

Amoco Production Company

501 West Lake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

September 27, 1988

File: WGW-6314-WF

Re: Application for Approval to Directionally Drill
South Hobbs (GSA) Unit Nos. 223 and 224
Hobbs Grayburg - San Andres Pool
Lea County, New Mexico

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: W. J. LeMay, Director

Amoco Production Company, as operator of the South Hobbs (Grayburg-San Andres) Unit, Lea County, New Mexico, hereby applies for administrative approval to directionally drill the subject wells at the attached surface and bottomhole locations (see Attachment I for locations).

Required notice of this application has been served by certified mail to each operator of proration or spacing units offsetting the unit for which this directional drilling exception is requested. Each party shown on the attached service list has been furnished a copy of this letter complete with all attachments.

If there are any questions concerning this application, please contact Howard Black (713/584-7213).

Wayne G. White HB

Wayne G. White
Administrative Services Manager

HIB/jd

Attachments

cc: State of New Mexico
Oil Conservation Division
P. O. Box 1980
Hobbs, New Mexico 88240

**NOTICE REQUIREMENTS
South Hobbs (GSA) Unit**

Surface Owners

State of New Mexico
Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico 87504

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Amoco Production Company
P. O. Box 68
Hobbs, New Mexico 88240

Offset Operators

Shell Western E&P, Inc.
P. O. Box 991
Houston, Texas 77001

Conoco, Inc.
P. O. Box 460
Hobbs, New Mexico 88240

Chevron U.S.A.
Attn: J. C. Prindle
P. O. Box 670
Hobbs, New Mexico 88240

Marathon Oil Company
P. O. Box 552
Midland, Texas 79702

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-101
Revised 10-1-78

| | |
|------------------------|--|
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| U.S.G.S. | |
| LAND OFFICE | |
| OPERATOR | |

| | |
|--------------------------------|---|
| 5A. Indicate Type of Lease | |
| STATE <input type="checkbox"/> | FEE <input checked="" type="checkbox"/> |
| 5. State Oil & Gas Lease No. | |

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

| | | | | | |
|---|--|--|--|---|--|
| 1a. Type of Work | | | | 7. Unit Agreement Name | |
| b. Type of Well DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/> | | | | 8. Farm or Lease Name South Hobbs (GSA) Unit | |
| 2. Name of Operator Amoco Production Company | | | | 9. Well No. 223 | |
| 3. Address of Operator P. O. Box 3092, Houston, Texas 77253 | | | | 10. Field and Pool, or Wildcat Hobbs GSA | |
| 4. Location of Well UNIT LETTER <u>N</u> LOCATED <u>1791/1900</u> FEET FROM THE <u>West</u> LINE AND <u>1257/1330</u> FEET FROM THE <u>South</u> LINE OF SEC. <u>34</u> TWP. <u>18-S</u> RGE. <u>38-E</u> NMPM | | | | 12. County Lea | |
| 19. Proposed Depth 4500 | | | | 19A. Formation Grayburg-San And | |
| 20. Rotary or C.T. Rotary | | | | 21. Drilling Contractor N/A | |
| 21. Elevations (show whether DI, KT, etc.) 3613.2 | | 21A. Kind & Status Plug. Bond Blanket-on-file | | 22. Approx. Date Work will start November 1988 | |

23.

PROPOSED CASING AND CEMENT PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | SACKS OF CEMENT | EST. TOP |
|--------------|----------------|-----------------|---------------|----------------------|----------|
| 14-3/4" | 10-3/4" | 40.5# | 1600' | Circulate to surface | |
| 9-7/8" | 7" | 23# | 4500' | Circulate to surface | |

Propose to drill and equip well in the Grayburg-San Andres formation. After reaching TD, logs will be run and evaluated. Plan to perforate and stimulate as necessary to establish commercial production.

Mud Program

| | |
|---------------|-----------------|
| 0 - 1600' | Native Spud Mud |
| 1600' - 3800' | Brine Water |
| 3800' - TD | Salt Gel/Starch |

BOP Diagram Attached

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.

Signed H. I. Black H. I. Black Title Sr. Admin. Analyst Date 9-27-88

(This space for State Use)

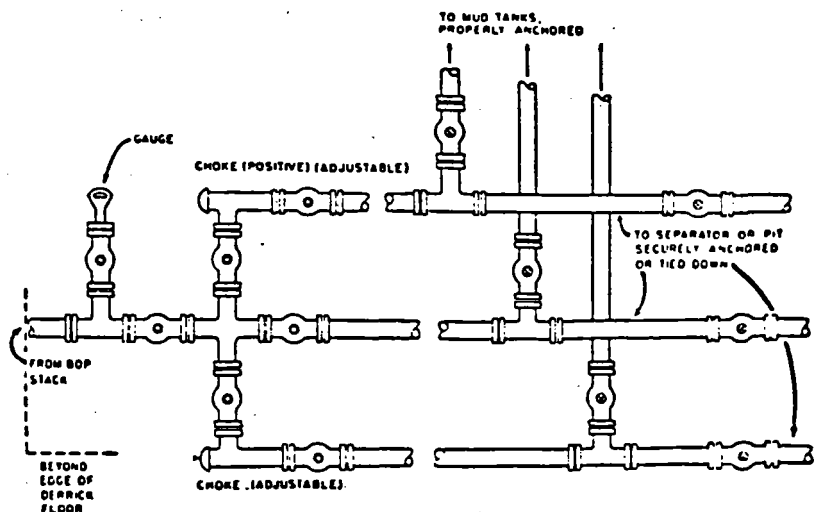
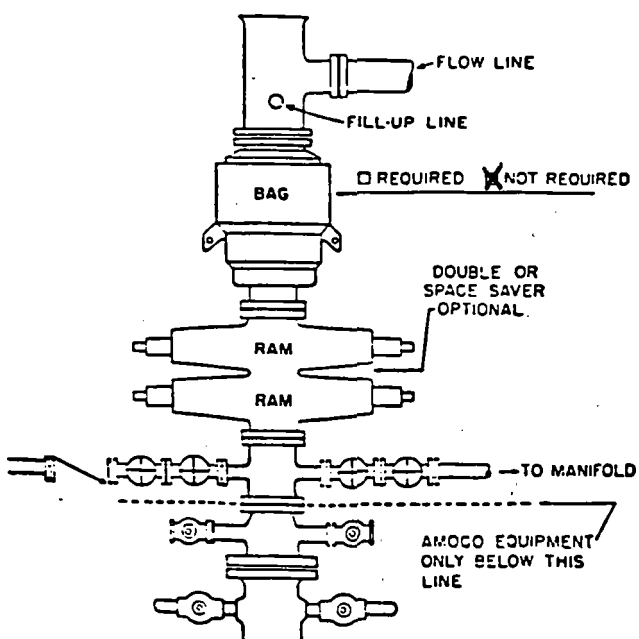
APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

1. BOP's to be fluid operated. BOP's and all fittings must be in good condition and rated at 3000 psi w.p. minimum.
2. Equipment through which bit must pass shall be at least as large as casing size being drilled through.
3. Upper kelly cock is required and shall be 3000 psi w.p. minimum. Lower kelly cock is (required)(not required).
4. Hydril or comparable safety valve shall be available on rig floor with connection or subs to fit any tool joint in the string. Valve to be full bore 5000 psi w.p. minimum.
5. Hydril or equivalent drill pipe back pressure valve is (required)(not required).
6. All equipment upstream of chokes, including kill line equipment shall be flanged or clamped and of a test pressure no less than that of the blowout preventer. All valves upstream of choke shall be (3") (4") gate valves Cameron Type "F" or equivalent. All equipment downstream of chokes may be flanged or screw end gate or plug. Line from spool to manifold cross to be a minimum of 3", straight and short as possible with minimum bends. Other lines may be 2", 3" or 4". Choke manifold, beyond second valve from cross, must be positioned outside of substructure. Manifold, header and all lines must be adequately supported and properly anchored. Two inch (2") lines and valves are permitted on the kill line. All valves designated for H₂S service are (required) (not required).
7. Blowout preventer closing unit equipment to include accumulator capable of closing, opening and closing the bag and pipe rams with a minimum remaining pressure of 1200 psi. After closure, the remaining fluid volume will be at least 50 percent of original volume. Two independent sources of pump power are required on each closing unit installation and shall meet all IADC specifications. Operating time for closing unit shall not be greater than one minute with charging pump shut down. Time test must be witnessed by Amoco representative while nipping up and test results reported on IADC report. Failure to meet these conditions will necessitate corrective action by contractor and retesting all at contractor's expense.
8. The accumulator must be located at least 50 feet from the well. Blowout preventer controls must be properly labeled and located as close to drillers position as feasible. Floor control valves are (required)(not required).
9. Fluid lines from accumulator to BOP's and all remote control fluid lines shall be steel, and rated at or above maximum accumulator pressure. Lines shall be routed in bundles and adequately protected from damage.
10. Use rams in following positions:

| | | |
|-----------|-----------------|-----------------------|
| | <u>Drilling</u> | <u>Running Casing</u> |
| Upper ram | Grill pipe | Casing |
| Lower Ram | Blind | Blind |

*Amoco District Superintendent may reverse location of rams.
11. Extensions and hand wheels to be installed and braced at all times.



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

| | | | | |
|--------------------------------------|---------------|---|------------------|-----------------|
| Operator Amoco Production Company | | Lease South Hobbs Grayburg San Andres Unit | | Well No. 223 |
| Unit Letter N | Section 34 | Township 18 South | Range 38 East | County Lea |

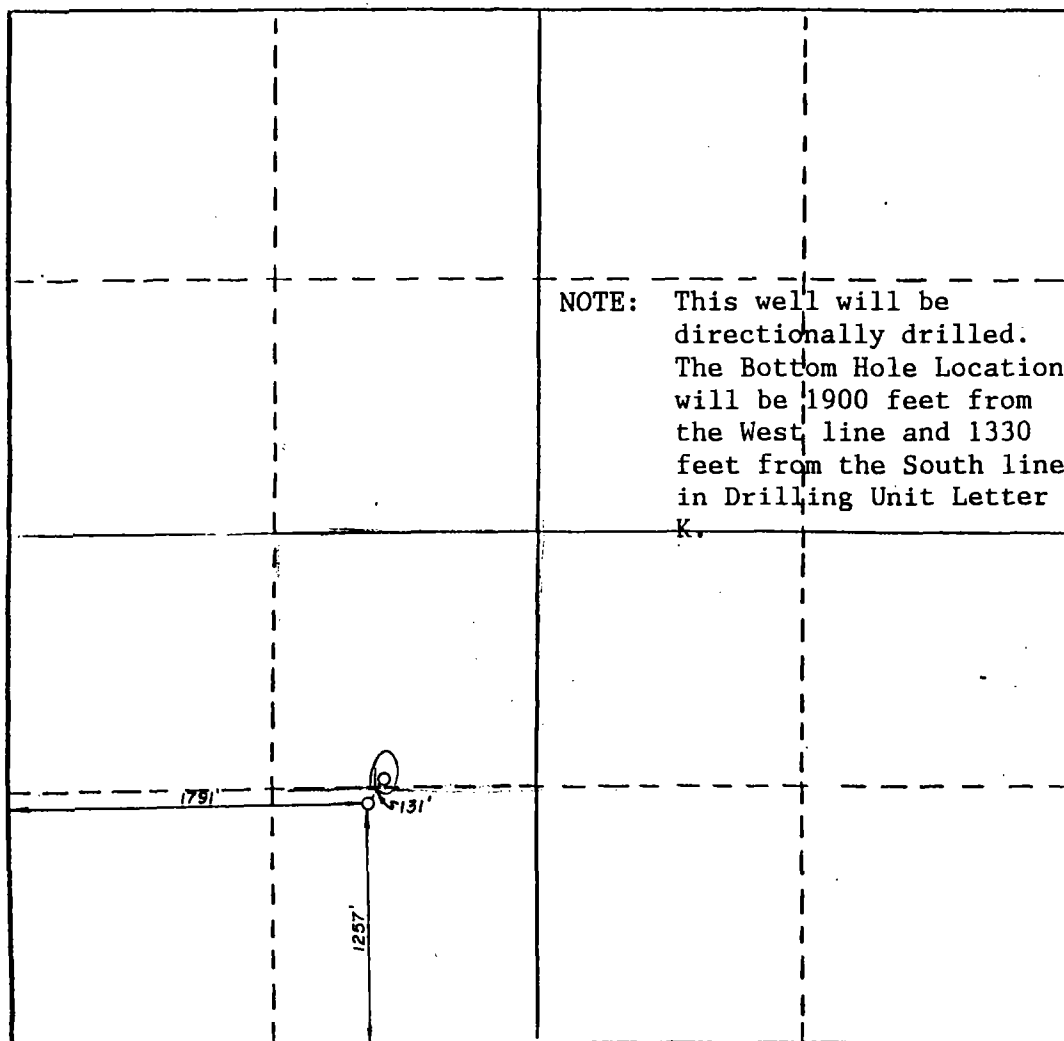
| | | | | |
|--|--|-----------------------------|--------------------------------|--|
| Actual Footage Location of Well: 1791 feet from the West line and 1257 feet from the South line | | | | |
| Ground Level Elev. 3613.2 feet | Producing Formation Grayburg San Andres | Pool Hobbs Grayburg / SA | Dedicated Acreage: 40 Acres | |

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, force-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.



CERTIFICATION

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

Name
H. J. Blum
Position
Sr. Admin. Analyst
Company
Amoco Production
Date
9-27-88

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.

September 21, 1988

Date Surveyed
Jeffrey L. Hansen
Registered Land Surveyor

NMLS No. 10034

Certificate No.

ATTACHMENT I

| <u>Well Name</u> | <u>Type of Well</u> | <u>Surface Location</u> | <u>Bottomhole Location</u> | <u>Elevation (Ground Level)</u> |
|------------------|---------------------|--|---|---------------------------------|
| SHU No. 223 | Producing | Unit N, 1791' FWL x 1257' FSL, Sec. 34 T-18-S, R-38-E | 1900' FWL x 1330' FSL, Sec. 34, T-18-S, R-38-E | 3613.2' |
| SHU No. 224 | Producing | Unit B, 1530' FEL x 625' FNL, Sec. 4, T-19-S, R-38-E | 1440' FEL x 580' FNL, Sec. 4, T-19-S, R-38-E | 3620.3' |

Note: Reason for directional drilling wells is due to surface obstruction (i.e. buildings, streets, etc.).

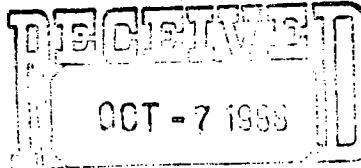


STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

10-3-88

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161



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

RE: Proposed:

MC _____
DHC _____
NSL X 400
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Amoco Prod. Co. South Hobbs G/S Act # 224-B-4-19-38
Operator Lease & Well No. Unit S-T-R # 223-N/K 34-18-38

and my recommendations are as follows:

OKJS

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed



Amoco Production Company

501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

October 4, 1988

State of New Mexico
Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico 87504

Howard Black
713-584-7213

File: WGW-6313-WF

Gentlemen:

Request for Waiver to Directionally Drill
At Unorthodox Locations
South Hobbs (GSA) Unit Nos. 223 and 224
Lea County, New Mexico

Amoco Production Company, as operator of the South Hobbs (GSA) Unit, hereby notifies you that we have applied to the NMOCD for administrative approval to directionally drill the subject wells at the attached surface and bottomhole locations. These wells will also be drilled at unorthodox locations.

If you have no objections to the directional drilling/unorthodox locations of these wells, please sign below and forward one copy to the NMOCD in Santa Fe, one copy to the NMOCD in Hobbs, one copy to this office, and retain a copy for your file. Addressed, stamped envelopes have been provided for your convenience.

If there are any questions concerning this application, please contact Howard Black (713/584-7213).

V. P. Whitfield
V. P. Whitfield

HIB/jd

Attachments

APPROVAL

Company: New Mexico State Lands Office

By: [Signature]

Date: 10-6-88



RECEIVED
OCT 17 1988
OIL CONSERV.
S&P

Amoco Production Company

501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

October 4, 1988

Shell Western E&P, Inc.
P. O. Box 991
Houston, Texas 77001

File: WGW-6313-WF

Gentlemen:

Request for Waiver to Directionally Drill
At Unorthodox Locations
South Hobbs (GSA) Unit Nos. 223 and 224
Lea County, New Mexico

Amoco Production Company, as operator of the South Hobbs (GSA) Unit, hereby notifies you that we have applied to the NMOCD for administrative approval to directionally drill the subject wells at the attached surface and bottomhole locations. These wells will also be drilled at unorthodox locations.

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If there are any questions concerning this application, please contact Howard Black (713/584-7213).

V. P. Whitfield
V. P. Whitfield

HIB/jd

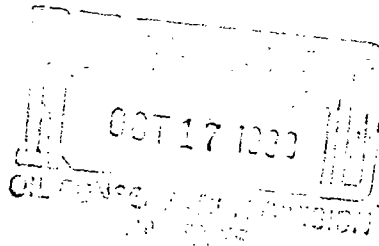
Attachments

APPROVAL

Company: SHELL WESTERN E & P INC.

By: W.F.N. Kelldorf W.F.N. KELLDORF

Date: 10/12/88



Amoco Production Company
501 West Lake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

September 27, 1988

File: WGW-6313-WF

Request for Waiver to Directionally Drill
South Hobbs (GSA) Unit Nos. 223 and 224
Lea County, New Mexico

Chevron U.S.A.
Attn: J. C. Prindle
P. O. Box 670
Hobbs, New Mexico 88240

Amoco Production Company, as operator of the South Hobbs (GSA) Unit, hereby notifies you that we have applied to the NMOCD for administrative approval to directionally drill the subject wells at the attached surface and bottomhole locations.

If you have no objections to the directional drilling of these wells, please sign below and forward one copy to the NMOCD in Santa Fe, one copy to the NMOCD in Hobbs, one copy to this office, and retain a copy for your file. Addressed, stamped envelopes have been provided for your convenience.

If there are any questions concerning this application, please contact Howard Black (713/584-7213).

V.P. Whitfield HB

V. P. Whitfield

HIB/jd

Attachments

APPROVAL

Company: Chevron U.S.A. Inc.

By: Alan W. Bohling Division Proration
Engineer

Date: October 13, 1988



RECEIVED
OCT 11 1988

Amoco Production Company

501 West Lake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

September 27, 1988

File: WGW-6313-WF

Request for Waiver to Directionally Drill
South Hobbs (GSA) Unit Nos. 223 and 224
Lea County, New Mexico

Shell Western E&P, Inc.
P. O. Box 991
Houston, Texas 77001

Amoco Production Company, as operator of the South Hobbs (GSA) Unit, hereby notifies you that we have applied to the NMOCD for administrative approval to directionally drill the subject wells at the attached surface and bottomhole locations.

If you have no objections to the directional drilling of these wells, please sign below and forward one copy to the NMOCD in Santa Fe, one copy to the NMOCD in Hobbs, one copy to this office, and retain a copy for your file. Addressed, stamped envelopes have been provided for your convenience.

If there are any questions concerning this application, please contact Howard Black (713/584-7213).

V. P. Whitfield
HB

V. P. Whitfield

HIB/jd

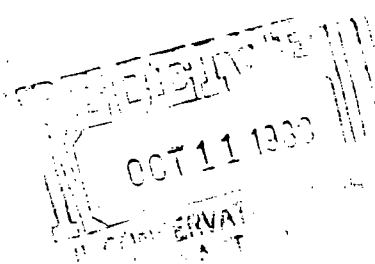
Attachments

APPROVAL

Company: Shell Western E&P Inc.

By: *A. J. Fure*

Date: October 5, 1988



Amoco Production Company

501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

September 27, 1988

File: WGW-6313-WF

Request for Waiver to Directionally Drill
South Hobbs (GSA) Unit Nos. 223 and 224
Lea County, New Mexico

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Amoco Production Company, as operator of the South Hobbs (GSA) Unit, hereby notifies you that we have applied to the NMOCD for administrative approval to directionally drill the subject wells at the attached surface and bottomhole locations.

If you have no objections to the directional drilling of these wells, please sign below and forward one copy to the NMOCD in Santa Fe, one copy to the NMOCD in Hobbs, one copy to this office, and retain a copy for your file. Addressed, stamped envelopes have been provided for your convenience.

If there are any questions concerning this application, please contact Howard Black (713/584-7213).

V. P. Whitfield
HB

V. P. Whitfield

APPROVAL

HIB/jd

Company: Phillips Petroleum Company

Attachments

By: [Signature]

D. A. Brown, Director, Res. Engineering

Date: 10/7/88

Phillips Petroleum Company's approval of this waiver request is conditional that sufficient isolation is maintained between all surface activities and any pipelines operated by Phillips Petroleum Company in the respective areas. Phillips' Hobbs office should be contacted to identify any pipelines in the area prior to start of operations (505-397-5500)



Production Department
Hobbs Division
North American Production

Conoco Inc.
726 East Michigan
P.O. Box 460
Hobbs, NM 88241
(505) 397-5800

October 17, 1988

New Mexico Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, New Mexico 87503

Attention David Catanach

Gentlemen:

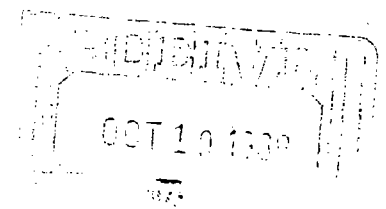
Amoco's Request for Waiver to Directionally Drill the South Hobbs (GSA)
Unit Nos. 223 & 224, Lea County, New Mexico

Conoco Inc. has approved Amoco's request as shown above. One copy of their letter ballot is attached for your file, and one copy has been forwarded to the NMOCD office in Hobbs, and one returned to Amoco.


H. A. Ingram
Conservation Coordinator

/tm

cc: NMOCD, Hobbs
Amoco, Houston





Amoco Production Company

501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

September 27, 1988

File: WGW-6313-WF

Request for Waiver to Directionally Drill
South Hobbs (GSA) Unit Nos. 223 and 224
Lea County, New Mexico

Conoco, Inc.
P. O. Box 460
Hobbs, New Mexico 88240

Amoco Production Company, as operator of the South Hobbs (GSA) Unit, hereby notifies you that we have applied to the NMOCD for administrative approval to directionally drill the subject wells at the attached surface and bottomhole locations.

If you have no objections to the directional drilling of these wells, please sign below and forward one copy to the NMOCD in Santa Fe, one copy to the NMOCD in Hobbs, one copy to this office, and retain a copy for your file. Addressed, stamped envelopes have been provided for your convenience.

If there are any questions concerning this application, please contact Howard Black (713/584-7213).

V. P. Whitfield
V. P. Whitfield *HB*

HIB/jd

Attachments:

APPROVAL

Company: CONOCO

By: *[Signature]*

Date: October 17, 1988