



Amoco Exploration and Production U.S.A. Operations Group

Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

P. M. Jarrell Resource Manager, Bravo Dome

May 17, 1996

Roy Johnson, District Supervisor
Oil Conservation Division
New Mexico Department of Energy
Minerals and Natural Resources
2040 South Pacheco Street
Sante Fe, New Mexico 87505

File: PMJ - 4270 - 400

Re: Application for Administrative Approval of Unorthodox Well Location,

BDCDGU 2135 Well No. 302M Union County, New Mexico

Dear Mr. Johnson:

Amoco hereby seeks administrative approval pursuant to the provisions of amended Division Rule 104 F(2), effective January 18, 1996, of an unorthodox well location for its BDCDGU 2135 Well No. 302M to be drilled at a location 482 feet from the south line and 255 feet from the west line of Section 30, Township 21N, Range 35E, NMPM., Union County, New Mexico.

The unorthodox location is necessary for engineering reasons (i.e., reservoir pressure, drainage, ultimate gas recovery, etc.). Infill wells at orthodox locations will not recover enough incremental reserves to justify drilling them under the current economic climate. The only viable way to increase ultimate recovery is to drill at an unorthodox location as proposed in this application.

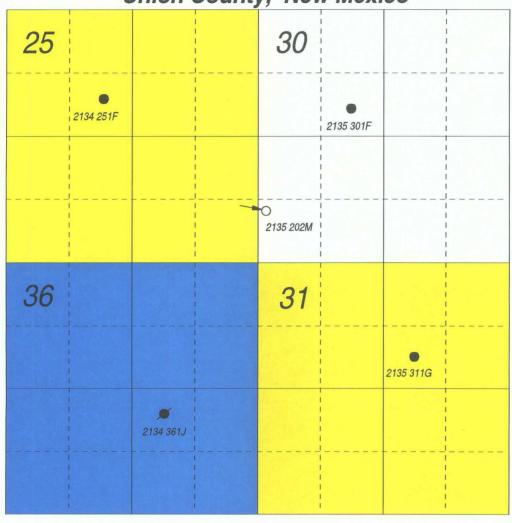
Diagonal and adjoining sections to the unorthodox well location are operated by Amoco, are leased by Amoco, or are subject to a lease owned by another working interest owner in the Bravo Dome Carbon Dioxide Gas Unit and committed to the Unit. No notification to "affected parties" under amended Division Rule 104.F(4), effective January 18, 1996 is required. Exhibit A shows the subject spacing unit, proposed unorthodox location, and the diagonal/adjoining spacing units.

Your attention to this request is appreciated.

Very truly yours,

Kerry M. Janell
Enclosure

Bravo Dome Well No. 2135 302M 482' FSL x 255' FWL Section 30, Township 21N, Range 35E Union County, New Mexico



Amoco Lease
(One PxA well on Section 36)

Amoco Operated (One well on Sections 25 & 31)

Exhibit A

CMD.: . OG5SECT

ONGARD INQUIRE LAND BY SECTION

07/02/96 09:03:52 OGOMES -EMG1

PAGE NO: 1

Sec : 30 Twp : 21N Rng : 35E Section Type : NORMAL

-				
1		С	l B	A
38.49		40.00	40.00	40.00
Fee owned		Fee owned	 Fee owned	 Fee owned
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	j	U .	Ŭ	U
A	 			
2		F	 G	
38.59	Ì	40.00	40.00	40.00
Fee owned	·	Fee owned	Fee owned	Fee owned
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		••		
		**************************************		I
PF01 HELP	PF02	PF03 EXIT	PF04 GoTo PF05	PF06
PF07 BKWD	PF08 FWI	PF09 PRINT	PF10 SDIV PF11	PF12

77.08 317.08 317.48 434.56 CMD : · OG5SECT

ONGARD INQUIRE LAND BY SECTION

07/02/96 09:03:57 OGOMES -EMG1

PAGE NO: 2

Sec : 30 Twp : 21N Rng : 35E Section Type : NORMAL

3		K	J	ļI
38.69		40.00	40.00	40.00
Fee owned		Fee owned	 Fee owned	Fee owned
U		Ω	ū	l u
4		N	0	P
38.79		40.00	40.00	40.00
Fee owned		Fee owned	Fee owned	Fee owned
U		U	U .	U
			İİ	i
F01 HELP	PF02	PF03 EXIT	PF04 GoTo PF05	PF06
F07 BKWD	PF08 FWI	PF09 PRINT	PF10 SDIV PF11	PF12

240 79.48 317.48

07/02/96 09:05:16 CMD.: ONGARD

C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1 OG6C101

OGRID Idn : 778 API Well No: 30 59 20321 APD Status(A/C/P): A

Aprvl/Cncl Date : 06-06-1995 Opr Name, Addr: AMOCO PRODUCTION CO

> PO BOX 21178 TULSA, OK 74121

2135

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 301

U/L Sec Township Range Lot Idn North/South East/West

FTG 2022 F N FTG 1964 F W Surface Locn: F 30 21N 35E

OCD U/L : F API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ (F/S/P/N/J/U/I): P Ground Level Elevation: 4738

State Lease No: Multiple Comp (Y/N) : N

Prpsd Depth : 2330 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF08 PF07

CMD: ONGARD 07/02/96 09:05:08

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1 OG6CLOG

OGRID Identifier : 778 AMOCO PRODUCTION CO
Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20321 Well No : 301

Surface Locn - UL : F Sec : 30 Twp : 21N Range : 35E Lot Idn :

 $\label{eq:multiple_comp} \text{Multple comp } (\text{S/M/C}): \text{N} \qquad \text{TVD Depth (Feet)}: \qquad \qquad \text{MVD Depth (Feet)}:$

Spud Date : P/A Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code ______

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF08 PF09 COMMENT PF10 TLOG PF11 PF07

CMD: .

ONGARD
INQUIRE WELL COMPLETIONS

07/02/96 09:05:22 OGOMES -EMG1

API Well No : 30 59 20321 Eff Date : 06-06-1995 WC Status : A

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 301 GL Elevation: 4738

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : F 30 21N 35E FTG 2022 F N FTG 1964 F W I

Lot Identifier:
Dedicated Acre:
Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

ONGARD 07/02/96 09:04:41 CMD: -

OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1

OGRID Idn : 778 API Well No: 30 59 20363 APD Status(A/C/P): A

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-28-1996

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 302

U/L Sec Township Range Lot Idn North/South East/West

_______ Surface Locn: 1 30 21N 35E FTG 482 F S FTG 255 F W

OCD U/L : M API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4741

Multiple Comp (Y/N) : N State Lease No:

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF01 HELP PF02

PF07

ONGARD 07/02/96 09:04:26 CMD:

OG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO
Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20363 Well No : 302

Surface Locn - UL: 1 Sec: 30 Twp: 21N Range: 35E Lot Idn:

P/A Date : Spud Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF08 PF09 COMMENT PF10 TLOG PF11 PF07 PF12 CMD : - OG6IWCM

ONGARD INQUIRE WELL COMPLETIONS

07/02/96 09:04:49 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : / 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 302 GL Elevation: 4741

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : 1 30 21N 35E FTG 482 F S FTG 255 F W P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC





Amoco Exploration and Production U.S.A. Operations Group

Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

P. M. Jarrell Resource Manager, Bravo Dome

May 17, 1996

Roy Johnson, District Supervisor
Oil Conservation Division
New Mexico Department of Energy
Minerals and Natural Resources
2040 South Pacheco Street
Sante Fe. New Mexico 87505

File: PMJ - 4265 - 400

Re: Application for Administrative Approval of Unorthodox Well Location,

BDCDGU 2234 Well No. 282P Union County, New Mexico

Dear Mr. Johnson:

Amoco hereby seeks administrative approval pursuant to the provisions of amended Division Rule 104 F(2), effective January 18, 1996, of an unorthodox well location for its BDCDGU 2234 Well No. 282P to be drilled at a location 862 feet from the south line and 372 feet from the east line of Section 28, Township 22N, Range 34E, NMPM., Union County, New Mexico.

The unorthodox location is necessary for engineering reasons (i.e., reservoir pressure, drainage, ultimate gas recovery, etc.). Infill wells at orthodox locations will not recover enough incremental reserves to justify drilling them under the current economic climate. The only viable way to increase ultimate recovery is to drill at an unorthodox location as proposed in this application.

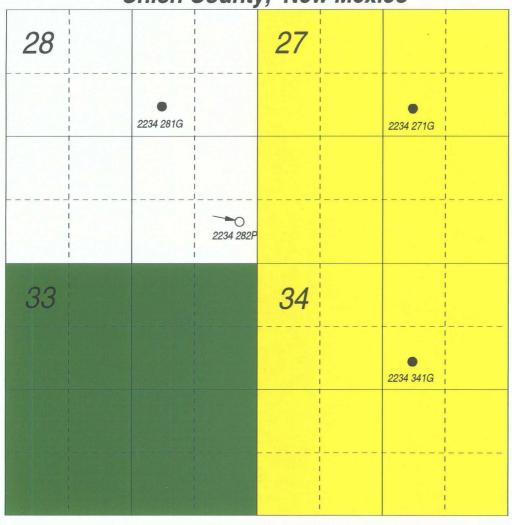
Diagonal and adjoining sections to the unorthodox well location are operated by Amoco, are leased by Amoco, or are subject to a lease owned by another working interest owner in the Bravo Dome Carbon Dioxide Gas Unit and committed to the Unit. No notification to "affected parties" under amended Division Rule 104.F(4), effective January 18, 1996 is required. Exhibit A shows the subject spacing unit, proposed unorthodox location, and the diagonal/adjoining spacing units.

Your attention to this request is appreciated.

Very truly yours,

Keny M. Janell Enclosure

Bravo Dome Well No. 2234 282P 862' FSL x 372' FEL Section 28, Township 22N, Range 34E Union County, New Mexico



Amerada Hess Lease Committed to Bravo Dome Unit (No well on lease)

Amoco Operated (One well on each Section)

Exhibit A

CMD : OG5SECT

ONGARD INQUIRE LAND BY SECTION 07/02/96 09:02:01

OGOMES -EMG1 PAGE NO: 1

Sec : 28 Twp : 22N Rng : 34E Section Type : NORMAL

D	C	В	A ·
40.00	40.00	40.00	40.00
CS	CS		CS
L06249 05/81	L06249 05/81	·	L06249 05/81
AMOCO PRODUCTION	AMOCO PRODUCTION	Fee owned	AMOCO PRODUCTION
U	 	U	U
E	i F		i H
40.00	40.00	40.00	40.00
CS			CS
L06249 05/81			L06249 05/81
AMOCO PRODUCTION	Fee owned	Fee owned	AMOCO PRODUCTION
Ŭ	U	U	U U
		A]
PF01 HELP PF02	PF03 EXIT PI	F04 GoTo PF05	PF06
PF07 BKWD PF08 FWI	PF09 PRINT PI	F10 SDIV PF11	PF12

 ONGARD INQUIRE LAND BY SECTION 07/02/96 09:02:08 OGOMES -EMG1

PAGE NO: 2

Sec : 28 Twp : 22N Rng : 34E Section Type : NORMAL

L	K	l J	ļ I
40.00	40.00	40.00	40.00
CS		CS	CS
L06249 05/81		L06249 05/81	L06249 05/81
AMOCO PRODUCTION	Fee owned	AMOCO PRODUCTION	AMOCO PRODUCTION
U	U	U	U
M	N	0	P
40.00	40.00	40.00	40.00
CS	CS	CS	CS
L06249 05/81	L06249 05/81	L06249 05/81	L06249 05/81
AMOCO PRODUCTION	AMOCO PRODUCTION	AMOCO PRODUCTION	AMOCO PRODUCTION
ប	U	ן ע	U
			A
		-	
PF01 HELP PF02	PF03 EXIT PI	F04 GoTo PF05	PF06
PF07 BKWD PF08 FWI	PF09 PRINT PI	F10 SDIV PF11	PF12

CMD: ONGARD 07/02/96 09:02:34 QG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1

OGRID Idn : 778 API Well No: 30 59 20334 APD Status(A/C/P): A

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-06-1995

PO BOX 21178 TULSA,OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 281

U/L Sec Township Range Lot Idn North/South East/West

Surface Locn : G 28 22N 34E FTG 1700 F N FTG 1924 F E

OCD U/L : G API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4784

State Lease No: Multiple Comp (Y/N) : N

Prpsd Depth : 2310 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF07 PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12

ONGARD 07/02/96 09:02:26 CMD:

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1 QG6CL0Ğ

OGRID Identifier : 778 AMOCO PRODUCTION CO
Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20334 Well No : 281

Surface Locn - UL : G Sec : 28 Twp : 22N Range : 34E Lot Idn :

P/A Date : Spud Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code ______

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF07 PF08 PF09 COMMENT PF10 TLOG PF11 PF12 CMD : ... QG6IWCM

ONGARD INQUIRE WELL COMPLETIONS

07/02/96 09:02:41 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 281 GL Elevation: 4784

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : G 28 22N 34E FTG 1700 F N FTG 1924 F E

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD: ONGARD 07/02/96 13:06:38
OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EME1

OGRID Idn : 778 API Well No: 30 59 20364 APD Status(A/C/P): A

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-28-1996

PO BOX 21178 TULSA,OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 282

U/L Sec Township Range Lot Idn North/South East/West

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Surface Locn : P 28 22N 34E FTG 862 F S FTG 372 F E

OCD U/L : P API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4780

State Lease No: Multiple Comp (Y/N): N

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF07 PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12

07/02/96 13:06:28 ONGARD CMD : QG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EME1

OGRID Identifier : 778 AMOCO PRODUCTION CO
Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20364 Well No : 282 Surface Locn - UL : P Sec : 28 Twp : 22N Range : 34E Lot Idn :

Multple comp (S/M/C): N TVD Depth (Feet): MVD Depth (Feet):

Spud Date : P/A Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code ______

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF08 PF09 COMMENT PF10 TLOG PF11 PF07 PF12 CMD : OG6IWCM

ONGARD
INQUIRE WELL COMPLETIONS

07/02/96 13:06:46 OGOMES -EME1

API Well No : 30 59 20364 Eff Date : 06-28-1996 WC Status :

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 282 GL Elevation: 4780

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : P 28 22N 34E FTG 862 F S FTG 372 F E P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

OIL CONSERVATION DIVISION RECE VED



*95 門行 20 日刊 8 52 Amoco Explorations Group

Amoco Exploration and Production

(640 aur)

Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

P. M. Jarrell Resource Manager, Bravo Dome

May 17, 1996

Roy Johnson, District Supervisor Oil Conservation Division **New Mexico Department of Energy** Minerals and Natural Resources 2040 South Pacheco Street Sante Fe. New Mexico 87505

File: PMJ - 4271 - 400

Re: Application for Administrative Approval of Unorthodox Well Location,

BDCDGU 1835 Well No. 232D)

Union County, New Mexico

Dear Mr. Johnson:

Amoco hereby seeks administrative approval pursuant to the provisions of amended Division Rule 104 F(2), effective January 18, 1996, of an unorthodox well location for its BDCDGU 1835 Well No. 232D to be drilled at a location 204 feet from the north line and 1195 feet from the west line of Section 23, Township 18N, Range 35E, NMPM., Union County, New Mexico.

The unorthodox location is necessary for engineering reasons (i.e., reservoir pressure, drainage, ultimate gas recovery, etc.). Infill wells at orthodox locations will not recover enough incremental reserves to justify drilling them under the current economic climate. The only viable way to increase ultimate recovery is to drill at an unorthodox location as proposed in this application.

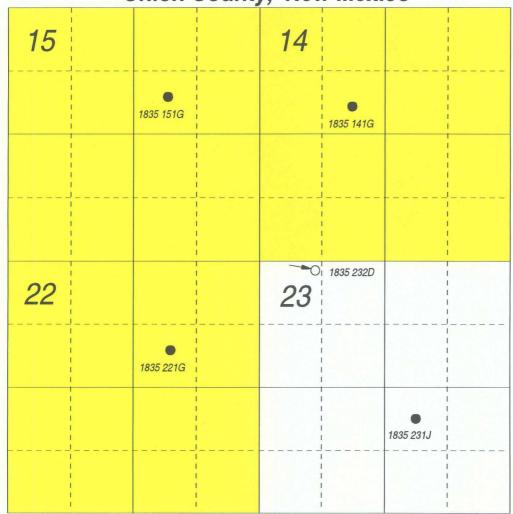
Diagonal and adjoining sections to the unorthodox well location are operated by Amoco, are leased by Amoco, or are subject to a lease owned by another working interest owner in the Bravo Dome Carbon Dioxide Gas Unit and committed to the Unit. No notification to "affected parties" under amended Division Rule 104.F(4), effective January 18, 1996 is required. Exhibit A shows the subject spacing unit. proposed unorthodox location, and the diagonal/adjoining spacing units.

Your attention to this request is appreciated.

Very truly yours,

Kern M. Janul

Bravo Dome Well No. 1835 232D 204' FNL x 1195' FWL Section 23, Township 18N, Range 35E Union County, New Mexico



Amoco Operated
(One well on each Section)

Exhibit A

CMD: OGSSECT

ONGARD INQUIRE LAND BY SECTION 07/02/96 09:00:14 OGOMES -EMG1

PAGE NO: 1

Sec : 23 Twp : 18N Rng : 35E Section Type : NORMAL

D		l c	В	A
40.00		40.00	40.00	40.00
40.00	: 	1	1	1 =0.00
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A			ļ	
E		F	G	Н
40.00		40.00	40.00	40.00
Fee owned		Fee owned	Fee owned	Fee owned
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		1	1	
PF01 HELP	PF02	PF03 EXIT	PF04 GoTo PF05	PF06
PF07 BKWD	PF08 FWI		PF10 SDIV PF11	PF12
IIO/ DIMD	IIOO I'MI	J IIOJ IRINI	TITO DDIV TITI	LITZ

CMD·: OG5SECT

ONGARĎ INQUIRE LAND BY SECTION

07/02/96 09:00:19 OGOMES -EMG1

PAGE NO: 2

Sec : 23 Twp : 18N Rng : 35E Section Type : NORMAL

			<u> </u>	
L		¦ K	J	I
40.00		40.00	40.00	40.00
Fee owned		Fee owned	Fee owned	Fee owned
U		U	U	U
			A	
M		 N	0	 P
40.00		40.00	40.00	40.00
		!		
Fee owned		Fee owned	Fee owned	Fee owned
U		ן ט	Ū	n .
		1	I	······································
F01 HELP	PF02	PF03 EXIT	PF04 GoTo PF05	PF06
PF07 BKWD	PF08 FW	O PF09 PRINT	PF10 SDIV PF11	PF12

CMD: ONGARD
OG6C101 C101-APPLICATION FOR PERMIT TO DRILL

07/02/96 09:00:48 OGOMES -EMG1

OGRID Idn : 778 API Well No: 30 59 20281 APD Status(A/C/P): A

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 12-01-1985

PO BOX 21178 TULSA,OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 231

U/L Sec Township Range Lot Idn North/South East/West

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Surface Locn : J 23 18N 35E FTG 1650 F S FTG 1650 F E

OCD U/L : J API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4550

State Lease No: Multiple Comp (Y/N) : S

Prpsd Depth : 2900 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF07 PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12

CMD·: ONGARD C105-WELL COMPLETION OR RECOMP CASING LOG OG6CLOG

07/02/96 09:00:40

OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO
Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20281 Well No : 231

Surface Locn - UL : J Sec : 23 Twp : 18N Range : 35E Lot Idn :

Multple comp (S/M/C): S TVD Depth (Feet): 99999 MVD Depth (Feet): 99999

Spud Date : 12-01-1985 P/A Date :

Casing/Linear Record:

S Size (inches)	Grade	_	-	Depth(ft) Bot-Liner			 Code
9.625		32.0	1.0	705.0	12.250	390	 C
7.000		20.0	705.0	2547.0	8.750	450	C

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF07 PF08 PF09 COMMENT PF10 TLOG PF11 PF12 CMD : OG6IWCM

ONGARD INQUIRE WELL COMPLETIONS

07/02/96 09:00:55 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 231 GL Elevation: 4550

U/L Sec Township Range North/South East/West Prop/Act(P/A)

. --- --- ----- ----- ------ -------

B.H. Locn : J 23 18N 35E FTG 1650 F S FTG 1650 F E A

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD : ` ONGARD

07/02/96 13:15:45 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EME1 . OG6C101

OGRID Idn : 778 API Well No: 30 59 20359 APD Status(A/C/P): A

Aprvl/Cncl Date : 06-28-1996 Opr Name, Addr: AMOCO PRODUCTION CO

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 232 A

U/L Sec Township Range Lot Idn North/South East/West

Surface Locn: D 23 18N 35E FTG 204 F N FTG 1195 F W

OCD U/L : D API County : 59

 $\label{eq:work_typ} \text{Work typ} (N/E/D/P/A) \qquad : \text{N Well typ} (O/G/M/I/S/W/C) : \text{C} \qquad \text{Cable/Rotary} \ (\text{C/R}) \ : \text{R}$

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4577

State Lease No: Multiple Comp (Y/N) : N

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07 PF08

CMD: ONGARD 07/02/96 13:15:37

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EME1 . OG6CLOG

OGRID Identifier : 778 AMOCO PRODUCTION CO
Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20359 Well No : 232A

Surface Locn - UL : D Sec : 23 Twp : 18N Range : 35E Lot Idn :

 $\label{eq:multiple_comp} \text{Multple comp } (\text{S/M/C}): \text{N} \qquad \text{TVD Depth (Feet)}: \qquad \qquad \text{MVD Depth (Feet)}:$

P/A Date : Spud Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code _____

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF09 COMMENT PF10 TLOG PF11 PF12 PF08 PF07

CMD : OG6IWCM

ONGARD
INQUIRE WELL COMPLETIONS

07/02/96 13:15:51 OGOMES -EME1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 232A GL Elevation: 4577

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : D 23 18N 35E FTG 204 F N FTG 1195 F W

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC





Amoco Exploration and Production U.S.A. Operations Group

Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

P. M. Jarrell Resource Manager, Bravo Dome

May 17, 1996

Roy Johnson, District Supervisor
Oil Conservation Division
New Mexico Department of Energy
Minerals and Natural Resources
2040 South Pacheco Street
Sante Fe, New Mexico 87505

File: PMJ - 4269 - 400

Re: Application for Administrative Approval of Unorthodox Well Location,

BDCDGU 2135 Well No. 202M)

Union County, New Mexico

30-059-20362

Dear Mr. Johnson:

Amoco hereby seeks administrative approval pursuant to the provisions of amended Division Rule 104 F(2), effective January 18, 1996, of an unorthodox well location for its BDCDGU 2135 Well No. 202M to be drilled at a location 1173 feet from the south line and 176 feet from the west line of Section 20, Township 21N, Range 35E, NMPM., Union County, New Mexico.

The unorthodox location is necessary for engineering reasons (i.e., reservoir pressure, drainage, ultimate gas recovery, etc.). Infill wells at orthodox locations will not recover enough incremental reserves to justify drilling them under the current economic climate. The only viable way to increase ultimate recovery is to drill at an unorthodox location as proposed in this application.

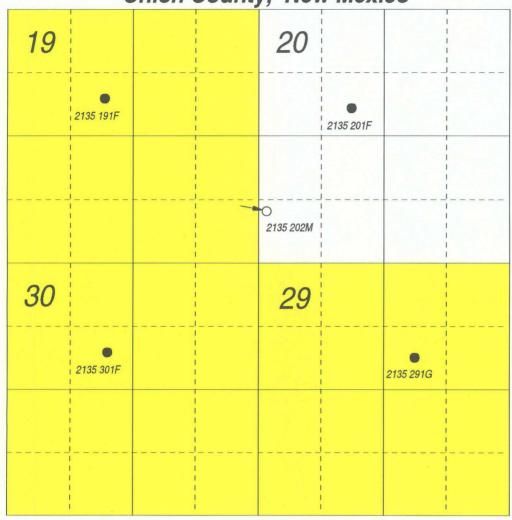
Diagonal and adjoining sections to the unorthodox well location are operated by Amoco, are leased by Amoco, or are subject to a lease owned by another working interest owner in the Bravo Dome Carbon Dioxide Gas Unit and committed to the Unit. No notification to "affected parties" under amended Division Rule 104.F(4), effective January 18, 1996 is required. Exhibit A shows the subject spacing unit, proposed unorthodox location, and the diagonal/adjoining spacing units.

Your attention to this request is appreciated.

Very truly yours.

Enclosure

Bravo Dome Well No. 2135 202M 1173' FSL x 176' FWL Section 20, Township 21N, Range 35E Union County, New Mexico



Amoco Operated (One well on each Section)

Exhibit A

CMD : OG5SECT

ONGARD INQUIRE LAND BY SECTION 07/02/96 08:58:09 OGOMES -EMG1

PAGE NO: 1

Sec : 20 Twp : 21N Rng : 35E Section Type : NORMAL

D		С	B	A
40.00		40.00	40.00	40.00
	 		.	
Fee owned		Fee owned	Fee owned	Fee owned
U		U	ן ט	U
E	1	F	! 	 H
40.00		40.00	40.00	40.00
Dog ormod	į	Ess sured	 	
Fee owned	į	Fee owned	Fee owned	Fee owned
U	į	Ŭ	Ü	l u
	 	A		
			7	
	PF02	PF03 EXIT	PF04 GoTo PF05	PF06
F07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV PF11	PF12

CMD ; . . . OG5SECT

ONGARD INQUIRE LAND BY SECTION

07/02/96 08:58:20 OGOMES -EMG1

PAGE NO: 2

Sec : 20 Twp : 21N Rng : 35E Section Type : NORMAL

L	¦ K	J	I
40.00	40.00	40.00	40.00
Fee owned	Fee owned	Fee owned	Fee owned
U	U	ប	U
М	N	0	P
40.00	40.00	40.00	40.00
_			
Fee owned	Fee owned	Fee owned	Fee owned
Ū	U	. U	U
A			
	l	_	
PF01 HELP PF02		PF04 GoTo PF05	PF06
PF07 BKWD PF08 FW	D PF09 PRINT	PF10 SDIV PF11	PF12

CMD ; ONGARD 07/02/96 08:58:50

C101-APPLICATION FOR PERMIT TO DRILL OG6C101 OGOMES -EMG1

OGRID Idn : 778 API Well No: 30 59 20320 APD Status(A/C/P): A

Aprvl/Cncl Date : 06-06-1995 Opr Name, Addr: AMOCO PRODUCTION CO

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 201

U/L Sec Township Range Lot Idn North/South East/West

Surface Locn: F 20 21N 35E

OCD U/L : F API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

FTG 1985 F N FTG 1942 F W

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4693

Multiple Comp (Y/N) : N State Lease No:

Prpsd Depth : 2290 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07

CMD : . ONGARD OG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG

07/02/96 08:58:40 OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20320 Well No : 201

Surface Locn - UL : F Sec : 20 Twp : 21N Range : 35E Lot Idn :

Spud Date P/A Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF09 COMMENT PF10 TLOG PF11 PF07 PF08 PF12 CMD : OG6IWCM

ONGARD INQUIRE WELL COMPLETIONS

07/02/96 08:58:58 OGOMES -EMG1

API Well No : 30 59 20320 Eff Date : 08-28-1995 WC Status : A

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 201 GL Elevation: 4693

U/L Sec Township Range North/South East/West Prop/Act(P/A)

--- --- ------ ----- ------

B.H. Locn : F 20 21N 35E FTG 1985 F N FTG 1942 F W P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

07/02/96 13:23:16 ONGARD CMD : OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EME1

: 778 API Well No: 30 59 20362 APD Status(A/C/P): A OGRID Idn

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-28-1996

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 202

U/L Sec Township Range Lot Idn North/South East/West

___ ___

FTG 1173 F S FTG 176 F W Surface Locn: M 20 21N 35E

: M API County: 59 OCD U/L

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4709

State Lease No: Multiple Comp (Y/N) : N

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF08 PF07

CMD : ONGARD 07/02/96 13:23:07

OGOMES -EME1 OG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20362 Well No : 202

Surface Locn - UL : M Sec : 20 Twp : 21N Range : 35E Lot Idn :

P/A Date : Spud Date :

Casing/Linear Record:

…______

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF09 COMMENT PF10 TLOG PF11 PF12 PF08 PF07

CMD: OG6IWCM

ONGARD INQUIRE WELL COMPLETIONS

07/02/96 13:23:22 OGOMES -EME1

API Well No : 30 59 20362 Eff Date : 06-28-1996 WC Status :

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 202 GL Elevation: 4709

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : M 20 21N 35E FTG 1173 F S FTG 176 F W F

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC



Amoco Exploration and Production U.S.A. Operations Group

Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

P. M. Jarrell Resource Manager, Bravo Dome

May 17, 1996

Roy Johnson, District Supervisor
Oil Conservation Division
New Mexico Department of Energy
Minerals and Natural Resources
2040 South Pacheco Street
Sante Fe, New Mexico 87505

File: PMJ - 4266 - 400

Re: Application for Administrative Approval of Unorthodox Well Location,

BDCDGU 2234 Well No. 342P

Union County, New Mexico

30-059-20365

(e)

Dear Mr. Johnson:

Amoco hereby seeks administrative approval pursuant to the provisions of amended Division Rule 104 F(2), effective January 18, 1996, of an unorthodox well location for its BDCDGU 2234 Well No. 342P to be drilled at a location 500 feet from the south line and 200 feet from the east line of Section 34, Township 22N, Range 34E, NMPM., Union County, New Mexico.

The unorthodox location is necessary for engineering reasons (i.e., reservoir pressure, drainage, ultimate gas recovery, etc.). Infill wells at orthodox locations will not recover enough incremental reserves to justify drilling them under the current economic climate. The only viable way to increase ultimate recovery is to drill at an unorthodox location as proposed in this application.

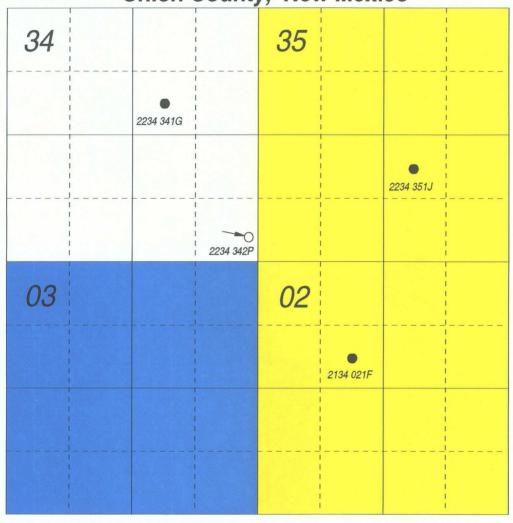
Diagonal and adjoining sections to the unorthodox well location are operated by Amoco, are leased by Amoco, or are subject to a lease owned by another working interest owner in the Bravo Dome Carbon Dioxide Gas Unit and committed to the Unit. No notification to "affected parties" under amended Division Rule 104.F(4), effective January 18, 1996 is required. Exhibit A shows the subject spacing unit, proposed unorthodox location, and the diagonal/adjoining spacing units.

Your attention to this request is appreciated.

Very truly yours,

Kerry M. Janul

Bravo Dome Well No. 2234 342P 500' FSL x 200' FEL Section 34, Township 22N, Range 34E Union County, New Mexico



Amoco Lease (No well on lease)

Amoco Operated (One well on each Section)

Exhibit A

CMD : OG5SECT ONGARD INQUIRE LAND BY SECTION 07/02/96 09:13:57 OGOMES -EMG1

PAGE NO: 1

Sec : 34 Twp : 22N Rng : 34E Section Type : NORMAL

		·	
D	C	В	A
40.00	40.00	40.00	40.00
CS		CS	CS
LG2909 2 07/85		LG2909 2 07/85	LG2909 2 07/85
AMERADA HESS CORP	Fee owned	AMERADA HESS CORP	AMERADA HESS CORE
U	U U	U	U U
		·	
E	F	G	H
40.00	40.00	40.00	40.00
CS		CS	CS
LG2909 2 07/85		LG2909 2 07/85	LG2909 2 07/85
AMERADA HESS CORP	Fee owned	AMERADA HESS CORP	AMERADA HESS CORE
U	U U	J. J.	U U
		A	
PF01 HELP PF02	PF03 EXIT	PF04 GoTo PF05	PF06
PF07 BKWD PF08 FW	D PF09 PRINT	PF10 SDIV PF11	PF12

CMD: .

ONGARD INQUIRE LAND BY SECTION

07/02/96 09:14:01 OGOMES -EMG1

PAGE NO: 2

Sec : 34 Twp : 22N Rng : 34E Section Type : NORMAL

L	K	J	I
40.00	40.00	40.00	40.00
CS	40.00	1	40.00 CS
· ·		i I	!
LG2909 2 07/85	_	j 	LG2909 2 07/85
AMERADA HESS CORP	Fee owned	Fee owned	AMERADA HESS CORP
U	U	U	ן ט
		<u> </u>	
M	N	0	P
40.00	40.00	40.00	40.00
CS	CS	CS	CS
LG2909 2 07/85	LG2909 2 07/85	LG2909 2 07/85	LG2909 2 07/85
AMERADA HESS CORP	AMERADA HESS CORP	AMERADA HESS CORP	AMERADA HESS CORP
U	U	ן ע	U
			$\left(\begin{array}{c} A \end{array}\right)$
PF01 HELP PF02	PF03 EXIT PH	F04 GoTo PF05	PF06
PF07 BKWD PF08 FWD	PF09 PRINT P	F10 SDIV PF11	PF12

CMD: ONGARD 07/02/96 09:14:21
OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1

OGRID Idn : 778 API Well No: 30 59 20341 APD Status(A/C/P): A

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-16-1995

PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 341

U/L Sec Township Range Lot Idn North/South East/West

Surface Locn : G 34 22N 34E FTG 2120 F N FTG 2206 F E

OCD U/L : G API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): S Ground Level Elevation: 4833

State Lease No: Multiple Comp (Y/N) : N

Prpsd Depth : 2370 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF07 PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12

CMD: ONGARD 07/02/96 09:14:15

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1 OG6CLOG

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20341 Well No : 341

Surface Locn - UL : G Sec : 34 Twp : 22N Range : 34E Lot Idn :

 $\label{eq:multiple_comp} \text{Multple comp } (\text{S/M/C}): \text{N} \qquad \text{TVD Depth (Feet)}: \qquad \qquad \text{MVD Depth (Feet)}:$

P/A Date : Spud Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code ______

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF08 PF09 COMMENT PF10 TLOG PF11 PF07 PF12 CMD: OG6IWCM

ONGARD INOUIRE WELL COMPLETIONS

07/02/96 09:14:27 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 341 GL Elevation: 4833

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : G 34 22N 34E FTG 2120 F N FTG 2206 F E P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : S

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD: . ONGARD

07/02/96 09:14:51 C101-APPLICATION FOR PERMIT TO DRILL 'OG6C101 OGOMES -EMG1

OGRID Idn 778 API Well No: 30 59 20365 APD Status(A/C/P): A :

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-28-1996

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 342

U/L Sec Township Range Lot Idn North/South East/West

___ ___ ______

22N 34E FTG 500 F S FTG 200 F E Surface Locn: P 34

OCD U/L : P API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4749

Multiple Comp (Y/N): N State Lease No:

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07 PF08

CMD: . ONGARD OG6CLOG

07/02/96 09:14:45

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20365 Well No : 342

Surface Locn - UL : P Sec : 34 Twp : 22N Range : 34E Lot Idn :

Multple comp (S/M/C): N TVD Depth (Feet): MVD Depth (Feet):

P/A Date : Spud Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code ______

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF09 COMMENT PF10 TLOG PF11 PF08 PF07 PF12 CMD: -OG6IWCM

ONGARD INQUIRE WELL COMPLETIONS

07/02/96 09:14:57 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 342 GL Elevation: 4749

U/L Sec Township Range North/South East/West Prop/Act(P/A)

--- --- -------

B.H. Locn : P 34 22N 34E FTG 500 F S FTG 200 F E P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC



Amoco Exploration and Production U.S.A. Operations Group

Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

P. M. Jarrell Resource Manager, Bravo Dome

May 17, 1996

Roy Johnson, District Supervisor Oil Conservation Division New Mexico Department of Energy Minerals and Natural Resources 2040 South Pacheco Street Sante Fe, New Mexico 87505 (f)

File: PMJ - 4267- 400

Re: Application for Administrative Approval of Unorthodox Well Location,

BDCDGU 2134 Well No. 133M Union County, New Mexico

Dear Mr. Johnson:

Amoco hereby seeks administrative approval pursuant to the provisions of amended Division Rule 104 F(2), effective January 18, 1996, of an unorthodox well location for its BDCDGU 2134 Well No.133M to be drilled at a location 1158 feet from the south line and 515 feet from the west line of Section 13, Township 21N, Range 34E, NMPM., Union County, New Mexico.

The unorthodox location is necessary for engineering reasons (i.e., reservoir pressure, drainage, ultimate gas recovery, etc.). Infill wells at orthodox locations will not recover enough incremental reserves to justify drilling them under the current economic climate. The only viable way to increase ultimate recovery is to drill at an unorthodox location as proposed in this application.

Diagonal and adjoining sections to the unorthodox well location are operated by Amoco, are leased by Amoco, or are subject to a lease owned by another working interest owner in the Bravo Dome Carbon Dioxide Gas Unit and committed to the Unit. No notification to "affected parties" under amended Division Rule 104.F(4), effective January 18, 1996 is required. Exhibit A shows the subject spacing unit, proposed unorthodox location, and the diagonal/adjoining spacing units.

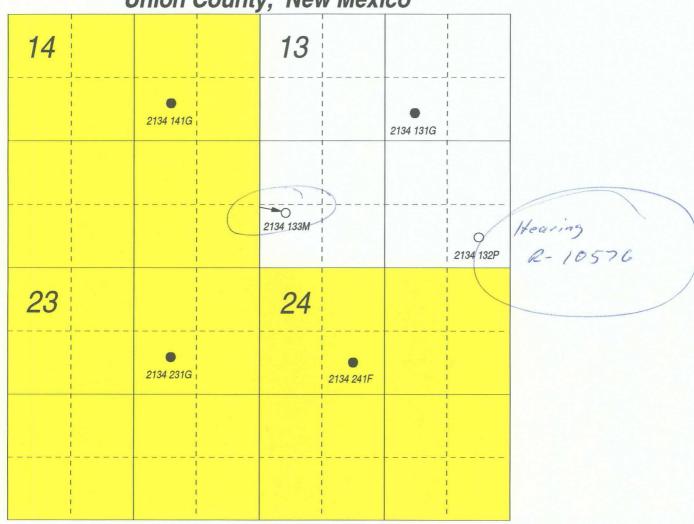
Your attention to this request is appreciated.

Kerry M. Janell

Very truly yours,

Enclosure

Bravo Dome Well No. 2134 133M 1158' FSL x 515' FWL Section 13, Township 21N, Range 34E Union County, New Mexico



Amoco Operated (One well on each Section)

Exhibit A

CMD : OG5SECT

ONGARD INQUIRE LAND BY SECTION

07/02/96 09:10:56 OGOMES -EMG1

PAGE NO: 1

Sec : 13 Twp : 21N Rng : 34E Section Type : NORMAL

D		C	B		A	
40.00		40.00	40.00		40.00	
			NMT		NMT	
			L06256	05/81	L06256	05/81
Fee owned		Fee owned	AMOCO PRO	DUCTION	AMOCO PRO	DUCTION
U		U	U		U	
					}	
					Í	
E	_	F	G		Н	
40.00		40.00	40.00		40.00	
			NMT		NMT	
			L06256	05/81	L06256	05/81
Fee owned		Fee owned	AMOCO PRO	DUCTION	AMOCO PRO	DUCTION
U		U	U		U	
			A		İ	
					Ì	
PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06	
PF07 BKWD	PF08 FW	O PF09 PRINT	PF10 SDIV	PF11	PF12	

CMD : OG5SECT ONGARD INQUIRE LAND BY SECTION 07/02/96 09:11:01

OGOMES -EMG1

PAGE NO: 2

Sec : 13 Twp : 21N Rng : 34E Section Type : NORMAL

L		K	J		I	
40.00		40.00	40.00		40.00	
			NMT		NMT	
			L06256	05/81	L06256	05/81
Fee owned		Fee owned	AMOCO PR	ODUCTION	AMOCO PROI	UCTION
U		U	U		U	
			ļ		 	
M	-	 N	 		 P	
40.00		40.00	40.00		40.00	
			NMT		NMT	
			L06256	05/81	L06256	05/81
Fee owned		Fee owned	AMOCO PR	ODUCTION	AMOCO PROI	DUCTION
U		U	U		U	
A	•				A	
		<u> </u>	[
					•	
PF01 HELP	PF02	PF03 EXIT	PF04 GoŤo	PF05	PF06	
PF07 BKWD	PF08 FW	D PF09 PRINT	PF10 SDIV	PF11	PF12	•

07/02/96 09:11:20 CMD : ONGARD C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1 OG6C101

778 API Well No: 30 59 20313 APD Status(A/C/P): A OGRID Idn :

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-06-1995

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 131

U/L Sec Township Range Lot Idn North/South East/West

--- --- ----- ----______

FTG 1981 F N FTG 2015 F E Surface Locn : G 13 21N 34E

OCD U/L : G API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ (F/S/P/N/J/U/I): S Ground Level Elevation : 4748

Multiple Comp (Y/N) : N State Lease No:

Prpsd Depth : 2280 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF02 PF01 HELP

PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07 PF08

07/02/96 09:11:13 CMD : ONGARD og6ČLÓG .

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20313 Well No : 131

Surface Locn - UL : G Sec : 13 Twp : 21N Range : 34E Lot Idn :

 $\label{eq:multiple_comp} \text{Multple comp } (\text{S/M/C}): \text{N} \qquad \text{TVD Depth (Feet)}: \qquad \qquad \text{MVD Depth (Feet)}:$

P/A Date : Spud Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code ______

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM

PF09 COMMENT PF10 TLOG PF11 PF08 PF12 PF07

CMD: OG6IWCM

ONGARD
INQUIRE WELL COMPLETIONS

07/02/96 09:11:26 OGOMES -EMG1

API Well No : 30 59 20313 Eff Date : 09-15-1995 WC Status : A

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 131 GL Elevation: 4748

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : G 13 21N 34E FTG 1981 F N FTG 2015 F E P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : S

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD: ONGARD 07/02/96 09:11:50 OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1

OGRID Idn : 778 API Well No: 30 59 20360 APD Status(A/C/P): A

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-28-1996

PO BOX 21178 TULSA,OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 133

U/L Sec Township Range Lot Idn North/South East/West

Surface Locn: M 13 21N 34E FTG 1158 F S FTG 515 F W

OCD U/L : M API County : 59

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4714

State Lease No: Multiple Comp (Y/N) : N

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF07 PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12

CMD: 07/02/96 09:11:44

OG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20360 Well No: 133

Surface Locn - UL: M Sec: 13 Twp: 21N Range: 34E Lot Idn:

Spud Date : P/A Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ---- (inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF07 PF08 PF09 COMMENT PF10 TLOG PF11 PF12

CMD::
OG6IWCM INQU

ONGARD
INQUIRE WELL COMPLETIONS

07/02/96 09:11:57 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 133 GL Elevation: 4714

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : M 13 21N 34E FTG 1158 F S FTG 515 F W P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) : U

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD : ONGARD 07/02/96 09:12:16

C101-APPLICATION FOR PERMIT TO DRILL OG6C101 OGOMES -EMG1

778 API Well No: 30 59 20349 APD Status(A/C/P): A OGRID Idn :

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 04-16-1996

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 132

Township Range Lot Idn North/South East/West U/L Sec

--- --- -----

FTG 660 F S FTG 660 F E Surface Locn: P 13 21N 34E

: P API County : 59 OCD U/L

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): S Ground Level Elevation: 4823

Multiple Comp (Y/N) : N State Lease No:

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF02 PF01 HELP PF06 CONFIRM

PF07 PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12

CMD : 07/02/96 09:12:10 ONGARD CMD: OG6CLOG

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20349 Well No: 132

Surface Locn - UL : P Sec : 13 Twp : 21N Range : 34E Lot Idn :

 $\label{eq:multiple_comp} \text{Multple comp } (\text{S/M/C}): \text{N} \qquad \text{TVD Depth (Feet)}: \qquad \qquad \text{MVD Depth (Feet)}:$

P/A Date : Spud Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF08 PF09 COMMENT PF10 TLOG PF11 PF07 PF12 CMD: ONGARD
OG6IWCM INQUIRE WELL COMPLETIONS

07/02/96 09:12:22 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 132 GL Elevation: 4823

U/L Sec Township Range North/South East/West Prop/Act(P/A)

B.H. Locn : P 13 21N 34E FTG 660 F S FTG 660 F E

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : S

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O):

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC



Amoco Exploration and Production U.S.A. Operations Group

Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

P. M. Jarrell Resource Manager, Bravo Dome

May 17, 1996

Roy Johnson, District Supervisor Oil Conservation Division New Mexico Department of Energy Minerals and Natural Resources 2040 South Pacheco Street Sante Fe, New Mexico 87505

(9)

File: PMJ - 4268 - 400

Re: Application for Administrative Approval of Unorthodox Well Location,

BDCDGU 2134 Well No. 243M Union County, New Mexico

Dear Mr. Johnson:

Amoco hereby seeks administrative approval pursuant to the provisions of amended Division Rule 104 F(2), effective January 18, 1996, of an unorthodox well location for its BDCDGU 2134 Well No. 243M to be drilled at a location 600 feet from the south line and 250 feet from the west line of Section 24, Township 21N, Range 34E, NMPM., Union County, New Mexico.

The unorthodox location is necessary for engineering reasons (i.e., reservoir pressure, drainage, ultimate gas recovery, etc.). Infill wells at orthodox locations will not recover enough incremental reserves to justify drilling them under the current economic climate. The only viable way to increase ultimate recovery is to drill at an unorthodox location as proposed in this application.

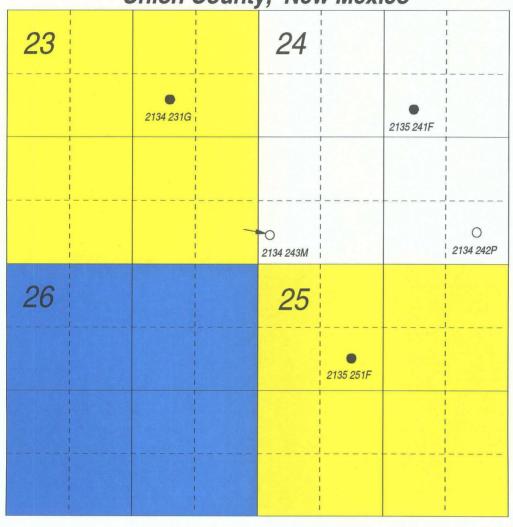
Diagonal and adjoining sections to the unorthodox well location are operated by Amoco, are leased by Amoco, or are subject to a lease owned by another working interest owner in the Bravo Dome Carbon Dioxide Gas Unit and committed to the Unit. No notification to "affected parties" under amended Division Rule 104.F(4), effective January 18, 1996 is required. Exhibit A shows the subject spacing unit, proposed unorthodox location, and the diagonal/adjoining spacing units.

Your attention to this request is appreciated.

Very truly yours,

Kerry M. Januly
Enclosure

Bravo Dome Well No. 2134 243M 600' FSL x 250' FWL Section 24, Township 21N, Range 34E Union County, New Mexico



Amoco Lease Committed to Bravo Dome Unit (No well on lease)

Amoco Operated (One well on each Section)

Exhibit A

CMD : OG5SECT

ONGARD INQUIRE LAND BY SECTION

07/02/96 09:07:25

OGOMES -EMG1 PAGE NO: 1

Sec : 24 Twp : 21N Rng : 34E Section Type : NORMAL

D	C	B	A
40.00	40.00	40.00	40.00
CS		NMT	NMT
L06259 05/81		OPEN 04/95	OPEN 04/95
AMOCO PRODUCTION	Fee owned	i	
U	Ū	U	Ŭ
E	-	G	
40.00	40.00	40.00	40.00
CS		NMT	NMT
L06259 05/81		OPEN 04/95	OPEN 04/95
AMOCO PRODUCTION	Fee owned		
U	U	U	ט
	A		İ
PF01 HELP PF02	PF03 EXIT	PF04 GoTo PF05	PF06
PF07 BKWD PF08 FW		PF10 SDIV PF11	PF12

CMD : OG5SECT

ONGARD INQUIRE LAND BY SECTION

07/02/96 09:07:36 OGOMES -EMG1

PAGE NO: 2

Sec : 24 Twp : 21N Rng : 34E Section Type : NORMAL

L		K	J	I
40.00	}	40.00	40.00	40.00
				}
Fee owned		Fee owned	Fee owned	Fee owned
Ü		U	U	U
	}			
M		N	0	P
40.00	}	40.00	40.00	40.00
		_		
Fee owned	ļ	Fee owned	Fee owned	Fee owned
U		U	U U	U
A				A
PF01 HELP	PF02	PF03 EXIT	PF04 GoTo PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV PF11	PF12

07/02/96 09:07:56 CMD : ONGARD

OGOMES -EMG1 C101-APPLICATION FOR PERMIT TO DRILL OG6C101

778 API Well No: 30 59 20314 APD Status(A/C/P): A OGRID Idn :

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-06-1995

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 241

U/L Sec Township Range Lot Idn North/South East/West

FTG 2018 F N FTG 1962 F W Surface Locn: F 24 21N 34E

: F API County : 59 OCD U/L

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4834

Multiple Comp (Y/N) : N State Lease No:

Prpsd Depth : 2390 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07 PF08

07/02/96 09:07:48 CMD : ONGARD

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1 OG6CLOG

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20314 Well No : 241

Surface Locn - UL : F Sec : 24 Twp : 21N Range : 34E Lot Idn :

Multple comp (S/M/C): N TVD Depth (Feet): MVD Depth (Feet):

P/A Date : Spud Date

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF03 EXIT PF04 GoTo PF05 PF01 HELP PF02 PF06 CONFIRM PF09 COMMENT PF10 TLOG PF11 PF07 PF08 PF12

ONGARD CMD: OG6İWCM INQUIRE WELL COMPLETIONS 07/02/96 09:08:07 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO
Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 241 GL Elevation: 4834

U/L Sec Township Range North/South East/West Prop/Act(P/A)

___ ___

B.H. Locn : F 24 21N 34E FTG 2018 F N FTG 1962 F W

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF03 EXIT PF04 GoTo PF05 PF06 PF01 HELP PF02

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

ONGARD 07/02/96 09:08:35 CMD :

OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1

778 API Well No: 30 59 20361 APD Status(A/C/P): A OGRID Idn

Opr Name, Addr: AMOCO PRODUCTION CO Aprvl/Cncl Date : 06-28-1996

PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 243

U/L Sec Township Range Lot Idn North/South East/West

FTG 600 F S FTG 250 F W Surface Locn: M 24 21N 34E

OCD U/L : M API County : 59

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ (F/S/P/N/J/U/I): P Ground Level Elevation : 4827

State Lease No: Multiple Comp (Y/N) : N

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07

07/02/96 09:08:28 ONGARD CMD :

C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1 OG6ČLOG

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20361 Well No: 243

Surface Locn - UL : M Sec : 24 Twp : 21N Range : 34E Lot Idn :

 $\label{eq:multiple_comp} \text{Multple comp } (\text{S/M/C}): \text{N} \qquad \text{TVD Depth (Feet)}: \qquad \qquad \text{MVD Depth (Feet)}:$

P/A Date : Spud Date

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ----(inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF09 COMMENT PF10 TLOG PF11 PF07 PF08 PF12 CMD: OG6IWCM

ONGARD INQUIRE WELL COMPLETIONS

07/02/96 09:08:45 OGOMES -EMG1

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 243 GL Elevation: 4827

U/L Sec Township Range North/South East/West Prop/Act(P/A)

--- --- ------ ----- ------

B.H. Locn : M 24 21N 34E FTG 600 F S FTG 250 F W P

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) : U

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

ONGARD 07/02/96 09:09:09 CMD :

C101-APPLICATION FOR PERMIT TO DRILL OGOMES -EMG1 OG6C101

778 API Well No: 30 59 20350 APD Status(A/C/P): A OGRID Idn :

Aprvl/Cncl Date : 04-16-1996 Opr Name, Addr: AMOCO PRODUCTION CO

> PO BOX 21178 TULSA, OK 74121

Prop Idn: 335 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 242

U/L Sec Township Range Lot Idn North/South East/West

FTG 660 F S FTG 660 F E Surface Locn: P 24 21N 34E

: P API County: 59 OCD U/L

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : C Cable/Rotary (C/R) : R

Lease typ(F/S/P/N/J/U/I): P Ground Level Elevation: 4822

Multiple Comp (Y/N) : N State Lease No:

Prpsd Depth : 2450 Prpsd Frmtn : TUBB

E0009: Enter data to modify record

PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM PF01 HELP PF02

PF08 PF09 PRINT PF10 C102 PF11 HISTORY PF12 PF07

CMD: 07/02/96 09:09:01

OG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -EMG1

OGRID Identifier : 778 AMOCO PRODUCTION CO

Prop Identifier : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

API Well Identifier: 30 59 20350 Well No: 242

Surface Locn - UL : P Sec : 24 Twp : 21N Range : 34E Lot Idn :

 $\label{eq:multiple_comp} \text{Multple comp } (\text{S/M/C}): \text{N} \qquad \text{TVD Depth (Feet)}: \qquad \qquad \text{MVD Depth (Feet)}:$

Spud Date : P/A Date :

Casing/Linear Record:

S Size Grade Weight Depth(ft) Depth(ft) Hole Size Cement ---- TOC ---- (inches) (lb/ft) Top-Liner Bot-Liner (inches) (Sacks) (feet) Code

E0004: No matching record found. Enter data to create.

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM

PF07 PF08 PF09 COMMENT PF10 TLOG PF11 PF12

CMD: ONG ONG INQUIRE WEL

ONGARD
INQUIRE WELL COMPLETIONS

07/02/96 09:09:18 OGOMES -EMG1

API Well No : 30 59 20350 Eff Date : 04-16-1996 WC Status :

Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

OGRID Idn : 778 AMOCO PRODUCTION CO

Prop Idn : 335 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 242 GL Elevation: 4822

U/L Sec Township Range North/South East/West Prop/Act(P/A)

--- --- ------ ----- ------ -------

B.H. Locn : P 24 21N 34E FTG 660 F S FTG 660 F E

Lot Identifier:

Dedicated Acre: 640.00

Lease Type : P

Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06

PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

OIL CONSERVATION DIVISION 2040 South Pacheco Street Santa Fe, New Mexico 87505

May 28, 1996 Mike - FYI - I'll do these when the appropriate into comes in.

Amoco Production Co. 501 Westlake Park Blvd. PO Box 4891 Houston, Tx. 77210

Attention: Mr. Jarrell

Re: Application for Administrative Approval of

Unorthodox Well Locations, BDCDG Unit Wells Nos. 1835-232D, 2135-302M, 2135-202M, 2134-243M, 2134-133M, 2234-342P and 2234-282P,

Union County, New Mexico

Dear Mr. Jarrell:

This office is in receipt of the above-referenced applications and has found them incomplete as per OCD Order No. R-10576. In order for these applications to be processed, Amoco will be required to identify all offsetting royalty interest owners and provide this office a certified statement stating whether or not these interest owners are committed to the Bravo Dome Carbon Dioxide Gas Unit. In the event that the offset royalty interest owners are not committed to this unit, additional notice to these interest owners will be required.

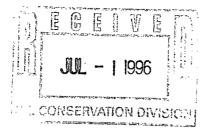
Should you have questions pertaining to this matter, please contact me at this office.

Sincerely

Sr. Petroleum Geologist

REJ/dr





Amoco Exploration and Production

U.S.A. Operations Group
Permian Basin Business Unit

501 WestLake Park Boulevard Post Office Box 4891 Houston, Texas 77210

.

Sam Culpepper Senior Business Analyst (713) 366-2361 (713) 366-7590 (FAX)

June 26, 1996

New Mexico Energy, Minerals & Natural Resources Department Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

Attention: Roy E. Johnson

Re: Application for Administrative Approval of

Unorthodox Well Locations, BDCDG Unit Wells Nos. 1835-232D, 2135-302M, 2135-202M, 2134-243M, 2134-133M, 2234-342P and 2234-282P,

Union County, New Mexico

Dear Mr. Johnson:

In response to your letter of May 28, 1996, in regard to the above-referenced applications of which receipt was acknowledged, I have researched Amoco records involving the sections adjoining and diagonal to the unorthodox well locations detailed in the plats attached to the applications originally submitted to your office. Without reservation, I can state from my research that in every said section, there are no unleased mineral interests and all Amoco royalty interest owners are committed to the Bravo Dome Carbon Dioxide Gas Unit.

Since each working interest owner within the BDCDGU makes royalty settlement with its own royalty interest owners, Amoco has no records of royalty interest ownership for BDCDGU partners, however Amoco has sent copies of the above-referenced applications to each lessee of record (working interest owner) in the sections adjoining and diagonal to the unorthodox well locations, deemed 'affected parties' under Amended Division Rule No. 104.F (Shell and Amerada Hess). In addition, Amoco has inquired of said BDCDGU working interest owners in sections adjoining and diagonal to the unorthodox well locations as to any uncommitted royalty interests and has received assurances that all of their royalty interest owners in those sections are committed to the unit.

Please, accept this statement as an addendum to the above-referenced applications, and based on the information contained herein, approve said Applications for Administrative Approval of Unorthodox Well Locations.

I appreciate your cooperation in this matter. If you have any questions or problems, please give me a call at 713-366-2361.

Sincerely,

Sam Culpepper

cc: Perry Jarrell
Shell Western E&P Inc.

 $Amerada\ Hess\ Corp.$

FAX TRANSMISSION

DATE:

June 27, 1996

TO:

Roy Johnson (NMOCD District Supervisor)

FAX 505-827-8177- 488-3855

FROM:

Sam Culpepper (Amoco)

713-366-2361

RE:

Applications for Administrative Approval of Unorthodox Well

Locations

PAGES:

3, including cover

Attached is a statement from me regarding royalty interests in the adjoining and diagonal sections to the unorthodox well locations for the above-referenced applications. The original will follow through U.S. mail.

I hope this will meet your requirements for approval.

I will be on vacation next week, but I will be back in the office on Monday, July 8.

Thanks for your help in this matter.

Sam

Amoco Exploration and Production

U.S.A. Operations Group Permise Basin Business Unit 501 WestLake Park Boulevard Post Office Box 4891 Houston, Taxas 77210



8am Culpepper Senior Business Analyst (713) 366-2361 (713) 366-7590 (FAX)

June 26, 1996

New Mexico Energy, Minerals & Natural Resources Department Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

Attention: Roy E. Johnson

Re: Application for Administrative Approval of

Unorthodox Well Locations, BDCDG Unit Wells Nos. 1835-232D, 2135-302M, 2135-202M, 2134-243M, 2134-133M, 2234-342P and 2234-282P,

Union County, New Mexico

Dear Mr. Johnson:

In response to your letter of May 28, 1996, in regard to the above-referenced applications of which receipt was acknowledged, I have researched Amoco records involving the sections adjoining and diagonal to the unorthodox well locations detailed in the plats attached to the applications originally submitted to your office. Without reservation, I can state from my research that in every said section, there are no unleased mineral interests and all Amoco royalty interest owners are committed to the Bravo Dome Carbon Dioxide Gas Unit.

Since each working interest owner within the BDCDGU makes royalty settlement with its own royalty interest owners, Amoco has no records of royalty interest ownership for BDCDGU partners, however Amoco has sent copies of the above-referenced applications to each lessee of record (working interest owner) in the sections adjoining and diagonal to the unorthodox well locations, deemed "affected parties" under Amended Division Rule No. 104.F (Shell and Amerada Hess). In addition, Amoco has inquired of said BDCDGU working interest owners in sections adjoining and diagonal to the unorthodox well locations as to any uncommitted royalty interests and has received assurances that all of their royalty interest owners in those sections are committed to the unit.

Please, accept this statement as an addendum to the above-referenced applications, and based on the information contained herein, approve said Applications for Administrative Approval of Unorthodox Well Locations.

I appreciate your cooperation in this matter. If you have any questions or problems, please give me a call at 713-366-2361.

Sincerely,

Sam Culpepper

cc: Perry Jarrell
Shell Western E&P Inc.
Amerada Hess Corp.

STATE OF NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 11497 Order No. R-10576

APPLICATION OF AMOCO PRODUCTION COMPANY FOR FOURTEEN UNORTHODOX INFILL CARBON DIOXIDE GAS WELL LOCATIONS, UNION COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 21, 1996, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 1st day of April, 1996, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

WELL MAME & MINDED

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Amoco Production Company, seeks an exception to Rule No. (4) of the Special Rules and Regulations for the Bravo Dome 640-Acre Area as promulgated by Division Order No. R-7556, to allow the drilling of the following described fourteen carbon dioxide infill gas wells at unorthodox gas well locations, all located in Union County, New Mexico:

WELL NAME & NUMBER	WELL LOCATION
BDCDGU 2135 Well No. 182	660' FNL & 660'FWL (D)-18-21N-35E
BDCDGU 2234 Well No. 232	660' FSL & 660'FWL (M)-23-22N-34E
BDCDGU 1835 Well No. 082	660' FSL & 1980'FWL (N)- 8-18N-35E
BDCDGU 2234 Well No. 262	660' FSL & 560'FWL (M)-26-22N-34E
BDCDGU 2134 Well No. 243	660' FSL & 660'FEL (P)-24-21N-34E
BDCDGU 2234 Well No. 223	660' FNL & 385'FWL (D)-22-22N-34E

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BDCDGU 2234 Well No. 212	660' FSL & 660' FWL (M)-21-22N-34E
BDCDGU 2134 Well No. 132	450' FSL & 450'FEL (P)-13-21N-34E
BDCDGU 1835 Well No. 072	1980' FSL & 1980'FWL (K)- 7-18N-35E
BDCDGU 2135 Well No. 183	660' FSL & 660'FEL (P)-18-21N-35E
BDCDGU 1835 Well No. 162	660' FSL & 660'FEL (P)-16-18N-35E
BDCDGU 1835 Well No. 163	660' FNL & 1980'FWL (C)-16-18N-35E
BDCDGU 2234 Well No. 213	560' FNL & 660'FWL (D)-21-22N-34E
BDCDGU 2234 Well No. 172	660' FNL & 660'FEL (A)-17-22N-34E

- (3) The applicant further requests the establishment of an administrative procedure whereby additional infill wells proposed to be drilled at unorthodox locations based upon geologic and engineering considerations may be approved administratively by the Division.
- (4) At the time of the hearing, it was determined that the BDCDGU 1835 Well No. 072 is located at a standard gas well location, and therefore, the unorthodox location request for this well should be <u>dismissed</u>.
- (5) The subject wells are all located within the Amoco Production Company Bravo Dome Carbon Dioxide Gas Unit. In addition, the wells are located within the Bravo Dome 640-Acre Area as defined within Division Order No. R-7556, entered in Case No. 8190 on June 19, 1984.
- (6) The Bravo Dome 640-Acre Area is currently governed by Special Rules and Regulations as contained within said Order No. R-7556 which require, in part, 640-acre standard gas spacing and proration units with wells to be located no closer than 1,650 feet from the outer boundary of the section nor closer than 330 feet from any quarter-quarter section line or subdivision inner boundary. The rules further allow the drilling of infill gas wells within a standard spacing unit (Rule No. (2)) provided that such wells are located no closer than 1,320 feet from any other well drilling to or capable of producing from the Bravo Dome 640-Acre Area.
- (7) According to applicant's evidence and testimony, it has recently undertaken a study to determine the feasibility of infill drilling within the Bravo Dome 640-Acre Area. Initially, the applicant identified approximately 450 well locations which may be candidates for infill drilling. Utilizing the following described criteria, the applicant has identified the fourteen wells described in Finding No. (2) above as being the top candidates for infill drilling at this time:

- a) areas where infill drilling can maximize ultimate recovery;
- b) areas where infill drilling will result in wells with relatively high deliverabilities (2.5 + MMCFGD); and,
- c) minimize costs by locating wells near existing surface facilities.
- (8) According to applicant's testimony, the proposed unorthodox locations for those wells located on its Leg 9 Gathering System, being the BDCDGU Well Nos. 2135-182, 2234-232, 2234-262, 2134-243, 2234-223, 2234-212, 2134-132, 2135-183, 2234-213, and 2234-172, are necessary due to engineering considerations (i.e. reservoir pressure, drainage, ultimate gas recovery, etc.).
- (9) Applicant's evidence further indicates that the proposed unorthodox locations for those wells located on its Leg 6 and 7 Gathering System, being the BDCDGU Well Nos. 1835-082, 1835-072, 1835-162, and 1835-163, are based upon geologic as well as engineering considerations, namely the presence of a northwest to southeast trending fault which traverses each of the well's proration units.
- (10) To aid in its determination of those areas within the Bravo Dome 640-Acre Area where infill drilling can maximize recovery, the applicant has built a field-wide computer simulation model which is composed of a reservoir model component and a surface facility model component.
- (11) The evidence presented indicates that the applicant has obtained a good history match between the computer simulation and past production within the model area. This indicates that applicant's computer simulation should be capable of accurately predicting future field performance.
- (12) The computer simulation was utilized by the applicant to select those infill well locations where incremental gas recovery would be maximized.
- (13) The results of the reservoir simulation indicate that drilling the infill wells at the proposed unorthodox locations instead of standard well locations within the subject proration units should result in the recovery of an additional 13 BCF of carbon dioxide gas which would otherwise not be recovered, thereby preventing waste.
- (14) All of the affected offset acreage is located within the Amoco Production Company Bravo Dome Carbon Dioxide Gas Unit.

- (15) The applicant testified that it has examined the affected offset acreage to determine whether or not there are royalty interest owners who have not ratified the Unit Agreement, and therefore may be affected by the proposed unorthodox locations. Applicant determined that there are such interest owners, however, applicant testified that it has historically been unsuccessful in locating these interest owners.
- (16) No other offset operator and/or interest owner appeared at the hearing in opposition to the application.
- (17) Approval of the subject application will afford the applicant the opportunity to recover additional gas reserves from each of the subject proration units which may otherwise not be recovered, thereby preventing waste, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will not violate correlative rights.
- (18) Pursuant to Division Rule No. 104.F., which was recently amended by Division Order No. R-10533, future unorthodox gas well locations within the Bravo Dome 640-Acre Area based upon geologic or engineering considerations should qualify for administrative approval, provided however, that the supervisor of the Division's Santa Fe District Office should have the authority to require additional notice by the applicant to those offset interest owners deemed to be affected by any proposed unorthodox location.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Amoco Production Company, is hereby authorized to drill the following described thirteen infill carbon dioxide gas wells within the Bravo Dome 640-Acre Area at unorthodox gas well locations, all located in Union County, New Mexico:

WELL NAME & NUMBER	WELL LOCATION
BDCDGU 2135 Well No. 182	660' FNL & 660'FWL (D)-18-21N-35E
BDCDGU 2234 Well No. 232	660' FSL & 660'FWL (M)-23-22N-34E
BDCDGU 1835 Well No. 082	660' FSL & 1980'FWL (N)- 8-18N-35E
BDCDGU 2234 Well No. 262	660' FSL & 560'FWL (M)-26-22N-34E
BDCDGU 2134 Well No. 243	660' FSL & 660'FEL (P)-24-21N-34E
BDCDGU 2234 Well No. 223	660' FNL & 385'FWL (D)-22-22N-34E
BDCDGU 2234 Well No. 212	660' FSL & 660'FWL (M)-21-22N-34E
BDCDGU 2134 Well No. 132	450' FSL & 450'FEL (P)-13-21N-34E
BDCDGU 2135 Well No. 183	660' FSL & 660'FEL (P)-18-21N-35E
BDCDGU 1835 Well No. 162	660' FSL & 660'FEL (P)-16-18N-35E
BDCDGU 1835 Well No. 163	660' FNL & 1980'FWL (C)-16-18N-35E

BDCDGU 2234 Well No. 213 BDCDGU 2234 Well No. 172 560' FNL & 660'FWL

(D)-21-22N-34E

660' FNL & 660'FEL

(A)-17-22N-34E

- (2) Each of the subject wells shall be dedicated to the existing 640-acre standard gas spacing and proration unit on which it is located.
- (3) Applicant's request for an unorthodox location approval for its BDCDGU 1835 Well No. 072 is hereby <u>dismissed</u>.
- (4) Pursuant to Division Rule No. 104.F., future unorthodox gas well locations within the Bravo Dome 640-Acre Area based upon geologic or engineering considerations shall qualify for administrative approval, provided however, that the supervisor of the Division's Santa Fe District Office shall have the authority to require additional notice by the applicant to those offset interest owners deemed to be affected by any proposed unorthodox location.
- (5) Jurisdiction is hereby 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. LÆMAY

Director

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