

**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:**

(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  
BDCDGU 2234 Well No. 232  
BDCDGU 1835 Well No. 082  
BDCDGU 2234 Well No. 262  
BDCDGU 2134 Well No. 243  
BDCDGU 2234 Well No. 223

660' FNL & 660'FWL (D)-18-21N-35E  
660' FSL & 660'FWL (M)-23-22N-34E  
660' FSL & 1980'FWL (N)- 8-18N-35E  
660' FSL & 560'FWL (M)-26-22N-34E  
660' FSL & 660'FEL (P)-24-21N-34E  
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 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 dismissed.

(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  
BDCDGU 2234 Well No. 232  
BDCDGU 1835 Well No. 082  
BDCDGU 2234 Well No. 262  
BDCDGU 2134 Well No. 243  
BDCDGU 2234 Well No. 223  
BDCDGU 2234 Well No. 212  
BDCDGU 2134 Well No. 132  
BDCDGU 2135 Well No. 183  
BDCDGU 1835 Well No. 162  
BDCDGU 1835 Well No. 163

660' FNL & 660'FWL (D)-18-21N-35E  
660' FSL & 660'FWL (M)-23-22N-34E  
660' FSL & 1980'FWL (N)- 8-18N-35E  
660' FSL & 560'FWL (M)-26-22N-34E  
660' FSL & 660'FEL (P)-24-21N-34E  
660' FNL & 385'FWL (D)-22-22N-34E  
660' FSL & 660'FWL (M)-21-22N-34E  
450' FSL & 450'FEL (P)-13-21N-34E  
660' FSL & 660'FEL (P)-18-21N-35E  
660' FSL & 660'FEL (P)-16-18N-35E  
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.

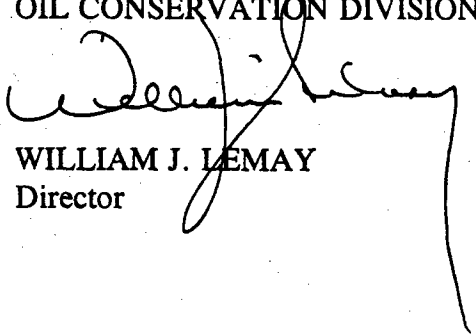
(3) Applicant's request for an unorthodox location approval for its BDCDGU 1835 Well No. 072 is hereby dismissed.

(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. LEMAY  
Director

S E A L

CMD : ONGARD 09/14/04 10:09:47  
 OG6C101 C101-APPLICATION FOR PERMIT TO DRILL OGOMES -TPW1

OGRID Idn : 16696 API Well No: 30 59 20460 APD Status(A/C/P): A  
 Opr Name, Addr: OXY USA INC Aprvl/Cncl Date : 04-12-2004

PO BOX 50250  
 MIDLAND, TX 79710

Prop Idn: 27111 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No: 352

U/L	Sec	Township	Range	Lot	Idn	North/South	East/West
Surface	Locn	: J	35	22N	32E	FTG 1664 F S	FTG 2578 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 : 4856

State Lease No: Multiple Comp (S/M/C) : S  
 Prpsd Depth : 2600 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 09/14/04 10:09:42  
OG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -TPWL

OGRID Identifier : 16696 OXY USA INC  
Prop Identifier : 27111 BRAVO DOME CARBON DIOXIDE GAS UNIT  
API Well Identifier : 30 59 20460 Well No : 352  
Surface Locn - UL : J Sec : 35 Twp : 22N Range : 32E Lot Idn :  
Multiple comp (S/M/C) : S 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  
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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

## APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address OXY USA Inc. P.O. Box 50250 Midland, TX 79710-0250		<sup>2</sup> OGRID Number 16696
<sup>4</sup> Property Code 27111	<sup>5</sup> Property Name Bravo Dome Carbon Dioxide Gas Unit 2232	<sup>3</sup> API Number 30- 059- 20460 <sup>6</sup> Well No. 352

<sup>7</sup>Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
J	35	22 N	32 E		1664	South	2578	East	Union

<sup>8</sup>Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County

<sup>9</sup>Proposed Pool 1

Bravo Dome Carbon Dioxide Gas 640 96010

<sup>10</sup>Proposed Pool 2

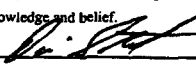
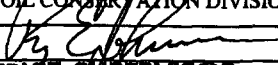
<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code C	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code P	<sup>15</sup> Ground Level Elevation 4855-8'
<sup>16</sup> Multiple NO	<sup>17</sup> Proposed Depth 2600'	<sup>18</sup> Formation Tubb	<sup>19</sup> Contractor N/A	<sup>20</sup> Spud Date 8/22/04

<sup>21</sup>Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	8-5/8"	24#	700'	300sx	Surface
7-7/8"	5-1/2"	5.9#FG/15.5#	2600'	300sx	Surface

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE ATTACHED

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: 		Approved by: 	
Printed name: David Stewart		Title: DISTRICT SUPERVISOR	
Title: Sr. Regulatory Analyst		Approval Date: 4/12/04 Expiration Date: 4/12/05	
Date: 4/8/04	Phone: 432-685-5717	Conditions of Approval: NSL MUST BE APPROVED	
		Attached <input type="checkbox"/> PRIOR TO PRODUCTION	



1635 N. French Dr., Hobbs, NM 88240  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

STATE OF NEW MEXICO  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-102  
Revised October 18, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 96010	Pool Name BRAVO DOME CARBON DIOXIDE GAS (640)
Property Code 27111	Property Name BRAVO DOME CARBON DIOXIDE GAS UNIT 2232	Well Number 352
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 4855.8

Surface Location

UL or lot no. J	Section 35	Township 22 N	Range 32 E	Lot Idn.	Feet from the 1664'	North/South line SOUTH	Feet from the 2578'	East/West line EAST	County UNION
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Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 640	Joint or Infill Y	Consolidation Code	Order No.						

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

<p>NM-E NAD27 Lat - 36° 05' 27.49" Lon - 103° 29' 53.31"</p>	<b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.   Signature David Stewart Printed Name Sr. Regulatory Analyst Title 4/6/04 Date
	<b>SURVEYOR CERTIFICATION</b> 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.  March 24, 2004 Date of Survey  Signature and Seal of Professional Surveyor Jesse M. Martin Certificate Number 7911

CMD : ONGARD 09/14/04 10:09:07  
OG6IWCN INQUIRE WELL COMPLETIONS OGOMES -TPW1

API Well No : 30 59 20311 Eff Date : 01-01-2001 WC Status : A  
Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640  
OGRID Idn : 16696 OXY USA INC  
Prop Idn : 27111 BRAVO DOME CARBON DIOXIDE GAS UNIT

Well No : 351  
GL Elevation: 4767

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
B.H. Locn	:	F	35	22N	32E	FTG 1782 F N FTG 2278 F W	A

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 09/14/04 10:08:59  
 OG6CLOG C105-WELL COMPLETION OR RECOMP CASING LOG OGOMES -TPW1

OGRID Identifier : 16696 OXY USA INC  
 Prop Identifier : 27111 BRAVO DOME CARBON DIOXIDE GAS UNIT  
 API Well Identifier : 30 59 20311 Well No : 351  
 Surface Locn - UL : F Sec : 35 Twp : 22N Range : 32E Lot Idn :  
 Multiple comp (S/M/C) : S TVD Depth (Feet) : 2275 MVD Depth (Feet) : 2275  
 Spud Date : 07-27-1993 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	
8.625	24.0							C
4.500	1.0							C

E0009: Enter data to modify record  
 PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM  
 PF07 PF08 PF09 COMMENT PF10 TLOG PF11 PF12

CMD : ONGARD  
 OG6ACRE C102-DEDICATE ACREAGE  
 09/14/04 10:09:15  
 OGOMES -TPW1  
 Page No : 1

API Well No : 30 59 20311 Eff Date : 07-09-1993  
 Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640  
 Prop Idn : 27111 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No : 351  
 Spacing Unit : 42203 OCD Order : Simultaneous Dedication:  
 Sect/Twp/Rng : 35 22N 32E Acreage : 640.00 Revised C102? (Y/N) :  
 Dedicated Land:

S	Base	U/L	Sec	Twp	Rng	Acreage	L/W	Ownership	Lot	Idn
	A	35	22N	32E	40.00	N	FE			
	B	35	22N	32E	40.00	N	FE			
	C	35	22N	32E	40.00	N	FE			
	D	35	22N	32E	40.00	N	FE			
	E	35	22N	32E	40.00	N	FE			
	F	35	22N	32E	40.00	N	FE			
	G	35	22N	32E	40.00	N	FE			
	H	35	22N	32E	40.00	N	ST			
	I	35	22N	32E	40.00	N	ST			

E0005: Enter data to modify or PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
 PF07 BKWD PF08 FWD PF09 PF10 LAND PF11 NXTSEC PF12 RECONF

CMD :  
OG6ACRE

ONGARD  
C102-DEDICATE ACREAGE

09/14/04 10:09:17  
OGOMES -TPW1  
Page No : 2

API Well No : 30 59 20311 Eff Date : 07-09-1993  
Pool Idn : 96010 BRAVO DOME CARBON DIOXIDE GAS 640  
Prop Idn : 27111 BRAVO DOME CARBON DIOXIDE GAS UNIT Well No : 351  
Spacing Unit : 42203 OCD Order : Simultaneous Dedication:  
Sect/Twp/Rng : 35 22N 32E Acreage : 640.00 Revised C102? (Y/N) :  
Dedicated Land:

-----  
S Base U/L Sec Twp Rng Acreage L/W Ownership Lot Idn  
-----  
J 35 22N 32E 40.00 N FE  
K 35 22N 32E 40.00 N FE  
L 35 22N 32E 40.00 N FE  
M 35 22N 32E 40.00 N FE  
N 35 22N 32E 40.00 N FE  
O 35 22N 32E 40.00 N FE  
P 35 22N 32E 40.00 N ST  
-----

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
PF07 BKWD PF08 FWD PF09 PF10 LAND PF11 NXTSEC PF12 RECONF

CMD : ONGARD 09/14/04 10:09:26  
 OG6IPRD INQUIRE PRODUCTION BY POOL/WELL OGOMES -TPW1  
 Page No: 1

OGRID Identifier : 16696 OXY USA INC

Pool Identifier : 96010 BRAVO DOME CARBON DIOXIDE GAS 640

API Well No : 30 59 20311 Report Period - From : 01 2004 To : 08 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water	Well Stat
30	59 20311 BRAVO DOME CARBON DI	01 04 31	43621	P
30	59 20311 BRAVO DOME CARBON DI	02 04 29	41087	P
30	59 20311 BRAVO DOME CARBON DI	03 04 31	42922	P
30	59 20311 BRAVO DOME CARBON DI	04 04 30	40328	P
30	59 20311 BRAVO DOME CARBON DI	05 04 31	41777	P
30	59 20311 BRAVO DOME CARBON DI	06 04 30	39982	P

Reporting Period Total (Gas, Oil) : 249717

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
 PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12

Sec : 35 Twp : 22N Rng : 32E Section Type : NORMAL

D 40.00 Fee owned U	C 40.00 Fee owned U	B 40.00 Fee owned U	A 40.00 Fee owned U
E 40.00 Fee owned U	F 40.00 Fee owned U A	G 40.00 Fee owned U	H 40.00 NMEN LG4677 0000 AMERADA HESS CORP U 09/01/87
L 40.00 Fee owned U	K 40.00 Fee owned U	J 40.00 Fee owned U A	I 40.00 NMEN LG4677 0000 AMERADA HESS CORP U 09/01/87
M 40.00 Fee owned U	N 40.00 Fee owned U	O 40.00 Fee owned U	P 40.00 NMEN LG4677 0000 AMERADA HESS CORP U 09/01/87

Submit to Appropriate  
District Office  
State Lease - 6 copies  
Fee Lease - 5 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-101  
Revised 1-1-89

OIL CONSERVATION DIVISION

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

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

API NO. (assigned by OCD on New Wells)

30-059-20311

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL ☒

RE-ENTER ☐

DEEPEN ☐

PLUG BACK ☐

b. Type of Well:

OIL  
WELL ☐

GAS  
WELL ☒

OTHER CO2

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

7. Lease Name or Unit Agreement Name

Bravo Dome Carbon Dioxide Gas Unit - 2232

2. Name of Operator

Amoco Production Company

8. Well No.

351F

3. Address of operator

P.O. Box 606 Clayton N. Mex. 88415

9. Pool name or Wildcat

Tubb

4. Well Location

Unit Letter F : 2278 Feet From The West Line and 1782 Feet From The North Line

Section 35 Township T 22 N Range R 32E NMPM Union County

10. Proposed Depth

2292

11. Formation

Tubb

12. Rotary or C.T.

Rotary

13. Elevations (Show whether DF, RT, GR, etc.)

4767

14. Kind & Status Plug. Bond

Blanket On File

15. Drilling Contractor

N/A

16. Approx. Date Work well start

08-15-93

17.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8" Steel	24#	700'	Circulate to Surface	Surface
7 7/8"	4 1/2" Fiberglass	2000# psi	2292	Circulate to Surface	Surface

Propose to Drill & Equip well in the Tubb formation.

Mud Program: O-700' gel-Spud Mud  
700-2292 Starch/Gel

BOP Program Attached

APPROVAL VALID FOR   —   DAYS  
PERMIT EXPIRES 12-31-93  
UNLESS DRILLING UNDERWAY

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE, GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Joy Filkins

TITLE

Administrative Secretary

DATE

6-28-93

TYPE OR PRINT NAME

Joy Filkins

TELEPHONE NO. (713) 556-3613

(This space for State Use)

APPROVED BY

[Signature]

TITLE

DISTRICT SUPERVISOR

DATE

7-9-93

CONDITIONS OF APPROVAL, IF ANY:



Submit to Appropriation  
District Office  
Scale - 4 copies  
Fee Loans - 5 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-122  
Revised 1-1-89

## OIL CONSERVATION DIVISION

DISTRICT I  
P.O. Box 1986, Santa Fe, NM 87504

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT II  
P.O. Drawer DD, Santa Fe, NM 87504

DISTRICT III  
1000 E. Rios, Santa Fe, NM 87504

### WELL LOCATION AND ACREAGE DEDICATION PLAT

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

Operator	AMOCO PRODUCTION COMPANY				Lease	BRAVO DOME CARBON DIOXIDE GAS UNIT		Well No.	1
Unit Letter	F	Section	35	Township	22 NORTH	Range	32 EAST	County	UNION
Actual Footage Location of Well:									
2278		feet from the		WEST	line and	1782	feet from the		NORTH
Ground Level Elev.	4755.00'		Producing Formation	TUBB		Pool	BRAVO DOME CARBON DIOXIDE GAS		Dedicated Acreage
								640	Acre

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
  2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
  3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, forced-pooling, etc?  
☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_
- If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_
- No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.

2278'

1782'

Well No. 1

AMOCO 576000

REGISTERED PROFESSIONAL SURVEYOR  
NEW MEXICO  
LARRY A. FISHER  
11013

#### OPERATOR CERTIFICATION

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

Signature Mark Randolph  
Printed Name MARK RANDOLPH  
Position BUSINESS ANALYST  
Company AMOCO PRODUCTION CO.  
Date 6/28/93

#### 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 knowledge and belief.

Date Surveyed JUNE 10, 1993

Signature & Seal of  
Professional Surveyor

Larry A. Fisher  
LARRY A. FISHER

Certificate No. 11013

Submit 3 Copies  
to Appropriate  
District Office

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-103  
Revised 1-1-89

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

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

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

WELL API NO.  
30-059-203

5. Indicate Type of Lease  
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"  
(FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:  
OIL WELL ☐ GAS WELL ☒ OTHER CO<sub>2</sub>

2. Name of Operator  
Amoco Production Company

8. Well No.  
351 F

3. Address of Operator  
PO Box 606 Clayton NM 88415

9. Pool name or Wildcat  
Tubb

4. Well Location  
Unit Letter F : 2152 Feet From The West Line and 2000 Feet From The North Line

Section 35 Township T22N Range R32E NMPM Union County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)  
4771

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐  
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☒ PLUG AND ABANDONMENT ☐  
CASING TEST AND CEMENT JOB ☒  
OTHER: ☐

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Miru Drlg. Unit/Spud 12 1/4 surf. hole on 7/27/93.  
Drill to 690. Ran 17 joints of 8.625, 24#, K-55 casing.  
Set @ 690. Cement w/450 sx's. Class "A", circ. 105 BBLs.  
Pressure test casing to 500 PSI. Drill 7 7/8 hole to 2275.  
Ran 78 joints of 4 1/2 fiberglass, set @ 2275. Cement  
w/550 sx's. class "A", circ. 147 sx's to surface.  
Well SI. Wocu and PLC.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Billy E. Prichard TITLE Field Foreman DATE 8-2-93  
TYPE OR PRINT NAME Billy E. Prichard TELEPHONE NO. 505.374.3053

(This space for State Use)

APPROVED BY [Signature] DISTRICT SUPERVISOR DATE 8-5-93

CONDITIONS OF APPROVAL, IF ANY:

Submit to Appropriate  
District Office  
State Leases - 6 copies  
Fee Leases - 5 copies  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Denver DD, Artesia, NM 88210

DISTRICT III  
1000 Rio Grande Rd., Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Form C-105  
Revised 1-1-89

WELL AP NO.	30-059-20302
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.	

WELL COMPLETION OR RECOMPLETION REPORT AND LOG				
1a. Type of Well: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER <u>CO2</u>	7. Lease Name or Unit Agreement Name BDCDGLU - 2232			
b. Type of Completion: NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DEEP RELIVE <input type="checkbox"/> OTHER <input type="checkbox"/>				
2. Name of Operator AMOCO PRODUCTION COMPANY	8. Well No. 351F			
3. Address of Operator PO Box 606 CLAYTON NM 88415	9. Pool name or Wildcat TUBB			
4. Well Location Unit Letter <u>F</u> : 2152 Feet From The <u>WEST</u> Line and 2000 Feet From The <u>NORTH</u> Line Section <u>35</u> Township <u>T22N</u> Range <u>R32E</u> NMPM <u>UNION</u> County				
10. Date Spudded 7/27/93	11. Date T.D. Reached 7/30/93	12. Date Complet. (Ready to Prod.) 8/13/93	13. Elevations (D.F. & R.E.B. RT. GR. etc.) 4771	14. Elev. Casinghead 4771
15. Total Depth 2275	16. Plug Back T.D. 2249	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By Rotary Tools 0-TD	Cable Tools
19. Producing Interval(s), of this completion - Top, Bottom, Name 2080 - 2233 TUBB				20. Was Directional Survey Made YES
21. Type, Electric and Other Logs Run LOGS PREVIOUSLY SENT				22. Was Well Cased NO

CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8.625	24 #	690	12 1/4	450 SKS	CIRC.
4.5	Fiberglass	2275	7 7/8	550 SKS	CIRC.

LINER RECORD					TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)				27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
2080-2094 25PF 3/4"	2199-2208 25PF 3/4"			DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
2099-2117 " "	2216-2223 " "				
2124-2131 " "	2226-2233 " "				
2146-2154 " "					

28. PRODUCTION							
Date First Production 8/13/93		Production Method (Flowing, gas lift, pumping - Size and type pump) FLOWING				Well Status (Prod. or Shut-in) PROD.	
Date of Test 8/13/93	Hours Tested 2 HRS	Casing Size 2"	Prod'n Per Test Period	Oil - Bbl.	Gas - MCF 533	Water - Bbl. 0	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure 310 PSI	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF 6400	Water - Bbl. 0	Oil Gravity - API - (Conv.)	

29. Disposition of Gas (Sold, used for fuel, vented, etc.) SOLD	Test Witnessed By B.E. PRICHARD
--	------------------------------------

30. List Amendments LOGS PREVIOUSLY SENT
---

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief	
Signature Billy E. Prichard	Printed Name BILLY E. PRICHARD Title FIELD FOREMAN Date 8/17/93

# INCLINATION REPORT

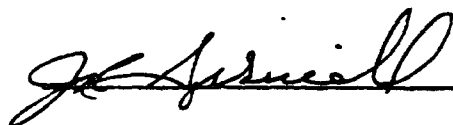
Operator: Amoco Production Company Address: P. O. Box 606, Clayton, New Mexico 88415


Lease Name: Bravo Dome Carbon Dioxide Gas Unit Well No. 2232-351F Field: Bravo Dome

Location: 2150' FWL X 2000' FNL T22N, R32E, SEC 25, UNIT F

DEPTH	ANGLE INCLINATION DEGREES
<u>215</u>	<u>1/4</u>
<u>4160</u>	<u>3/4</u>
<u>690</u>	<u>3/4</u>
<u>1119</u>	<u>3/4</u>
<u>1593</u>	<u>1°</u>
<u>20166</u>	<u>1°</u>
<u>2275</u>	<u>1°</u>

I hereby certify that the above data as set forth is true and correct to the best of my knowledge and belief.



  
Title: SITON Tool Packer

Submit 5 Copies  
Appropriate District Office  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-104  
Revised 1-1-89  
See Instructions  
at Bottom of Page

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

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

### REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator <u>Amoco Production Company</u>		Well API No. <u>30-059-20302</u>
Address <u>PO Box 606 CLAYTON NM 88415</u>		
Reason(s) for Filing (Check proper box) <input checked="" type="checkbox"/> Other (Please explain) New Well <input checked="" type="checkbox"/> Change in Transporter of: Recompletion <input type="checkbox"/> Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/> Change in Operator <input type="checkbox"/> Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/> <u>CO<sub>2</sub></u>		
If change of operator give name and address of previous operator		

### II. DESCRIPTION OF WELL AND LEASE

Lease Name <u>BDCDGL 2232</u>	Well No. <u>351F</u>	Pool Name, including Formation <u>TUBB - BRAVO DOME 640</u>	Kind of Lease State, Federal or <u>(Fee)</u>	Lease No.
Location Unit Letter <u>F</u> <u>2152</u> Feet From The <u>WEST</u> Line and <u>2000</u> Feet From The <u>NORTH</u> Line Section <u>35</u> Township <u>T22N</u> Range <u>R32E</u> NMPM <u>UNION</u> County				

### III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)	
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)	
<u>Amoco Production Company</u>	<u>PO Box 606 CLAYTON NM 88415</u>	
If well produces oil or liquids, give location of tanks.	Unit	Sec. Twp. Rge.
Is gas actually connected?	When?	
<u>YES</u>		

If this production is commingled with that from any other lease or pool, give commingling order number:

### IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v	Diff Res'v
			<input checked="" type="checkbox"/>					
Date Spudded <u>7/27/93</u>	Date Comp. Ready to Prod. <u>8/13/93</u>	Total Depth <u>2275</u>		P.B.T.D. <u>2249</u>				
Elevations (DF, RKB, RT, GR, etc.) <u>4771</u>	Name of Producing Formation <u>TUBB</u>	Top Oil/Gas Pay <u>2080</u>		Tubing Depth				
Performances <u>2080-2084, 2094-2117, 2124-2131, 2146-2154, 2199-2208, 2216-2223</u>		<u>2236-2233</u>		Depth Casing Shoe <u>2275</u>				
TUBING, CASING AND CEMENTING RECORD								
HOLE SIZE <u>12 1/4</u> <u>7 7/8</u>	CASING & TUBING SIZE <u>8.625</u> <u>4.5 P.G.</u>	DEPTH SET <u>1040</u> <u>2275</u>		SACKS CEMENT <u>450</u> <u>550</u>				

### V. TEST DATA AND REQUEST FOR ALLOWABLE

OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF

### GAS WELL

Actual Prod. Test - MCF/D <u>6400</u>	Length of Test <u>2 HRS</u>	Bbls. Condensate/MCF <u>6.4</u>	Gravity of Condensate
Testing Method (pilot, back pr.) <u>PILOT</u>	Tubing Pressure (Shut-in) <u>—</u>	Casing Pressure (Shut-in) <u>390 PSI</u>	Choke Size <u>2"</u>

### VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature  
Billy E. Prichard FIELD FOREMAN  
Printed Name  
Billy E. Prichard  
Date  
8/20/93  
Telephone No.  
505 374 3053

### OIL CONSERVATION DIVISION

Date Approved 8/20/93

By [Signature]

Title DISTRICT SUPERVISOR

### INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

- 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- 2) All sections of this form must be filled out for allowable on new and recompleted wells.
- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
- 4) Separate Form C-104 must be filed for each pool in multiply completed wells.



OIL CONSERVATION DIVISION

RECEIVED

Amoco Production Company

1994 FEB 2 AM 8 35 P. O. Box 606  
Clayton, NM 88415

January 31, 1994

### NOTICE OF GAS CONNECTION

This is to notify the Oil Conservation Division that connection for purchase of gas  
from Amoco Production Company's Bravo Dome Carbon Dioxide Gas Unit

Well No. 2232-351F, Meter Station No. 632296, located in Unit letter F, Section 35,

Township 22 North, Range 32 East, <sup>UNION</sup> ~~Harding~~ County New Mexico, Bravo Dome 640 acre  
area was made on 9/13/93 by Amoco Production Company.

First delivery date: 9/13/93.

Purchaser: AMOCO PRODUCTION COMPANY

Representative:

*Robert J. Greer*

Title:

CLERK