Form 3160 3
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

NITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NMLC029426A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL XX DEEPEN

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL: OIL WELL — GAS WELL XX OTHER — SINGLE ZONE XX MULTIPLE ZONE —

8. FARM OR LEASE NAME, WELL NO.: OXY Pralines & Cream Federal #1 26860

2. NAME OF OPERATOR: OXY USA Inc. 16696 16696

9. API WELL NO: 30-015- 31411

3. ADDRESS AND TELEPHONE NO: P.O. BOX 50250 MIDLAND, TX 79710-0250 915-685-5717

10. FIELD AND POOL, OR WILDCAT: Undsg. Fren Morrow

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1650 FNL 660 FEL SENE(H)
At proposed prod. zone

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 3 T17S R31E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 7 miles northeast from Loco Hills, NM

12. COUNTY OR PARISH: EDDY 13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 660'

16. NO. OF ACRES IN LEASE: 320

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: N/A

19. PROPOSED DEPTH: 12400'

20. ROTARY OR CABLE TOOLS: R

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3984'

22. APPROX. DATE WORK WILL START*: 9/30/00

23. PROPOSED CASING AND CEMENTING PROGRAM — See drilling plan.

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8" H40	48#	~~625~~ 675'	500sx - Circulate
12-1/4"	9-5/8" K55	36#	4500'	1005sx - Circulate
8-3/4"	5-1/2" N80-S95	17#	12400'	1025sx - Est TOC 8000'

SEE OTHER SIDE

RECEIVED
OCD ARTESIA

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED: [signature] TITLE: DAVID STEWART REGULATORY ANALYST DATE: 6/15/00

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY: [signature] Acting TITLE: Assistant Field Manager, Lands And Minerals DATE: OCT 30 2000

APPROVED FOR 1 YEAR

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

ATTACHMENT 3160-3
OXY USA Inc.
OXY Pralines & Cream Federal #1
SEC 3 T17S R31E
Eddy County, NM

PROPOSED TD: 12400' TVD

BOP PROGRAM:

0' - 625'	None
625' - 4500'	13-3/8" 3M annular preventer.
4500' - 12400'	11" 5M blind pipe rams with 5M annular preventer and rotating head below 8500'.

CASING:

Surface:	13-3/8" OD 48# H40 ST&C new casing set at 625'
Intermediate:	9-5/8" OD 36# K55 ST&C new casing from 0-4500'
Production:	5-1/2" OD 17# N80-S95 LT&C new casing from 0-12400' N80-8800' S95-3600'

CEMENT:

Surface - Circulate cement with 350sx 35:65 POZ/C with 6% Bentonite + 2% $CaCl_2$ + .25#/sx Cello-Seal followed by 150sx Cl C with 2% $CaCl_2$.

Intermediate - Circulate cement with 840sx 35:65 POZ/C with 6% Bentonite + 2% $CaCl_2$ + .25#/sx Cello-Seal followed by 165sx Cl C with 2% $CaCl_2$.

Production - Cement with 925sx 15:61:11 POZ/C/CSE with .5% FL-52 + .5% FL-25 + 8#/sx Gilsonite followed by 100sx Cl C with .7% FL-25. Estimated top of cement is 8000'.

Note: Cement volumes may need to be adjusted to hole caliper.

MUD:

0 - 625'	Fresh water/native mud. Lime for pH control (9-10). Paper for seepage. Wt 8.7-9.2 ppg, Vis 32-34 sec
625' - 4500'	Fresh/*Brine water. Lime for pH control (10.0-10.5). Paper for seepage. Wt 8.3-9.0/10.0-10.1ppg, Vis 28-29 sec *Fresh water will be used unless chlorides in the mud system increases to 20000PPM.
4500' - 9500'	Fresh water. Lime for pH control(9-9.5). Paper for seepage. Wt 8.3-8.5 ppg, Vis 28-29 sec
9500' - 11000'	Cut brine. Lime for pH control (10-10.5). Wt 9.6-10.0 ppg, Vis 28-29sec
11000' - 12400'	Mud up with an Duo Vis/Flo Trol mud system. Wt 9.6-10.0ppg, Vis 32-36sec, WL<10cc

DISTRICT I
1625 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 and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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	Pool Name
30-015-	96663	Undesignated Fren Morrow

Property Code	Property Name	Well Number
	OXY PRALINES & CREAM FEDERAL	1

OGRID No.	Operator Name	Elevation
16696	OXY USA INC.	3984'

Surface Location

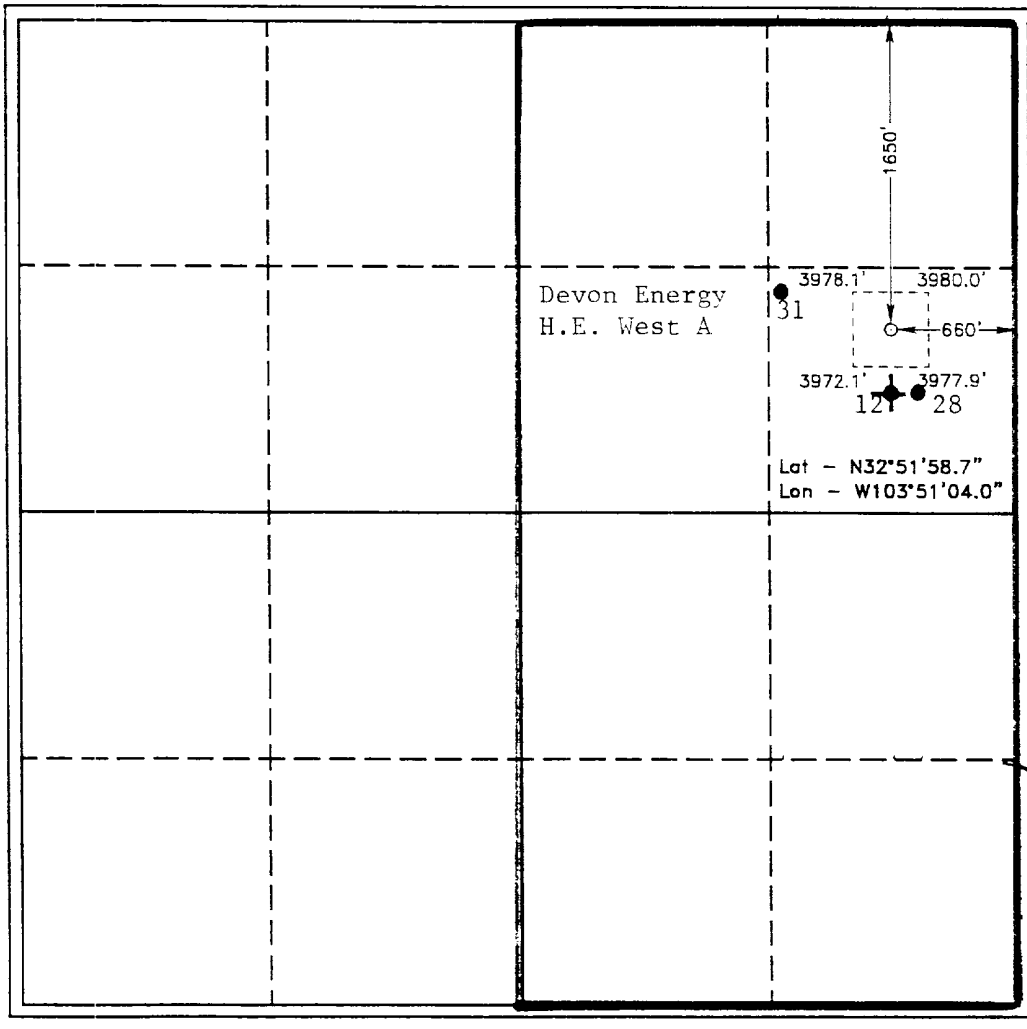
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	3	17 S	31 E		1650	NORTH	660	EAST	EDDY

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	Joint or Infill	Consolidation Code	Order No.
320	N		

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



OPERATOR CERTIFICATION

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

Signature

David Stewart
Printed Name

Regulatory Analyst
Title

8/15/00
Date

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 supervison, and that the same is true and correct to the best of my belief.

June 2, 2000
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 0292A

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

OXY USA Inc.
P.O. Box 50250, Midland, TX 79710-0250

August 15, 2000

United States Department of the Interior
Bureau of Land Management
Roswell District Office
2909 West Second Street
Roswell, New Mexico 88201

Re: Application for Permit to Drill
OXY USA Inc.
OXY Pralines & Cream Federal #1
Eddy County, New Mexico
Lease No. NMLC029426A

Gentlemen:

OXY USA Inc. respectfully requests permission to drill our OXY Pralines & Cream Federal #1 located 1650 FNL and 660 FEL of Section 3, T17S, R31E, Eddy County, New Mexico, Federal Lease No. NMLC029426A. The proposed well will be drilled to a TD of approximately 12400' (TVD). The location and work area has been staked. It is approximately 7 miles northeast of Loco Hills, New Mexico.

In accordance with requirements stipulated in Federal Onshore Oil and Gas Order No. 1 under 43 CFR 3162.1, our Application for Permission to Drill and supporting evidence is hereby submitted.

I. Application for Permit to Drill:

1. Form 3160.3, Application for Permit to Drill.

2. Form C-102 Location and Acreage Dedication Plat certified by Gary L. Jones, Registered Land Surveyor No. 7977 in the State of New Mexico, dated June 2, 2000.

3. The elevation of the unprepared ground is 3984 feet above sea level.

4. The geologic name of the surface formation is Permian Rustler.

5. Rotary drilling equipment will be utilized to drill the well to TD 12400' (TVD), and run casing. This equipment will then be rigged down and the well will be completed with a pulling unit.

6. Proposed total depth is 12400' TVD.

7. Estimated tops of important geologic markers.

Wolfcamp	8650' TVD
Penn	9950' TVD
Strawn	11130' TVD
Atoka	11400' TVD
Morrow	11650' TVD

8. Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Primary Objective: Morrow 11650' TVD

Secondary Objective: Atoka 11400' TVD

9. The proposed casing program is as follows:

   Surface: 13-3/8" 48# H40 ST&C new casing set at ~~625'~~ 675'

   Intermediate: 9-5/8" 36# K55 ST&C new casing from 0-4500'

   Production: 5-1/2" 17# N80-S95 LT&C new casing from 0-12400'
   N80-8800' S95-3600'

10. Casing setting depth and cementing program:

   A. 13-3/8" surface casing set at 625' in 17-1/2" hole. Circulate cement with 350sx 35:65 POZ/C w/ 6% Bentonite + 2% $CaCl_2$ + .25#/sx Cello-Seal followed by 150sx Class C w/ 2% $CaCl_2$.

   If cement does not circulate, a temperature survey will be run to find the TOC and then finish cementing to surface through 1" using Class C with 2% $CaCl_2$.

   B. 9-5/8" intermediate casing set at 4500' in 12-1/4" hole. Circulate cement with 840sx 35:65 POZ/C w/ 6% Bentonite + 2% $CaCl_2$ + .25#/sx Cello-Seal + 5#/sx Gilsonite followed by 165sx Class C w/ 2% $CaCl_2$.

   If hole conditions dictate, a DV tool may be run to ensure that the intermediate string is cemented to surface.

   If cement does not circulate, a temperature survey will be run to find the TOC and then finish cementing to surface through 1" using Class C with 2% $CaCl_2$.

   Note: Cement volumes may be adjusted according to fluid caliper.

   C. 5-1/2" production casing set at 12400' in 8-3/4" hole. Cement with 925sx 15:61:11 POZ/C/CSE w/ .5% FL-25 + .5% FL-52 + 8#/sx Gilsonite followed by 100sx Class C w/ .7% FL-25.

   Estimated top of cement is 8000'.

   Note: Cement volumes may need to be adjusted to hole caliper.

11. Pressure Control Equipment

0' - ~~625'~~ 675'	None
625' - 4500'	13-3/8" 3000# annular preventer.
4500' - 12400'	11" 5000# ram type preventers with one set blind rams and one set pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 8500'. Exhibit A.

A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

After setting the 9-5/8" casing, the blowout preventers and related control equipment shall be pressure tested to 5000 psi. Any equipment failing to test satisfactorily shall be repaired or replaced. Results of the BOP test will be recorded in the Driller's Log. The BOP's will be maintained ready for use until drilling operations are completed.

BOP drills will be conducted as necessary to assure that equipment is operational and each crew is properly trained to carry out emergency duties.

Accumulator shall maintain a pressure capacity reserve at all times to provide for the close-open-close sequence of the blind and pipe rams of the hydraulic preventers.

12. Mud Program:

0 - 625'	Fresh water/native mud. Lime for pH control (9-10). Paper for seepage. Wt.8.7-9.2 ppg, vis 32-34 sec.
625' - 4500'	Fresh/*brine water. Lime for pH control (10-10.5). Paper for seepage. Wt. 8.3-9.0/10.0-10.1ppg, vis 28-29 sec. *Fresh water will be used unless chlorides in the mud system increase to 20000PPM.
4500' - 9500'	Fresh water. Lime for pH control (9-9.5). Paper for seepage. Wt. 8.3-8.5 ppg, vis 28-29 sec.
9500' - 11000'	Cut brine. Lime for pH control (10-10.5). Wt. 9.6-10.0 ppg, vis 28-29 sec.
11000' - 12400'	Mud up with an Duo Vis/Flo Trol system. Wt. 9.6-10.0 ppg, Vis 32-36sec, WL<10cc.

Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until the production casing is run and cemented. Monitoring equipment shall consist of the following:

1) A recording pit level indicator.

2) A pit volume totalizer.

3) A flowline sensor.


RECEIVED
AUG 16 2000
BLM
ROSWELL, NM

13. Testing, Logging and Coring Program:

    A. Testing program: No DST's are anticipated.

    B. Mud logging program: One-man unit from 6000' to TD.

    C. Electric logging program: CNL/LDT/CAL/GR, DLL/CAL/GR.

    D. Coring program: Possible sidewall rotary cores.

14. No abnormal temperatures, or H2S gas are anticipated. The highest anticipated pressure gradient would be .55psi/ft. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

15. Anticipated starting date is September 30, 2000. It should take approximately 30 days to drill the well and another 10 days to complete.

16. The Multi-Point Surface Use & Operation Plan is attached.

17. If the Bureau of Land Management needs additional information to evaluate this application, please advise.

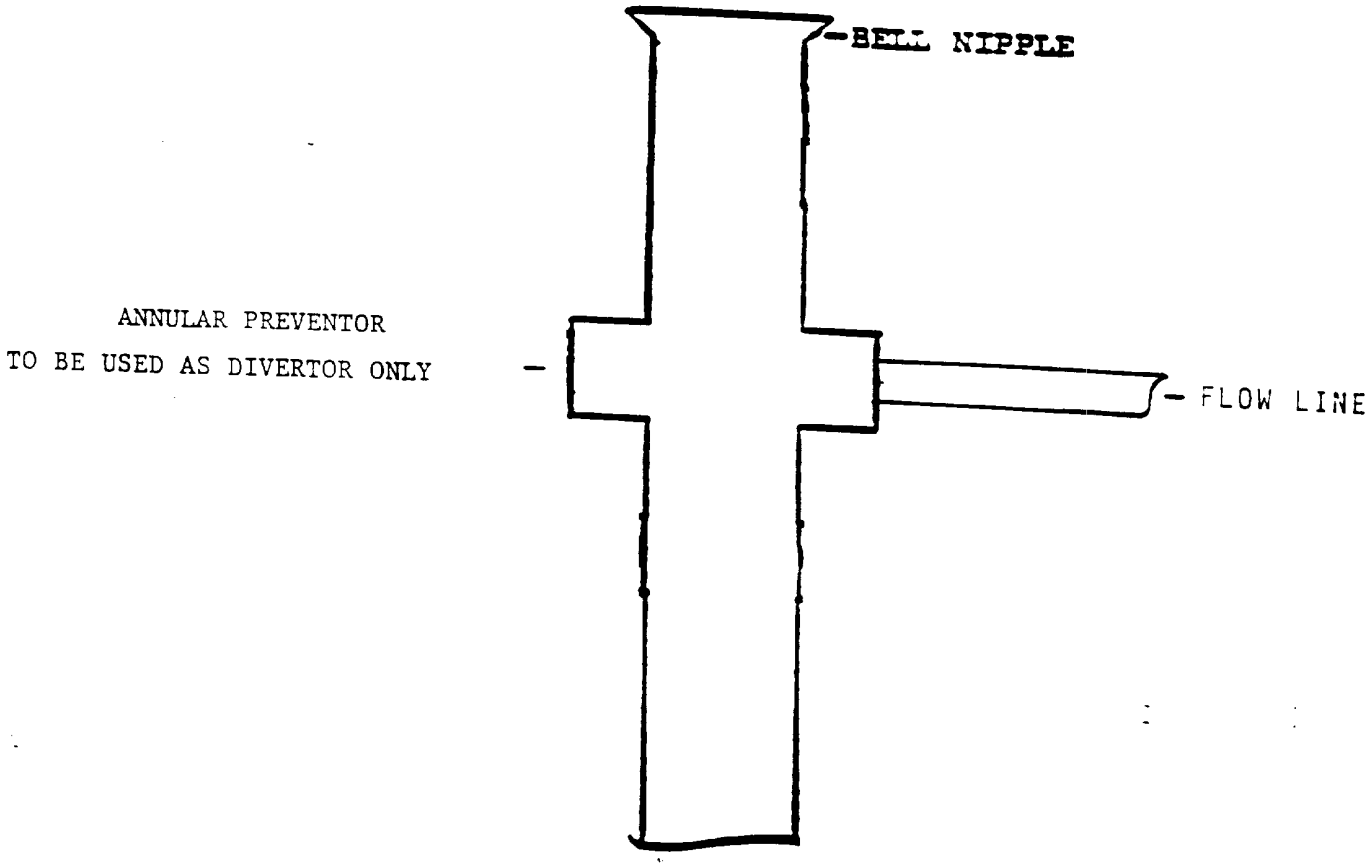
Very truly yours,

David Stewart
Regulatory Analyst
OXY USA Inc.

DRS/drs

Attachments

EXHIBIT A

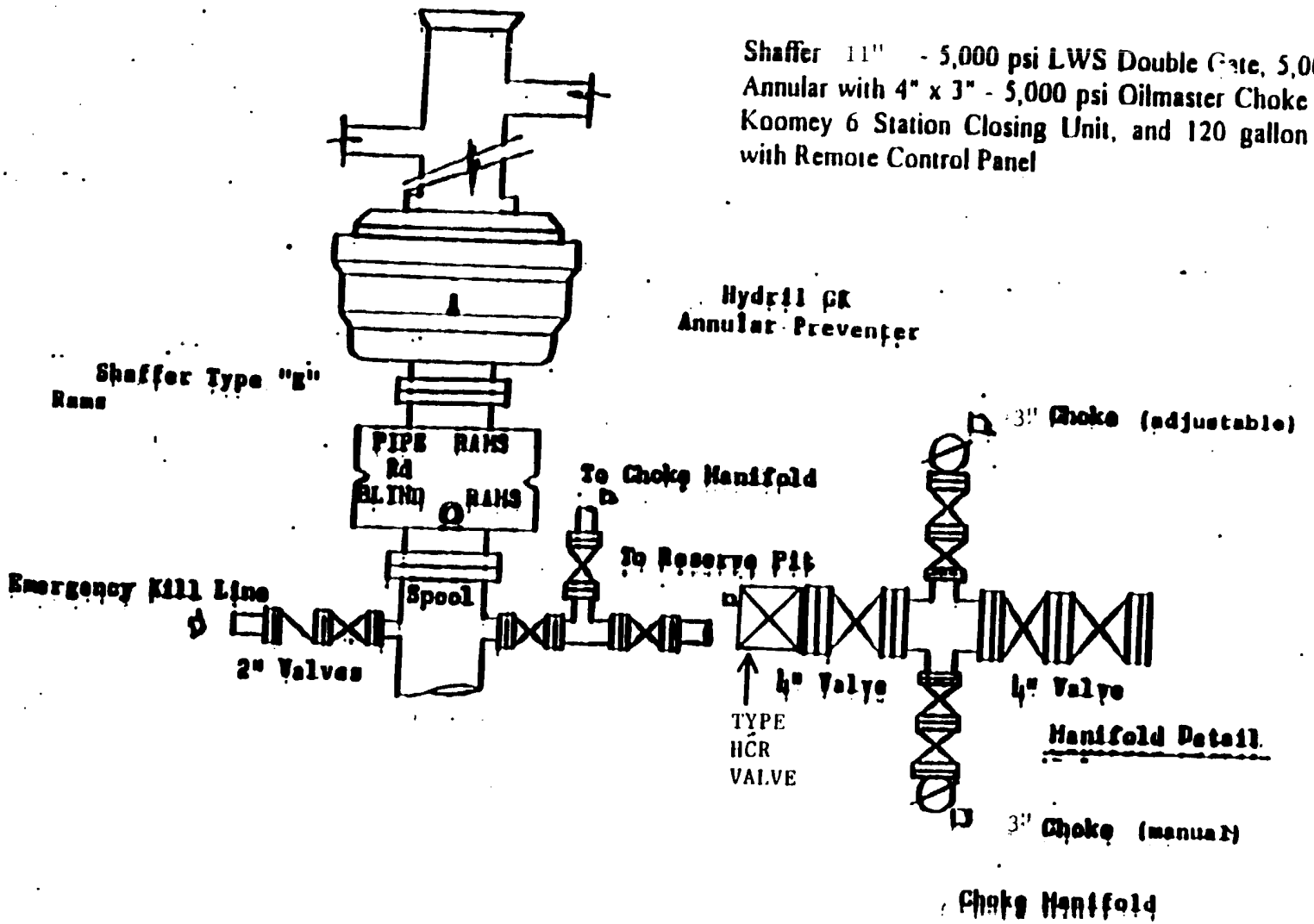


STARTING HEAD

BLOWOUT PREVENTOR SCHEME

EXHIBIT A

Shaffer 11" - 5,000 psi LWS Double Gate, 5,000 psi Shaffer Annular with 4" x 3" - 5,000 psi Oilmaster Choke Manifold and Koomey 6 Station Closing Unit, and 120 gallon Accumulator with Remote Control Panel



MULTI-POINT SURFACE USE AND OPERATIONS PLAN

OXY USA Inc.
OXY Pralines & Cream Federal #1
Eddy County, New Mexico
Lease No. NMLC029426A

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to identify the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal may be made of the environmental effects associated with the operation.

The well, and work area have been staked by a registered New Mexico land surveyor. GEO Marine has been engaged to make an archaeological reconnaissance of the work area. Their findings concerning cultural resources will be reported to the Bureau of Land Management.

1. Existing Roads

A copy of a USGS "Red Lake, SE New Mexico" quadrangle map is attached showing the proposed location. The well location is spotted on this map, which also shows the existing road system. Exhibit B.

Directions to location:
From the junction of US Hwy 82 and CR 221, go north on CR 221 approximately 1.4 miles to caliche lease road. Go northeast 1.2 miles, then .5 mile north, 2 miles east to a dead end. Go north .3 mile, east .2 mile, north .5 mile, east .5 mile to the proposed location.

2. Planned Access Road

A. No access road will be built. Exhibit B.

B. Surfacing material: N/A

C. Maximum Grade: N/A

D. Turnouts: N/A

E. Drainage Design: N/A

F. Culverts: N/A

G.

H. Cuts and Fills: N/A

H. Gates or Cattleguards: N/A

3. Existing wells within a one mile radius of the proposed development well are shown on Exhibit C.

4. Location of Existing and/or Proposed Facilities

A. If the well is productive, production facilities will be constructed on the well pad. The facility will consist of a stack pack, one 300 bbl oil tank and one 300 bbl fiberglass water tank. All permanent above ground facilities will be painted in accordance with the BLM's painting guidelines simulating the color of sandstone brown.

B. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to and a site security plan will be submitted for the OXY Pralines & Cream Federal #1 tank battery. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

5. Location and Type of Water Supply

Fresh water and brine water will be used to drill this well. It will be purchased from a supply in Loco Hills and transported to the well site.

6. Source of Construction Materials

Caliche for surfacing the well pad will be obtained from a Federal pit located in Section 12, T20S, R27E, Eddy County, New Mexico.

7. Method of Handling Waste Disposal

A. Drill Cuttings will be disposed of in drilling pits.

B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.

C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

E. Trash, waste paper, garbage and junk will be collected in steel trash bins and removed after drilling and completion operations are completed. All waste material will be contained to prevent scattering by the wind.

F. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. Ancillary Facilities

A. None needed.

9. Wellsite Layout

A. The location and dimensions of the well pad, mud pits, reserve pit and location of major rig components are shown on the well site layout sketch. The V-door will be to the east and the pits to the north. Exhibit D.

B. Leveling of the wellsite will be required with minimal cuts or fills anticipated.

C. The reserve pit will be plastic lined.

D. While constructing the pits and material is encountered at a depth which would not allow the pits to meet the BLM stipulations with out blasting, OXY requests a variance. There will be an adequate amount of material to reclaim the pit per the stipulations.

E. The pad and pit area have been staked and flagged.

10. Plans for Restoration of the Surface

A. After completion of drilling and/or completion operations, all equipment and other materials not needed for operations will be removed.

B. Pits will be filled and location cleaned of all trash and junk to leave the well site in as aesthetically pleasing condition as possible. Any plastic material used to line the pits or sumps will be cut off below ground level as far as possible and disposed of before the pits are covered. All unattended pits containing liquid will be fenced and the liquid portion allowed to evaporate before the pits are broken and backfilled.

C. After abandonment of the well, surface restoration will be in accordance with the land owner. This will be accomplished as expeditiously as possible. Barring unforeseen problems, all pits will be filled and leveled within 90 days after abandonment.

11. Surface Ownership

The wellsite is on Federal owned surface. The surface is leased to: Caswell Ranches, Maljamar, NM.
They will be notified of our intention to drill prior to any activity.

12. Other Information

A. Topography: The location is a flat plain. GL elevation is 3984'.

B. Soil: Sandy clay loams.

C. Flora and Fauna: The vegetative cover is generally sparse consisting of mesquite, yucca, shinnery oak, sandsage and perennial native range grasses. Wildlife in the area is also sparse consisting of coyotes, rabbits, rodents, reptiles, dove and quail.

D. Ponds and Streams: There are no rivers, streams, lakes or ponds in the area.

E. Residences and Other Structures: There are no occupied dwellings within a ¼ mile radius of the location.

F. Archaeological, Historical and Cultural Sites: Cultural resources have been recorded in the area. Desert West will be engaged to make an archaeological reconnaissance of the work area.

G. Land Use: Cattle ranching.

H. The well site, if a producer, will be maintained and kept clean of all trash and litter which detracts from the surrounding environment. Equipment will be maintained in accordance with good operating practice.

I. After the wellsite is cleaned and pits and sumps backfilled, any obstruction to the natural drainage will be corrected by ditching or terracing. All disturbed areas, including any access road no longer needed, will be ripped. Those areas will be reseeded with grass if, in the opinion of the land owner, it is required.

13. Operator's Representatives and Certification

The field representative responsible for assuring compliance with the approved surface use and operations plan are as follows:

Joe Gibson, Production Coordinator
P.O. Box 69
Hobbs, New Mexico 88240
Office Phone: 505-393-2174
Home Phone: 505-390-4988

Gary Womack
P.O. Box 50250
Midland, TX 79710-0250
Office Phone: 915-685-5772

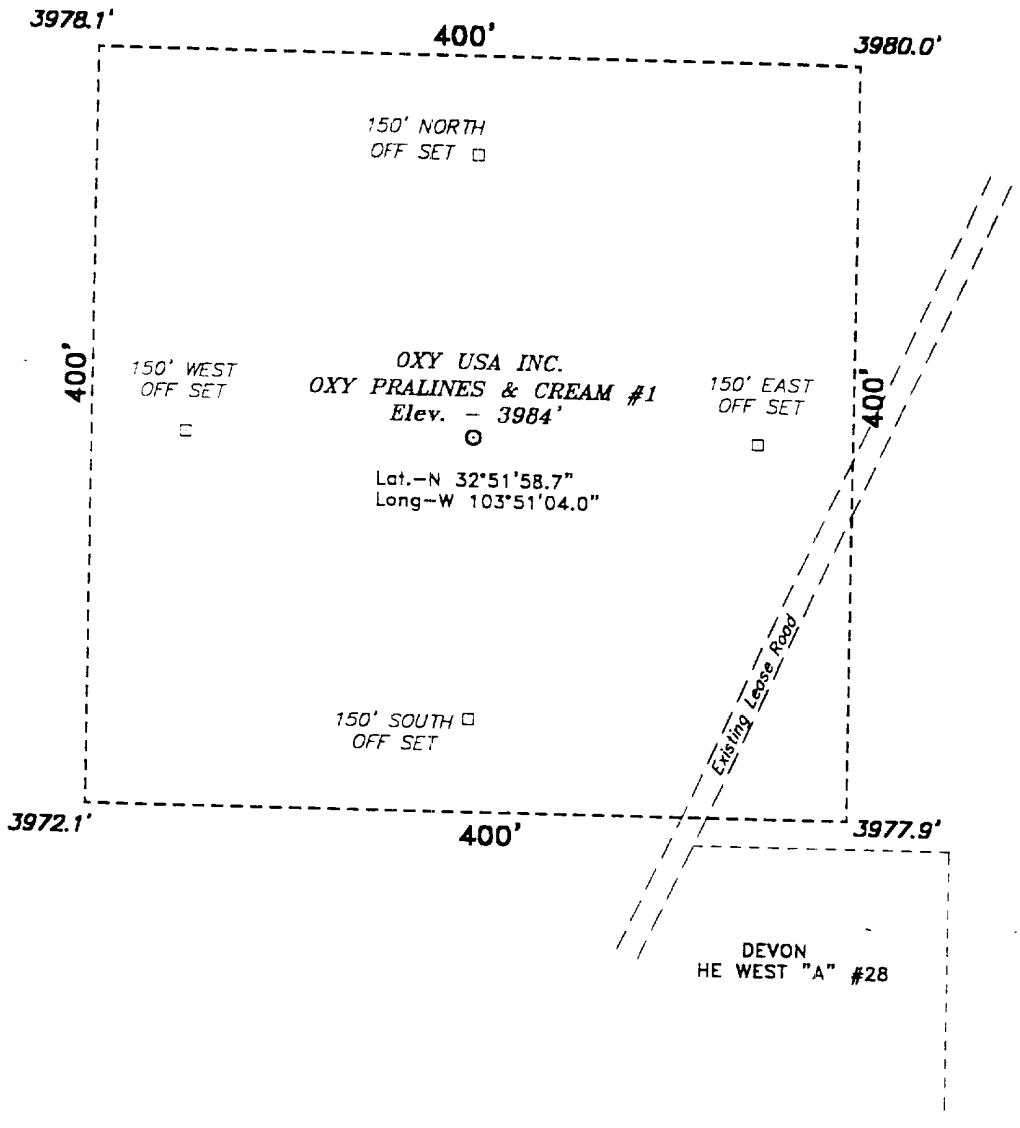
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by OXY USA Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

8-15-2000
DATE

Joe Fleming
Drilling Coordinator
915-685-5858
Frontier Asset Team
OXY USA Inc.

EXHIBIT B

SECTION 3, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF US HWY 82 AND CO. RD. 221, GO NORTH ON CO. RD. 221 1.4 MILE; THENCE 1.2 MILE NORTHEAST ON CAL. LEASE ROAD; THENCE 0.5 MILE NORTH; THENCE 2.0 MILES EAST TO A DEAD END; THENCE NORTH 0.3 MILE; THENCE EAST 0.2 MILE; THENCE NORTH 0.5 MILE; THENCE EAST 0.5 MILE TO THE PROPOSED WELL LOCATION.

100 0 100 200 FEET

SCALE: 1" = 100'

Oxy USA Inc.

REF: Oxy Pralines & Cream No. 1 / Well Pad Topo

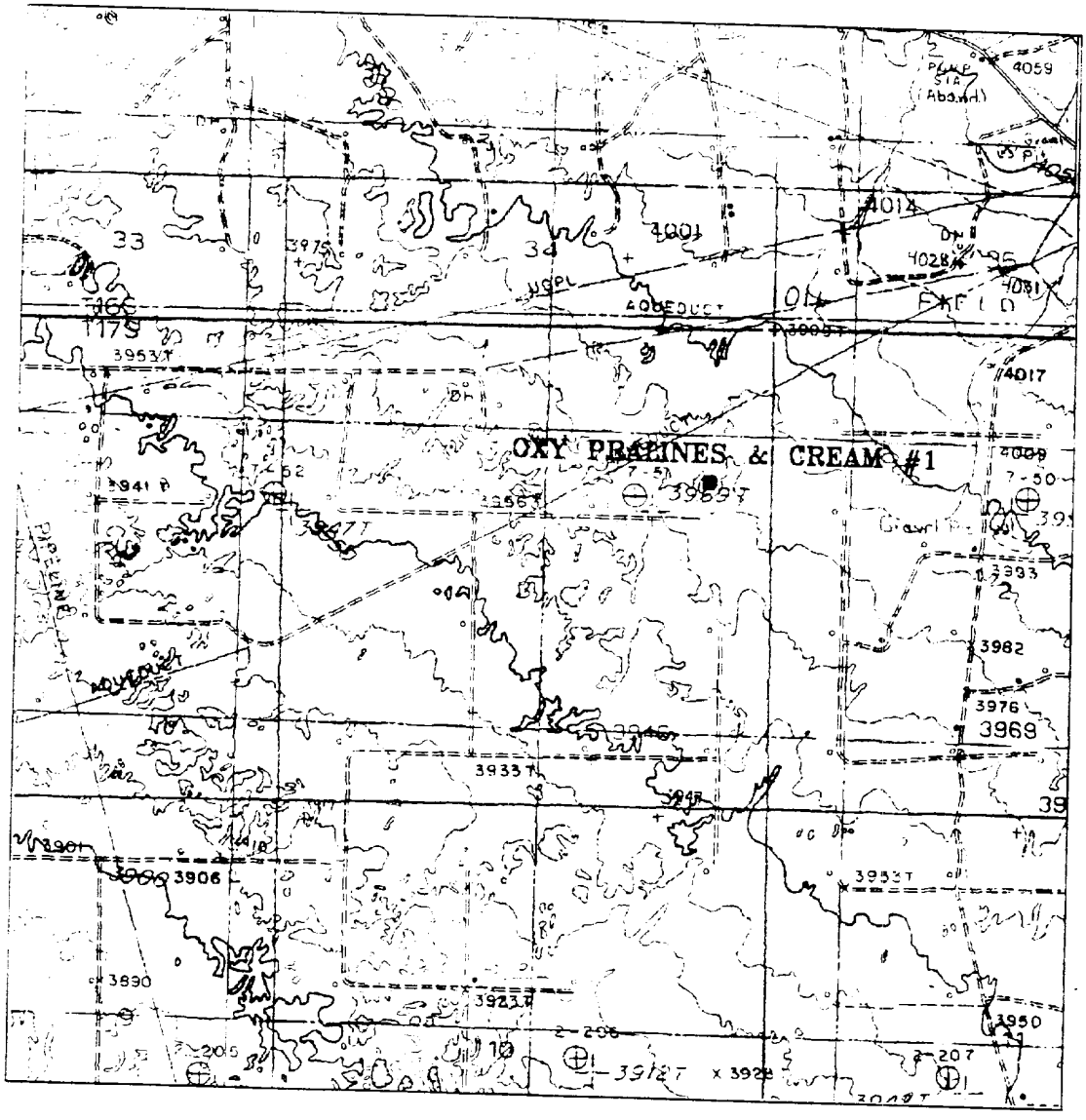
THE OXY PRALINES & CREAM No. 1 LOCATED 1650' FROM THE NORTH LINE AND 660' FROM THE EAST LINE OF SECTION 3, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

W.O. Number: 0292	Drawn By: K. GOAD		
Date: 06-06-2000	Disk: KJG #122 – 0292A.DWG	Survey Date: 06-02-2000	Sheet 1 of 1 Sheets

In the oilfield ... Date: 06-05-2000

EXHIBIT B



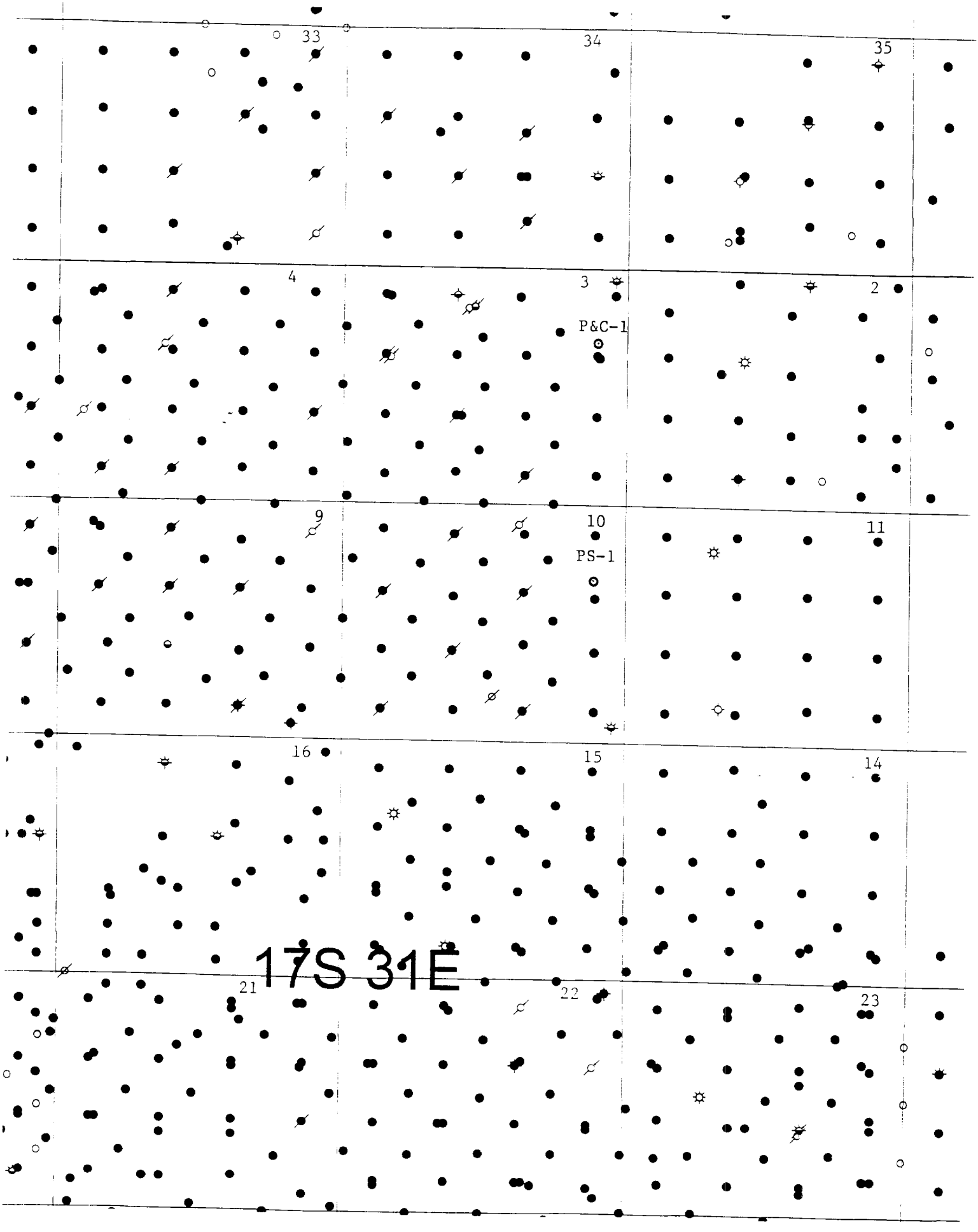
OXY PRALINES & CREAM #1
Located at 1650' FNL and 660' FEL
Section 3, Township 17 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number: 0292AA - KJG #122
Survey Date: 06-02-2000
Scale: 1" = 2000'
Date: 06-05-2000

OXY USA INC.

EXHIBIT C



HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

OXY USA Inc.
OXY Pralines & Cream Federal #1
Eddy County, New Mexico
Lease No. NMLC029426A

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and The Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

1. Well Control Equipment:

   A. Flare Line with electronic igniter or continuous pilot.

   B. Choke manifold with a minimum of one remote choke.

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   D. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head, and flare gun with flares.

2. Protective equipment for essential personnel:

   A. 30-minute SCBA units located in the dog house and at the briefing areas, as indicated on well site diagram.

3. H2S detection and monitoring equipment:

   A. 2-portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 10ppm are reached.

   B. 1-portable SO2 monitor positioned near flare line.

4. Visual warning systems:

   A. Wind direction indicators as shown on well site diagram.

   B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.

5. Mud program:

   A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

   B. A mud-gas separator and an H2S gas buster will be utilized.

6. Metallurgy:

   A. All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

   B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

   A. Radio communication in company vehicles including cellular telephone and/or 2-way radio.

   B. Land line (telephone) communications at field office.

8. Well testing:

A. Drill stem testing will be performed with the minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H2S environment will use the closed chamber method of testing.