



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

January 19, 1996

**Amoco Production Company**  
**P. O. Box 800**  
**Denver, Colorado 80201**

**Attention: J. W. Hawkins**

***AMENDED Administrative Order DD-121(NSBHL)***

Dear Mr. Hawkins:

By Division Administrative Order DD-121, dated October 16, 1995, authorization was given Amoco Production Company ("Amoco") to directionally drill its Holmberg Gas Com Well No. 1-R from a standard surface gas well location, being 960 feet from the North line and 1710 feet from the East line (Lot 1/Unit B) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico, to a standard bottom-hole gas well location in the Blanco-Mesaverde Pool within a drilling window or "producing area" in the NE/4 equivalent of said Section 28 that is no closer than 790 feet to the quarter section lines.

Reference is now made to your letter with attachments dated December 22, 1995, whereby an amendment should be issued in this order to accurately reflect the actual bottom-hole location of this wellbore.

The Division Director Finds That:

- (1) This application was originally approved under the provisions of General Rule 111.D and Rule 2(c) of the "*General Rules For The Prorated Gas Pools of New Mexico/Special Rules and Regulations For The Blanco-Mesaverde Pool*";;
- (2) This amendment has been duly filed under the provisions of Division General Rules 111.D and 111.E and said Special Rule 2(c); and,
- (3) Amoco owns all affected offsetting 320-acre tracts to the captioned well, no notification was therefore required.

AMENDED Administrative Order DD-121 (NSBHL)

Amoco Production Company

January 19, 1996

Page No. 2

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**IT IS THEREFORE ORDERED THAT:**

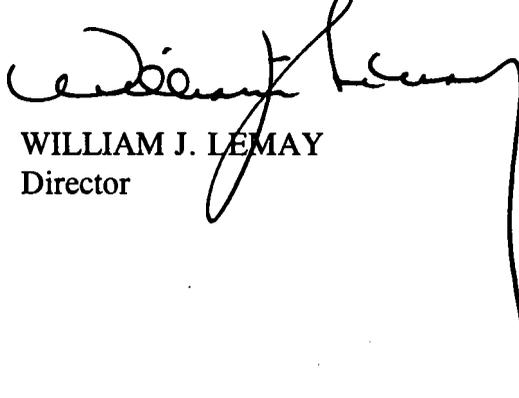
(1) Division Administrative Order DD-121 is hereby amended to properly reflect the actual bottomhole location for said Holmberg Gas Com Well No. 1-R within the Blanco-Mesaverde Pool to be, more or less, 2142 feet from the North line and 718 feet from the East line (Unit H) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(2) All other provisions of said Order DD-121, dated October 16, 1995, not in conflict with this change shall remain in full force and effect until further notice.

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

S E A L

WJL/MES/kv

cc: Oil Conservation Division - Aztec  
U. S. Bureau of Land Management - Farmington  
File: Case 11,274  
DD-121 ✓

DD-121.AMD

Rec. 12/26/95

Susp. N/A

Released 1/19/96

January 19, 1996

**Amoco Production Company**  
**P. O. Box 800**  
**Denver, Colorado 80201**

**Attention: J. W. Hawkins**

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Dear Mr. Hawkins:

By Division Administrative Order DD-121, dated October 16, 1995, authorization was given Amoco Production Company ("Amoco") to directionally drill its Holmberg Gas Com Well No. 1-R from a standard surface gas well location, being 960 feet from the North line and 1710 feet from the East line (Lot 1/Unit B) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico, to a standard bottom-hole gas well location in the Blanco-Mesaverde Pool within a drilling window or "producing area" in the NE/4 equivalent of said Section 28 that is no closer than 790 feet to the Quarter section lines.

Reference is now made to your letter with attachments dated December 22, 1995, whereby an amendment should be issued in this order to accurately reflect the actual bottom-hole location of this wellbore.

The Division Director Finds That:

- (1) This application was originally approved under the provisions of General Rule 111.D and Rule 2(c) of the "*General Rules For The Prorated Gas Pools of New Mexico/Special Rules and Regulations For The Blanco-Mesaverde Pool*";;
- (2) This amendment has been duly filed under the provisions of Division General Rules 111.D and 111.E and said Special Rule 2(c); and,
- (3) Amoco owns all affected offsetting 320-acre tracts to the captioned well, no notification was therefore required.

**IT IS THEREFORE ORDERED THAT:**

(1) Division Administrative Order DD-121 is hereby amended to properly reflect the actual bottomhole location for said Holmberg Gas Com Well No. 1-R within the Blanco-Mesaverde Pool to be, more or less, 2142 feet from the North line and 718 feet from the East line (Unit H) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

(2) All other provisions of said Order DD-121, dated October 16, 1995, not in conflict with this change shall remain in full force and effect until further notice.

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY  
Director

S E A L

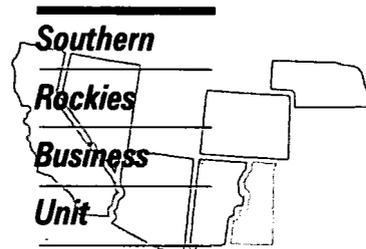
WJL/MES/kv

cc: Oil Conservation Division - Aztec  
U. S. Bureau of Land Management - Farmington  
File: Case 11,274  
DD-121



NEW MEXICO OIL CONSERVATION DIVISION  
RECEIVED

'95 DEC 25 AM 8 52



December 22, 1995

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
Santa Fe, NM 87505

**Application for Unorthodox Location**  
**Holmberg Gas Com #1R Well**  
**E/2 Section 28-T32N-R10W**  
**Blanco Mesaverde Pool**  
**San Juan County, New Mexico**

Amoco Production Company hereby requests administrative approval for an unorthodox location for the Holmberg Gas Com #1R well. This well was recently drilled as a high angle / horizontal well in the Blanco Mesaverde Pool as approved under NMOCD Administrative Order DD-121. The Holmberg Gas Com #1 well was drilled from a surface location of 960' FNL and 1710' FEL of Section 28, T32N-R10W to a bottomhole location of 2142' FNL and 718' FEL. The Project Area for this well is the Blanco Mesaverde gas proration unit consisting of E/2 Section 28, T32N-R10W with the Producing Area for the well to consist of a drilling window inside the NE/4 of Section 28 that is no closer than 790' to the quarter section lines. Since the bottom portion of the wellbore is closer than 790' to the quarter section lines, approval for the unorthodox location is required.

To aid in your review are:

- 1) a plat showing the well location, project area and producing area for the project well and the offset spacing units, their wells and operators;
- 2) a form C-102 showing surface and bottomhole locations of the well;
- 3) a direction survey for the wellbore.

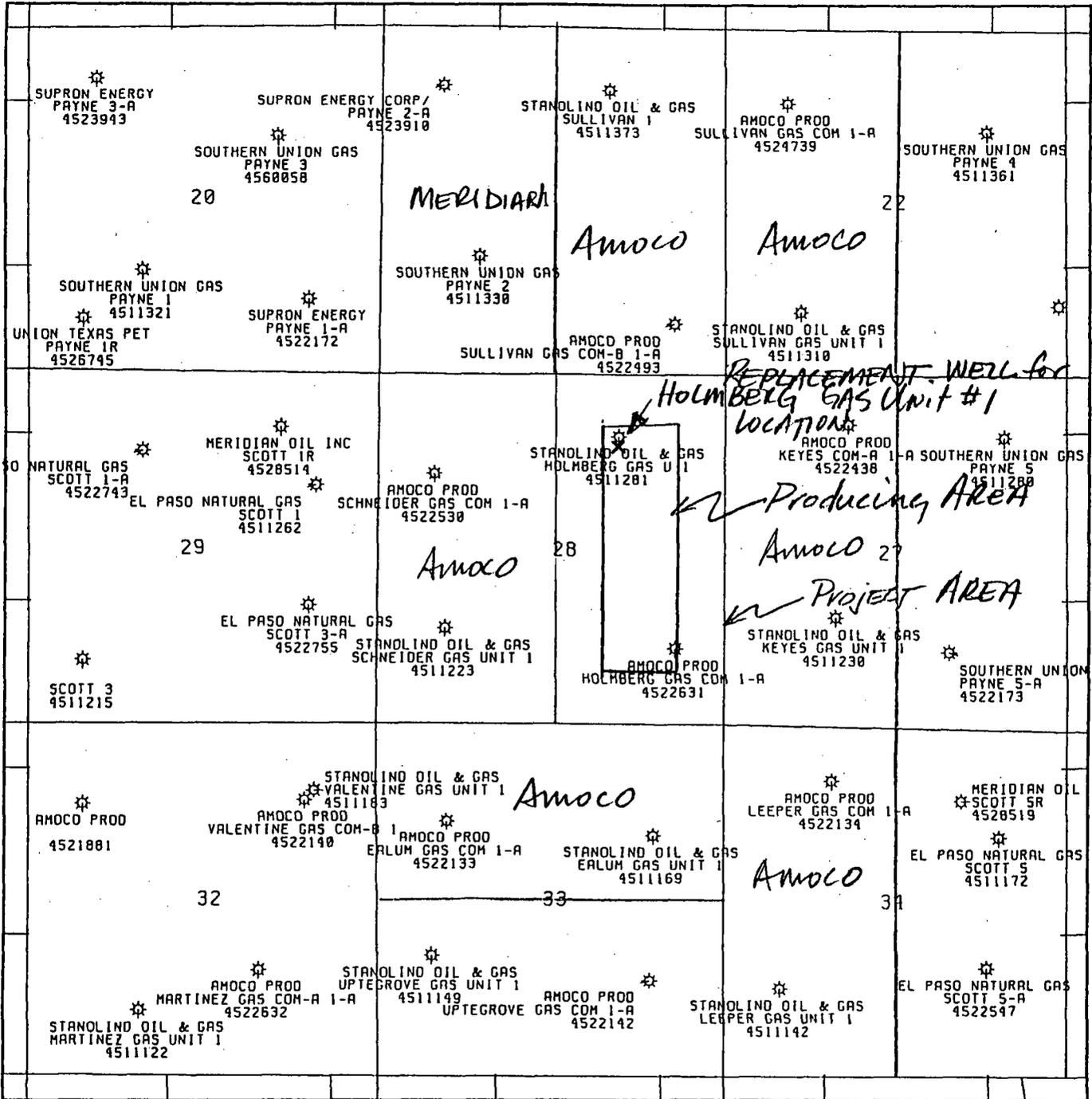
Amoco is the only affected offset operator, therefore, no additional notice will be required.

Sincerely,

J. W. Hawkins

cc: Jack St. John  
Patty Haefele

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410



1:24000

STATUTE MILES 0 .2 STATUTE MILES

KILOMETERS 0 .5 KILOMETERS

AMOCO E&P SECTOR		
SOUTHERN ROCKIES BUSINESS UNIT		
SAN JUAN BASIN		
T32N-R10W		
1:24000	K. LAMBERT	1-SEP-95

District I  
 PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
 Energy, Minerals & Natural Resources Department

Form C-102  
 Revised October 18, 1994

District II  
 811 South First, Artesia, NM 88210

**OIL CONSERVATION DIVISION**  
 2040 South Pacheco  
 Santa Fe, NM 87505

Instructions on back  
 Submit to Appropriate District Office  
 State Lease - 4 Copies  
 Fee Lease - 3 Copies

District III  
 1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
 2040 South Pacheco, Santa Fe, NM 87505

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 API Number 30-045-29299		2 Pool Code 72319		3 Pool Name Blanco Mesaverde	
4 Property Code		5 Property Name Holmberg Gas Com			6 Well Number 1R
7 OGRID No. 000778		8 Operator Name Amoco Production Company			9 Elevation 6043'

**10 Surface Location**

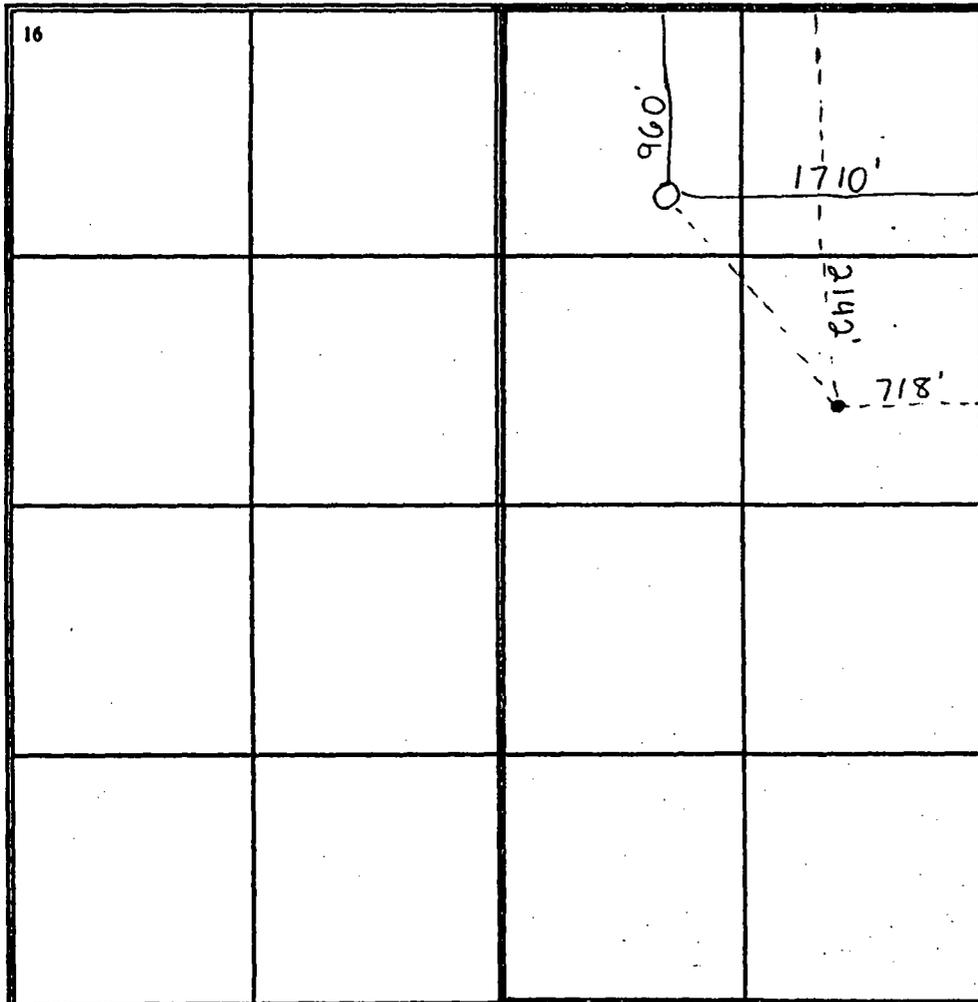
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
B	28	32N	10W		960	North	1710	East	San Juan

**11 Bottom Hole Location If Different From Surface**

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
H	28	32N	10W		2142	North	718	East	San Juan

12 Dedicated Acres 319.51	13 Joint or Infill	14 Consolidation Code	15 Order No.
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**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**



**17 OPERATOR CERTIFICATION**

*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief*

Signature: Patty Haefele  
 Printed Name: Patty Haefele  
 Title: Staff Assistant  
 Date: 12/22/95

**18 SURVEYOR CERTIFICATION**

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

Date of Survey: 9/7/95  
 Signature and Seal of Professional Surveyer:

7016  
 Certificate Number

*Holmberg Gas Unit #1-R  
com*

AMOCO PRODUCTION COMPANY  
SEC.28-132N-R10W

# 1A  
SLOT #1  
SAN JUAN COUNTY  
NEW MEXICO

SURVEY LISTING

by  
Baker Hughes Inteq

Your ref : HWD Survey  
Our ref : svy3507  
License : HOLMBERG GAS UNIT

Date printed : 13-Nov-95  
Date created : 8-Nov-95  
Last revised : 13-Nov-95

Field is centred on n36 50 0.000,w107 30 0  
Structure is centred on n36 57 38.012,w107 50 24

Slot location is n36 57 28.519,w107 50 45.068  
Slot Grid coordinates are N 2167951.046, E 496342.302  
Slot local coordinates are 960.00 S 1710.00 W  
Reference North is True North

AMOCO PRODUCTION COMPANY  
 SEC.28-T32N-R10W,# 1A  
 SAN JUAN COUNTY,NEW MEXICO

SURVEY LISTING Page 1  
 Your ref : MWD Survey  
 Last revised : 13-Nov-95

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES		Dogleg Deg/100Ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
257.00	0.00	0.00	257.00	0.00 N	0.00 E	0.00	0.00
638.00	1.00	71.70	637.98	1.04 N	3.16 E	0.26	1.01
1161.00	1.00	106.70	1160.90	1.16 N	11.86 E	0.11	6.03
1760.00	1.00	129.30	1759.82	3.65 S	20.91 E	0.06	15.24
2107.00	0.25	71.70	2106.80	5.33 S	23.97 E	0.26	18.40
2542.00	0.25	275.30	2541.79	4.94 S	23.93 E	0.11	18.06
3011.00	1.50	336.70	3010.73	0.79 N	20.48 E	0.30	11.40
3278.00	0.50	34.30	3277.70	4.96 N	19.76 E	0.49	7.60
3308.00	0.63	102.90	3307.69	5.03 N	19.99 E	2.15	7.68
3339.00	2.13	144.70	3338.68	4.53 N	20.49 E	5.52	8.38
3369.00	4.38	150.40	3368.63	3.07 N	21.38 E	7.57	10.08
3401.00	6.75	147.90	3400.48	0.42 N	22.98 E	7.44	13.17
3431.00	9.06	147.30	3430.19	3.06 S	25.20 E	7.70	17.29
3463.00	10.94	145.20	3461.71	7.68 S	28.29 E	5.98	22.84
3494.00	13.38	145.40	3492.01	13.04 S	32.01 E	7.87	29.37
3525.00	15.56	143.30	3522.02	19.33 S	36.53 E	7.23	37.11
3556.00	17.63	143.90	3551.73	26.46 S	41.78 E	6.70	45.96
3589.00	19.81	143.80	3582.98	35.01 S	48.03 E	6.61	56.55
3620.00	21.44	142.60	3612.00	43.75 S	54.57 E	5.43	67.47
3650.00	23.25	141.10	3639.74	52.72 S	61.62 E	6.32	78.87
3681.00	24.56	140.80	3668.08	62.47 S	69.54 E	4.24	91.41
3713.00	24.25	139.20	3697.22	72.60 S	78.03 E	2.28	104.60
3744.00	25.44	136.90	3725.35	82.28 S	86.74 E	4.94	117.55
3776.00	26.81	137.80	3754.08	92.64 S	96.29 E	4.46	131.55
3806.00	27.56	141.80	3780.77	103.11 S	105.12 E	6.58	145.21
3836.00	27.39	140.80	3807.39	113.91 S	113.78 E	1.64	159.03
3868.00	25.26	143.90	3836.07	125.14 S	122.45 E	7.92	173.21
3897.00	25.56	146.40	3862.27	135.35 S	129.56 E	3.84	185.65
3929.00	26.94	147.90	3890.96	147.24 S	137.23 E	4.78	199.78
3960.00	28.75	147.60	3918.38	159.48 S	144.96 E	5.86	214.23
3991.00	30.94	147.40	3945.26	172.49 S	153.25 E	7.07	229.63
4021.00	33.50	146.40	3970.64	185.89 S	161.99 E	8.72	245.60
4053.00	36.19	144.60	3996.90	200.95 S	172.35 E	9.00	263.88
4085.00	38.31	142.80	4022.37	216.55 S	183.82 E	7.45	283.24
4117.00	40.06	142.60	4047.18	232.63 S	196.07 E	5.48	303.45
4147.00	41.63	143.10	4069.87	248.27 S	207.92 E	5.34	323.07
4179.00	42.69	143.80	4093.59	265.53 S	220.71 E	3.62	344.55
4211.00	41.75	144.32	4117.29	282.94 S	233.33 E	3.13	366.05
4242.00	42.50	143.80	4140.28	299.77 S	245.54 E	2.67	386.84
4273.00	44.31	143.30	4162.80	316.90 S	258.19 E	5.94	408.14
4305.00	43.81	142.40	4185.80	334.64 S	271.63 E	2.50	430.39
4336.00	42.81	142.10	4208.35	351.45 S	284.65 E	3.29	451.64
4368.00	43.81	142.30	4231.64	368.80 S	298.10 E	3.15	473.58
4399.00	45.44	142.80	4253.70	386.09 S	311.34 E	5.38	495.35
4431.00	44.81	142.20	4276.28	404.08 S	325.14 E	2.38	518.02
4463.00	43.81	141.60	4299.18	421.67 S	338.94 E	3.39	540.36
4493.00	44.56	141.60	4320.69	438.05 S	351.92 E	2.50	561.25
4526.00	43.69	140.70	4344.38	455.95 S	366.34 E	3.25	584.20
4558.00	42.50	139.70	4367.74	472.74 S	380.33 E	4.29	606.01

Last Single Shot Survey

All data is in feet unless otherwise stated  
 Coordinates from SLOT #1 and TVD from RKB (6054.00 Ft above mean sea level).  
 Vertical section is from wellhead on azimuth 144.00 degrees.  
 Declination is 11.71 degrees, Convergence is 0.00 degrees.  
 Calculation uses the minimum curvature method.  
 Presented by Baker Hughes Inteq

*Holmberg Gas Unit #1-A*

AMOCO PRODUCTION COMPANY  
SEC.28-T32N-R10W, # 1A  
SAN JUAN COUNTY, NEW MEXICO

SURVEY LISTING Page 2  
Your ref : MWD Survey  
Last revised : 13-Nov-95

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR DOGLEG COORDINATES			Vert Sect
				S	E	Deg/100Ft	
4589.00	43.13	139.90	4390.48	488.84	393.93	2.08	627.02
4620.00	44.69	140.70	4412.82	505.38	407.66	5.34	648.48
4652.00	44.75	140.30	4435.56	522.75	421.98	0.90	670.95
4683.00	44.25	140.20	4457.66	539.46	435.87	1.63	692.63
4715.00	43.88	140.40	4480.66	556.58	450.09	1.24	714.84
4747.00	43.25	139.70	4503.85	573.49	464.25	2.48	736.04
4779.00	42.75	139.40	4527.25	590.10	478.41	1.69	758.60
4810.00	42.56	140.10	4550.05	606.13	491.98	1.65	779.55
4842.00	43.00	139.90	4573.54	622.78	505.95	1.44	801.23
4874.00	44.69	141.20	4596.61	639.89	520.03	5.98	823.35
4906.00	45.06	141.30	4619.29	657.50	534.16	1.18	845.90
4938.00	45.00	141.40	4640.49	674.08	547.42	0.31	867.11
4967.00	44.94	141.10	4662.42	691.16	561.13	0.71	888.99
4998.00	44.81	141.10	4684.39	708.19	574.87	0.42	910.83
5028.00	44.81	142.10	4705.68	724.76	588.00	2.35	931.96
5059.00	44.56	142.20	4727.72	741.97	601.38	0.84	953.74
5089.00	44.63	142.10	4749.08	758.60	614.30	0.33	974.80
5121.00	45.06	142.60	4771.77	776.47	628.08	1.74	997.35
5153.00	44.88	142.30	4794.41	794.40	641.87	0.87	1019.96
5183.00	44.38	142.20	4815.76	811.06	654.77	1.68	1041.03
5215.00	44.75	141.90	4838.56	828.77	668.58	1.33	1063.47
5246.00	45.50	142.40	4860.43	846.12	682.06	2.68	1085.42
5277.00	45.56	142.20	4882.14	863.62	695.59	0.50	1107.54
5308.00	45.63	141.70	4903.84	881.06	709.24	1.17	1129.67
5337.00	45.44	140.90	4924.15	897.21	722.18	2.07	1150.34
5429.00	44.69	139.40	4989.13	947.21	763.90	1.41	1215.32
5522.00	44.63	137.40	5055.28	996.09	807.30	1.51	1280.37
5615.00	44.13	136.70	5121.75	1043.70	851.62	0.75	1344.94
5708.00	43.56	135.30	5188.83	1090.04	896.36	1.21	1400.73
5805.00	43.06	133.80	5259.41	1136.72	943.77	1.18	1474.36
5850.00	42.89	133.34	5292.34	1157.86	966.00	0.79	1504.53 Projected Survey
5885.00	42.50	133.00	5318.17	1181.73	991.60	-	1521.86 Projected Survey

*These calculations are correct to the best of my knowledge.*

*Bradley D. Silveo*

*Amoco Production Company*

*November 14, 1995*

All data is in feet unless otherwise stated  
Coordinates from SLOT #1 and TVD from RKB (6054.00 Ft above mean sea level).  
Vertical section is from wellhead on azimuth 144.00 degrees.  
Declination is 11.71 degrees, Convergence is 0.00 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes Inteq

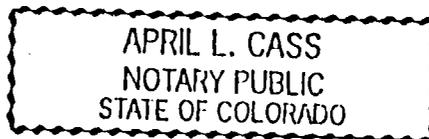
STATE OF COLORADO )  
CITY AND : ss.  
COUNTY OF DENVER )

On this the 14th day of November, 19 95, the undersigned, personally appeared, Bradley D. Bilyeu, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument and acknowledged that he/she executed the same for the purposes therein contained. In witness whereof, I hereunto set my hand and official seal.

  
Notary Public

My Commission expires:

August 17, 1997





STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

October 16, 1995

**Amoco Production Company**  
**P. O. Box 800**  
**Denver, Colorado 80201**

**Attention: J. W. Hawkins**

*Administrative Order DD-121*

Dear Mr. Hawkins:

Reference is made to Amoco Production Company's application dated September 15, 1995 for authorization to directional drill a high-angle well to a pre-determined bottom-hole location in order to further develop the Blanco-Mesaverde Pool underlying an existing 319.51-acre standard gas spacing and proration unit ("GPU") comprising Lots 1 and 4, the E/2 NE/4, and the SE/4 (E/2 equivalent) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

**The Division Director Finds That:**

- (1) The application has been duly filed under the provisions of Rule 111(D) and (E) of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995;
- (2) By Order No. R-8170, as amended, the Division promulgated the "*General Rules For The Prorated Gas Pools of New Mexico/Special Rules and Regulations For The Blanco-Mesaverde Pool*", which includes provisions for 320-acre gas spacing and proration units and well location requirements whereby the initial well drilled on a GPU shall be located be no closer than 790 feet to the outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary and the infill well drilled on an existing GPU shall be in the quarter section not containing a Mesaverde gas well and shall be located with respect to the restrictions as previously described;
- (3) Initial development of Blanco-Mesaverde gas pool production within the subject 319.51-acre GPU occurred with the Holmberg Gas Com Well No. 1 (API No. 30-045-11281) being drilled in 1954 at a standard gas well location 890 feet from the North line and 1650 feet from the East line (Lot 1/Unit B) of said Section 28. The Holmberg Gas Com Well No. 1-A (API No. 30-045-22631) was drilled in 1977 as an "infill well" at a

standard gas well location 1165 feet from the South line and 810 feet from the East line (Unit P) of said Section 28. It is our understanding that the Holmberg Gas Com Well No. 1 has been plugged and abandoned;

- (4) The applicant/operator proposes to drill its replacement well for the Holmberg Gas Com Well No. 1 from a standard gas well location in Lot 1 (NW/4 NE/4 equivalent) of said Section 28, kick-off of vertical at a depth of approximately 3600 feet in a southerly direction, build to an angle of approximately 45 degrees and continue to drill in such a manner as to bottom back into the Blanco-Mesaverde Pool, with total horizontal displacement of said well to be approximately 1300 feet;
- (5) A high angle wellbore as proposed should provide Amoco a better opportunity to encounter the naturally occurring fracture system in the Mesaverde formation which should result in a higher production rate and an increased ultimate recovery of gas from this GPU.
- (6) The applicable drilling window or "producing area" for said wellbore should include that area within the NE/4 equivalent of said Section 28 that is no closer than 790 feet to the quarter section lines; and,
- (7) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E, the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Amoco Production Company, is hereby authorized to directionally drill its proposed replacement well for the above-described Holmberg Gas Com Well No. 1 from a standard gas well location in Lot 1 (NW/4 NE/4 equivalent) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico, by kicking-off from vertical in a southerly direction and continue drilling in such a manner as to bottom back into the Blanco-Mesaverde Pool (total horizontal displacement of said well to be approximately 1300 feet) within a drilling window or "producing area" the NE/4 equivalent of said Section 28 that is no closer than 790 feet to the quarter section lines.

**PROVIDED HOWEVER THAT** prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

**PROVIDED FURTHER THAT** during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Aztec district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant

shall further provide a copy of said wellbore surveys to the Santa Fe and Aztec offices of the Division upon completion.

(3) Blanco-Mesaverde gas production from both the existing Holmberg Gas Com Well No. 1-A (API No. 30-045-22631), located at a standard infill gas well location 1165 feet from the South line and 810 feet from the East line (Unit P) of said Section 28, and the proposed well as described above shall be attributed to the existing 319.51-acre standard gas spacing and proration unit ("GPU") comprising Lots 1 and 4, the E/2 NE/4, and the SE/4 (E/2 equivalent) of Section 28.

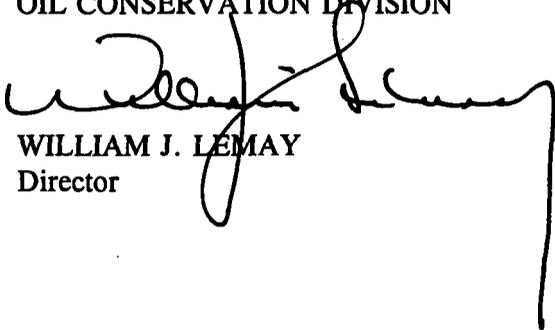
(4) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F and Order No. R-8170, as amended.

(5) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

WJL/MES/kv

cc: Oil Conservation Division - Aztec  
U. S. Bureau of Land Management - Farmington  
File: Case 11,274

DD-AMOC. 2

Rec. 9/22  
Susp. 10/12  
Released 10/13

October 16, 1995

**Amoco Production Company**  
**P. O. Box 800**  
**Denver, Colorado 80201**

**Attention: J. W. Hawkins**

*Administrative Order DD- 121*

Dear Mr. Hawkins:

Reference is made to Amoco Production Company's application dated September 15, 1995 for authorization to directional drill a high-angle well to a pre-determined bottom-hole location in order to further develop the Blanco-Mesaverde Pool underlying an existing 319.51-acre standard gas spacing and proration unit ("GPU") comprising Lots 1 and 4, the E/2 NE/4, and the SE/4 (E/2 equivalent) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico.

**The Division Director Finds That:**

- (1) The application has been duly filed under the provisions of Rule 111(D) and (E) of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995;
- (2) By Order No. R-8170, as amended, the Division promulgated the "*General Rules For The Prorated Gas Pools of New Mexico/Special Rules and Regulations For The Blanco-Mesaverde Pool*", which includes provisions for 320-acre gas spacing and proration units and well location requirements whereby the initial well drilled on a GPU shall be located be no closer than 790 feet to the outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary and the infill well drilled on an existing GPU shall be in the quarter section not containing a Mesaverde gas well and shall be located with respect to the restrictions as previously described;
- (3) Initial development of Blanco-Mesaverde gas pool production within the subject 319.51-acre GPU occurred with the Holmberg Gas Com Well No. 1 (API No.

**30-045-11281**) being drilled in 1954 at a standard gas well location 890 feet from the North line and 1650 feet from the East line (Lot 1/Unit B) of said Section 28. The Holmberg Gas Com Well No. 1-A (API No. **30-045-22631**) was drilled in 1977 as an "infill well" at a standard gas well location 1165 feet from the South line and 810 feet from the East line (Unit P) of said Section 28. It is our understanding that the Holmberg Gas Com Well No. 1 has been plugged and abandoned;

- (4) The applicant/operator proposes to drill its replacement well for the Holmberg Gas Com Well No. 1 from a standard gas well location in Lot 1 (NW/4 NE/4 equivalent) of said Section 28, kick-off of vertical at a depth of approximately 3600 feet in a southerly direction, build to an angle of approximately 45 degrees and continue to drill in such a manner as to bottom back into the Blanco-Mesaverde Pool, with total horizontal displacement of said well to be approximately 1300 feet;
- (5) A high angle wellbore as proposed should provide Amoco a better opportunity to encounter the naturally occurring fracture system in the Mesaverde formation which should result in a higher production rate and an increased ultimate recovery of gas from this GPU.
- (6) The applicable drilling window or "producing area" for said wellbore should include that area within the NE/4 equivalent of said Section 28 that is no closer than 790 feet to the quarter section lines; and,
- (7) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E, the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Amoco Production Company, is hereby authorized to directionally drill its proposed replacement well for the above-described Holmberg Gas Com Well No. 1 from a standard gas well location in Lot 1 (NW/4 NE/4 equivalent) of Section 28, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico, by kicking-off from vertical in a southerly direction and continue drilling in such a manner as to bottom back into the Blanco-Mesaverde Pool (total horizontal displacement of said well to be approximately 1300 feet) within a drilling window or "producing area" the NE/4 equivalent of said Section 28 that is no closer than 790 feet to the quarter section lines.

**PROVIDED HOWEVER THAT** prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

**PROVIDED FURTHER THAT** during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Aztec district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Aztec offices of the Division upon completion.

(3) Blanco-Mesaverde gas production from both the existing Holmberg Gas Com Well No. 1-A (API No. 30-045-22631), located at a standard infill gas well location 1165 feet from the South line and 810 feet from the East line (Unit P) of said Section 28, and the proposed well as described above shall be attributed to the existing 319.51-acre standard gas spacing and proration unit ("GPU") comprising Lots 1 and 4, the E/2 NE/4, and the SE/4 (E/2 equivalent) of Section 28.

(4) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F and Order No. R-8170, as amended.

(5) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY  
Director

S E A L

*Administrative Order DD-\*\*\*\**

*Amoco Production Company*

*October 16, 1995*

*Page No. 4*

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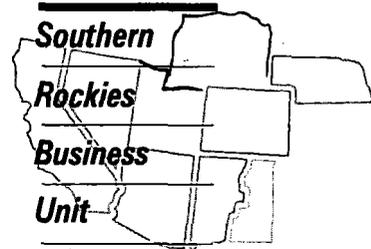
WJL/MES/kv

cc: Oil Conservation Division - Aztec  
U. S. Bureau of Land Management - Farmington  
File: Case 11,274



OIL CONSERVATION DIVISION  
RECEIVED

'95 SEP 22 AM 8 52



September 15, 1995

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
Santa Fe, NM 87505

**Application to Drill a Directional Well**  
**Rule 111 as Amended by Order No. R-10388**  
**Holmberg Gas Unit #1 Well**  
**890' FNL, 1650' FEL, Section 28-T32N-R10W**  
**Blanco Mesaverde Pool**  
**San Juan County, New Mexico**

*New Drill to replace  
the original*

Amoco Production Company hereby requests administrative approval to directionally drill a replacement well for the Holmberg Gas Unit #1 well referenced above as a high angle horizontal well in the Blanco Mesaverde Pool. The referenced well was previously completed as a producing well in the Blanco Mesaverde Pool but has been plugged and abandoned. Amoco believes that directionally drilling the replacement well will provide a better opportunity to encounter the naturally occurring fracture system in the Mesaverde formation which will increase the producing rate and ultimate recovery of gas for this well. The surface location for the replacement well will be about 60' south of the old wellbore. We are requesting the Project Area for this well to be the Blanco Mesaverde gas proration unit consisting of E/2 Section 28, T32N-R10W with the Producing Area for the well to consist of a rectangle inside the gas proration unit that is not closer than 790' from the outer boundaries of the gas proration unit.

In accordance with Rule 111-D.(2), attached to aid in your review are:

- 1) a plat showing the well location, project area and producing area for the project well and the offset spacing units, their wells and operators;
- 2) a vertically oriented plan view for the project well showing top and bottom of the pool, degree of angle to be built, kickoff point, penetration point and lateral length;
- 3) a horizontal plan view for the project well showing the project area, producing area, estimated azimuth and maximum length of the lateral;
- 4) a type log section identifying the top and bottom of the pool.

As notification, a copy of this application will be sent by certified mail return receipt requested to the offset operators shown on the attached list advising them that if they have any objection, it must be filed in writing within twenty (20) days of the date notice was sent.

Sincerely,

*J. W. Hawkins*  
J. W. Hawkins

cc: Jack St. John  
Gail Jefferson

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

*DD-108  
DD-AMOC*

**OFFSET OWNERS**

Meridian Oil Inc.  
PO Box 4289  
Farmington NM 87499

2.174.856

2.174.856

SUPRON ENERGY  
PAYNE 3-A  
4523943

SUPRON ENERGY CORP/  
PAYNE 2-A  
4523910

STANOLIND OIL & GAS  
SULLIVAN 1  
4511373

AMOCO PROD  
SULLIVAN GAS COM 1-A  
4524739

SOUTHERN UNION GAS  
PAYNE 4  
4511361

SOUTHERN UNION GAS  
PAYNE 3  
4560058

20

MERIDIAN

Amoco

Amoco

22

SOUTHERN UNION GAS  
PAYNE 1  
4511321

SUPRON ENERGY  
PAYNE 1-A  
4522172

SOUTHERN UNION GAS  
PAYNE 2  
4511330

AMOCO PROD  
SULLIVAN GAS COM-A 1-A  
4522493

STANOLIND OIL & GAS  
SULLIVAN GAS UNIT 1  
4511310

UNION TEXAS PET  
PAYNE 1R  
4526745

AMOCO PROD  
SULLIVAN GAS COM-A 1-A  
4522493

STANOLIND OIL & GAS  
SULLIVAN GAS UNIT 1  
4511310

REPLACEMENT WELL for  
HOLMBERG GAS Unit #1  
LOCATION

2.169.856

2.169.856

EL PASO NATURAL GAS  
SCOTT 1-A  
4522743

MERIDIAN OIL INC  
SCOTT 1R  
4528514

STANOLIND OIL & GAS  
HOLMBERG GAS U 1  
4511261

AMOCO PROD  
KEYES COM-A 1-A SOUTHERN UNION GAS  
PAYNE 5  
4511280

EL PASO NATURAL GAS  
SCOTT 1  
4511262

AMOCO PROD  
SCHNEIDER GAS COM 1-A  
4522530

Producing Area

29

Amoco

Amoco 27

Project AREA

EL PASO NATURAL GAS  
SCOTT 3-A  
4522755

STANOLIND OIL & GAS  
SCHNEIDER GAS UNIT 1  
4511223

AMOCO PROD  
HOLMBERG GAS COM 1-A  
4522631

STANOLIND OIL & GAS  
KEYES GAS UNIT 1  
4511230

SOUTHERN UNION PROD  
PAYNE 5-A  
4522173

SCOTT 3  
4511215

2.164.856

2.164.856

AMOCO PROD  
4521881

STANOLIND OIL & GAS  
VALENTINE GAS UNIT 1  
4511183  
AMOCO PROD  
VALENTINE GAS COM-B 1  
4522140  
AMOCO PROD  
EALUM GAS COM 1-A  
4522133

Amoco

AMOCO PROD  
LEEPER GAS COM 1-A  
4522134

MERIDIAN OIL INC  
SCOTT 5R  
4528519

32

33

Amoco

34

AMOCO PROD  
MARTINEZ GAS COM-A 1-A  
4522632

STANOLIND OIL & GAS  
UPTEGROVE GAS UNIT 1  
4511149

AMOCO PROD  
UPTEGROVE GAS COM 1-A  
4522142

STANOLIND OIL & GAS  
LEEPER GAS UNIT 1  
4511142

EL PASO NATURAL GAS  
SCOTT 5-A  
4522547

STANOLIND OIL & GAS  
MARTINEZ GAS UNIT 1  
4511122

2.159.856

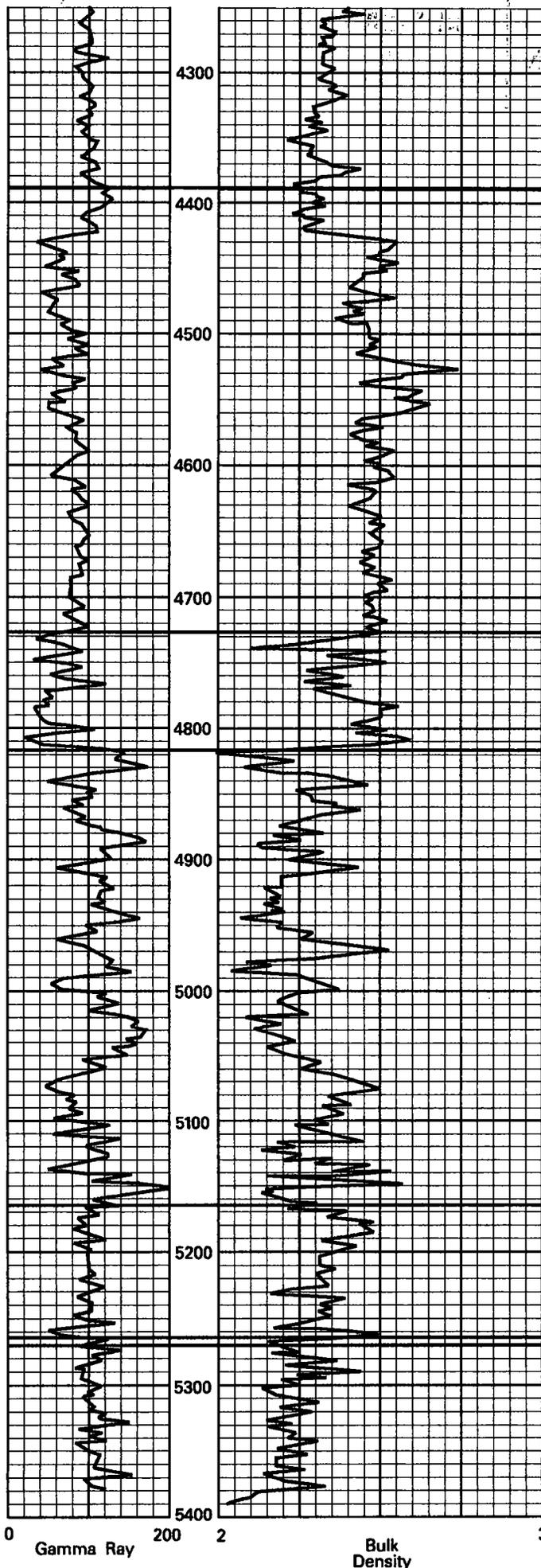
2.159.856



AMOCO E&P SECTOR		
SOUTHERN ROCKIES BUSINESS UNIT		
SAN JUAN BASIN		
T32N-R10W		
1:24000	K. LAMBERT	1-SEP-95

1:24000  
 STATUTE MILES 0 .2 STATUTE MILES  
 KILOMETERS 0 .5 KILOMETERS

**TYPE LOG**  
**HOLMBERG GAS UNIT #1**  
**NE, 28-32N-10W**  
**Cedar Hill Area**



MESA VERDE FM. 4389 +1665

Top Cliffhouse Mbr

4300

4400

4500

4600

4700

4727 +1327

Top Cliffhouse Pay

4800

4817 +1237

Top Menefee Mbr

4900

5000

5100

5165 +889

Top Point Lookout Mbr

5200

Top Point Lookout Pay

5263 +791

MANCOS FM. 5270 +784 \*

5300

5400

0      200      2      3  
 Gamma Ray      Bulk Density

\* Noted depths are accurate - Log curves slightly off depth in Pt. Lookout.

Sec : 28 Twp : 32N Rng : 10W Section Type : NORMAL

3 39.33  Federal owned	2 39.10  Federal owned  A	1 39.77  Federal owned  A A	A 40.00  Fee owned
E 40.00  Fee owned  A	F 40.00  Fee owned	4 39.74  Federal owned	H 40.00  Fee owned

PF01 HELP  
PF07 BKWD

PF02  
PF08 FWD

PF03 EXIT  
PF09 PRINT

PF04 GoTo  
PF10 SDIV

PF05  
PF11

PF06  
PF12

$$\begin{array}{r}
 79.51 \\
 80.00 \\
 \hline
 159.51 \\
 16 \\
 \hline
 319.51
 \end{array}$$

80.00

Sec : 28 Twp : 32N Rng : 10W Section Type : NORMAL

L 40.00  Fee owned  A	K 40.00  Fee owned	J 40.00  Fee owned	I 40.00  Fee owned
M 40.00  Fee owned  A A	N 40.00  Fee owned	O 40.00  Fee owned	P 40.00  Fee owned  A

PF01 HELP  
PF07 BKWD

PF02  
PF08 FWD

PF03 EXIT  
PF09 PRINT

PF04 GoTo  
PF10 SDIV

PF05  
PF11

PF06  
PF12

  
**AMOCO PRODUCTION COMPANY**  
**HOLMBERG GAS UNIT #1**  
**HORIZONTAL REPLACEMENT WELL PROPOSAL**  
 NE/4 Section 28, T32N, R10W  
 San Juan County, New Mexico

Stanolind  
 Holmberg Gas Unit #1  
 (890 FNL, 1650 FEL) Sec. 28, T32N, R10W  
 San Juan County, New Mexico  
 KB: 6054

