/ Form 3160-3 (August 1999)

# UNITED STATEN M. Oil Cons. DIV-Dist. 2 DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT W. Grand Avenue

FORM APPROVED OMB NO. 1004-0136 Expires: November 30, 2000

APPLICATION FOR PERMIT TO DRI	LL OR REENTER W 882	5. Lease Ser NM - 036	
1a. Type of Work X DRILL REEN	YTER		Allotee or Tribe Name
1b. Type of Well Oil Well Gas Well Other	Single Zone Multiple Zon	7. Unit or C	A Agreement Name and No.
2. Name of Operator			
Occidental Permian Limited Partnership 3a. Address	157984 3b. Phone No. (include area co	OXY St	ne and Well No. 35123 ent Federal #1
P.O. Box 50250 Midland, TX 79710-0250	432-685-5717	9. API Well	. 34333
4. Location of Well (Report location clearly and in accordance with any At surface 660 FSL 1400 FWL SESW(N)	State equirements)* RECEIVE	10. Field and	Pool, or Exploratory Malaga Morrow
At proposed prod. zone	SEP - 9 20	05 11. Sec., T., F	L., M., or Blk. and Survey or Are
14. Distance in miles and direction from nearest town or post office*	- OOD-AFTE	Sec 21 12. County or	T24S R28E
•	and and	12. County or	
6 miles south from L  15. Distance from proposed* location to nearest	16. No. of Acres in lease	17. Spacing Unit dec	NM licated to this well
property or lease line, ft.  (Also to nearest drg. unit line, if any)	320		320
18. Distance from proposed location* to nearest well, drilling, completed,	19. Proposed Depth	20. BLM/BIA Bond	No. on file
applied for, on this lease, ft.  N/A	12900 '	S	929128583
21. Elevations (Show whether DF, KDB, RT, GL, etc.	22. Approximate date work will star	t* 23.Estim	ated duration
3027'	10/1/05		30 days
	24. Attachments CARLSE	BAD CONTROLL	ED WATER BASIN
The following, completed in accordance with the requirements of Onshore (	Oil and Gas Order No. 1, shall be attached	to this form:	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan</li> <li>A Surface Use Plan (if the location is on National Forest System Lands SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>			an existing bond on file (see
25. Signuature	Name (Printed/Typed)	and the second of the second of the second of	Date
Title	David Stewart		6/16/05
Sr. Regulatory Analyst	•		
Approved by (Signautre) /s/ Joe G. Lara	Name (Printed/Typed) /s/ Joe G	. Lara	Date SEP - 2 2005
THACTING FIELD MANAGER	Office CARLSBA	D FIELD O	FFICE
Application approval does not warrant or certify that the applicant holds le conduct operations thereon.			
Conditions of approval, if any, are attached.	APPROV	AL FOR 1 Y	TEAR
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a United States any false, fictitious or fraudulent statements or representations	crime for any nerson knowlingly and w	illfully to make to a	ny department or agency of the
*(Instructions on Reverse)		***************************************	

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

79.5

WITNESS: 133/8" Cement Job

OPL Stent Federal #1 660 FSL 1400 FWL SESW(N) SEC 21 T24S R28E Eddy County, NM Federal Lease No. NM-036975

SCHING SECOND

PROPOSED TD:

12900' TVD

BOP PROGRAM:

0-650'

None

650-27001

13-3/8" 3M annular preventer, to be used as divertor only.

2700-12900

11" 5M blind pipe rams with 5M annular preventer and rotating head below 8500'.

CASING:

SEP - 9 2005 Surface: 13-3/8" OD 48# H40 ST&C new casing set at 650' 17-1/2" hole

Intermediate: 9-5/8" OD 36# K55 ST&C new casing from 0-2700'

12-1/4" hole

Production:

7" OD 26# K55-S95 LT&C new casing from 0-10000'

8-3/4" hole 5100'-K55 4900'-S95

Liner:

4-1/2" OD 11.6# HP-110 LT&C casing @ 9600-12900'

6-1/8" hole

CEMENT:

Surface - Circulate cement with 425sx HES Light PP cement with 2% CaCl2 + .25#/sx Flocele followed by 250sx PP cement with 2% CaCl2 + .25#/sx Flocele.

MOD DAGRIJAD MISAU BETAW OF LIO

Intermediate - Circulate cement with 555sx IFC with .25#/sx Flocele followed by 200sx PP cement with 2% CaCl2.

Production - DV Tool @ +/- 5000', cement  $1^{\rm st}$  stage with 460sx IFH cement with .1% HR-7 followed by 200sx PP cement. Cement  $2^{\rm nd}$  stage with 380sx IFH cement with .25#/sx Flocele followed by 200sx PP cement.

Liner - Cement with 325sx Super H cement with .5% HR-344 + .4% CFR-3 + 5#/sx Gilsonite + 1#/sx salt + .2% HR-7

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

MUD:

0-650 Latino G. Land Fresh water/native mud. Lime for pH control (9-10). Paper for seepage. Wt 8.7-9.2 ppg, Vis 32-34 sec

650-27001 A

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.

2700-89001

Fresh water. Lime for pH control(9-9.5). Paper for seepage.

Wt 8.3-8.5 ppg, Vis 28-29 sec

8900-109001

Cut brine. Lime for pH control (10-10-5). Wt 9.6-10.0 ppg, Vis 28-29sec

10900-12900'

Mud up with an Duo Vis/Rio Trol mud system? Wt 9.6-10.0ppg, Vis 32-36sec, WL<10kg

BECEINED

#### State of New Mexico

Rnergy, Minerals and Natural Resources Department

Form C-102

Revised JUNE 10, 2003 Submit to Appropriate District Office

# DISTRICT II 1801 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA PE, NM 87505	WELL LOCATION AND	ACREAGE DEDICATION PLAT	□ AMENDED REPORT
API Number	Pool Code	Pool Name	
30-015-	80920	Undesignated Malaga	Morrow
Property Code	Property Name OPL STENT FED. COM		Well Number
OGRID No. 157984	. Occidental I	ator Name Permian LP	Elevation 3027'

#### Surface Location

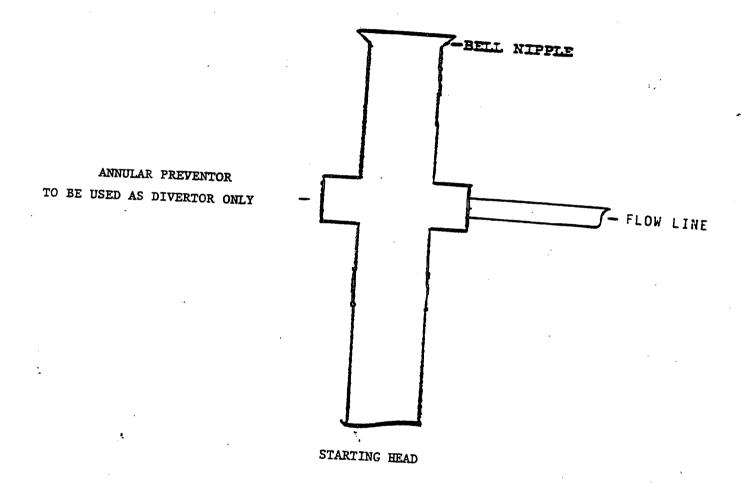
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	21	24-S	28-E	:	660	SOUTH	1400	WEST	EDDY

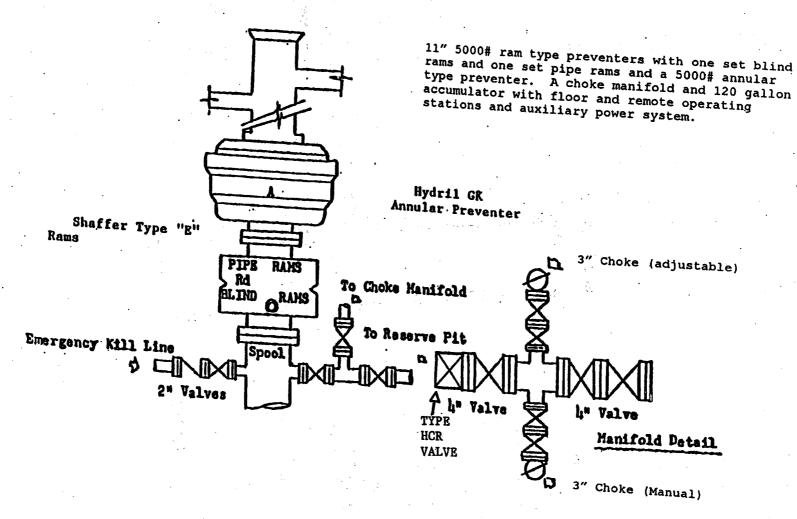
#### Bottom Hole Location If Different From Surface

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	Infili Co	nsolidation (	Code Ore	der No.	L		I	I

## 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

ON A NON STAN	DARD UNIT HAS BEEN APPROVED BY TH	E DIAISION
		OPERATOR CERTIFICATION  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature
GEODETIC C NAD 2  Y=4356 X=57336  LAT. = 32*1 LONG. = 104*0	71.2 N 51.5 E '51.39" N	David Stewart  Printed Name  Sr. Regulatory Analyst  Title  Color  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.  MARCH 10, 2005  Date Surveyed  Pracessional Surveyor  OS. 11.023  Certificate, No. GARY RUSON  12641





Choke Manifold

#### MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Occidental Permian Limited Partnership
OPL Stent Federal #1
Eddy County, New Mexico
Lease No. NM-036975

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. Boone Archaeological Services, LLC 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 "Malaga, 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:

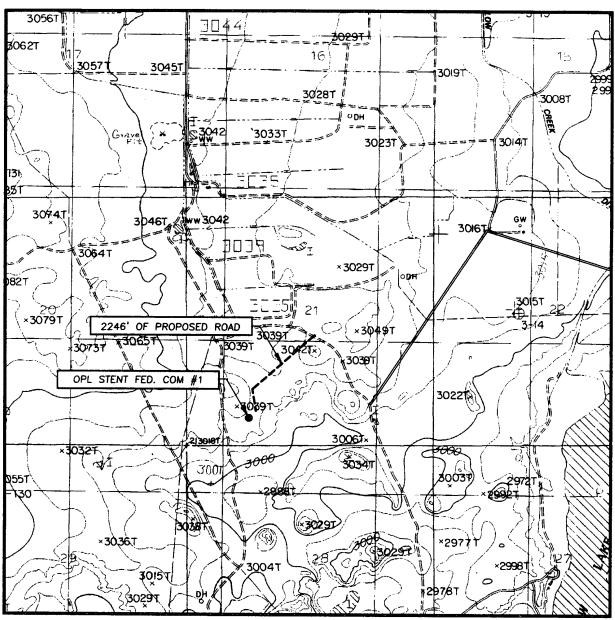
Go north on USH 285 turn left (west) at approximately 0.85 miles past MM 14. Go west-northwest approx. 0.1 miles. Follow bend to the right then to the left. Go west-northwest approx. 0.7 miles to a T intersection. Turn left and go SW approx. 0.85 miles to the New Zipper Fed-1 well pad. Turn right and go approx. 0.35 miles to a proposed road survey. Follow proposed road survey approx. 0.3 miles southwest then south appprox. 0.1 miles to location.

#### 2. Planned Access Road

- A. A new access road will be built. The access road will run approximately 2246' southwest from an existing road to the location. Exhibit B.
- B. Surfacing material: Six inches of caliche and water, compacted and graded.
- C. Maximum Grade: Less than 3%
- D. Turnouts: None needed
- E. Drainage Design: N/A
- F. Culverts: None needed
- G. Cuts and Fills: Leveling the location will require minimal cuts or fills.
- H. Gates or Cattleguards: None required
- 3. Existing wells within a one mile radius of the proposed development well are shown on Exhibit C.

3037.9'  600'  3025.5'  150' NORTH OFFSET JO27.2'  150' SOUTH OFFSET JO30.5.'  ELEV. 3027.3' LAT. =92' 11' 51.93" N LONG. = 104'05' 46.21" W  150' SOUTH OFFSET JO27.0'  3027.0'  3027.0'  3027.0'  3017.0'  DIRECTIONS TO LOCATION  NORTH BOUND ON U.S. HHY. \$285 TURN LEFT (WEST) APPROX. 0.85 MILES FAST MILE MARKER 14, 0.0 WNW APPROX. 0.1 MILES. FOLIOW BEND VERY NEW JEPER FD. \$1' METSECTION IN IRRN LEFT AND GO SIW APPROX. 0.85 MILES TO THE OXY NEW JEPER FD. \$1' MILES TO THE OXY OX NEW JEPER FD. \$1' MILES TO THE OXY OX NEW JEPER FD. \$1' MILES TO THE OXY OX NEW JEPER FD. \$1' MILES TO THE OXY OX OX NEW JEPER FD. \$1' MILES TO THE OXY OX	SECTION 21, TOWNSHIP 24 S	SOUTH, RANG		N.M.P.M., EW MEXICO
150' WEST OPL STENT FED. COM #1 OFFSET 3027.2'  BELEV. 3027.3' LAT.=32*1'5'1.39" N LONG.=104*98'46.21" W  150' SOUTH OFFSET 3027.0'  DIRECTIONS TO LOCATION NORTH BOUND ON LIS. HILY. #285 TURN LEFT (WEST) APPROX. 0.15 MILES FOLLOW BEND TO THE RICHT THEN TO THE LEFT. CO W-NW APPROX. 0.15 MILES FOLLOW BEND TO THE RICHT THEN TO THE LEFT. CO W-NW APPROX. 0.35 MILES TO THE OWN MAPPROX. 0.35 MILES TO THE CONTINUES TO THE RICHT THEN TO THE SET OF THE SOUTH APPROX. 0.35 MILES TO THE CONTINUES TO THE RICHT WELL PLAD. TURN RICHT AND GO APPROX. 0.35 MILES TO THE CONTINUES TO THE SOUTH APPROX. 0.35 MILES TO THE CONTINUES TO	3037.9'	600'	//	3025.5
OFFSET 3030.5'  BLEV. 3027.3'  LAT.=32*11'51.39" N LONG.=104*05'46.21" W  150' SOUTH OFFSET 3027.0'  DIRECTIONS TO LOCATION  NORTH BOUND ON U.S. HWY. #285 TURN LEFT (WEST) APPROX. 0.25 MILES PAST MILE MARKER 14. GO W-NW APPROX. 0.1 MILES. FOLLOW BEND TO THE RIGHT THEN TO THE LEFT. GO W-NW APPROX. 0.7 MILES TO 'T" INTERSECTION. TURN LEFT AND GO APPROX. 0.85 MILES TO THE OXY NEW ZIPPER FED. #1 WELL PAD. TURN RICHT AND GO APPROX. 0.75 MILES TO THE OXY NEW ZIPPER FED. #1 WELL PAD. TURN RICHT AND GO APPROX. 0.75 MILES TO THE OXY OS MILES TO A PROPOSED ROAD SURVEY APPROX. 0.75 MILES TO THE OXY OS MILES TO THE CONTROL OF THE CONTROL OF THE RICH THEN TO THE SOUTH LINE AND COAPPROX. 0.35 MILES TO THE OXY OS MILES TO THE PROPOSED ROAD SURVEY APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  PROVIDEND SURVEYING COMPANY 412K BULL PAGE  SURVEY Date: 0.33/10/55 Sheet 1 of 1 Sheets W.O. Number: 0.511.0232 Dr By: D. LOVE Rev 1:N/A		OFFSET 3027.2'		нот
JOHN WEST SURVEYING COMPANY  ATER DA PROS  JOHN WEST SURVEYING SERVICES  J	OFFSET  3030.5'  ELE LAT.=32	○ V. 3027.3' P11'51.39" N	□ <i>OFFSET</i>	,009
DIRECTIONS TO LOCATION  NORTH BOUND ON U.S. HWY. #285 TURN LEFT (WEST) APPROX. 0.85 MILES PAST MILE MARKER 14. GO W—NW APPROX. 0.1 MILES. FOLLOW BEND TO THE RIGHT THEN TO THE LEFT. GO W—NW APPROX. 0.7 MILES TO "T" INTERSECTION. TURN LEFT AND GO SW APPROX. 0.85 MILES TO THE OXY NEW ZIPPER FED. #1 WELL PAD. TURN RIGHT AND GO APPROX. 0.35 MILES TO A PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  PROVIDING SURVEYING SERVICES SINCE 1946  JOHN WEST SURVEYING COMPANY 412N DUL PASO HOBBS, NM. 82300 (MDBS, NM. 8230)  MOBBS, NM. 82300 (MDBS, NM. 8230)  MOB 383117		O' SOUTH OFFSET	•	
DIRECTIONS TO LOCATION  NORTH BOUND ON U.S. HWY. #285 TURN LEFT (WEST) APPROX. 0.85 MILES PAST MILE MARKER 14. GO W—NW APPROX. 0.1 MILES. FOLLOW BEND TO THE RIGHT THEN TO THE LEFT. GO W—NW APPROX. 0.7 MILES TO "T" INTERSECTION. TURN LEFT AND GO SW APPROX. 0.85 MILES TO THE OXY NEW ZIPPER FED. #1 WELL PAD. TURN RIGHT AND GO APPROX. 0.35 MILES TO A PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  PROVIDING SURVEYING SERVICES SINCE 1946  JOHN WEST SURVEYING COMPANY 412N DUL PASO HOBBS, NM. 8240 (MDB 38.9117)  W.O. Number: 05.11.0232 Dr By: D. LOVE Rev 1:N/A				
NORTH BOUND ON U.S. HWY. #285 TURN LEFT (WEST) APPROX. 0.85 MILES PAST MILE MARKER 14. GO W-NW APPROX. 0.1 MILES. FOLLOW BEND TO THE RIGHT THEN TO THE LEFT. GO W-NW APPROX. 0.7 MILES TO "T" INTERSECTION. TURN LEFT AND GO SW APPROX. 0.85 MILES TO THE OXY NEW ZIPPER FED. #1 WELL PAD. TURN RIGHT AND GO APPROX. 0.35 MILES TO A PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  PROVIDING SURVEYING SERVICES SINCE 1946  JOHN WEST SURVEYING COMPANY 112N. DAL PASO HOBBS, NAM. 8200 HOBBS	3027.7'	600'		3017.0'
NORTH BOUND ON U.S. HWY. #285 TURN LEFT (WEST) APPROX. 0.85 MILES PAST MILE MARKER 14. GO W-NW APPROX. 0.1 MILES. FOLLOW BEND TO THE RIGHT THEN TO THE LEFT. GO W-NW APPROX. 0.7 MILES TO "T" INTERSECTION. TURN LEFT AND GO SW APPROX. 0.85 MILES TO THE OXY NEW ZIPPER FED. #1 WELL PAD. TURN RIGHT AND GO APPROX. 0.35 MILES TO A PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  PROVIDING SURVEYING SERVICES SINCE 1946  JOHN WEST SURVEYING COMPANY 112N. DAL PASO HOBBS, NM. 8240 MOBBS, NM. 824	DIRECTIONS TO LOCATION			
AND GO APPROX. 0.35 MILES TO A PROPOSED ROAD SURVEY APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  OPL STENT FED. COM #1 WELL LOCATED 660 FEET FROM THE SOUTH LINE AND 1400 FEET FROM THE WEST LINE OF SECTION 21, TOWNSHIP 24 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.  Survey Date: 03/10/05 Sheet 1 of 1 Sheets W.O. Number: 05.11.0232 Dr By: D. LOVE Rev 1:N/A	NORTH BOUND ON U.S. HWY. #285 TURN LEFT (WEST) APPROX. 0.85 MILES PAST MILE MARKER 14. GO W-NW APPROX. 0.1 MILES. FOLLOW BEND TO THE RIGHT THEN TO THE LEFT. GO W-NW APPROX. 0.7 MILES TO "T" INTERSECTION. TURN LEFT AND GO SW APPROX. 0.85 MILES TO THE	100 日日日日日		200 Feet
APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  OPL STENT FED. COM #1 WELL LOCATED 660 FEET FROM THE SOUTH LINE AND 1400 FEET FROM THE WEST LINE OF SECTION 21, TOWNSHIP 24 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.  Survey Date: 03/10/05 Sheet 1 of 1 Sheets W.O. Number: 05.11.0232 Dr By: D. LOVE Rev 1:N/A	AND GO APPROX. 0.35 MILES TO A PROPOSED	OXY (	U.S.A. W.T.P.	, LP
412 N. DAL PASO HOBBS, N.M. 88240 W.O. Number: 05.11.0232 Dr By: D. LOVE Rev 1:N/A	APPROX. 0.3 MILES SW THEN SOUTH APPROX. 0.1 MILES TO THIS LOCATION.  PROVIDING SURVEYING SERVICES SINCE 1946	OPL S LOCATED 66 AND 1400 FEET I TOWNSHIP 24	STENT FED. COM #1 WELL SO FEET FROM THE SOUTH FROM THE WEST LINE OF S. SOUTH, RANGE 28 EAST, N	LINE ECTION 21.
(3/5)/3/5/17/	412 N. DAL PASO			
, , , , , , , , , , , , , , , , , , ,				Scale: 1"=100'

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

MALAGA, N.M.

SEC. 21 TWP. 24-S RGE. 28-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FSL & 1400' FWL

ELEVATION 3027'

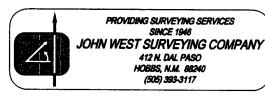
OPERATOR OXY U.S.A. W.T.P., LP

LEASE OPL STENT FED. COM

U.S.G.S. TOPOGRAPHIC MAP

CONTOUR INTERVAL:

MALAGA, N.M. – 10'
SUPPLEMENTAL INTERVALS – 5'





Occidental Permian Limited Partnership PO Box 50250 Midland, TX 79710

Hydrogen Sulfide (H2S) Contingency Plan

For

OPL Stent Fed Com #1 660 FSL, 1400 FWL Sec 21, T24S, R28E Eddy County, NM

And

McVay Drilling Co., Rig No. 8

## **TABLE OF CONTENTS**

<u>ITEM</u>		PAGE
PREFACE		3
LOCATION MAP		4
	NSE ACTIVATION AND GENERAL RESPONSIBILITIES	
SPECIFIC EMERGENC - H2S Release Well Control	Y GUIDANCE	8 10
PUBLIC RELATIONS		13
PHONE CONTACTS - (	OP DOWNHOLE SERVICES GROUP	14
EMERGENCY PERSON	NELL NOTIFICATION NUMBERS	15
PHONE CONTACTS - 0	OP PRODUCTION AND PLANT PERSONNEL	16
PHONE CONTACTS - C	OP HES PERSONNEL	16

#### **PREFACE**

An effective and viable Contingency Plan is intended to provide prior planning and guidance in responding to emergency incidents. The primary considerations in its development are protection of personnel, the public, company and public property, and the environment.

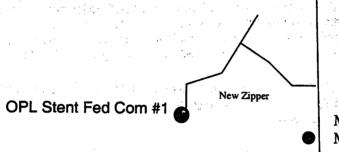
Although the plan addresses varied emergency situations which may occur, it recognizes that flexibility and the use of the organization's knowledge and experience is critical to safe resolution of emergency incidents. Response actions outlined in the plan provide a framework, which may be placed into operation without confusion. These actions should promote quick and decisive actions during the critical initial period and immediately following an emergency. As the response progresses, additional guidelines and procedures may need to be implemented as the situation dictates. In addition, all emergency incidents must be properly reported per the OPL Incident Reporting and Notification Policy, state and federal requirements, etc.

This Contingency Plan is intended for use on OPL Downhole Services Group projects and the operations within their area of responsibility, such as drilling, critical well work, etc.

A copy of the Plan shall be maintained in the Top Dog House, Rig Managers trailer, and Company Representative's trailer if applicable.

North

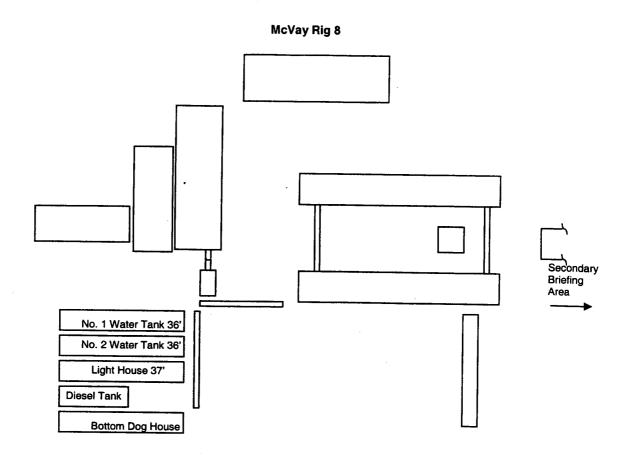
Occidental Permian LP
OPL Stent Fed Com #1
 Y = 435691.2 N
 X = 573361.5 E
 Lat. 32°11'51.39"N
Long. 104°05'46.21"W



Mile Marker 14

U.S. HWY. 285

North bound on US Hightway 285 turn left, west, approx 0.85 miles past mile marker 14. Go west-northwest approx 0.1 miles. Follow bend to the right and then to the left. Go west-north west approx 0.7 miles to T intersection. Turn left and go SW approx 0.85 miles to the OPL New Zipper Fed #1 well pad. Turn right and go approx 0.35 miles SW then south approx 0.1 miles to this location.



Primary Briefing Area

## **EMERGENCY RESPONSE ACTIVATION AND GENERAL RESPONSIBILITIES**

## Activation of the Emergency Action Plan

- A. In the event of any emergency situation, all personnel on location should first ensure that the following items are initiated. After that, they should refer to the appropriate Specific Emergency Guidance sections on pages ten (10) through twelve (12) in this document for further responsibilities:
  - 1. Notify the senior ranking contract representative on site.

2. Notify OPL representative in charge.

3. Notify civil authorities if the OPL Representative can not be contacted and the situation dictates.

4. Perform rescue and first aid as required (without jeopardizing additional personnel).

#### General Responsibilities

#### **OPL Permian Personnel:**

- A. Operations Specialist: The OPL Drilling/Critical Well Servicing Operations Specialist or contract personnel serving in that capacity will serve as Operations Chief Officer for all emergency incidents. The Operations Chief Officer is responsible for:
  - 1. Notification to the Downhole Services Team Leader of the incident occurrence.
  - 2. Notification to the local RMT/PMT leader of the incident occurrence, and the need for the designated local RMT/PMT Incident Commander to act in that capacity for the response effort.
  - 3. Sole control of all tactical activities directed toward reducing the immediate hazard, establishing situational control and restoring the operations to a non-emergency state.
- B. Local RMT/PMT Designated Incident Commander: The OPL local RMT/PMT Designated Incident Commander will serve as the overall Incident Commander for the drilling or critical well servicing emergency incident. The Incident Commander is responsible for:
  - 1. Coordinating with the Downhole Services Team Leader for notification to the OPL Crisis Management team of the incident occurrence.
  - 2. Establishing and managing the overall incident command structure and response from inception through restoration of normal activities in the area.
- C. Downhole Services HES Tech: The Downhole Services HES Tech (or his designate) is responsible for reporting to the incident as soon as reasonably possible, to provide support to the response effort as required by the Operations Chief Officer or the Incident Commander.

Contract Drilling Personnel will immediately report to their assigned stations and perform their duties as outlined in the appropriate Specific Emergency Guidance sections on pages ten (10) through twelve (12) in this document.

and the second of the second of the

Other Contractor Personnel will report to the safe briefing area to assist OPL personnel and civil authorities as requested when it is safe to do so and if they have been adequately trained in their assigned duties.

Civil Authorities (Law Enforcement, Fire, and EMS) will be responsible for:

- 1. Establishing membership in the Unified Incident Command.
- 2. As directed by the Incident Commander and the Unified Command, control site access, re-route traffic, and provide escort services for response personnel.
- 3. Perform all fire control activities in coordination with the Unified Command.
- 4. Initiate public evacuation plans as instructed by the Incident Commander.
- 5. Perform rescue or recovery activities with coordination from the Unified Command.
- 6. Provide medical assistance as dictated by the situation at hand.

## **H2S RELEASE**

The following procedures and responsibilities will be implemented on activation of the H2S siren and lights.

## All Personnel:

1. On alarm, don escape unit (if available) and report to upwind briefing area.

## Rig Manager/Tool Pusher:

- 1. Check that all personnel are accounted for and their condition.
- 2. Administer or arrange for first aid treatment, and /or call EMTs as needed.
- 3. Identify two people best suited to secure well and perform rescue, and instruct them to don SCBA.
- 4. Notify Contractor management and OPL Representative.
- 5. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.

## Two People Responsible For Shut-in and Rescue:

- 1. Don SCBA and acquire tools to secure well and perform rescue, i.e., wrenches, retrieval ropes, etc.
- 2. Utilize the buddy system to secure well and perform rescue(s).
- 3. Return to the briefing area and stand by for further instructions.

#### All Other Personnel:

1. Isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

#### **OPL** Representative:

- 1. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.
- 2. Notify Operation Specialists or Team Leader and RMT Leader or Local Incident Commander, and Police, Fire Department, or other local emergency services as required.

#### **Training**

There will be an initial training session 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 (Contingency 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.

#### Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police shall be the Incident Command of any major release.

#### Characteristics of H2S and SO2

Onaracien	31103 OF 112C	and OO2		. 7	and the second
Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air = 1	2 ppm	N/A	1000 ppm

#### **Contacting Authorities**

OPL Permian personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as; type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. This response plan must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER).

#### **WELL CONTROL**

The following procedures will be implemented when a loss of primary control is indicated. Indicators of loss of primary control are flow from the well, an increase in pit volume, or when the drilling fluid used to fill the hole on trips is less than the calculated pipe displacement volume. The emergency signal for well control procedures will be a single long blast of the rig air horn.

## Kick While Drilling - Procedures And Responsibilities

#### Driller:

- 1. Stop the rotary and hoist the kelly above the rotary table.
- 2. Stop the mud pump(s).
- 3. Check for flow.
- 4. If flowing, sound the alarm immediately.
- 5. Ensure that all crew members fill their responsibilities to secure the well.
- 6. Record drill pipe and casing shut-in pressures and pit volume increase and begin kill sheet.

#### Derrickman:

- 1. Go to BOP/choke manifold area.
- 2. Open choke line valve on BOP.
- 3. Signal to Floorman #1 that the choke line is open.
- 4. Close chokes after annular or pipe rams are closed.
- 5. Record shut-in casing pressure and pit volume increase.
- 6. Report readings and observations to Driller.
- 7. Verify actual mud weight in suction pit and report to Driller.
- 8. Be readily available as required for additional tasks.

#### Floorman # 1:

- 1. Go to accumulator control station and await signal from Derrickman.
- 2. Close annular preventer and HCR on signal (if available, if not then close pipe rams).
- 3. Record accumulator pressures and check for leaks in the BOP or accumulator system.
- 4. Report to Driller, and be readily available as required for additional tasks.

#### Floorman # 2:

- 1. Start water on motor exhausts.
- 2. Notify Contractor Tool Pusher or Rig Manager of well control situation.
- 3. Check location for ignition sources and extinguish or turn off, and stop any welding in progress.
- 4. Report to Driller, and be readily available as required for additional tasks.

#### Floorman # 3:

1. Stand-by with Driller, and be readily available as required for additional tasks.

医骨髓性 医克里氏管皮膜膜炎性后皮膜炎

#### Tool Pusher/Rig Manager:

- 1. Notify OPL Representative and report to rig floor.
- 2. Review and verify all pertinent information.
- 3. Communicate information to OPL Representative, and confer on an action plan.
- 4. Finalize well control worksheets, calculations and preparatory work for action plan.
- 5. Initiate and ensure the action plan is carried out.
- 6. Communicate any changes in well or site conditions, or any indications that the action plan needs to be revised to the OPL representative.

#### **OPL** Representative:

 Notify Operation Specialists or Team Leader and RMT Leader or Local Incident Commander, and Police, Fire Department, or other local emergency services as required.

## Kick While Tripping - Procedures and Responsibilities

#### Driller:

- 1. Sound the alarm immediately when pipe displacement volume is less than 75% of calculated.
- 2. Position the upper tool joint just above rotary table and set slips.
- 3. Check for flow.
- 4. Ensure that all crew members fill their responsibilities to secure the well.
- 5. Record drill pipe and casing shut-in pressures and pit volume increase, and begin kill sheets.

## <u>Derrickman:</u> (same as while drilling)

#### Floor Man # 1:

- 1. Install full opening valve (with help from Floorman #2) in top drill string connection.
- 2. Tighten valve with make up tongs.
- 3. Go to accumulator control station and await signal from Derrickman.
- 4. Close annular preventer and HCR valve on signal (if available, if not then close pipe rams).
- 5. Record accumulator pressures and check for leaks in the BOP and accumulator system.
- 6. Report to Driller, and be readily available as required for additional tasks.

#### Floor Man # 2:

1. Assist installing full opening valve in drill string.

- 2. Position back-up tongs for valve make-up.
- 3. Start water on motor exhausts.
- 4. Notify Contractor Tool Pusher or Rig Manager of well control situation.
- 5. Check location for ignition sources and extinguish or turn off, and stop any welding in progress.
- 6. Report to Driller, and be readily available as required for additional tasks.

Floorman # 3, Rig Manager/Tool Pusher, and OPL Representative: (same as while drilling)

#### **PUBLIC RELATIONS**

OPL recognizes that the news media have a legitimate interest in incidents at OPL facilities that could affect the public. It is to the company's benefit to cooperate with the news media when incidents occur because these media are our best liaison with the public.

Our objective is to see that all reports of any emergency are factual and represent the company's position fairly and accurately. Cooperation with news media representatives is the most reliable guarantee that this objective will be met.

All contract and OPL employees are instructed NOT to make any statement to the media concerning the emergency incident. If a media representative contacts any employee, they should refer them to the designated Emergency Command Center where they should contact the Incident Commander or his designated relief for any information concerning the incident.

#### OPL PERMIAN DOWNHOLE SERVICES GROUP

and the second s	LOCATION	OFFICE	HOME	CELL	PAGER
Manager Operations	Support	在15 (15) 在165 在1		the second section of	
Hardesty, Steve	Midland	432-685-5880	432/694-6441	713-560-8095	Salt acts to Bulletin to Antiboty &
Team Leader					
Pennington, Randy	Midland	432-685-5684	432/689-7642	432-556-0207	713-312-8186
			Toledo Bend =	318-590-2349	
Operations Specialis	is		The second of th		
Fleming, Joe	Midland	432-685-5858	432/699-0875	432-425-6075	432-498-3281
Ray, Fred	Midland	432-685-5683	432/362-2857	432-661-3893	432-499-3432
HES Tech	tuje sa tra	ger de la company	2803		
Thompson, Don	Midland	432-685-5719	432/684-3900	432-556-1505	

## **Emergency Notification Numbers**

Pub	lic Authorities	
New Mexico State Police	Artesia	505/746-2704
New Mexico State Police	Carlsbad	505/885-3137
New Mexico State Police	Hobbs	505/392-5588
Eddy County Sheriff's Office	Artesia	505/746-2704
Eddy County Sheriff's Office	Carlsbad	505/887-7551
Lea County Sheriff's Office	Hobbs	505/393-2515
Local Emergency Planning Center	Eddy County	505/887-9511
Local Emergency Planning Center	Lea County	505/397-9231
New Mexico Oil & Gas Commission	Artesia	505/748-1283
New Mexico Oil & Gas Commission	Hobbs	505/393-6161
NM Emergency Response Center	Hobbs	505/827-9222

, Emerg	gency Services	
Fire Fighting, Rescue, Ambulance, Police	Artesia	911
Fire Fighting, Rescue, Ambulance, Police	Carlsbad	911
Fire Fighting, Rescue, Ambulance, Police	Hobbs	911
Flight For Life	Lubbock	806/743-9911
Aerocare	Lubbock	806/7478923
Med Flight Air Ambulance	Albuquerque	505/842-4433

Other Er	mergency Services	
Boots and Coots	The state of the s	1/800-256-9688
Cudd Pressure Control	Midland	432/699-0139
B.J. Services	Artesia	505/746-3569
Halliburton	Artesia	505/746-2757

# OPL Permian Production and Plant Personnel OPL Permian Crisis Team Hotline Notification (713) 935-7210

•		OFFICE	FAX	CELL	PAGE
Asset Management-Operations Areas				Section 1	
OPL Permian General Manager: Tom Menges	Houston	(281) 552-1147	(281) 552-1484	(713) 560-8038	
South Permian Asset: Matt Hyde	Midland	(432) 685-5802	(432) 685-5930	(432) 556-5016	
RMT/PMT Leaders: South Permian Asset				Per Selection Control	and the second of
John Nicholas	Midland	(432) 685-5600			
			1004		
				Service of the servic	
PERSON	EOCATION ***	OFFICE	FAX	CELL	PAGEF
PERSON Production Coordinators: S. Permian Asse	The state of the s	OFFICE	FAX	CELL	PAGEI

PERSON	anne see	LOCATION	OFFICE	FAX	CELL	PAGER
HES Coordinators & Area of R	esponsibility	Gert Burnstein	17 17 19 19 19			HAGEN
Frontier: Ricky Tyler		Midlemd	((4(3)2)) 6385-57007	((4(32)) 685-5742	((432)) \$\$8-5790	
HES Techs & Area of Respons	sibility -	and the second second	gen son to		Control	<u>u                                      </u>
Hobbs RMT: Steve Bishop	**************************************	Hobbs	(505) 397-8251	(505) 397-8204	(505) 390-4784	(877) 339-1954- 1118#
Frontier-New Mexico: Rick Kerby		Hobbs	(505) 393-2174	(505) 393-2671	(505) 390-8639	(505) 370-6527

## Occidental Permian Limited Partnership

P.O. Box 50250, Midland, TX 79710-0250

June 16, 2005 2005 JUN 17 AM 9: 30

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

BURBALLOF LAND LIGHT. ROSMELL OFFICE

Re: Application for Permit to Drill
Occidental Permian Limited Partnership
OPL Stent Federal #1
Eddy County, New Mexico
Lease No. NM-036975

#### Gentlemen:

Occidental Permian Limited Partnership respectfully requests permission to drill our OPL Stent Federal #1 located 660 FSL and 1400 FWL of Section 21, T24S, R28E, Eddy County, New Mexico, Federal Lease No. NM-036975. The proposed well will be drilled to a TD of approximately 12900' (TVD). The location and work area has been staked. It is approximately 6 miles south of Loving, New Mexico.

为个种种的种种的基础的产品的现代。

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:
  - Form 3160.3, Application for Permit to Drill.
  - Form C-102 Location and Acreage Dedication Plat certified by Gary G. Eidson, Registered Land Surveyor No. 12641 in the State of New Mexico, dated March 17, 2005.
  - The elevation of the unprepared ground is 3027 feet above sea level.
  - 4. The geologic name of the surface formation is Permian Rustler.
  - Rotary drilling equipment will be utilized to drill the well to TD 12900' (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 12900' TVD.
  - Estimated tops of important geologic markers.

 Wolfcamp
 9450' TVD

 Strawn
 11500' TVD

 Atoka
 11750' TVD

 Morrow
 12350' TVD

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

Primary Objective: Morrow 12350' TVD

Secondary Objective: Atoka 11750' TVD

#### APD - OPL Stent Federal #1 Page 2

9. The proposed casing program is as follows:

Surface: 13-3/8" 48# H40 ST&C new casing set at 650'

Intermediate: 9-5/8" 36# K55 ST&C new casing from 0-2700'

Production: 7" 17# K55/S95 LT&C new casing from 0-10000'

Liner: 4-1/2" 11.6# P110 LT&C new casing from 9600-12900'

## 10. Casing setting depth and cementing program:

A. 13-3/8" surface casing set at 650' in 17-1/2" hole. Circulate cement with 425sx HES light PP w/ 2% CaCl<sub>2</sub> + .25#/sx Flocele followed by 250sx PP w/ 2% CaCl<sub>2</sub> + .25#/sx Flocele.

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% CáCl<sub>2</sub>.

B. 9-5/8" intermediate casing set at 2700' in 12-1/4" hole. Circulate cement with 555sx IFC w/ .25#/sx Flocele followed by 200sx PP w/ 2% CaCl<sub>2</sub>.

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<sub>2</sub>.

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

C. 7" production casing set at 10000' with DV Tool at 5000' in 8-3/4" hole. Cement 1<sup>st</sup> stage with 460sx IFH w/ .1% HR-7 followed by 200sx PP. Cement 2<sup>nd</sup> stage with 380sx IFH w/ .25#/sx Flocele followed by 200sx PP cement.

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

D. 4-1/2" production liner set @ 9600-12900' in 6-1/8" hole. Cement with 325sx Super H cement with .5% HR-344 + .4% CFR-3 + 5#/sx Gilsonite + 1#/sx salt + .2% HR-7.

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

### 11. Pressure Control Equipment

0-650' None

650-2700' 13-3/8" 3M annular preventer, to be used as divertor only. Exhibit A

2700-12900'

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.

#### APD - OPL Stent Federal #1 Page 3

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:

0-650' Fresh water/native mud. Lime for pH control (9-10). Paper for seepage. Wt.8.7-9.2 ppg, vis 32-34 sec.

650-2700' 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.

2700-8900' Fresh water. Lime for pH control (9-9.5). Paper for seepage.
Wt. 8.3-8.5 ppg, vis 28-29 sec.

8900-10900' Cut brine. Lime for pH control (10-10.5). Wt. 9.6-10.0 ppg, vis 28-29 sec.

10900-12900' 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:

- A recording pit level indicator.
- A pit volume totalizer.
- A flowline sensor.

# APD - OPL Stent Federal #1 Page 4

- 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. H2S Contingency Plan is attached per NMOCD requirements. 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 October 1, 2005. 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

Sr. Regulatory Analyst Occidental Permian LP

DRS/drs

Attachments

#### CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

OCCIDENTAL PERMIAN LIMITED PARTNERSHIP

Well Name & No.

1 – OXY STENT FEDERAL

Location:

660' FSL & 1400' FWL - SEC 21 - T24S - R28E - EDDY COUNTY

Lease: NM-036975

#### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

#### A. Spudding

- B. Cementing casing: 13-3/8 inch 9-5/8 inch 7 inch 4-1/2 inch liner
- C. BOP tests
- 2 Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
- 4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

#### **II. CASING:**

- 1. The <u>13-3/8</u> inch surface casing shall be set at <u>650 feet</u>, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
- 2. The minimum required fill of cement behind the <u>9-5/8</u> inch salt protection casing is <u>circulate cement to</u> the surface.
- 3. The minimum required fill of cement behind the 7 inch production casing is cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.
- 4. The minimum required fill of cement behind the <u>4-1/2</u> inch liner is <u>cement shall extend upward to the top of the liner at approximately 9600 feet.</u>

#### **III. PRESSURE CONTROL:**

- 1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13-3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the surface and intermediate casing shall be <u>2000</u> psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the <u>9-5/8</u> inch casing shall be <u>5000</u> psi.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.
- BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

#### **IV. DRILLING MUD:**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** Formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- 1. Recording pit level indicator to indicate volume gains and losses.
- 2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- 3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.