

380 X 340

OCD Artesia

0776 UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTV 000R  
ENE

3300 FT

715-01-710

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


## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		<b>R-111-POTASH</b>	
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		SEP 28 2009	
2. Name of Operator OXY USA Inc.		16696	
3a. Address P.O. Box 50250 Midland, TX 79710-0250		3b. Phone No (include area code) 432-685-5717	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 635 FNL 765 FEL NENE(A) At proposed prod. zone 660 FNL 400 FWL NWNW(D)		5. Lease Serial No NMN: 86024	
14. Distance in miles and direction from nearest town or post office* 6 miles northeast from Loving, NM		6. If Indian, Allottee or Tribe Name	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg unit line, if any) 400'		7. Unit or CA Agreement Name and No.	
16. No. of Acres in lease 640		8. Lease Name and Well No Cypress 33 Federal #2H	
17. Spacing Unit dedicated to this well 160		9. API Well No. 30-015-37308	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 1812'		10. Field and Pool, or Exploratory Cedar Canyon Bone Spring	
19. Proposed Depth 11700' M 7800' V		11. Sec., T., R., M., or Blk. and Survey or Area Sec 33 T23S R29E	
20. BLM/BIA Bond No. on file ES0136		12. County or Parish Eddy	
21. Elevations (Show whether DF, KDB, RT, GL, etc) 2996.3' GL		13. State NM	
22. Approximate date work will start* 8/1/09		23. Estimated duration 45	

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |                                                                                                                                                 |                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1. Well plat certified by a registered surveyor                                                                                                 | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)     |
| 2. A Drilling Plan                                                                                                                              | 5. Operator certification.                                                                         |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) David Stewart	Date 7/9/09
------------------------------------------------------------------------------------------------------	---------------------------------------	----------------

Title

Sr. Regulatory Analyst

Filed to correct Lease &amp; Well Number.

Approved by (Signature) /s/ Jesse J. Juen	Name (Printed/Typed)	Date SEP 24 2009
----------------------------------------------	----------------------	---------------------

Title

STATE DIRECTOR

Office

NM STATE OFFICE

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, are attached

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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

\*(Instructions on Reverse)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR  
CONDITIONS OF APPROVALBureau of Land Management  
RECEIVEDJUL 13 2009  
Approval Subject to General Requirements  
& Special Stipulations Attached  
Carlsbad Field Office  
Carlsbad, NM

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease- 4 Copies  
Fee Lease- 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-37308</b>	Pool Code <b>11520</b>	Pool Name <b>Cedar Canyon Bone Spring</b>
Property Code <b>305859</b>	Property Name <b>CYPRESS 33 FED.</b>	Well Number <b>2H</b>
OGRID No. <b>16696</b>	Operator Name <b>OXY USA Inc.</b>	Elevation <b>2996.3'</b>

Surface Location

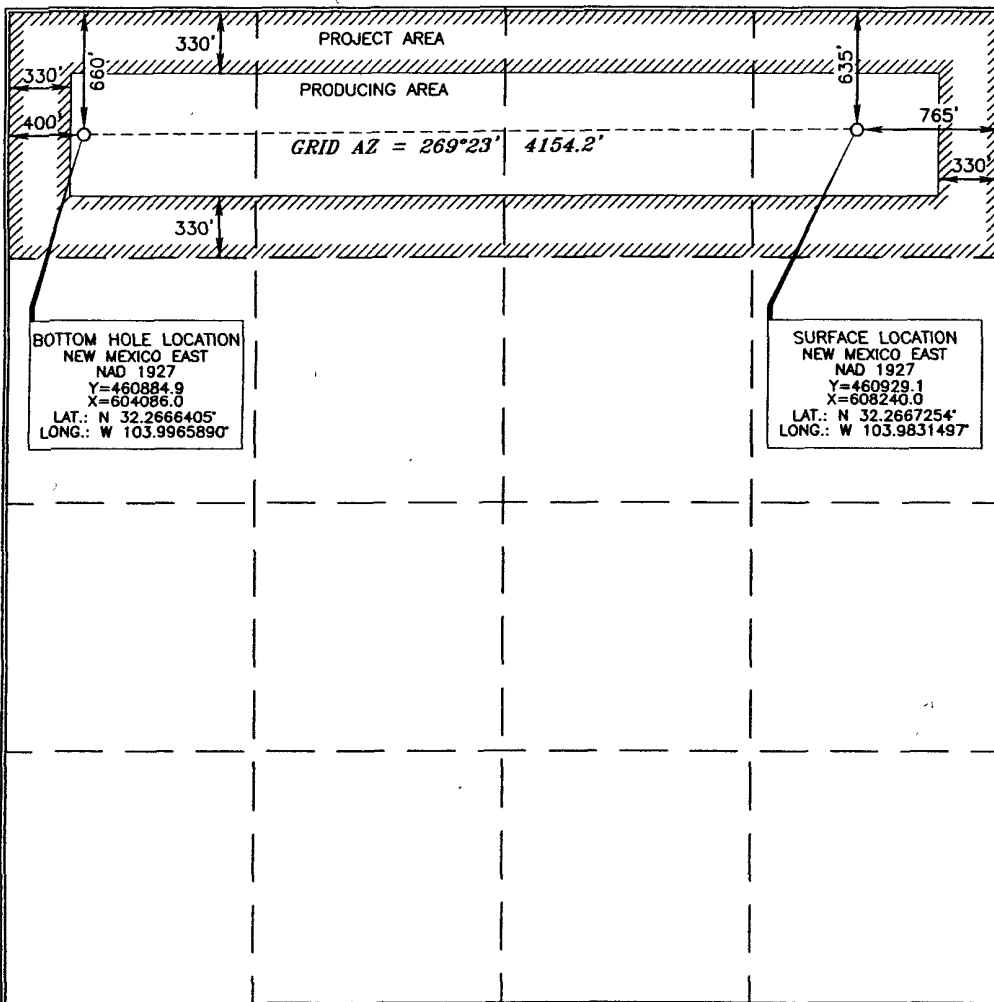
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>A</b>	<b>33</b>	<b>23 SOUTH</b>	<b>29 EAST, N.M.P.M.</b>		<b>635'</b>	<b>NORTH</b>	<b>765'</b>	<b>EAST</b>	<b>EDDY</b>

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
<b>D</b>	<b>33</b>	<b>23 SOUTH</b>	<b>29 EAST, N.M.P.M.</b>		<b>660'</b>	<b>NORTH</b>	<b>400'</b>	<b>WEST</b>	<b>EDDY</b>

Dedicated Acres <b>160</b>	Joint or Infill <b>N</b>	Consolidation Code	Order No.
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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 that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*David Stewart* 6/22/09  
Signature Date

David Stewart - Sr. Asst. Analyst  
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

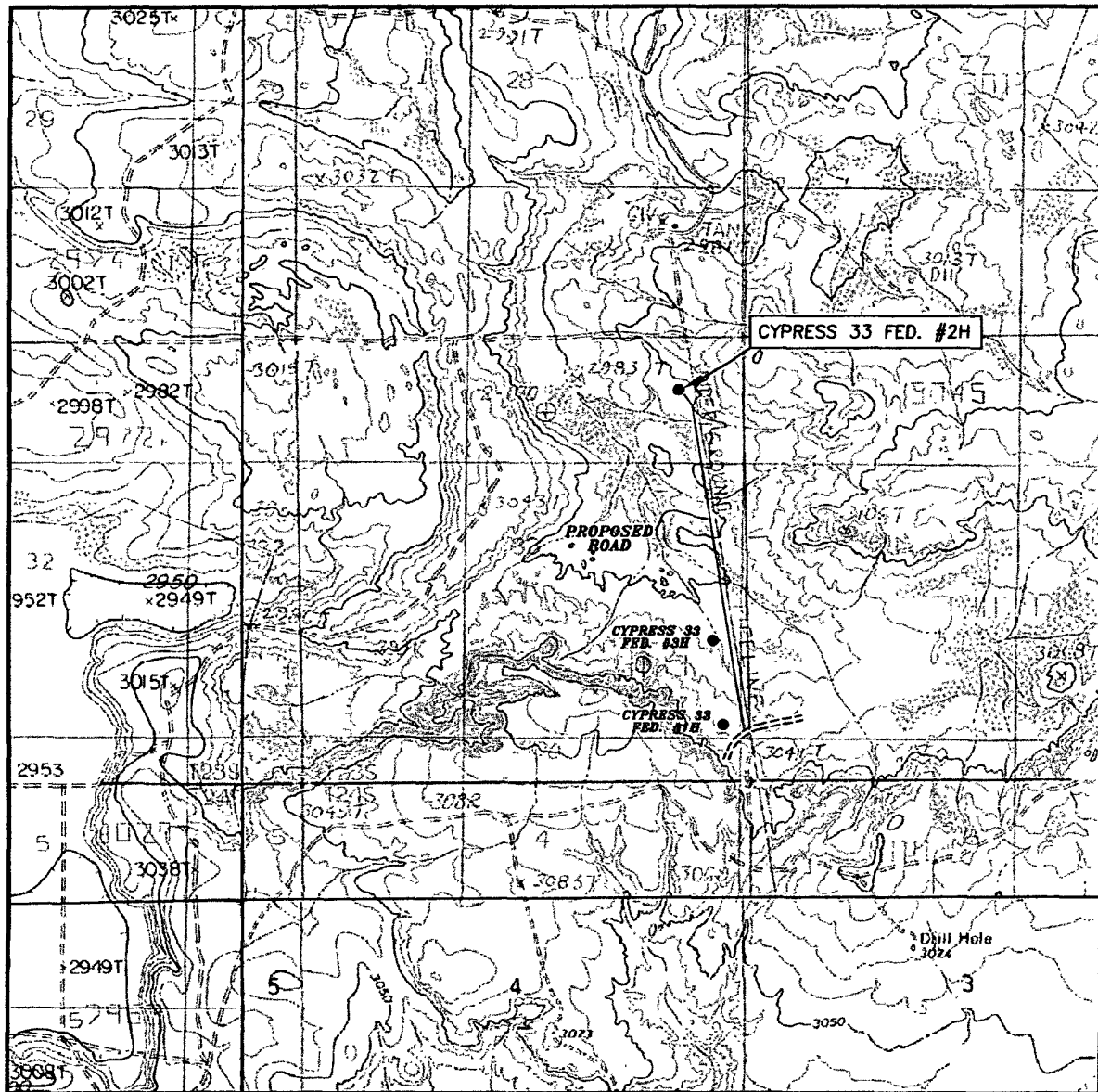
OCTOBER 31, 2008  
Date of Survey

Signature and Seal of Professional Surveyor

*Terry J. Aird* 10/29/2008  
Certificate Number 15079

WO# 080825WL-a (KA)

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 33 TWP. 23-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 635' FNL & 765' FEL

ELEVATION 2996.3'

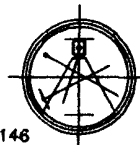
OPERATOR OXY USA WTP LP

LEASE CYPRESS 33 FED. #2H

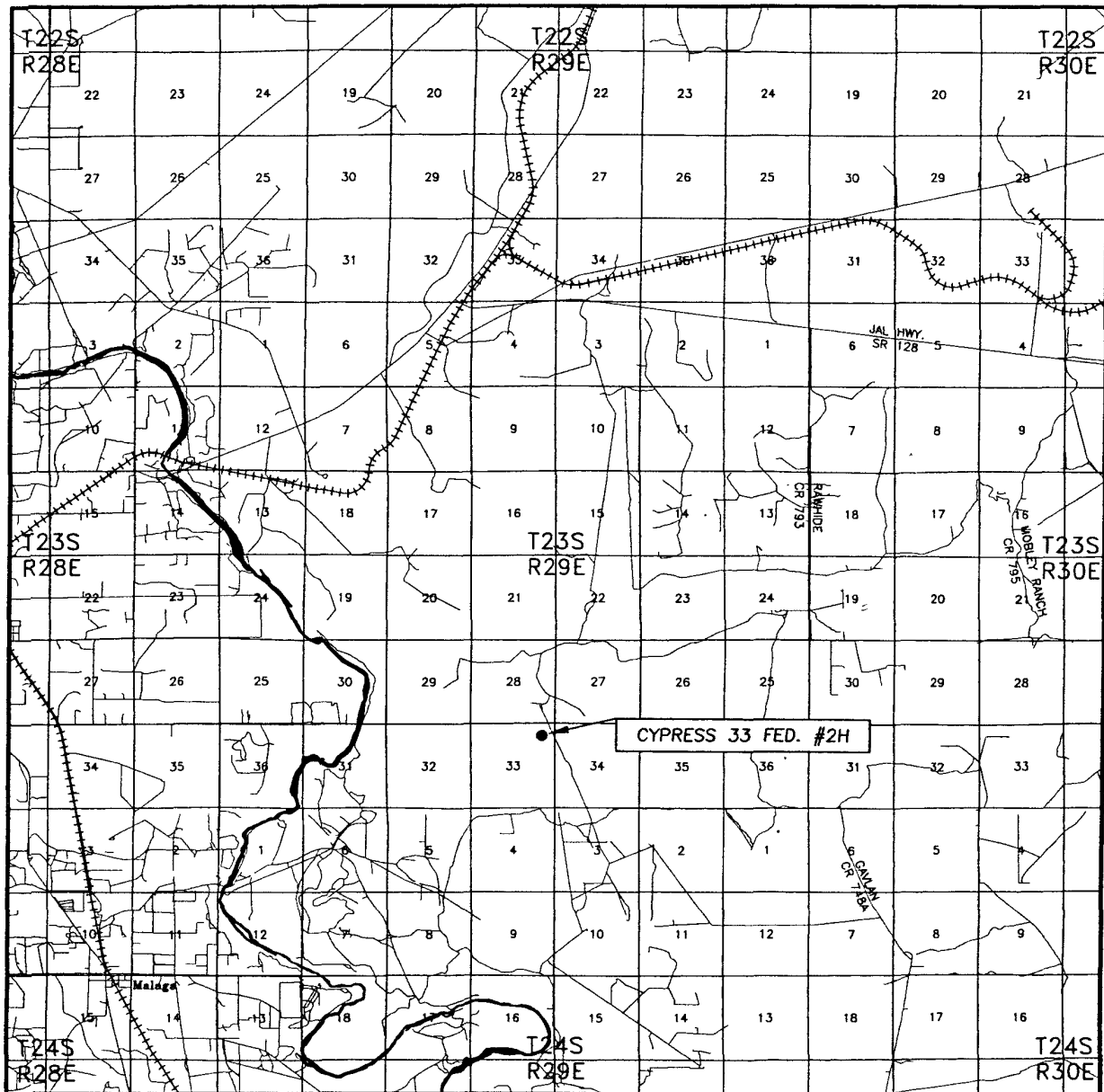
U.S.G.S. TOPOGRAPHIC MAP  
REMUDA BASIN, N.M.

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR  
HOBBS, NEW MEXICO - 575-393-9146



# VICINITY MAP

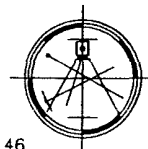


SEC. 33 TWP. 23-S RGE. 29-E  
 SURVEY N.M.P.M.  
 COUNTY EDDY  
 DESCRIPTION 635' FNL & 765' FEL  
 ELEVATION 2996.3'  
 OPERATOR OXY USA WTP LP  
 LEASE CYPRESS 33 FED. #2H

SCALE: 1" = 2 MILES

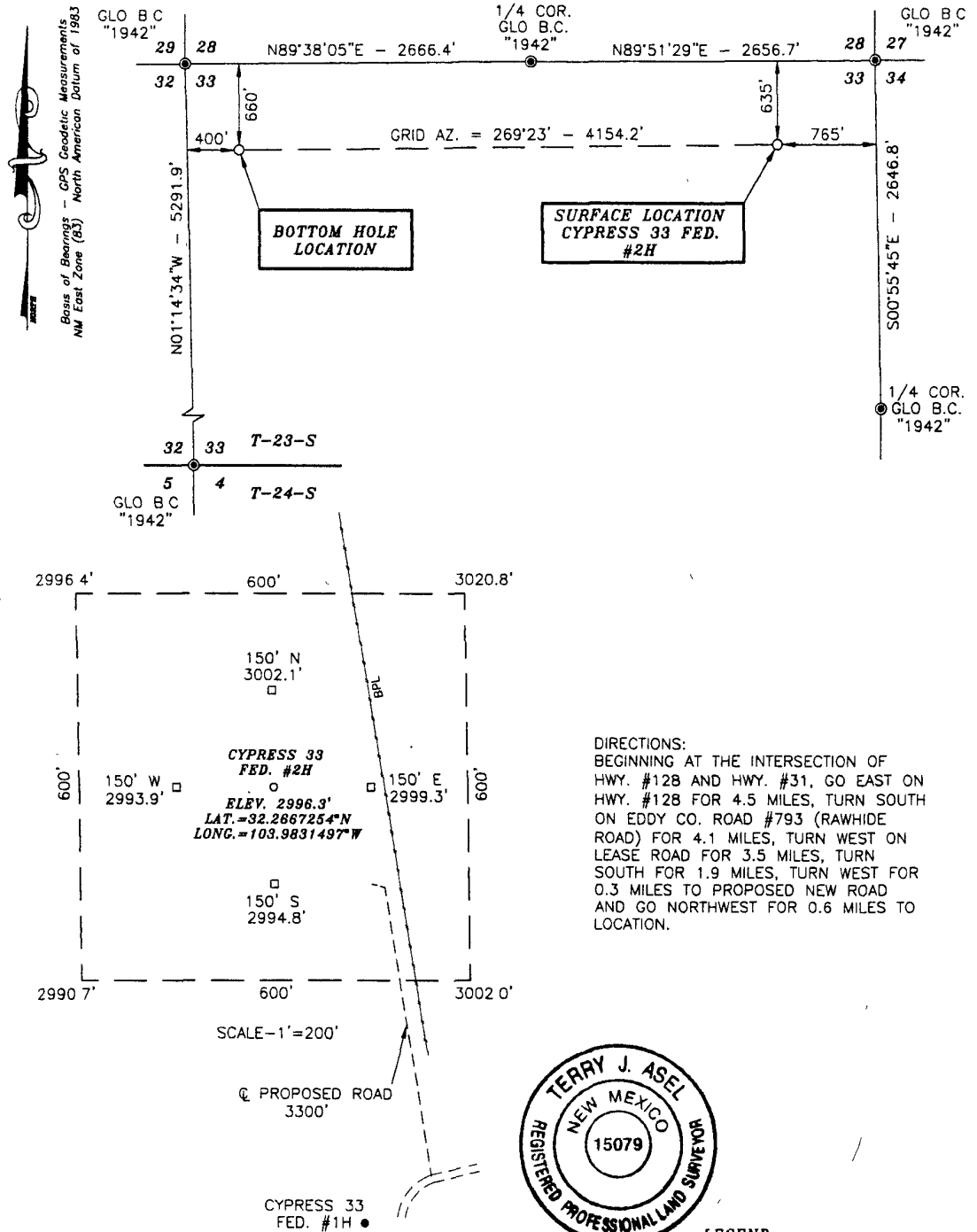
Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR  
 HOBBS, NEW MEXICO - 575-393-9146



DIRECTIONS BEGINNING AT THE INTERSECTION OF HWY. #128 AND HWY. #31, GO EAST ON HWY. #128 FOR 4.5 MILES, TURN SOUTH ON EDDY CO. ROAD #793 (RAWHIDE ROAD) FOR 4.1 MILES, TURN WEST ON LEASE ROAD FOR 3.5 MILES, TURN SOUTH FOR 1.9 MILES, TURN WEST FOR 0.3 MILES TO PROPOSED NEW ROAD AND GO NORTHWEST FOR 0.6 MILES TO LOCATION.

SECTION 33, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.,  
EDDY COUNTY  
NEW MEXICO

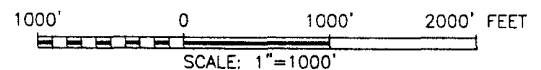


DIRECTIONS:  
BEGINNING AT THE INTERSECTION OF  
HWY. #128 AND HWY. #31, GO EAST  
ON HWY. #128 FOR 4.5 MILES, TURN SOUTH  
ON EDDY CO. ROAD #793 (RAWHIDE  
ROAD) FOR 4.1 MILES, TURN WEST ON  
LEASE ROAD FOR 3.5 MILES, TURN  
SOUTH FOR 1.9 MILES, TURN WEST FOR  
0.3 MILES TO PROPOSED NEW ROAD  
AND GO NORTHWEST FOR 0.6 MILES TO  
LOCATION.



LEGEND

● - DENOTES FOUND MONUMENT AS NOTED

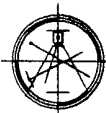


**SURVEYORS CERTIFICATE**

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR  
NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM  
RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS  
TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND  
BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR  
SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW  
MEXICO STATE BOARD OF REGISTRATION FOR  
PROFESSIONAL ENGINEERS AND SURVEYORS.

*Terry J. Asel* 10/29/2008  
Terry J. Asel N.M.R.P.S. No. 15079

Asel Surveying

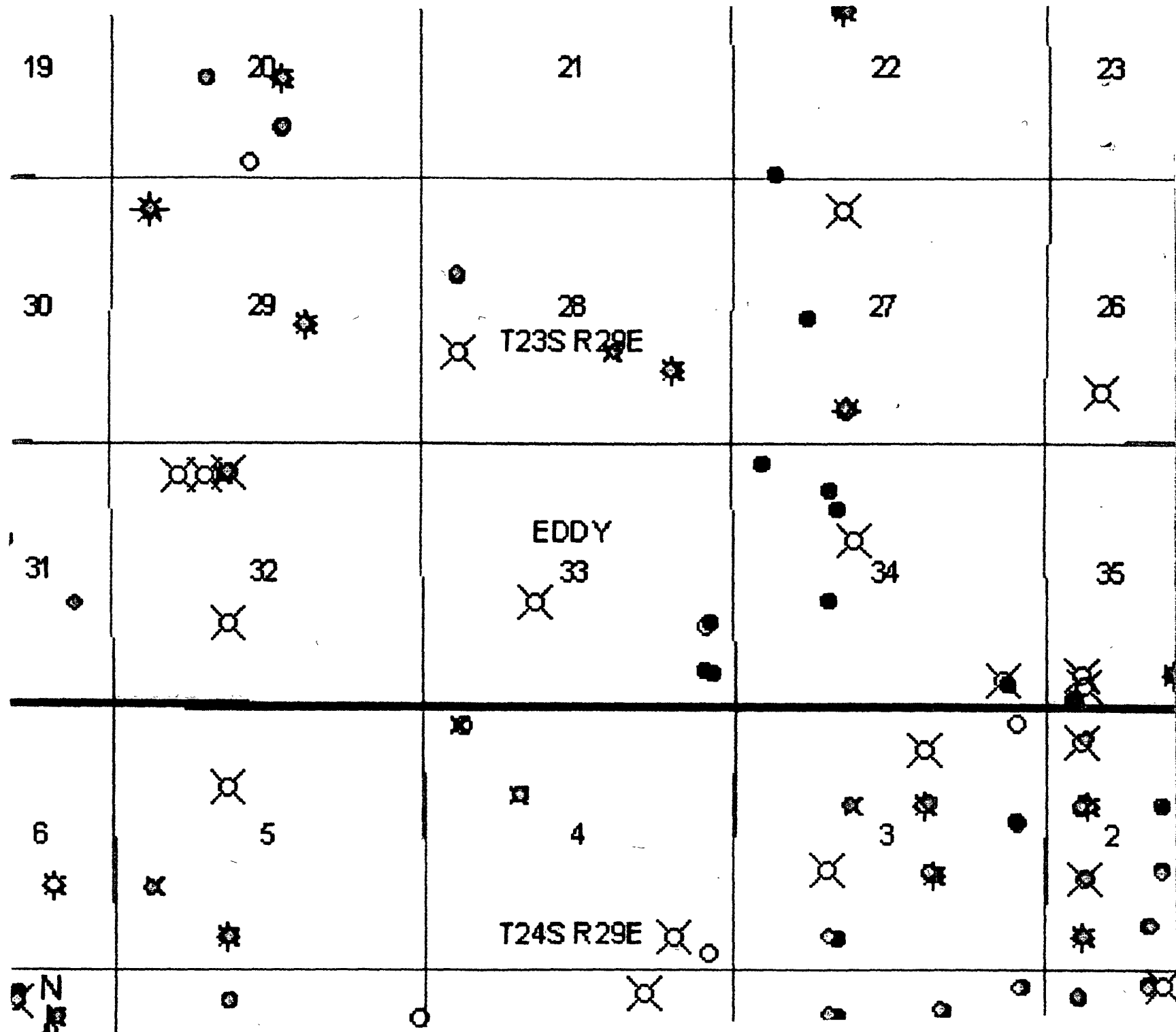


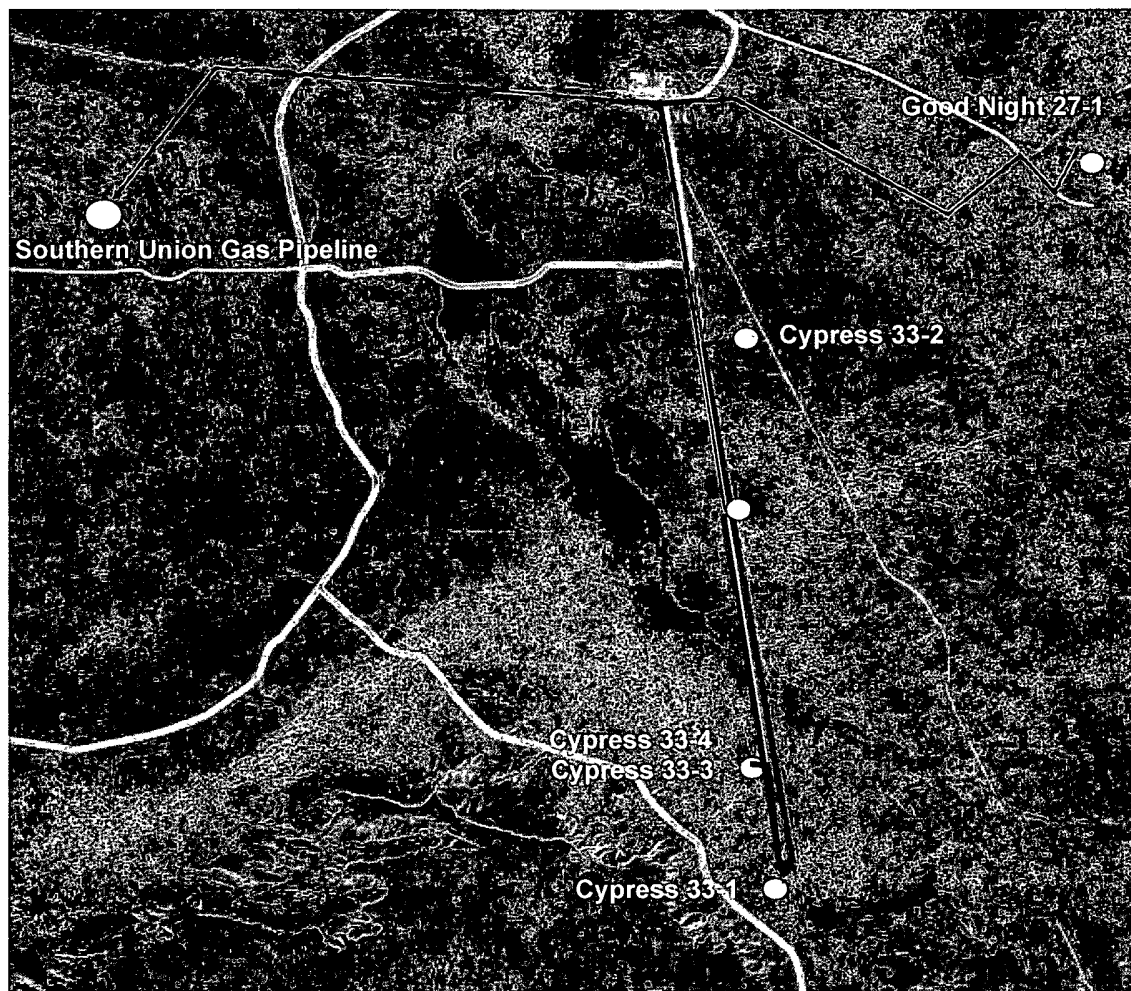
P.O. BOX 393 - 310 W. TAYLOR  
HOBBS, NEW MEXICO - 575-393-9146

**OXY USA WTP LP**

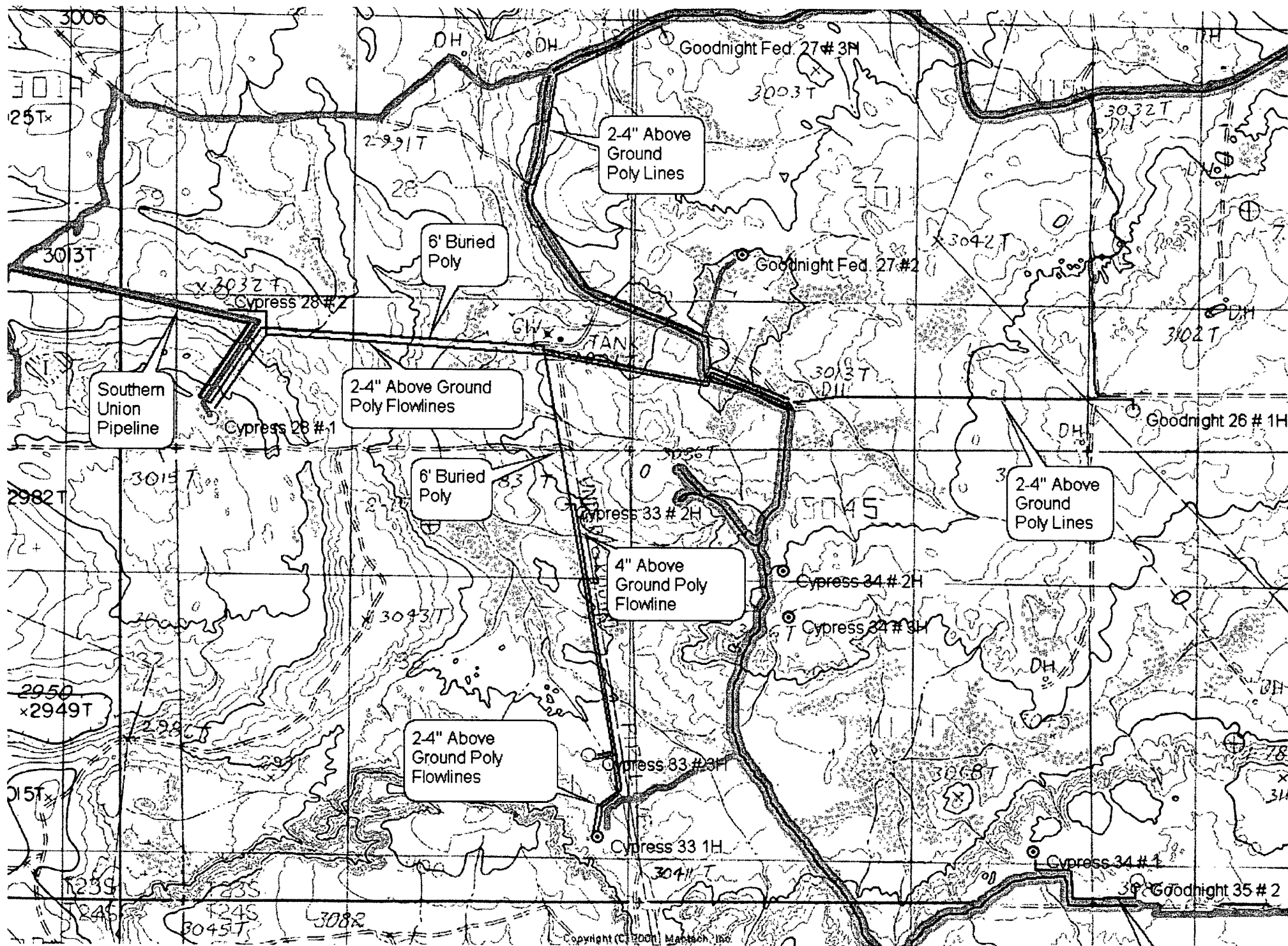
CYPRESS 33 FED. #2H LOCATED AT  
635' FNL & 765' FEL IN SECTION 33,  
TOWNSHIP 23 SOUTH, RANGE 29 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 10/21/08	Sheet 1 of 1 Sheets
W.O. Number: 080825WL-a	Drawn By: KA Rev:
Date: 10/22/08	080825WL-a Scale: 1"=1000'





— Production Flowline      — Gas Pipeline





## DRILLING PROGRAM

Operator Name/Number: OXY USA Inc. 16696  
Lease Name/Number: Cypress 33 Federal #2H 305859 Federal Lease No. NMNM19848  
Pool Name/Number: Cedar Canyon Bone Spring 11520  
Surface Location: 635 FNL 765 FEL NENE(A) Sec 33 T23S R29E  
Bottom Hole Location: 660 FNL 400 FWL NWNW(D) Sec 33 T23E R29E

Proposed TD: 7800' TVD 11700' TMD Elevation: 2996.3' GR  
SL - Lat: 32.2667254 Long: 103.9831497 X=608240.0 Y=460929.1 NAD - 1927  
BH - Lat: 32.2666405 Long: 103.9965890 X=604086.0 Y=460884.9 NAD - 1927

### 1. Geologic Name of Surface Formation:

a. Permian

### 2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

Geological Marker	Depth	Type
a. Upper Permian Sand	170'	Water
b. Top Salt	550'	---
c. Bottom Salt	2796'	---
d. Delaware	3011'	Oil
e. Cherry Canyon	3955'	Oil
f. Brushy Canyon	5135'	Oil
g. Bone Springs	6745'	Oil

### 3. Casing Program:

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	550'	13-3/8"	48#	STC	H40	New	3.57	1.7	2.45
	See COA								
12-1/4"	3050'	9-5/8"	47#	BTC	L80	New	7.78	1.8	4.85
	See COA								
8-1/2"	11700'M	5-1/2"	17#	LTC	N80	New	1.56	1.87	1.63
	DVT-5000'								
	DVT/ECP-3125'								

### 4. Cement Program

- a. 13-3/8" Surface Circulate cement to Surface w/ 570sx PP w/ 4% Bentonite + .25#/sx Poly-E-Flake + 2% CaCl<sub>2</sub>, 13.5 ppg 1.75 yield

If cement is not circulated, the BLM will be notified, a temperature survey will be run and will be immediately followed by top jobs as necessary to circulate cement to surface.

- b. 9-5/8" Intermediate Circulate cement to surface w/ 770sx HES light PP w/ 5% Salt + .25#/sx Poly-E-Flake + 5#/sx Gilsonite, 12.4ppg 2.12 yield followed by 200sx PP w/ 1% CaCl<sub>2</sub>, 14.8ppg 1.34 yield.

Intermediate -- Contingency

In the event that air pockets are encountered the following alternate cement design will be utilized. Circulate cement to surface w/DV & ECP tool @ +/-600'.

Stage 1: Lead: 620sx Light PP w/ 5% Salt + .25#/sx Pol-E-Flake + 5#/sx Gilsonite  
 Gilsonite 12.4ppg 2.12 yield  
 Tail 200sx PP w/ 1% CaCl<sub>2</sub> @ 14.8ppg 1.33 yield  
 Stage 2: Lead: 200sx Light PP w/ 5% Salt + .25#/sx Pol-E-Flake + 5#/sx Gilsonite @  
 12.4ppg 2.12 yield

c. 5-1/2" Production Cement 1st stage w/ 2150sx Super H w/ .5% LAP-1 + .4% CFR-3 + .25#/sx D-AIR 3000 +  
 .3% HR-601, 13.2ppg 1.59 yield - 100% Excess  
 Cement 2nd stage w/ 450sx IFC w/ .5% LAP-1 + .25#/sx D-AIR 1 + .125#/sx Pol-E-Flake  
 11.7ppg 2.61 yield followed by 100sx PP w/ 1% CaCl<sub>2</sub> 14.8ppg 1.34 yield - 200% Excess  
 Cement 3rd stage w/ 310sx IFC w/ .5% LAP-1 + .25#/sx D-AIR 3000 + .125#/sx Pol-E-Flake  
 11.7ppg 2.61 yield followed by 100sx PP w/ 1% CaCl<sub>2</sub> 14.8ppg 1.34 yield - 25% Excess  
 Estimated TOC @ Surface.

The above cement volumes could be revised pending the caliper measurement.

##### 5. Pressure Control Equipment:

Surface 0-550'

None

Production 2950-10600'

13-5/8" 10M two ram stack w/ 5M annular preventor, 10M Choke Manifold

All BOP's and associated equipment will be tested <sup>see COA</sup> to 1200psi with the rig pump before drilling out the 13-3/8" casing shoe. Prior to drilling out the 9-5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

Pipe Rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily driller's log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having a 5000 psi WP rating. OXY requests that the entire system be tested as a 5000psi WP rating.

Request variance to connect BOP outlet to the choke manifold a flex line that is manufactured by Contitech Rubber Industrial KFT. It is a 3" ID X 35' flexible hose rated to 10000psi working pressure. It has been tested to 15000psi and is built to API Spec 16C. Once the flex line is installed, it will be tied down with safety clamps, certification attached.

##### 6. Proposed Mud Circulation System

Depth	Mud Wt. ppg	Visc sec	Fluid Loss	Type System
0-550'	8.4-8.9	32-34	NC	Fresh Water/MI Gel Spud Mud
550-3050'	9.8-10.0	28-29	NC	Brine Water
3050-7300'	8.8-9.0	28-29	NC	Fresh Water
7300'-TD	9.0-9.8	32-36	10-15	Duo Vis/Poly Pac R

The necessary mud products for weight additional and fluid loss control will be on location at all times.

##### 7. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached.

#### 8. Logging, Coring and Testing Program:

- a. Drill stem tests are not anticipated but if done will be based on geological sample shows.
- b. The open hole logging program will consist of LWD Gamma Ray from 6800' to 8300'. ← see COA
- c. No coring program is planned but if done will be sidewall rotary cores.
- d. No mudloggers are currently programmed for this well.

#### 9. Potential Hazards:

No abnormal pressures, temperatures or H<sub>2</sub>S gas are expected. The highest anticipated pressure gradient would be .53 psi/ft or 4120psi. If H<sub>2</sub>S is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No.6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

#### 10. Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 45 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.



## **OXY Permian**

Eddy County, NM  
Cypress 33 Fed.  
Well #2H  
OH

Plan: Plan #1

## **Global X&Y Report**

29 May, 2009

**PATHFINDER®**



Project: Eddy County, NM  
 Site: Cypress 33 Fed.  
 Well: Well #2H  
 Wellbore: OH  
 Plan: Plan #1 (Well #2H/OH)



Azimuths to Grid North  
 True North: -0.19°  
 Magnetic North: 7.82°  
 Magnetic Field  
 Strength: 48831.0snT  
 Dip Angle: 60.22°  
 Date: 5/29/2009  
 Model: IGRF200510



#### WELL DETAILS: Well #2H

Ground Elevation: 2996.30  
 RKB Elevation: RKB to MSL @ 3020.30ft (Flex 3)  
 Rig Name: Flex 3

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	460929.10	608240.00	32° 16' 0.21189 N	103° 58' 59.33824 W	

PROJECT DETAILS: Eddy County, NM  
 Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: New Mexico East 3001  
 Magnetic Model: IGRF200510

System Datum: Mean Sea Level  
 Local North: Grid

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	7152.04	0.00	0.00	7152.04	0.00	0.00	0.00	0.00	0.00	
3	8052.04	90.00	269.39	7725.00	-6.10	-572.92	10.00	269.39	572.96	
4	11633.32	90.00	269.39	7725.00	-44.20	-4154.00	0.00	0.00	4154.24	BHL Cypress 33

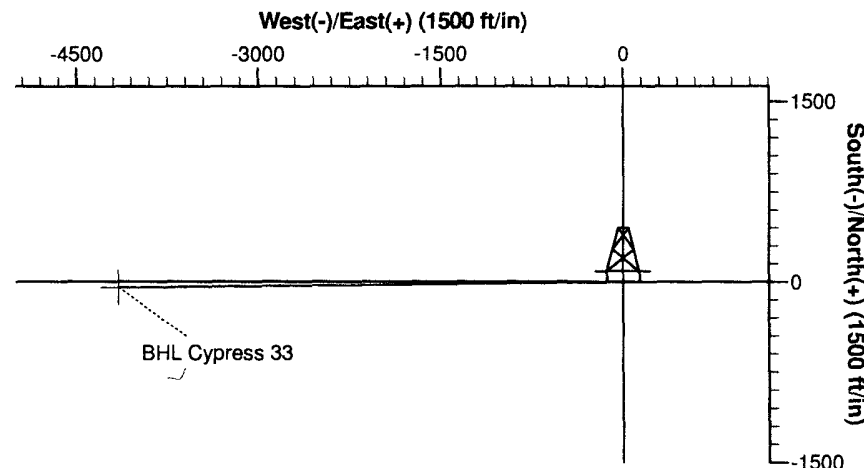
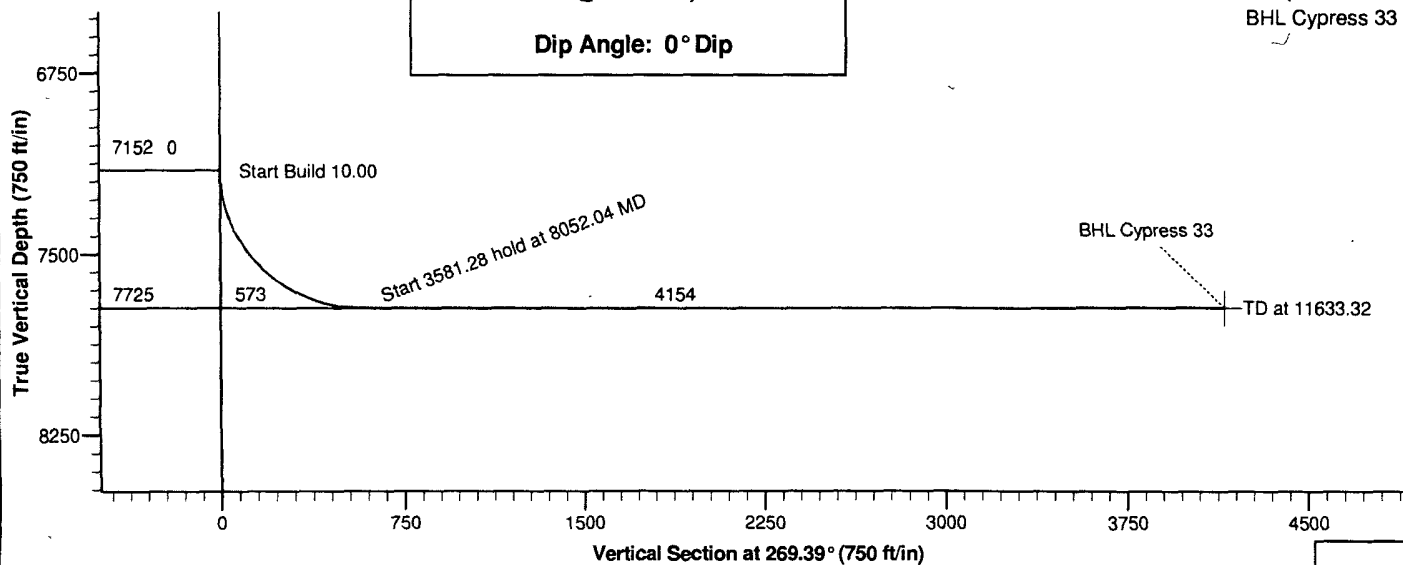
#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BHL Cypress 33	7725.00	-44.20	-4154.00	460884.90	604086.00	Point

#### TARGET CENTERLINE

TVD @ 0' VS: 7,725'

Dip Angle: 0° Dip



Plan: Plan #1 (Well #2H/OH)  
 Created By: Kurt Otto Date: 6:21, May 29 2009



PathFinder Energy Services  
Global X&Y Report



Company:	OXY Permian	Local Co-ordinate Reference:	Well Well #2H
Project:	Eddy County, NM	TVD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Site:	Cypress 33 Fed.	MD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Well:	Well #2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Landmark Network DB

Project	Eddy County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Cypress 33 Fed.			
Site Position:		Northing:		Latitude:	
From:	Map		460,929.10 ft		32° 16' 0.21189 N
Position Uncertainty:		Easting:		Longitude:	
	0.00 ft		608,240.00 ft		103° 58' 59.33824 W
		Slot Radius:		Grid Convergence:	
			"		0.19 °

Well		Well #2H				
Well Position	+N/-S	0.00 ft	Northing:	460,929.10 ft	Latitude:	32° 16' 0.21189 N
	+E/-W	0.00 ft	Easting:	608,240.00 ft	Longitude:	103° 58' 59.33824 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	2,996.30 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	5/29/2009	8.01	60.22	48,831

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	269.39

Survey Tool Program		Date 5/29/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	11,633.32	Plan #1 (OH)	MWD	MWD - Standard

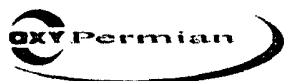


PathFinder Energy Services  
Global X&Y Report



Company:	OXY Permian	Local Co-ordinate Reference:	Well Well #2H
Project:	Eddy County, NM	TVD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Site:	Cypress 33 Fed.	MD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Well:	Well #2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Landmark Network DB

Planned Survey									
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	V. Sec (ft)	Northing (ft)	Easting (ft)	DLeg (°/100ft)	
7,152.04	0.00	0 00	7,152.04	-4,131.74	0.00	460,929.10	608,240.00	0.00	
7,200.00	4.80	269.39	7,199.94	-4,179.64	2.01	460,929.08	608,237.99	10.00	
7,250.00	9.80	269.39	7,249.52	-4,229.22	8.35	460,929.01	608,231.65	10.00	
7,300.00	14.80	269.39	7,298.36	-4,278.06	19.00	460,928.90	608,221.00	10.00	
7,350.00	19.80	269.39	7,346.09	-4,325.79	33.86	460,928.74	608,206.14	10.00	
7,400.00	24.80	269.39	7,392.33	-4,372.03	52.82	460,928.54	608,187.18	10.00	
7,450.00	29.80	269.39	7,436.75	-4,416.45	75.74	460,928.29	608,164.26	10.00	
7,500.00	34.80	269.39	7,479.00	-4,458.70	102.45	460,928.01	608,137.56	10.00	
7,550.00	39.80	269.39	7,518.77	-4,498.47	132.74	460,927.69	608,107.27	10.00	
7,600.00	44.80	269.39	7,555.74	-4,535.44	166.37	460,927.33	608,073.64	10.00	
7,650.00	49.80	269.39	7,589.64	-4,569.34	203.11	460,926.94	608,036.91	10.00	
7,700.00	54.80	269.39	7,620.21	-4,599.91	242.65	460,926.52	607,997.36	10.00	
7,750.00	59.80	269.39	7,647.21	-4,626.91	284.71	460,926.07	607,955.30	10.00	
7,800.00	64.80	269.39	7,670.45	-4,650.15	328.97	460,925.60	607,911.05	10.00	
7,850.00	69.80	269.39	7,689.74	-4,669.44	375.08	460,925.11	607,864.94	10.00	
7,900.00	74.80	269.39	7,704.94	-4,684.64	422.69	460,924.60	607,817.33	10.00	
7,950.00	79.80	269.39	7,715.94	-4,695.64	471.45	460,924.08	607,768.57	10.00	
8,000.00	84.80	269.39	7,722.64	-4,702.34	520.99	460,923.56	607,719.04	10.00	
8,052.04	90.00	269.39	7,725.00	-4,704.70	572.96	460,923.00	607,667.08	10.00	
8,100.00	90.00	269.39	7,725.00	-4,704.70	620.92	460,922.49	607,619.12	0.00	
8,200.00	90.00	269.39	7,725.00	-4,704.70	720.92	460,921.43	607,519.13	0.00	
8,300.00	90.00	269.39	7,725.00	-4,704.70	820.92	460,920.37	607,419.13	0.00	
8,400.00	90.00	269.39	7,725.00	-4,704.70	920.92	460,919.30	607,319.14	0.00	
8,500.00	90.00	269.39	7,725.00	-4,704.70	1,020.92	460,918.24	607,219.14	0.00	
8,600.00	90.00	269.39	7,725.00	-4,704.70	1,120.92	460,917.17	607,119.15	0.00	
8,700.00	90.00	269.39	7,725.00	-4,704.70	1,220.92	460,916.11	607,019.15	0.00	
8,800.00	90.00	269.39	7,725.00	-4,704.70	1,320.92	460,915.05	606,919.16	0.00	



PathFinder Energy Services  
Global X&Y Report



Company:	OXY Permian	Local Co-ordinate Reference:	Well Well #2H
Project:	Eddy County, NM	TVD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Site:	Cypress 33 Fed.	MD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Well:	Well #2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Landmark Network DB

Planned Survey								
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	V. Sec (ft)	Northing (ft)	Easting (ft)	DLeg (°/100ft)
8,900.00	90.00	269.39	7,725.00	-4,704.70	1,420.92	460,913.98	606,819.17	0.00
9,000.00	90.00	269.39	7,725.00	-4,704.70	1,520.92	460,912.92	606,719.17	0.00
9,100.00	90.00	269.39	7,725.00	-4,704.70	1,620.92	460,911.85	606,619.18	0.00
9,200.00	90.00	269.39	7,725.00	-4,704.70	1,720.92	460,910.79	606,519.18	0.00
9,300.00	90.00	269.39	7,725.00	-4,704.70	1,820.92	460,909.73	606,419.19	0.00
9,400.00	90.00	269.39	7,725.00	-4,704.70	1,920.92	460,908.66	606,319.19	0.00
9,500.00	90.00	269.39	7,725.00	-4,704.70	2,020.92	460,907.60	606,219.20	0.00
9,600.00	90.00	269.39	7,725.00	-4,704.70	2,120.92	460,906.53	606,119.20	0.00
9,700.00	90.00	269.39	7,725.00	-4,704.70	2,220.92	460,905.47	606,019.21	0.00
9,800.00	90.00	269.39	7,725.00	-4,704.70	2,320.92	460,904.41	605,919.22	0.00
9,900.00	90.00	269.39	7,725.00	-4,704.70	2,420.92	460,903.34	605,819.22	0.00
10,000.00	90.00	269.39	7,725.00	-4,704.70	2,520.92	460,902.28	605,719.23	0.00
10,100.00	90.00	269.39	7,725.00	-4,704.70	2,620.92	460,901.21	605,619.23	0.00
10,200.00	90.00	269.39	7,725.00	-4,704.70	2,720.92	460,900.15	605,519.24	0.00
10,300.00	90.00	269.39	7,725.00	-4,704.70	2,820.92	460,899.09	605,419.24	0.00
10,400.00	90.00	269.39	7,725.00	-4,704.70	2,920.92	460,898.02	605,319.25	0.00
10,500.00	90.00	269.39	7,725.00	-4,704.70	3,020.92	460,896.96	605,219.26	0.00
10,600.00	90.00	269.39	7,725.00	-4,704.70	3,120.92	460,895.89	605,119.26	0.00
10,700.00	90.00	269.39	7,725.00	-4,704.70	3,220.92	460,894.83	605,019.27	0.00
10,800.00	90.00	269.39	7,725.00	-4,704.70	3,320.92	460,893.77	604,919.27	0.00
10,900.00	90.00	269.39	7,725.00	-4,704.70	3,420.92	460,892.70	604,819.28	0.00
11,000.00	90.00	269.39	7,725.00	-4,704.70	3,520.92	460,891.64	604,719.28	0.00
11,100.00	90.00	269.39	7,725.00	-4,704.70	3,620.92	460,890.57	604,619.29	0.00
11,200.00	90.00	269.39	7,725.00	-4,704.70	3,720.92	460,889.51	604,519.30	0.00
11,300.00	90.00	269.39	7,725.00	-4,704.70	3,820.92	460,888.45	604,419.30	0.00
11,400.00	90.00	269.39	7,725.00	-4,704.70	3,920.92	460,887.38	604,319.31	0.00
11,500.00	90.00	269.39	7,725.00	-4,704.70	4,020.92	460,886.32	604,219.31	0.00





PathFinder Energy Services  
Global X&Y Report



Company:	OXY Permian	Local Co-ordinate Reference:	Well Well #2H
Project:	Eddy County, NM	TVD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Site:	Cypress 33 Fed.	MD Reference:	RKB to MSL @ 3020.30ft (Flex 3)
Well:	Well #2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Landmark Network DB

Planned Survey									
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	V. Sec (ft)	Northing (ft)	Easting (ft)	DLeg (°/100ft)	
11,600.00	90.00	269.39	7,725.00	-4,704.70	4,120.92	460,885.25	604,119.32	0.00	
11,633.32	90.00	269.39	7,725.00	-4,704.70	4,154.24	460,884.90	604,086.00	0.00	

Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude Longitude
BHL Cypress 33	- hit/miss target	0.00	0.00	7,725.00	-44.20	-4,154.00	460,884.90	604,086.00	32° 15' 59.90604 N 03° 59' 47.72039 W
- plan hits target center	- Shape								
- Point									

Checked By: _____	Approved By: _____	Date: _____
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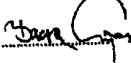
## CERTIFICATE OF CONFORMITY

Supplier : CONTITECH RUBBER INDUSTRIAL KFT.  
Equipment: 6 pos. Choke and Kill Hose with installed couplings  
Type : 3" x 10,67 m W.P.: 10000 psi  
Supplier File Number : 412536  
Date of Shipment : April 2008  
Customer : Phoenix Beattie Co.  
Customer P.O. : 002491  
Referenced Standards  
/ Codes / Specifications : API Spec 16 C  
Serial No.: 52754,52755,52776,52777,52778,52782

### STATEMENT OF CONFORMITY

We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

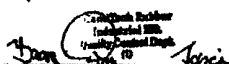
COUNTRY OF ORIGIN HUNGARY/EU

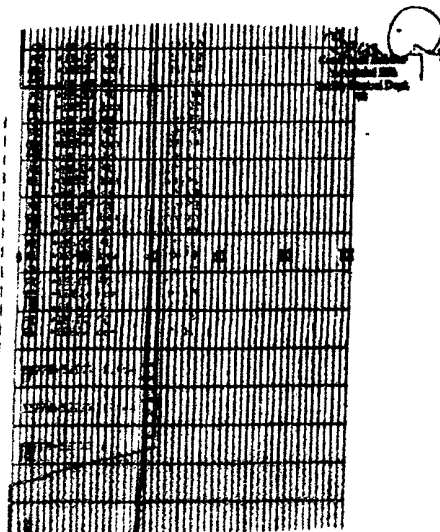
Signed :   
Position: G.C. Manager  
Date: 04. April 2008

PHOENIX Beattie									
Material Identification Certificate									
PA No	008330	Client	HELMERICH & PAYNE INT'L DRILLING	Client Ref	370-388-001	Page	1		
Part No	Description	Material Desc	Material Spec	Qty	W.O. No	Batch No	Test Cert No	Bin No	Draw No
000000-00-00	1" 1/2" 100' 100' 100' 100' 100' 100'			1	0000	000000		0000	
0000-0000	LIFTING & HOIST SYSTEMS TO			1	0000	000000		0000	
0000-0000	SHOCK CLAMP 1.00	CHROMIUM		1	0000	0000		0000	
0000-0000	SHOCK CLAMP 1.00	CHROMIUM		1	0000	0000		0000	

We hereby certify that these goods have been inspected by our Quality Management System, and to the best of our knowledge are found to conform to relevant industry standards within the requirements of the purchase order as issued to Phoenix Beattie Corporation.



<b>QUALITY CONTROL INSPECTION AND TEST CERTIFICATE</b>		CERT. NO: 748	
PURCHASER: Phoenix Baffle Co.		P.O. NO: 002491	
CONTITECH ORDER NO: 412538	HOSE TYPE: 3" ID	Choice and K&H Hose	
HOSE SERIAL NO: 52777	NOMINAL / ACTUAL LENGTH: 10,67 m		
W.P. 68,66 MPa 10000 psi	T.P. 103,4 MPa 12000 psi	Deviation: 50 - min.	
Pressure test with water at ambient temperature  See attachment. (1 page)			
↑ 10 mm = 10 MPa → 10 mm = 25 MPa			
<b>COMPLIANCE</b>			
Type	Serial NO	Quality	Heat NO
3" coupling with 4 1/16" Flange end	917 913	API 4130 API 4130	T7088A 26984
<b>INFOCHIP INSTALLED</b>		API Spec 16 C Temperature rate: "B"	
All metal parts are stainless steel			
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PROBLEMS TESTED AS ABOVE WITH SATISFACTORY RESULT.			
Date:	Inspector:	Quality Control:	
04. April 2008		Continental Rubber Inspected with Quality Control Dept. 	



### Delivery Note

Customer Order Number	378-369-001	Delivery Note Number	003678	Page	1
Customer / Invoice Address HELMERICH & PAYNE INT'L DRILLING CO 1407 SOUTH BOULDER TULSA, OK 74119		Delivery / Address HELMERICH & PAYNE INC ATTN: JOE STEPHENSON - Rm 378 13609 INDUSTRIAL ROAD HOUSTON, TX 77058			

Customer Acc No	Phoenix Beattie Contract Manager	Phoenix Beattie Reference	Date
101	J.L.	003678	05/23/2008

Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
1	HP10033A-36-F1 3" 100 100 C&K HOSE x 350' C&K ON 4.1/16" API SPEC FLANGE E/ End 1: 4.1/16" 100psi API Spec 6A Type 68E Flange End 2: 4.1/16" 100psi API Spec 6A Type 68E Flange c/w 87158 Standard ring groove at each end Suitable For HES Service Working pressure: 10,000psi Test pressure: 15,000psi Standard: API 10C Full specification Jumper Bore: Included Fire Rating: Not Included Temperature rating: -25 Deg C to +100 Deg C	1	1	0
2	SECKS-1099 LIFTING & SAFETY EQUIPMENT TO SUIT HP10033A-36-F1 2 x 100mm ID Safety Clamps 2 x 100mm ID Lifting Collars & element C's 2 x 7/8" Stainless Steel wire rope 3/4" OD 4 x 7/8" Shackles	1	1	0
3	SC726-200CS SAFETY CLAMP 200MM 7 2ST C/S GALVANIZED	1	1	0

### Delivery Note

Customer Order Number	378-369-001	Delivery Note Number	003678	Page	2
Customer / Invoice Address HELMERICH & PAYNE INT'L DRILLING CO 1407 SOUTH BOULDER TULSA, OK 74119		Delivery / Address HELMERICH & PAYNE INC ATTN: JOE STEPHENSON - Rm 378 13609 INDUSTRIAL ROAD HOUSTON, TX 77058			

Customer Acc No	Phoenix Beattie Contract Manager	Phoenix Beattie Reference	Date
101	J.L.	003678	05/23/2008

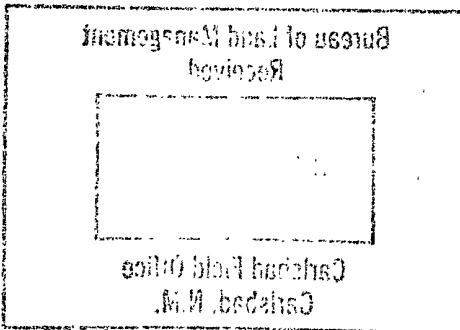
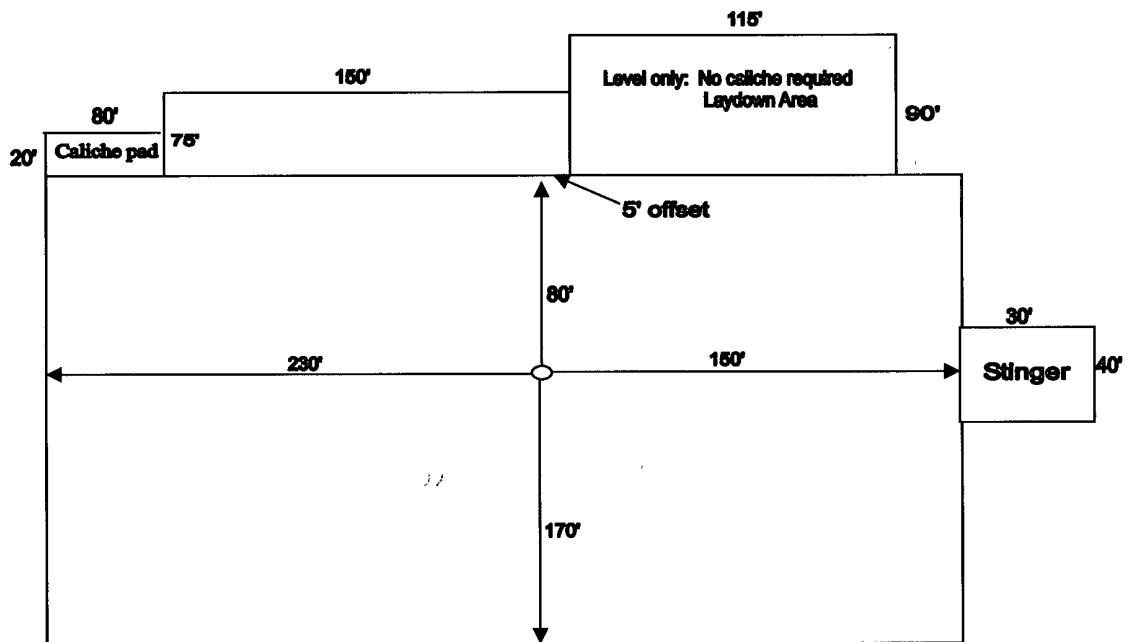
Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
4	SC726-150CS SAFETY CLAMP 150MM 7 2ST C/S GALVANIZED C/W BOLTS	1	1	0
5	NOCERT-1000 HYDROSTATIC PRESSURE TEST CERTIFICATE	1	1	0
6	NOCERT-1000 LOAD TEST CERTIFICATES	1	1	0
7	NOFRETHER INBOUND / OUTBOUND FREIGHT PRE-PAY & ADD TO FINAL INVOICE NOTE: MATERIAL MUST BE ACCOMPANIED BY PAPERWORK INCLUDING THE PURCHASE ORDER, Rm NUMBER TO ENSURE PROPER PAYMENT	1	1	0

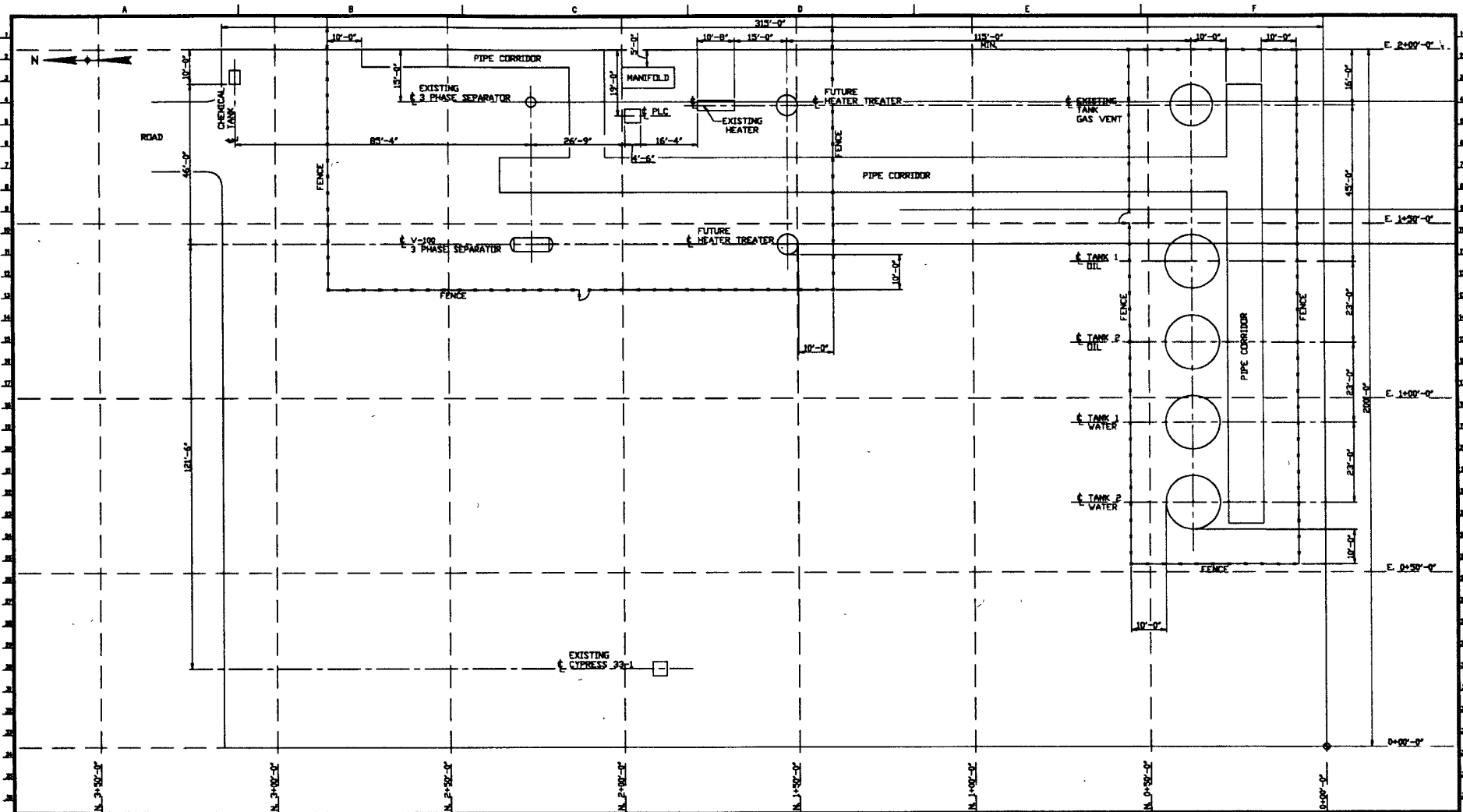
Phoenix Beattie Inspection Signature: \_\_\_\_\_

Received in Good Condition: Signature \_\_\_\_\_

Date \_\_\_\_\_

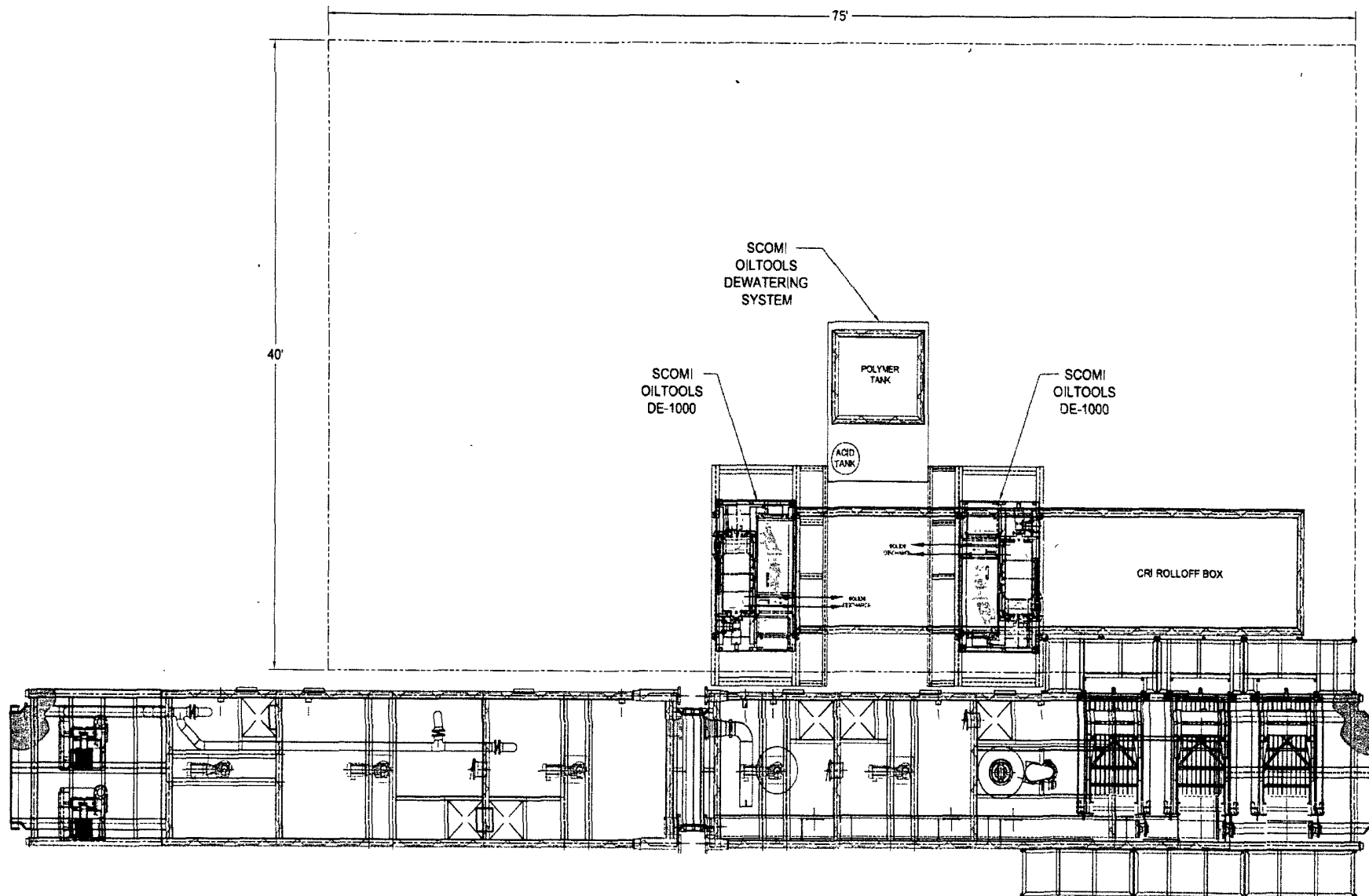
**Flex 3 Rig- H & P 212**  
(Oil Based)  
(Closed loop)





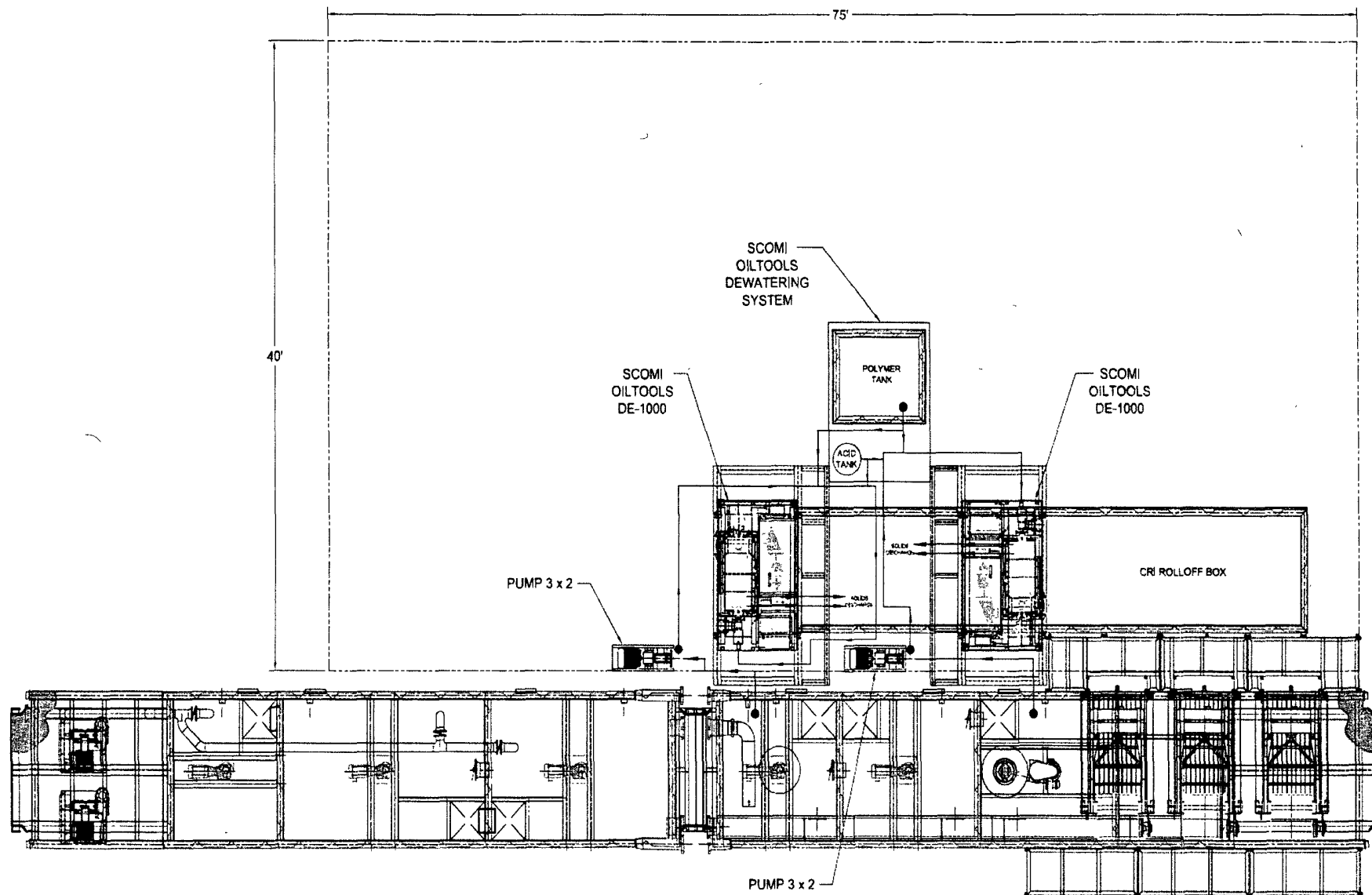
<b>NOTICE</b> THIS DRAWING IS THE PROPERTY OF OCCIDENTAL PERMIAN LTD. AND IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF OCCIDENTAL PERMIAN LTD.	<b>REFERENCE DRAWINGS</b> NUMBER TITLE - - - - -		<b>REVISIONS</b> REV DATE DESCRIPTION A 5/13/98 ISSUED FOR APPROVAL B 5/18/98 ISSUED FOR APPROVAL				<b>ENGINEERING RECORD</b> DWN CHD APP BY DATE DR DR RLP DR BY DR 5/13/98 CHD BY APPR REV NO CLIENT ENG'G WORKMAN CHAL. SUPERVISOR BOLD NONE				 OXY CYPRESS 33 CTB PLOT PLAN EDDY CO. NM PLOT NO. 0-3963-85-001 CHD NO. CONSTRUCTION
	 NICHOLAS CONSULTING GROUP, INC. 10000 20th St. Houston, TX 77058 www.nccg.com										


BILL OF MATERIAL				
ITEM	QTY	DESCRIPTION	LENGTH	WEIGHT



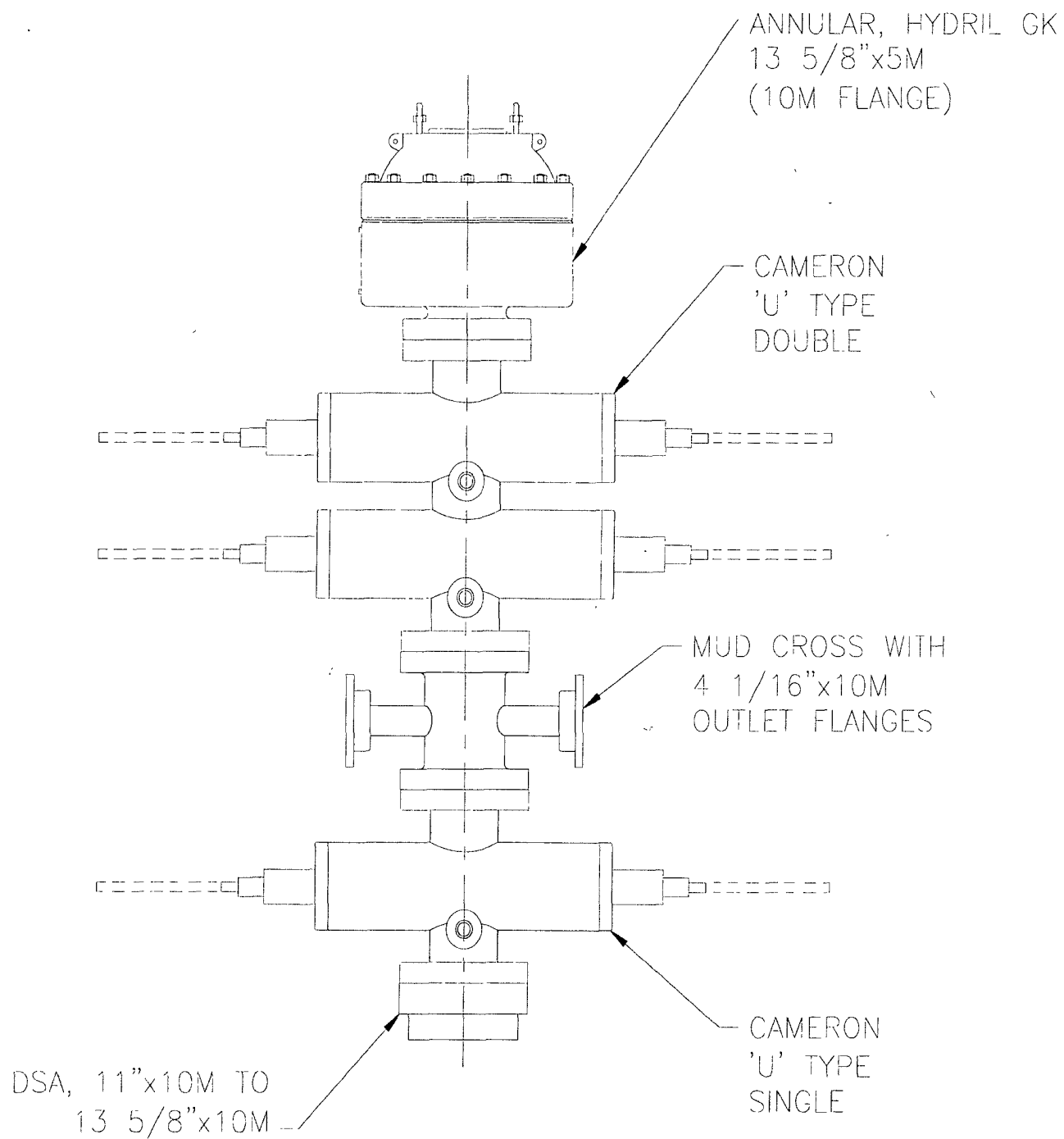
				<p>1. ALL STRUCTURAL MATERIAL SHALL BE ASTM - A36.</p> <p>2. ALL PIPE SCH 40 MATERIAL SA 106 Gr. B</p> <p>3. ALL FLANGES SHALL BE SCH 150# &amp; MATERIAL SA 106.</p> <p>4. ALL FITTINGS SCH 40 MATERIAL SHALL BE SA 234 Gr WPB</p> <p>5. TANK FABRICATION SHALL BE IN ACCORDANCE WITH API-650</p> <p>The design, information and disclosures on the drawing or copies are the exclusive confidential property of Scomi International Limited and are not to be reproduced or disclosed to others by any means, in any form, or transmitted, or translated into a machine language or used for manufacture or other purpose without the written permission of Scomi International Limited, in receipt of such permission, solely and directly for the purposes permitted. This drawing and any copies shall be returned to Scomi International Limited upon request.</p>				<p>TITLE</p> <p><b>CLOSED LOOP SYSTEM</b></p> <p><b>BASIC LAYOUT AND TIE IN</b></p> <p><b>OXY - H&amp;P - FLEX RIGS / PG 1 OF 2</b></p>				<p><b>Scomi</b></p> <p>52111 East Houston Parkway East, Suite 300, Houston, Texas 77060 PHONE: (281)-590-0210, FAX: (281)-590-0200</p>																			
A. ADD:0 PAGE 2 TO SHOW P&ID				DATE 10/30/06				DESIGNED BY DPL				CHECKED BY DPL				DATE 10/30/06				SCALE NTS				ACAD TWD D				JOB NO. 521S-014			

BILL OF MATERIAL			
ITEM	QTY	DESCRIPTION	WEIGHT

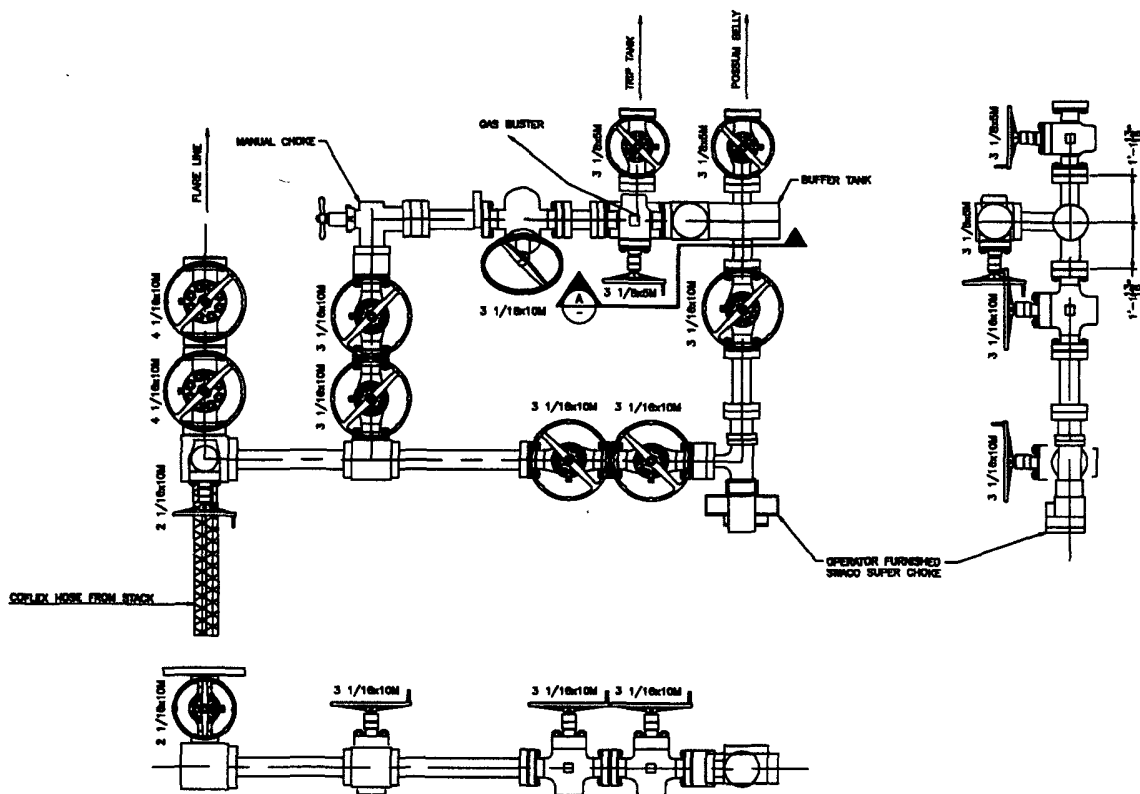
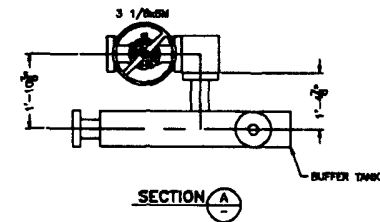
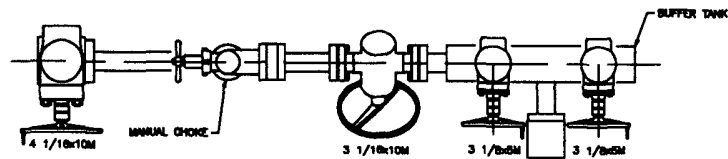


				1. ALL STRUCTURAL MATERIAL SHALL BE ASTM - A36. 2. ALL PIPE SCH. 40 MATERIAL SA 106 Gr D. 3. ALL FLANGES SHALL BE 5015 & MATERIAL SA 105. 4. ALL FITTINGS SCH. 40 MATERIAL SHALL BE SA 234 Gr WPB. 5. TANK FABRICATION SHALL BE IN ACCORDANCE WITH API-650.				TITLE <b>CLOSED LOOP SYSTEM BASIC LAYOUT AND TIE IN OXY - H&amp;P - FLEX RIGS / PG 2 OF 2</b>				 881 N. 2nd Street Parkway Suite 200, Houston, Texas 77060 PHONE: (281)-550-0010, FAX: (281)-550-0008																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
The design, information and disclosures on this drawing or copies are the exclusive confidential property of Scomi International Limited and are not to be reproduced or disclosed to others by any means, in any format, or transmitted, or translated into a machine language or used for manufacture or other purpose without the written permission of Scomi International Limited. In receipt of such permission, modify and directly for the purposes presented. This drawing and any copies shall be returned to Scomi International Limited upon request.				DRAWN BY PDL				DATE 10/30/08				CHECKED BY DKT				DATE 10/30/08				SCALE NTS				ROAD BLDG D				JOB NO.				DRAWING NO. 521S-014																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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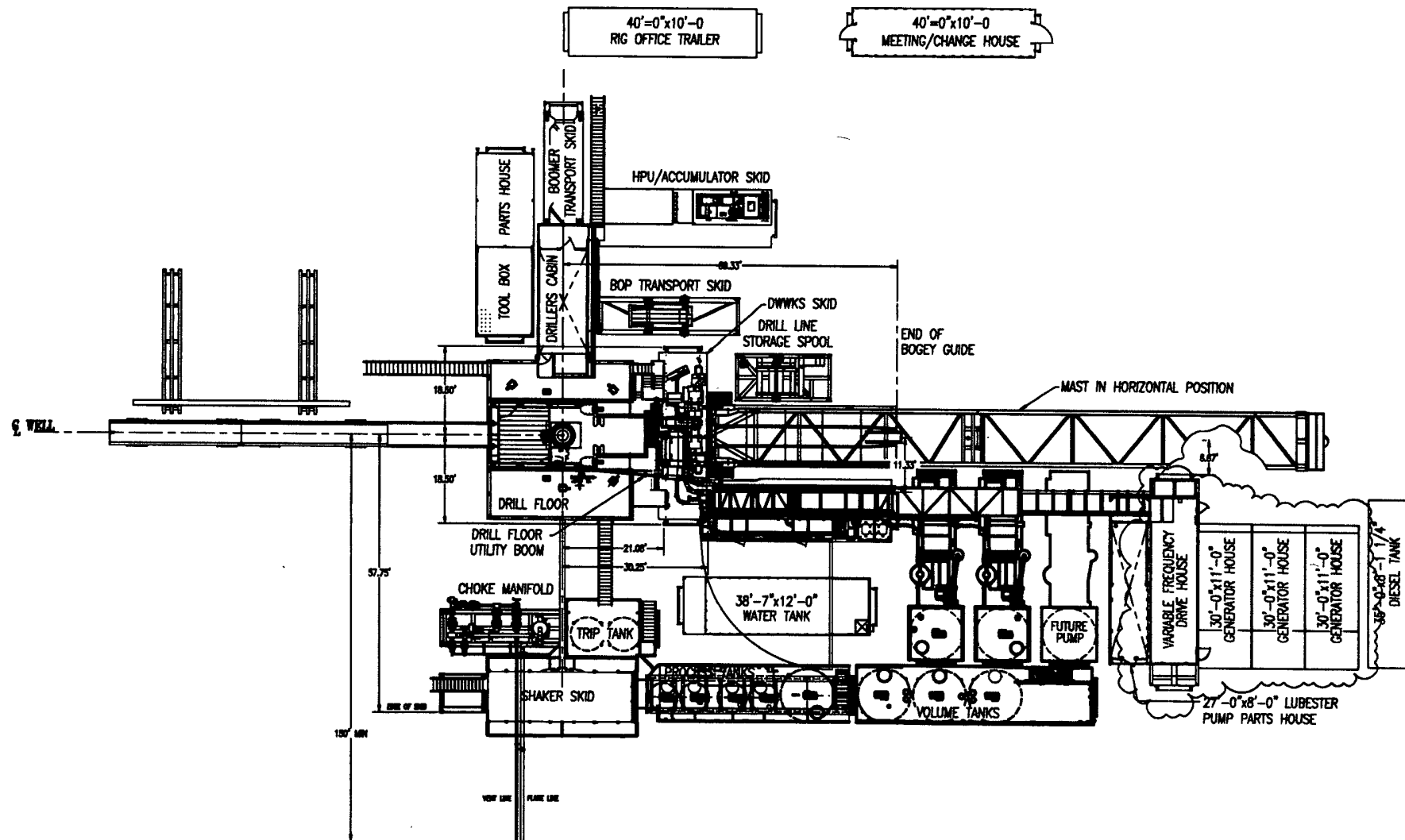


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 MARCH 9, 2000  
 DRAFTERMAN \_\_\_\_\_  
 ENGINEER \_\_\_\_\_

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<b>HELMERICH &amp; PAYNE</b> INTERNATIONAL DRILLING CO.			
CHOKE MANIFOLD			
CUSTOMER H&P			
PROJECT FLD/0003			
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# **OXY Permian**

## **EMERGENCY ACTION PLAN**

**Cypress 33 Federal #2H**

**DRILLING/WORKOVER**

**DRILLING AND CRITICAL WELL OPERATIONS**

**DRILLING/WORKOVER  
DRILLING AND CRITICAL WELL OPERATIONS  
EMERGENCY ACTION PLAN**

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## **PREFACE**

An effective and viable Emergency Action Plan (EAP) 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 that 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 Oxy Incident Reporting and Notification Policy, state and federal requirements, etc.

The following procedures are provided as Oxy Permian's minimum expectations. The Contractor's own procedures may be utilized in lieu of Oxy Permian's, provided that it meets or exceeds the minimum deliverables. It should be understood that this list is not all-inclusive, but the overall plan should assist in lateral application to similar incidents.

This EAP is intended for use on Oxy Drilling/Workover projects and the operations within their area of responsibility, such as drilling, critical well work, etc.

## **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 five (5) through nine (9) in this document for further responsibilities:
1. Notify the senior ranking contract representative on site.
  2. Notify Oxy representative in charge.
  3. Notify civil authorities if the Oxy Representative cannot be contacted and the situation dictates.
  4. Perform rescue and first aid as required (without jeopardizing additional personnel).

### ***General Responsibilities***

#### **Oxy Permian Personnel:**

- A. Drill Site Manager: The Oxy 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 Drilling/Workover 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 Oxy 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 Drilling Manager for notification to the Oxy 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. Drilling/Workover HES Tech: The Drilling/Workover 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 five (5) through nine (9) in this document.

**Other Contractor Personnel** will report to the safe briefing area to assist Oxy 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.

## **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.

#### Tool Pusher/Rig Manager:

1. Notify Oxy Representative and report to rig floor.
2. Review and verify all pertinent information.
3. Communicate information to Oxy 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 Oxy representative.

#### Oxy Representative:

1. Notify Drilling Superintendent or Drilling Manager and RMT Leader or Local Incident Commander, and Police, Fire Department, or other local emergency services as required.



## **WELL CONTROL (continued)**

### **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.

#### Derrickman: (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 Oxy Representative: (same as while drilling)

### **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 Oxy 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. Remain at the briefing area and await further instructions - do not leave unless instructed.

#### Oxy 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 Drilling Superintendent or Drilling Manager and RMT Leader or Local Incident Commander, and Police, Fire Department, or other local emergency services as required.

## **PERSONAL INJURY OR DEATH**

Call for assistance, and then administer first aid for the injured. Treatment should be prioritized by life-threatening conditions.

- A. Do not move injured personnel unless they are in imminent danger. An ambulance should be summoned for any injury that appears to be serious.

## **FIRE OR EXPLOSION**

### **Fire Fighting Philosophy**

It is Oxy Permian's intent that Oxy and contract personnel will only extinguish incipient or beginning stage fires and perform or assist in initial non-threatening rescue operations. The responding fire department will be given primacy when they arrive to control a fire on any Oxy property. Any Oxy or contract employee who participates in a fire response must be fully trained and qualified as such, and must be utilizing appropriate Personal Protective Equipment.

### **Contract and Oxy Personnel Deployment**

In the event of a fire or explosion all personnel will report to the safe briefing area. The Senior Contract Representative on site will designate personnel for rescue as appropriate depending on their qualifications and the risks of the rescue. Any rescue which involves significant risk to those performing the rescue should be deferred to professional response personnel.

No personnel will leave the area without direction / permission from the Senior Contract Representative on-site.

The Senior Contract Representative on site will notify local emergency response personnel as required, along with the Contract Company management and the Oxy Representative as soon as reasonably possible.

## **SPILLS**

In the event of a significant spill of any substance, the person discovering it should immediately notify the rig supervisor and the Oxy Representative. Personnel onsite should **NOT** attempt identification, control or containment unless they are absolutely sure of the product spilled, are fully aware of the hazard characteristics, and are equipped with the appropriate personal protective equipment.

## **HYDROCARBON VAPOR CLOUD RELEASE**

Upon discovery of a Hydrocarbon Vapor Cloud (NGL) release, take immediate safety precautions to protect any company personnel or others that might be in the area. Other emergency actions should be initiated only by trained expert personnel from the appropriate pipeline company.

### **The following guidelines should be followed:**

1. Immediately notify the rig supervisor and the Oxy Representative.
2. Determine wind direction, and evacuate upwind or at 90 degrees to the release.
3. Maintain a safe distance from the cloud.
4. Render first aid and call for an ambulance as necessary.
5. Attempt to warn approaching individuals of the hazard.

## BOMB THREAT

In the event of a bomb threat, the person receiving the call, on or off site, should try to get as much information as possible from the caller. The person receiving the call should immediately contact the supervisor in charge. Evacuation of the field should be considered at this time. Roadblocks may need to be installed. The supervisor in charge should make all appropriate contacts.

### The Supervisor contacted should:

- Realize that every bomb threat is serious.
- Notify Corporate Security
- Inform Police/Sheriff's Department and Fire Department
- Contact RMT Leader or his designated relief to coordinate search efforts with the assistance of the local law enforcement agencies.

## BOMB THREAT CHECKLIST

Date \_\_\_\_\_ Name of person taking call \_\_\_\_\_ Phone # call came on \_\_\_\_\_

### FILL OUT COMPLETELY IMMEDIATELY AFTER BOMB THREAT

- When is the bomb set to explode? \_\_\_\_\_
- Where is the bomb located? \_\_\_\_\_
- What does the bomb look like? \_\_\_\_\_
- What type of bomb is it? \_\_\_\_\_
- What will cause the bomb to explode? \_\_\_\_\_
- Did the caller place the bomb? \_\_\_\_\_
- Why did the caller place the bomb? \_\_\_\_\_
- What is the caller's name and address? \_\_\_\_\_

Callers: Sex \_\_\_ Age \_\_\_ Race \_\_\_ Length of call \_\_\_\_\_

### DESCRIPTION OF CALLER'S VOICE (Check all that apply)

<input type="checkbox"/> Calm	<input type="checkbox"/> Rapid	<input type="checkbox"/> Laughing	<input type="checkbox"/> Lisp	<input type="checkbox"/> Disguised
<input type="checkbox"/> Angry	<input type="checkbox"/> Crying	<input type="checkbox"/> Raspy	<input type="checkbox"/> Accent	<input type="checkbox"/> Familiar? Who did
<input type="checkbox"/> Excited	<input type="checkbox"/> Normal	<input type="checkbox"/> Deep	<input type="checkbox"/> Stutter	<input type="checkbox"/> it sound like?
<input type="checkbox"/> Slow	<input type="checkbox"/> Distinct	<input type="checkbox"/> Ragged	<input type="checkbox"/> Deep	<input type="checkbox"/> Deep Breathing
<input type="checkbox"/> Loud	<input type="checkbox"/> Slurred	<input type="checkbox"/> Nasal	<input type="checkbox"/> Clearing Throat	

### BACKGROUND SOUNDS:

<input type="checkbox"/> Street	<input type="checkbox"/> House	<input type="checkbox"/> Factory	<input type="checkbox"/> Music	<input type="checkbox"/> Local Call
<input type="checkbox"/> Noises	<input type="checkbox"/> Noises	<input type="checkbox"/> Machinery	<input type="checkbox"/> Static	<input type="checkbox"/> Long Distance
<input type="checkbox"/> Voices	<input type="checkbox"/> Motor	<input type="checkbox"/> Animals	<input type="checkbox"/> PA System	<input type="checkbox"/> Phone Booth
<input type="checkbox"/> Office	<input type="checkbox"/> Clear	<input type="checkbox"/> Other		

### THREAT LANGUAGE:

<input type="checkbox"/> Well-Spoken	<input type="checkbox"/> Foul	<input type="checkbox"/> Incoherent	<input type="checkbox"/> Irrational	<input type="checkbox"/> Taped
<input type="checkbox"/> Message Read by Threat Maker				

### REMARKS:

## **NATURAL DISASTERS**

### **Tornadoes**

These general procedures should be followed by everyone seeking shelter from a severe storm or tornado:

#### **Indoors:**

1. Protect yourself from flying glass and debris.
2. Take refuge near the core of the building for maximum protection.
3. Do not smoke while taking shelter.
4. Shut all doors to offices, if time permits.

#### **In the field:**

1. Seek cover in a low-lying area, such as a culvert, ditch, pit, or water injection valve box.
2. Get out of and away from your vehicle.
3. Stay away from power lines.
4. Cover your head with your arms and clothing.

### **Thunderstorms**

#### **Indoors:**

1. Avoid water pipes, sinks, showers, tubs, etc.
2. Stay away from doors and windows.
3. Do not use the telephone.
4. Take off head sets.
5. Turn off, unplug, and stay away from appliances, computers, power tools, & TV sets.

#### **In the field:**

1. Avoid water.
2. Avoid high ground and open spaces.
3. Avoid all metal objects including electric wires, fences, machinery, motors, power tools, etc. Unsafe places include underneath canopies, small picnic or rain shelters, or near trees. Where possible, find shelter in a substantial building or in a fully enclosed metal vehicle such as a car, truck or a van with the windows completely shut. If lightning is striking nearby when you are outside, you should:
  - a. Crouch down, feet together, hands over ears
  - b. Avoid proximity (minimum of 15 ft.) to other people.
4. SUSPEND ACTIVITIES for 30 minutes after the last observed lightning or thunder.

## **PUBLIC RELATIONS**

Oxy recognizes that the news media have a legitimate interest in incidents at Oxy 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 Oxy 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.

# **Drilling Dept. Emergency Contact list**

**Drilling Manager                      Scott Cooper      713-366-5325 office**  
**281-352-5865 cell**

**Drilling Superintendent      Festus Hagan      713-366-5946 office**  
**432-894-5352 cell**

**Drilling Eng. Supervisor Richard Jackson 713-215-7235 office**  
**281-467-6383 cell**

**HES Specialist-Drilling      Brian Bielss      432-685-5719 office**  
**432-813-6335 cell**

**Drilling Coordinator              Drue Dunaway 432-685-5715 office**  
**432-556-3288 cell**

**Drilling Coordinator              Kevin Videtich 806-592-6213 office**  
**806-891-2000 cell**

**OXY Permian Incident Reporting Phone List****OXY Permian Crisis Team Hotline Notification****(713) 935-7210**

<b>Person</b>	<b>Location</b>	<b>Office Phone</b>	<b>Cell/Mobile Phone</b>
<b>Asset Management-Operations Areas</b>			
OXY Permian President & General Manager: Ken Dillon	Houston	(713) 366-5140	(661) 333-9315
Operations Support Manager: Rick Callahan	Houston	(713)-215-7578	(281) 389-1141
Asset Development Manager-Jeff Simmons	Houston	(713) 366-5124	(713) 560-8073
Public Affairs: Stacey Crews	Houston	(713) 366-5304	(713) 416-8381

**Operations South-Frontier**

RMT Lead Frontier-Barry Beresik	Houston	(713) 366-5016	(713) 560-8061
RMT Lead South-Keith Brown	Houston	(713) 366-5354	(713) 264-1114
Surface Operations Team Lead-Bill Elliott	Midland	(432) 685-5845	(432) 557-6736
Well Operations Team Lead-Leamon Hood	Midland	(432) 685-5794	(432) 634-4486
Well Servicing Team Lead-Vicki Hollub	Houston	(713) 215-7332	(713) 885-6347
WST Coord Frontier-Kirk Hobbs	Midland	(432) 685-5951	(432) 634-3890
WST Coord South-Robert Ricks	Midland	(432) 685-5821	(432) 634-8791
NM Frontier Oper Coord -Larry Sammons	Carlsbad	(575) 887-8337	(575) 390-8397
NM-South Oper Coord-Gilbert Williams	Seminole	(432) 385-2778	(806) 215-0009
NM Frontier Oper Coord -Van Barton	Carlsbad	(575) 887-8337	
Completion Specialist-Dale Redding	Hobbs	(432) 385-3206	

**HES Staff & Areas of First Contact Support**

HES Manager: John Kirby	Houston	(713) 366-5460	(281) 974-9523
Environmental Engineer, Air: Peggy Waisanen	Midland	(432) 685-5673	(432) 894-1968
Administrative Assistant: Judy Browning	Midland	(432) 685 5692	(432) 661 1048
Environmental Consultant: Dennis Newman	Houston	(713) 366-5485	(713) 560-8060
Safety Engineer: Derek Purvis	Houston	(713) 366-5932	(713) 582-1848
Pipeline Safety: Don Bales	Midland	(432) 685-5844	(432) 894-1960
HES Lead-Pete Maciula	Midland	(432) 685-5667	(432) 557-2450
HES Specialist: Eddie Gonzales	Midland	(432) 685-5929	(432) 556-6790
HES Specialist-Drilling: Robert Lovelady	Midland	(432) 685-5630	(432) 813-6332

**HES Tech & Area of Responsibility**

Wasson San Andres RMT: Mark Andersen	Denver City	(806) 592-6299	(806) 215-0077
Hobbs RMT: Steve Bishop	Hobbs	(575) 397-8251	(575) 390-4784
Frontier-New Mexico: Rick Kerby	Carlsbad	(575) 887-8337	(575) 631-4972
South-New Mexico-CJ Summers	Hobbs	(575) 397-8236	(575) 390-9228

**Regulatory Affairs**

Lead-Liz Bush-Ivie	Houston	(713) 366-5303	832-474-3701
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Regulatory Analyst-David Stewart	Midland	(432) 685-5717	
Regulatory Analyst-Elizabeth Casbeer	Midland	(432) 685-5755	
Regulatory Analyst-Mark Stephens	Houston	(713) 366-5158	

#### **DOT-Pipeline Response Numbers**

N. Hobbs Unit: Steve Bishop	Hobbs	(575) 397-8251	(575) 390-4784
Wasson PMT: Todd King	Denver City	(806) 592-6274	(806) 215-0183
Bravo/Slaughter PMT: Gary Polk	Levelland	(806) 229-9708	(806) 638-2425
Cogdell RMT: Dean Peevy	Cogdell	(325) 573-7272	(325) 207-3367
Sharon Ridge: Carl Morales	Sharon Ridge	(325) 573-6341	(325) 207-3374
All DOT Pipeline Support: Donald Bales	Midland	(432) 685-5844	(432) 894-1960

#### **OOGC HES Contacts**

Manager HES: Wes Scott	OOGC – Houston	(713) 215-7171	(713) 203-4050
Worldwide Safety Mgr: Greg Hardin alternate	OOGC – Houston	(713) 366-5324	(713) 560-8037
Worldwide Environ. Mgr: Ravi Ravishankar	OOGC – Houston	(713) 366-5039	(832) 863-2240

#### **OOGC Risk Management**

Jim Garrett	Los Angeles	(310) 443-6588	(310) 710-3233
Greg LaSalle, alternate	Los Angeles	(310) 443-6542	(310) 710-2255

#### **OSI**

Workers Comp. Claim Manager: Steve Jones	Dallas	(972) 404-3542	
Workers Comp. Claims: Mark Ryan	Dallas	(972) 404-3974	
Auto Claims: Steve Jones	Dallas	(972) 404-3542	

#### **Gallagher Bassett**

Workers Comp. & Property Damage Claims-OXY Permian Ltd.: Danny Ross		(972) 728-3600 X252	(800) 349-8492
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#### **Axiom Medical Consulting**

Medical Case Management		(877) 502-9466	
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#### **OXY Permian Legal**

Tom Janiszewski	Houston	(713) 366-5529	(713) 560-8049
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#### **Human Resources**

H.R. Manager: Barbara Bernhard	Houston	(713) 215-7150	(713) 702-7949
H.R. Consultant: Amy Thompson	Houston	(713) 215-7863	(281) 799-7348
H.R. Consultant: Laura Matthews	Houston	(713) 366-5137	(713) 569-0386
H.R. Consultant: Jill Williams	Midland	(432) 685-5818	(432) 661-4581

#### **Corporate Security**

Frank Zapalac	Houston	(713) 215-7157	(713) 829-5753
Hugh Moreno, alternate	Houston	(713) 215-7162	(713) 817-3322

#### **Regulatory Agencies**

Bureau of Land Management	Carlsbad, NM	(575) 887-6544	
Bureau of Land Management	Hobbs, NM	(575) 393-3612	
Bureau of Land Management	Roswell, NM	(575) 393-3612	
Bureau of Land Management	Santa Fe, NM	(505) 988-6030	
DOT Juisdictional Pipelines-Incident Reporting New Mexico Public Regulation Commission	Santa Fe, NM	(505) 827-3549 (505) 490-2375	
DOT Juisdictional Pipelines-Incident Reporting Texas Railroad Commission	Austin, TX	(512) 463-6788	
EPA Hot Line	Dallas, Texas	(214) 665-6444	
Federal OSHA, Area Office	Lubbock, Texas	(806) 472-7681	
National Response Center	Washington, D. C.	(800) 424-8802	
National Infrastructure Coordinator Center		(202) 282-9201	
New Mexico Air Quality Bureau	Santa Fe, NM	(505) 827-1494	
New Mexico Oil Conservation Division	Artesia, NM	(575) 748-1283	
New Mexico Oil Conservation Division	Hobbs, NM	(575) 393-6161	
New Mexico Oil Conservation Division	Santa Fe, NM	(505) 471-1068 (505) 827-7152 (505) 476-3470	
New Mexico OCD Environmental Bureau	Santa Fe, NM		
New Mexico Environmental Department	Hobbs, NM	(575) 827-9329	
NM State Emergency Response Center	Santa Fe, NM	(505) 827-9222	
Railroad Commission of TX	District 8, 8A Midland, TX	(432) 684-5581	
Texas Emergency Response Center	Austin, TX	(512) 463-7727	
TCEQ Air	Region 2 Lubbock, TX	(806) 796-3494	
TCEQ Water/Waste/Air	Region 7 Midland, TX	(432) 570-1359	

#### Medical Facilities

Artesia General Hospital	Artesia, NM	(575) 748-3333	
Guadalupe Medical Center	Carlsbad, NM	(575) 887-6633	
Lea Regional Hospital	Hobbs, NM	(575) 492-5000	
Medical Arts Hospital	Lamesa, TX	(806) 872-2183	
Medical Center Hospital	Odessa, TX	(432) 640-4000	
Memorial Hospital	Seminole, TX	(432) 758-5811	
Midland Memorial Hospital	Midland, TX	(432) 685-1111	
Nor-Lea General Hospital	Lovington, NM	(575) 396-6611	
Odessa Regional Hospital	Odessa, TX	(432) 334-8200	
St. Mary's Hospital	Lubbock, TX	(806) 796-6000	
Union County General Hospital	Clayton, NM	(575) 374-2585	
University Medical Center	Lubbock, TX	(806) 743-3111	

#### Local Emergency Planning Comm.

Richard H. Dolgener	Andrews County, TX	(432) 524-1401	
Joel Arnwine	Eddy County, NM	(575) 887-9511	
County Judge Judy House	Gaines County, TX	(432) 758-5411	
Myra Sande	Harding County, NM	(575) 673-2231	
Jerry Reynolds	Lea County, NM	(575) 396-8600	(575) 399-2376



Royce Creager	Loving County, TX	(432) 377-2231	
Mike Cherry	Quay County, NM	(575) 461-2476	
Della Wetsel	Union County, NM	(575) 374-8896	
Bonnie Leck	Winkler County, TX	(432) 586-6658	
Carl Whitaker	Yoakum County, TX	(806) 456-7491	

#### **Law Enforcement - Sheriff**

Andrews Cty Sheriff's Department	Andrews County	(432) 523-5545	
Eddy Cty Sheriff's Department	Eddy County (Artesia)	(575) 746-2704	
Eddy Cty Sheriff's Department	Eddy County (Carlsbad)	(575) 887-7551	
Gaines Cty Sheriff's Department	Gaines County (Seminole)	(432) 758-9871	
Lea Cty Sheriff's Department	Lea County (Eunice)	(575) 384-2020	
Lea Cty Sheriff's Department	Lea County (Hobbs)	(575) 393-2515	
Lea Cty Sheriff's Department	Lea County (Lovington)	(575) 396-3611	
Union Cty Sheriff's Department	Union County (Clayton)	(505) 374-2583	
Yoakum City Sheriff's Department	Yoakum Co.	(806) 456-2377	

#### **Law Enforcement - Police**

Andrews City Police	Andrews, TX	(432) 523-5675	
Artesia City Police	Artesia, NM	(575) 746-2704	
Carlsbad City Police	Carlsbad, NM	(575) 885-2111	
Clayton City Police	Clayton, NM	(575) 374-2504	
Denver City Police	Denver City, TX	(806) 592-3516	
Eunice City Police	Eunice, NM	(575) 394-2112	
Hobbs City Police	Hobbs, NM	(575) 397-9265 (575) 393-2677	
Jal City Police	Jal, NM	(575) 395-2501	
Lovington City Police	Lovington, NM	(575) 396-2811	
Seminole City Police	Seminole, TX	(432) 758-9871	

#### **Law Enforcement - FBI**

FBI	Albuquerque, NM	(505) 224-2000	
FBI	Midland, TX	(432) 570-0255	

#### **Law Enforcement - DPS**

NM State Police	Artesia, NM	(575) 746-2704	
NM State Police	Carlsbad, NM	(575) 885-3137	
NM State Police	Eunice, NM	(575) 392-5588	
NM State Police	Hobbs, NM	(575) 392-5588	
NM State Police	Clayton, NM	(575) 374-2473; 911	
TX Dept of Public Safety	Andrews, TX	(432) 524-1443	
TX Dept of Public Safety	Seminole, TX	(432) 758-4041	
TX Dept of Public Safety	Yoakum County TX	(806) 456-2377	

#### **Firefighting & Rescue**

Amistad/Rosebud	Amistad/Rosebud, NM	(505) 633-9113	
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Andrews	Andrews, TX	(432) 523-4820 (432) 523-3111	
Artesia	Artesia, NM	(575) 746-5051	
Carlsbad	Carlsbad, NM	(575) 885-3125	
Clayton	Clayton, NM	(575) 374-2435	
Denver City	Denver City, TX	(806) 592-5426	
Eunice	Eunice, NM	(575) 394-2111	
Hobbs	Hobbs, NM	(575) 397-9308	
Jal	Jal, NM	(575) 395-2221	
Kermit	Kermit, TX	(432) 586-3468	
Lovington	Lovington, NM	(575) 396-2359	
Maljamar	Maljamar, NM	(575) 676-4100	
Monahans	Monahans, TX	(432) 943-4343	
Nara Visa	Nara Visa, NM	(575) 461-3300	
Pecos	Pecos, TX	(432) 445-2421	
Seminole	Seminole, TX	(432) 758-3676 (432) 758-9871	

#### **Ambulance**

Amistad/Rosebud	Amistad/Rosebud, NM	(575) 633-9113	
Andrews Ambulance	Andrews, TX	(432) 523-5675	
Artesia Ambulance	Artesia, NM	(575) 746-2701	
Carlsbad Ambulance	Carlsbad, NM	(575) 885-2111; 911	
Clayton, NM	Clayton, NM	(575) 374-2501	
Denver City Ambulance	Denver City, TX	(806) 592-3516	
Eunice Ambulance	Eunice, NM	(575) 394-3258	
Hobbs, NM	Hobbs, NM	(575) 397-9308	
Jal, NM	Jal, NM	(575) 395-2501	
Lovington Ambulance	Lovington, NM	(575) 396-2811	
Nara Visa, NM	Nara Visa, NM	(575) 461-3300	
Pecos Ambulance	Pecos, TX	(432) 445-4444	
Seminole Ambulance	Seminole, TX	(432) 758-8816 (432) 758-9871	

#### **Medical Air Ambulance Service**

AEROCARE - Methodist Hospital	Lubbock, TX	(800) 627-2376	
San Angelo Med-Vac Air Ambulance	San Angelo, TX	(800) 277-4354	
Southwest Air Ambulance Service	Stanford, TX	(800) 242-6199	
Southwest MediVac	Snyder, TX	(800) 242-6199	
Southwest MediVac	Hobbs, NM	(800) 242-6199	
Odessa Care Star	Odessa, TX	(888) 624-3571	
NWTH Medivac	Amarillo, TX	(800) 692-1331	

**Flowlines DETAILS**

FROM	TO	FLUID	LINE SIZE	LINE LENGTH	MATERIAL	PRESS	BURIED
CYPRESS 33-2	CYPRESS 33 CTB	PRODUCTION	4"SDR7	0.886	HDPE	LOW	NO
CYPRESS 33-3	CYPRESS 33 CTB	PRODUCTION	4"SDR7	0.219	HDPE	LOW	NO
CYPRESS 33-4	CYPRESS 33 CTB	PRODUCTION	4"SDR7	0.574	HDPE	LOW	NO
CYPRESS 33 CTB	Good Night 27-1	GAS	6"SDR11	2.057	HDPE	LOW	YES
Good Night 27-1	Junction	GAS	6"SDR11	0.698	HDPE	LOW	YES

**EXISTING FACILITIES @ CYPRESS 33-1**

FACILITY	COUNT	SIZE	MATERIAL
THREE PH SEP	1	3'X10'	CS
GAS POP-UP TANK	1	300BBL	CS
INLINEHEATER	1		CS
CYPRESS 33-1 WELLHEAD	1		
PLC(SCADA SYSTEM)	1		

**NEW MAJOR FACILITIES @ Cypress 33 CTB**

FACILITY	COUNT	SIZE	MATERIAL
THREE PH SEP	1	4'X10'	CS
HEATER TREATER	2	6X20'	CS
OIL ST TANKS	2	500BBL	CS
WATER FG TANKS	2	500BBL	CS
CIRCULATING PUMP	1	20HP	CS
GAS PIPELINE TO CYPRESS 28-1	1	6"SDR11	HDPE

**LOCATIONS**

		LAT	LONG
CYPRESS 33-1	660 FROM SOUTH, 330 FROM EAST	32 15.352	-103 58.897
CYPRESS 33-2	X = 608587.7450 Y = 461099.0122	32.26719	-103.982023
CYPRESS 33-3	X = 608637.7246 Y = 457863.0481	32.258294	-103.981895
CYPRESS 33-4	1650 FROM NORTH, 400 FROM EAST		
Cypress 28-1		N32 16.171	W103 59.821
Good Night 27-1		N32 16.218	W103 58.473

**Flow Rates**

Well Name	Oil Rate (BOPD)	Gas Rate (MCFPD)	Water Rate (BWPD)
Cypress 33-1	105	1030	96
Cypress 33-2	470	104.32	235
Cypress 33-3	492	760	246
Cypress 33-4	460	585	229
TOTAL MAX	866	3680	476

## **SURFACE USE PLAN OF OPERATIONS**

<b>Operator Name/Number:</b>	<b>OXY USA Inc.</b>	<b>16696</b>	
<b>Lease Name/Number:</b>	<b>Cypress 33 Federal #2H</b>	<b>305859</b>	<b>Federal Lease No. NMNM19848</b>
<b>Pool Name/Number:</b>	<b>Cedar Canyon Bone Spring</b>	<b>11520</b>	
<b>Surface Location:</b>	<b>635 FNL 765 FEL NENE(A) Sec 33 T23S R29E</b>		
<b>Bottom Hole Location:</b>	<b>660 FNL 400 FWL NWNW(D) Sec 33 T23E R29E</b>		

### **1. Existing Roads**

- a. A copy of a USGS "Remuda Basin, New Mexico" quadrangle map is attached showing the proposed location. The well location is spotted on this map, which shows the existing road system.
- b. The well was staked by Terry J. Asel, Certificate No. 15079 on 10/21/08, certified 10/29/08.
- c. Directions to Location: From the intersection of Hwy 128 and Hwy 31, go east on Hwy 128 for 4.5 miles. Turn south on CR 793 (Rawhide) for 4.1 miles, turn west on lease road for 3.5 miles. Turn south for 1.9 miles, turn west for 0.3 miles to proposed new road and go northwest for 0.6 miles to location.

### **2. New or Reconstructed Access Roads:**

- a. A new access road will be built. The access road will run approximately 3300' north/northwest from an existing road to the location. See Exhibit #2.
- b. The maximum width of the road will be 15'. It will be crowned and made up of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- c. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
- d. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

### **3. Location of Existing Wells:**

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

### **4. Location of Existing and/or Proposed Production Facilities.**

- a. In the event the well is found productive, the Cypress 33 Federal tank battery would be utilized and the necessary production equipment will be installed at the well site and the tank battery. See proposed Production Facilities Layout diagrams, Exhibit #4.
- b. If necessary, electric power poles will be set along side of the access road.
- c. All flowlines will adhere to API Standards, see Exhibit #4.

### **5. Location and types of Water Supply.**

This well will be drilled using a combination of water mud systems. It will be obtained from commercial water stations in the area and will be hauled to location by transport truck using existing and proposed roads.

## **6. Construction Materials:**

All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

## **7. Methods of Handling Waste Material:**

- a. A closed loop system will be utilized consisting of above ground steel tanks and haul-off bins. Disposal of liquids, drilling fluids and cuttings will be disposed of at an approved facility, see C-144 CLEZ.
  - 1. Solids - CRI
  - 2. Liquids - Laguna
- b. All trash, junk, and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier, including broken sacks, will pick up slats remaining after completion of well.
- d. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- e. Disposal of fluids to be transported will be by the following companies:  
TFH Ltd. - Laguna SWD Facility

## **8. Ancillary Facilities: None needed**

## **9. Well Site Layout**

Exhibit #5 shows the proposed well site layout with dimensions of the pad layout and equipment location.  
V-door - East                      Tanks - North

## **10. Plans for Surface Reclamation:**

- a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography.
- b. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation.

## **11. Surface Ownership**

The surface is owned by the U.S. Government and is administered by the BLM. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas. The surface is leased to: Tyson Mahaffey P.O. Box 161 Loving, NM 88256  
They will be notified of our intention to drill prior to any activity.

## 12. Other Information

- a. The vegetation cover is generally sparse consisting of mesquite, yucca, shinnery oak, sandsage and perennial native range grass. The topsoil is sandy in nature. Wildlife in the area is also sparse consisting of deer, coyotes, rabbits, rodents, reptiles, dove and quail.
- b. There is no permanent or live water in the general proximity of the location.
- c. There are no dwellings within 2 miles of the proposed well site.

d. Cultural Resources Examination - this well is located in the Permian Basin MOA.

Pad + 1/4 mile road	<u>\$1,300.00</u>	3300	\$0.15/ft over 1/4 mile	<u>\$297.00</u>	<u>\$1,597.00</u>
Pipeline - up to 1mile	<u>\$1,200.00</u>		\$250 per 1/4 mile	<u>\$0.00</u>	<u>\$1,200.00</u>
Electric Line - up to 1mile	<u>\$600.00</u>		\$0.17/ft over 1 mile	<u>\$0.00</u>	<u>\$600.00</u>
Total	<u><u>\$3,100.00</u></u>			<u><u>\$297.00</u></u>	<u><u>\$3,397.00</u></u>

## 13. Bond Coverage:

Bond Coverage is Nationwide Bond No. ES0136.

## Operators Representatives:

The OXY Permian representatives responsible for ensuring compliance of the surface use plan are listed below.

Larry Sammons  
Production Coordinator  
P.O. Box 1988  
Carlsbad, NM 88220  
Office Phone: 575-887-8337  
Cellular: 575-390-8397

Van Barton  
Production Coordinator  
P.O. Box 1988  
Carlsbad, NM 88220  
Office Phone: 575-887-8337  
Cellular: 575-706-7671

Fetus Hagan  
Drilling Superintendent  
P.O. Box 4294  
Houston, TX 77210  
Office Phone: 432-685-5719  
Cellular: 432-894-5352

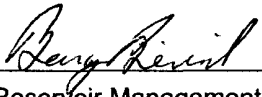
Calvin (Dusty) Weaver  
Operation Specialist  
P.O. Box 50250  
Midland, TX 79710  
Office Phone: 432-685-5723  
Cellular: 806-893-3067

Richard Jackson  
Drilling Engineering Supervisor  
P.O. Box 4294  
Houston, TX 77210  
Office Phone: 713-215-7235  
Cellular: 281-467-6383

Melissa Schaaf  
Drilling Engineer  
P.O. Box 4294  
Houston, TX 77210  
Office Phone: 713-366-5274  
Cellular: 713-594-7331

### OPERATOR CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 18<sup>th</sup> day of June, 2009.

Name:  Barry Beresik  
Position: Reservoir Management Team Leader  
Address: 5 Greenway Plaza, Suite 110, Houston, TX 77046  
Telephone: 713-366-5016  
E-mail: (optional): barry\_beresik@oxy.com  
Company: OXY USA Inc.  
Field Representative (if not above signatory): Larry Sammons  
Address (if different from above): 1502 W. Commerce Dr. Carlsbad, NM 88220  
Telephone (if different from above): 575-887-8337  
E-mail (if different from above): larry\_sammons@oxy.com

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INC.
LEASE NO.:	NM86024
WELL NAME & NO.:	CYPRESS 33 FEDERAL # 2
SURFACE HOLE FOOTAGE:	635' FNL & 765' FEL
BOTTOM HOLE FOOTAGE:	660' FNL & 400' FWL
LOCATION:	Section 33, T. 23 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Cave/Karst
- ☒ **Construction**
  - V-Door change**
  - Notification
  - Topsoil
  - Reserve Pit
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - Logging requirements
  - Contingency intermediate cement program
  - R-111-P potash requirements
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment/Reclamation**



## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

### **Cave and Karst**

\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

#### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

##### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

##### **No Blasting:**

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

##### **Pad Berming:**

The pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

##### **Tank Battery Liners and Berms:**

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

##### **Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

##### **Automatic Shut-off Systems:**

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

#### **Cave/Karst Subsurface Mitigation**

The following stipulations will be applied to protect cave/karst and ground water concerns:

##### **Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

**Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

**Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

**Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

## **VI. CONSTRUCTION**

### **V-DOOR EAST NORTHEAST**

#### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

#### **B. TOPSOIL**

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

#### **C. RESERVE PITS**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### **D. FEDERAL MINERAL MATERIALS PIT**

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

#### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## **F. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

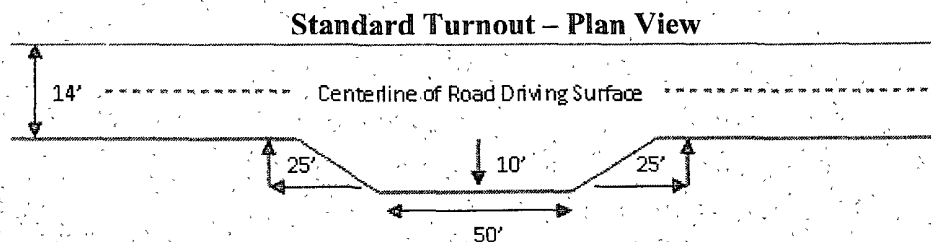
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

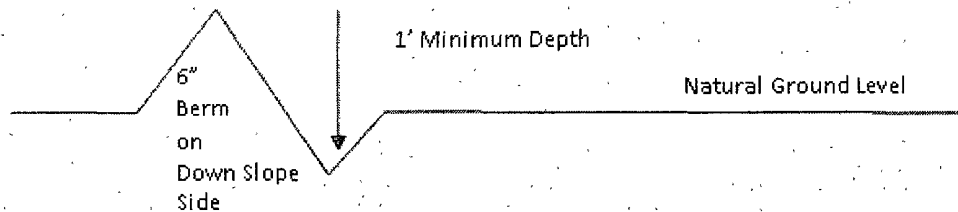


### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

**Cross Section Of Typical Lead-off Ditch**



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### **Formula for Spacing Interval of Lead-off Ditches**

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } 400/4\% + 100' = 200' \text{ lead-off ditch interval}$$

### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

### **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

### **Fence Requirement**

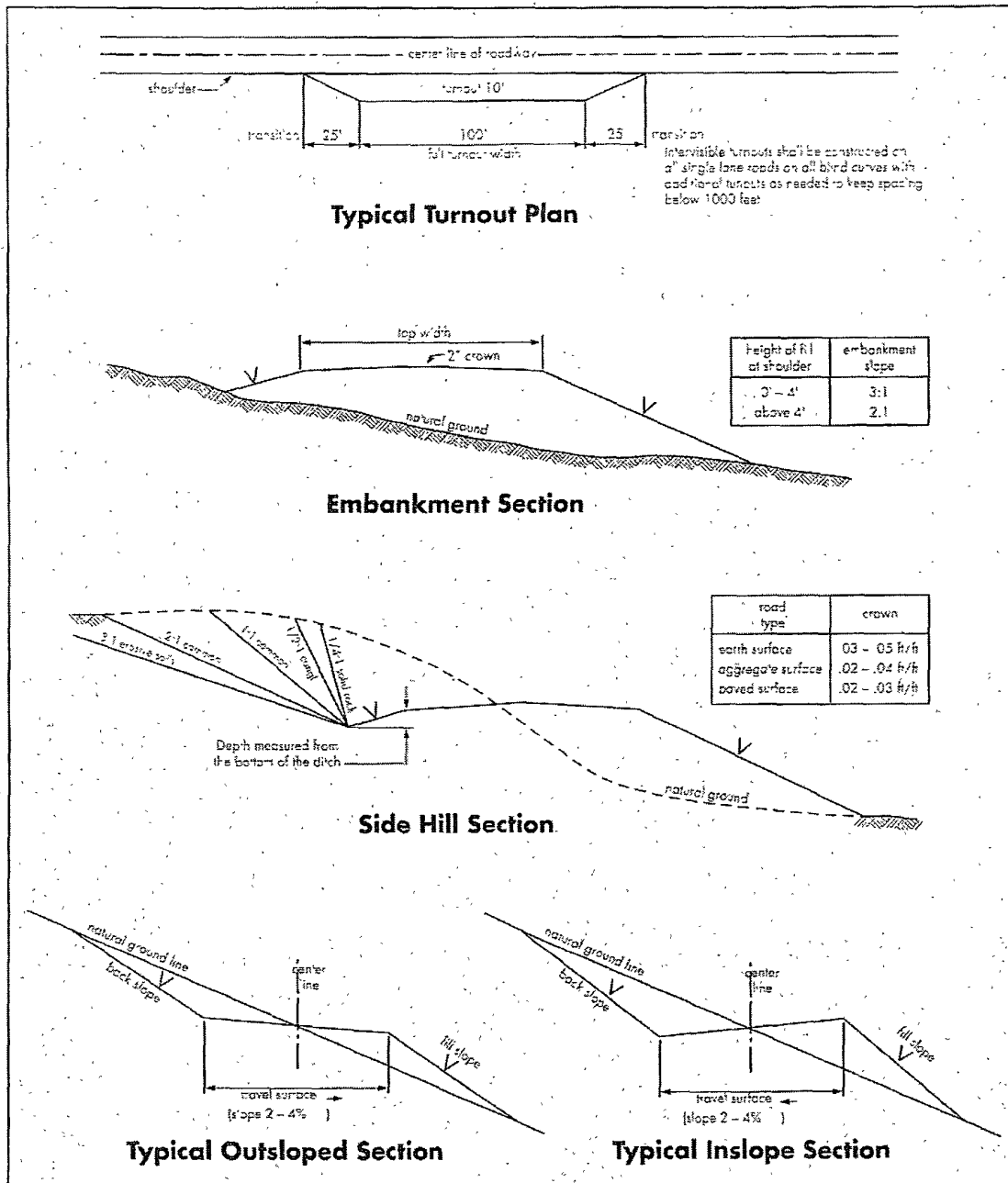
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Figure 1 – Cross Sections and Plans For Typical Road Sections**





## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a possible hazard. It has been reported in the Section to the north. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**
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. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**R-111-P Potash**

**High cave/karst**

**Possible lost circulation in the Delaware Mountain Group and the Bone Spring formations.**

1. The 13-3/8 inch surface casing shall be set at approximately 450 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Brine water mud to be used to drill intermediate hole.**

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Casing to be set in the Lamar Limestone at approximately 3000', a minimum of 100' and a maximum of 600' below the salt. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash and cave/karst.**

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.**

**Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

a. First stage to DV tool, cement shall:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.

**Second DV tool to be set a minimum of 50 feet below the intermediate casing shoe. Seal is required across the shoe due to potash.**

b. Second stage above DV tool, cement shall:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with third stage cement job.

c. Third stage above DV tool, cement shall:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required as excess cement calculates to less than 25%.**

#### **CONTINGENCY CEMENTING PROGRAM FOR INTERMEDIATE CASING**

4. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

**DV tool to be set a minimum of 50 feet below the surface casing shoe.**

**Casing to be set in the Lamar Limestone, see step 2 above.**

a. First stage to DV tool, cement shall:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job. **In addition, if the cement does not circulate, a CBL will be required prior to drilling out of the intermediate casing.**

b. Second stage above DV tool, cement shall:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash and cave/karst.**

- 5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. **Variance approved to use flex line from BOP to choke manifold. Check condition of 4 1/16" flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends. Hose to be anchored per manufacturer's recommendations.**
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi.**
- 4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8" intermediate casing shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

- e. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

**D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

**WWI 080709**

## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

### **B. PIPELINES**

#### **STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the

release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 25 feet.
7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.
8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.
9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.
10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.
13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.
14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.



15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

## **IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE**

### **A. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

### Seed Mixture 3, for Shallow Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass ( <i>Setaria macrostachya</i> )	1.0
Green Spangletop ( <i>Leptochloa dubia</i> )	2.0
Side oats Grama ( <i>Bouteloua curtipendula</i> )	5.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed  
(Insert Seed Mixture Here)

## **X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.