	320	955.68	
3rd Enlargement	May 1, 1967	320	1275.68	

File: AMR-2411-986.511 -2- November 10, 1967

In support of this application, the following items are attached hereto and made a part hereof:

- 1. An ownership map showing the boundaries of the Unit Area and the proposed Participating Areas.
- 2. Schedules showing the lands entitled to participation in the unitized substances produced from the Fruitland formation, with the percentage of participation of each tract indicated thereon.
- 3. A geological and engineering report supporting and justifying selection of the Participating Areas.

The Participating Areas and their proposed effective dates are predicated upon the knowledge and information obtained on the completion in paying quantities of Unit Wells Nos. 220, 255, 256, and 261.

Applicant respectfully requests that the Director approve the herein above selection of lands.

Dated this 10 Mday of November, 1967.

Respectfully submitted,

PAN AMERICAN PETROLEUM CORPORATION

J. B. Richard

Attachments

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Director, United States Geological Survey (Subject to like approval by appropriate State officials) Date

APPROVED

Commissioner of Public Lands (Subject to like approval of USGS and Oil Conservation Commission) Date ____

APPROVED

Oil Conservation Commission (Subject to like approval of USGS and Commissioner of Public Lands)

Date 1100. 20, 1961

MAILING LIST FOR GALLEGOS CANYON UNIT AREA SAN JUAN COUNTY, NEW MEXICO

American Petrofina Co. of Texas
P. O. Box 2159
Dallas, Texas
Attn: Mr. L. M. Thompson, Prod. Dept.

American Petrofina Co. of Texas P. O. Box 2159 Dallas, Texas Attn: Mr. Deewall, Land Dept.

The Atlantic Richfield Co. (3) P. O. Box 1978 Roswell, New Mexico

Aztec Oil & Gas Company 2000 First National Bank Bldg. Dallas, Texas Attn: Mr. P. R. Watts, Jr.

Mary Roberts Berry 208 E. Washington Street Washington, Iowa

Bloomfield Royalty Corporation 916 San Jacinto Building Houston, Texas

Brookhaven Oil Company P. O. Box 1267 Scottsdale, Arizona

El Paso Natural Gas Company P. O. Box 1492 El Paso, Texas 79999 Attn: Mr. Harry Gevertz

El Paso Natural Gas Company P. O. Box 990 Farmington, New Mexico Attn: Regional Land Manager

Olen F. Featherstone Roswell Petroleum Bldg. Roswell, New Mexico

A. C. Pegg P. O. Box 8852 Chicago, Illinois

E. I. Rydin
P. O. Box 8852
Chicago, Illinois

L. B. Hodges
P. O. Box 489
Roswell, New Mexico

Marie C. Anderson 359 Vernon Street Oakland, California 94610 Agnes L. Fulsaas 1903 Adams Court Mountain View, California

Arthur B. Johnson 1114 Laurel Drive Lafayette, California

Harold K. Johnson 1118 Laurel Drive Lafayette, California

Elma R. Jones c/o R. H. Klinger P. O. Box 1741 Stockton, California

National Drilling Company, Inc. 4810 N. Kenneth Avenue Chicago, Illinois

Pubco Petroleum Corporation P. O. Box 1419 Albuquerque, New Mexico

Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma 74102
Attn: Mr. R. G. Hiltz

Southern Union Production Co. Fidelity Union Tower Bldg. Dallas, Texas 75201 Attn: Mr. L. S. Muennink

Sunray DX Oil Company 1101 Wilco Building Midland, Texas Attn: Mr. V. M. Williams

Texaco, Inc.
P. O. Box 2100
Denver, Colorado
Attn: Mr. J. F. Neill

Texas Pacific Oil Company P. O. Box 747 Dallas, Texas 75221 Attn: Mr. L. B. Jeffers

John H. Trigg P. O. Box 520 Roswell, New Mexico

Rip C. Underwood P. O. Box 2588 First National Bank Bldg. Amarillo, Texas

Wood Oil Company Room 800 Midstates Building Tulsa, Oklahoma