ATS-12-1098
TQS
10/30/2013

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OCT 29 2013
NMOCD ARTESIA

Form 3160-3 (April 2004)

SECRETARY'S POTASH

Sorry Artesia

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **NM053373**

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☑ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. 24019967
Cypress 3 Federal SWD #1

2. Name of Operator **OXY USA Inc.** 16696

9. API Well No. **30-015-** 41765

3a. Address **P.O. Box 50250 Midland, TX 79710**

3b. Phone No. *(include area code)* **432-685-5717**

10. Field and Pool, or Exploratory 96100
~~Cedar Canyon Delaware~~ SWD; DELAWARE

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **870 FSL 1681 FWL SESW(N)**
At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 3 T24S R29E

14. Distance in miles and direction from nearest town or post office*
7 miles southeast from Loving, NM

12. County or Parish **Eddy**

13. State **NM**

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
870'	160	~~40~~ 0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
212'	**3600'**	**ESB000226** + NMB000862
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3043.2'	**09/01/2012**	**15 days**

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
	David Stewart	8/7/12
Title **Regulatory Advisor**	**david_stewart@oxy.com**	

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Aden Seidlitz		10/18/13
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 page 2)*

Carlsbad Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

OXY USA Inc.
Box 4294, Houston, TX 77210-4294

Taylor Cann, RPL
Land Negotiator

Phone (713) 366-5119
Cell (832) 291-9168
Fax (713) 985-1859
Taylor_Cann@oxy.com

United States Department of the Interior
Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220

Attention: Linda Denniston

RE: Cypress 3 Federal SWD # 1

Eddy County, New Mexico

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

OPERATOR NAME:	OXY USA Inc.
ADDRESS:	P.O. Box 4294 Houston, Texas 77210-4294

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

LEASE NO.:	**NMNM 053373**
LEGAL DESCRIPTION:	
Surface Location:	870' FSL & 1681' FWL
Bottom Hole Location:	870' FSL & 1681' FWL Section 3-T24S-R29E Eddy County, New Mexico
FORMATIONS:	None
BOND COVERAGE:	Nationwide
BLM BOND FILE NO.:	NMB000862
AUTHORIZED SIGNATURE:	OXY USA Inc. Taylor Cann
TITLE:	Land Negotiator
DATE:	August 3, 2012

cc: David Stewart

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 7th day of August, 2012.

Name: Peter Lawrence

Position: Reservoir Management Team Leader

Address: 5 Greenway Plaza, Suite 110, Houston, TX 77046

Telephone: 713-215-7644

E-mail: (optional): peter_lawrence@oxy.com

Company: OXY USA Inc.

Field Representative (if not above signatory): Dusty Weaver

Address (If different from above): P.O. Box 50250 Midland, TX 79710

Telephone (if different from above): 432-685-5723

E-mail (if different from above): calvin_weaver@oxy.com

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	Pool Code	Pool Name
30-015- 41765	11540	SWD; DELAWARE ~~Cedar Canyon Delaware~~

Property Code	Property Name	Well Number
40196	96100 CYPRESS "3" FEDERAL SWD	1

OGRID No.	Operator Name	Elevation
16696	OXY USA INC.	3043.2'

Surface Location

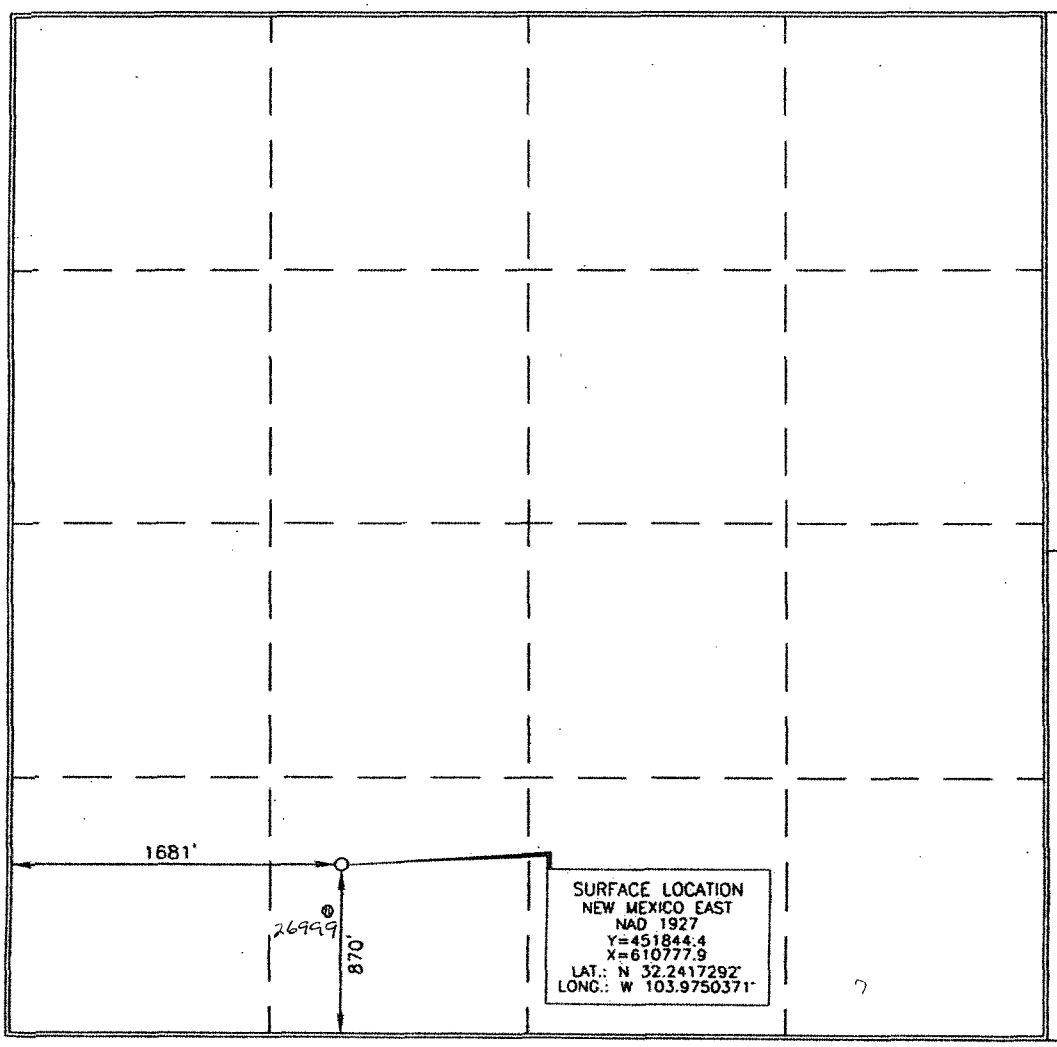
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	3	24 SOUTH	29 EAST, N.M.P.M.		870'	SOUTH	1681'	WEST	EDDY

Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
N/A	N		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



OPERATOR CERTIFICATION

I hereby certify 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.

Signature 8/7/12 Date

David Stewart - Reg. Advr.
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.

NOVEMBER 17, 2011
Date of Survey

Signature and Seal of Professional Surveyor:

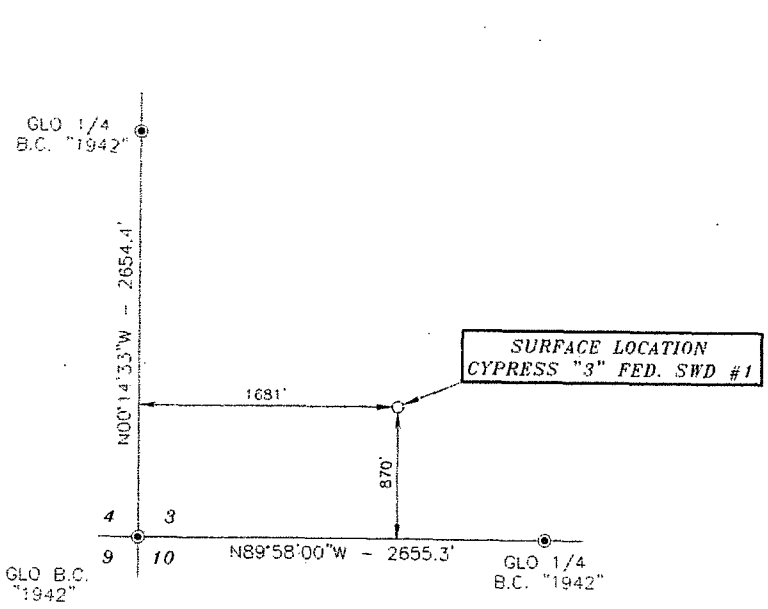
NEW MEXICO 15079 REGISTERED PROFESSIONAL LAND SURVEYOR

12/14/2011
Certificate Number 15079

WO# 111117WL-a (KA)

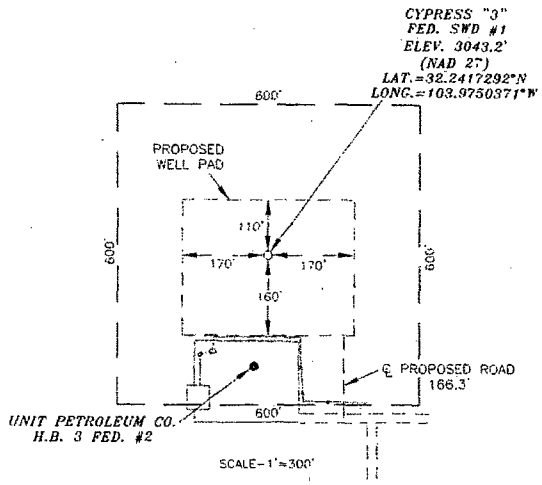
600 x 600

SECTION 3, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY NEW MEXICO



Basis of Bearings - GPS Geodetic Measurements NM East Zone (83) North American Datum of 1983

DRIVING DIRECTIONS:
BEGINNING AT THE INTERSECTION OF HWY. #31 AND HWY. #128, GO EAST ON HWY. #128 FOR APPX. 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 2.2 MILES, TURN EAST FOR 1.0 MILES, TURN SOUTHWEST FOR 1.4 MILES, TURN WEST FO 0.2 MILES, TURN NORTH ON PROPOSED ROAD FOR 166.3 FEET TO LOCATION.



TERRY J ASEL
NEW MEXICO
15079
REGISTERED PROFESSIONAL LAND SURVEYOR

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 12/14/2011
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

LEGEND

◉ - DENOTES FOUND MONUMENT AS NOTED

1000' 0 1000' 2000' FEET
SCALE: 1"=1000'

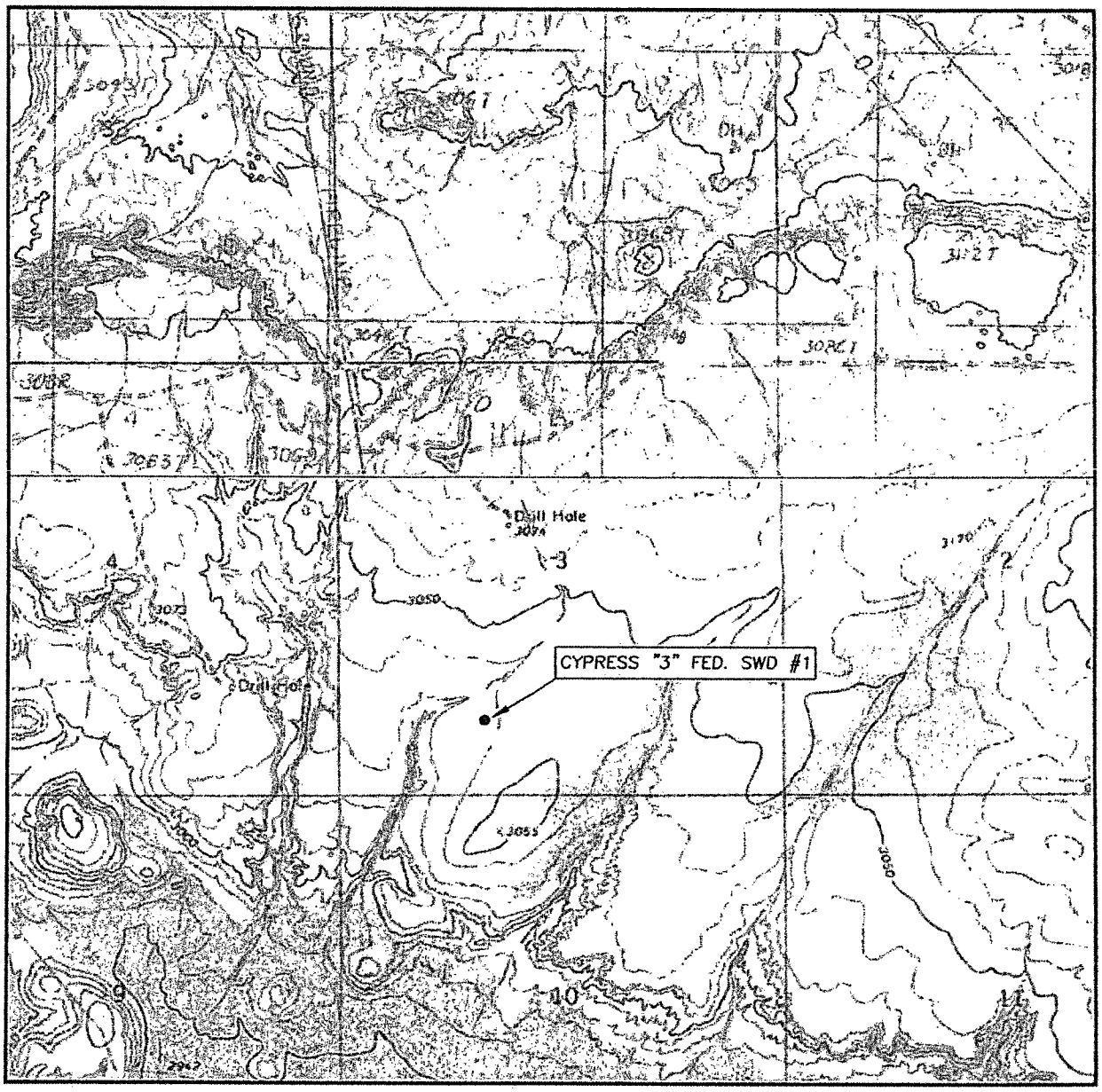
OXY USA INC.

CYPRESS "3" FED. SWD #1 LOCATED AT 870' FSL & 1681' FWL IN SECTION 3, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 11/17/11	Sheet 1 of 1 Sheet	
W.O. Number: 111117WL-a	Drawn By: KA	Rev:
Date: 12/08/11	111117WL-a	Scale:1"=100

LUM

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 3 TWP. 24-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 870' FSL & 1681' FWL

ELEVATION 3043.2'

OPERATOR OXY USA INC.

LEASE CYPRESS "3" FED. SWD #1

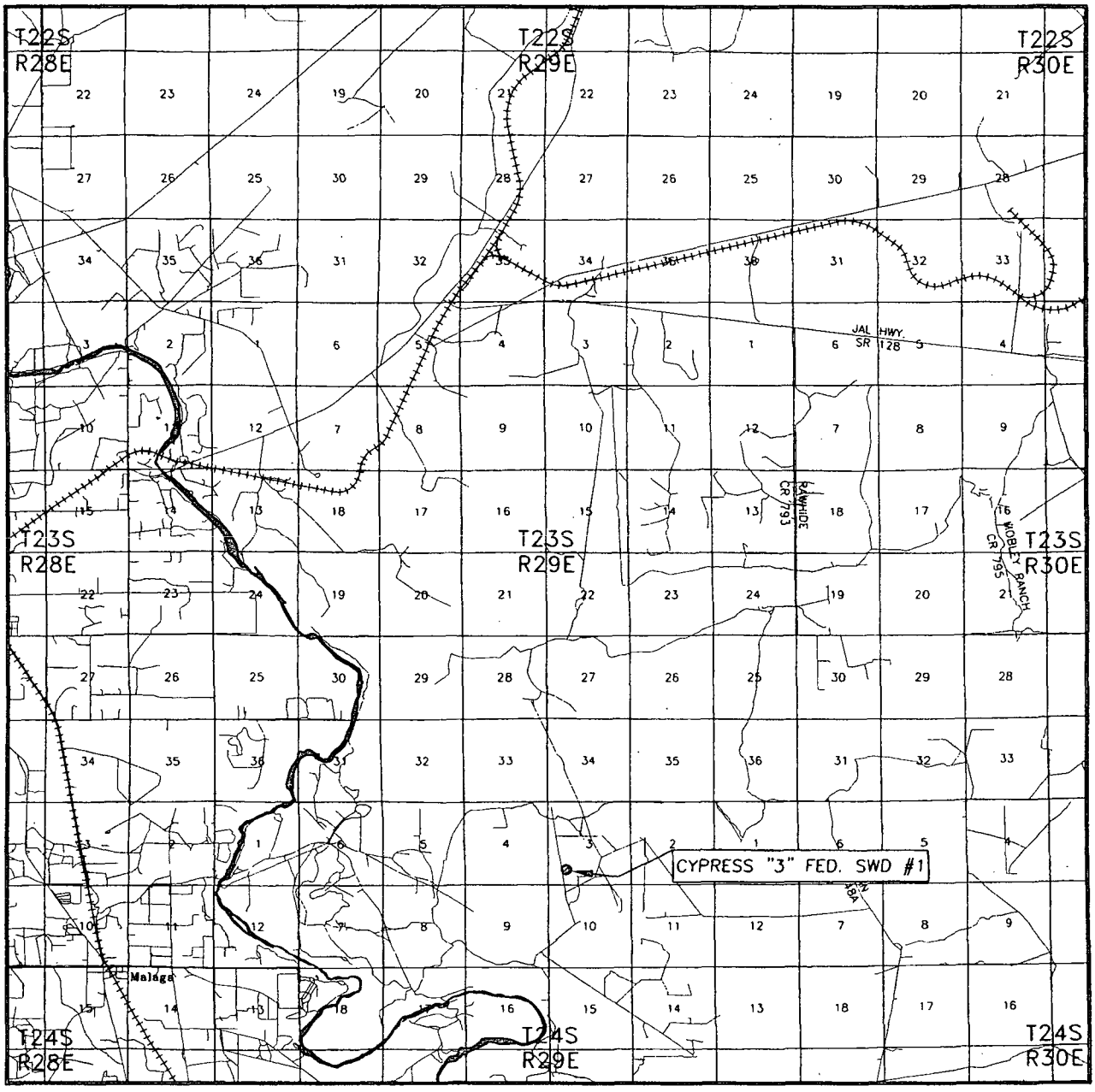
U.S.G.S. TOPOGRAPHIC MAP
REMUDA BASIN, N.M.

Asel Surveying

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

UM

VICINITY MAP



SCALE: 1" = 2 MILES

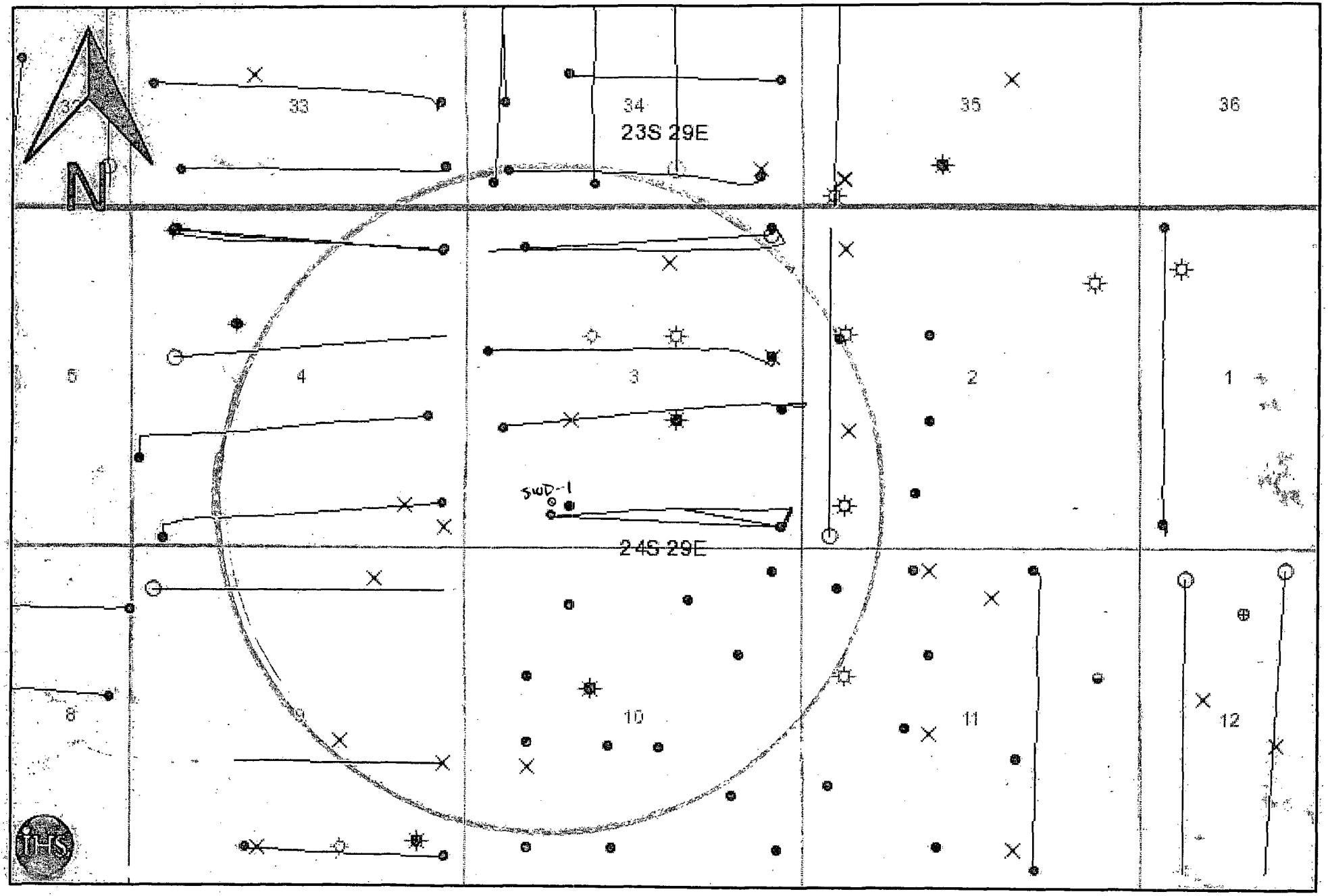
SEC. 3 TWP. 24-S RGE. 29-E
SURVEY N.M.P.M.
COUNTY EDDY
DESCRIPTION 870' FSL & 1681' FWL
ELEVATION 3043.2'
OPERATOR OXY USA INC.
LEASE CYPRESS "3" FED. SWD #1

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

DIRECTIONS BEGINNING AT THE INTERSECTION OF HWY. #31 AND HWY. #128, GO EAST ON HWY. #128 FOR APPX. 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 2.2 MILES, TURN EAST FOR 1.0 MILES, TURN SOUTHWEST FOR 1.4 MILES, TURN WEST FOR 0.2 MILES, TURN NORTH ON PROPOSED ROAD FOR 166.3 FEET TO LOCATION.

1 Mi. AOR

Cypress 3 Federal SWD #1

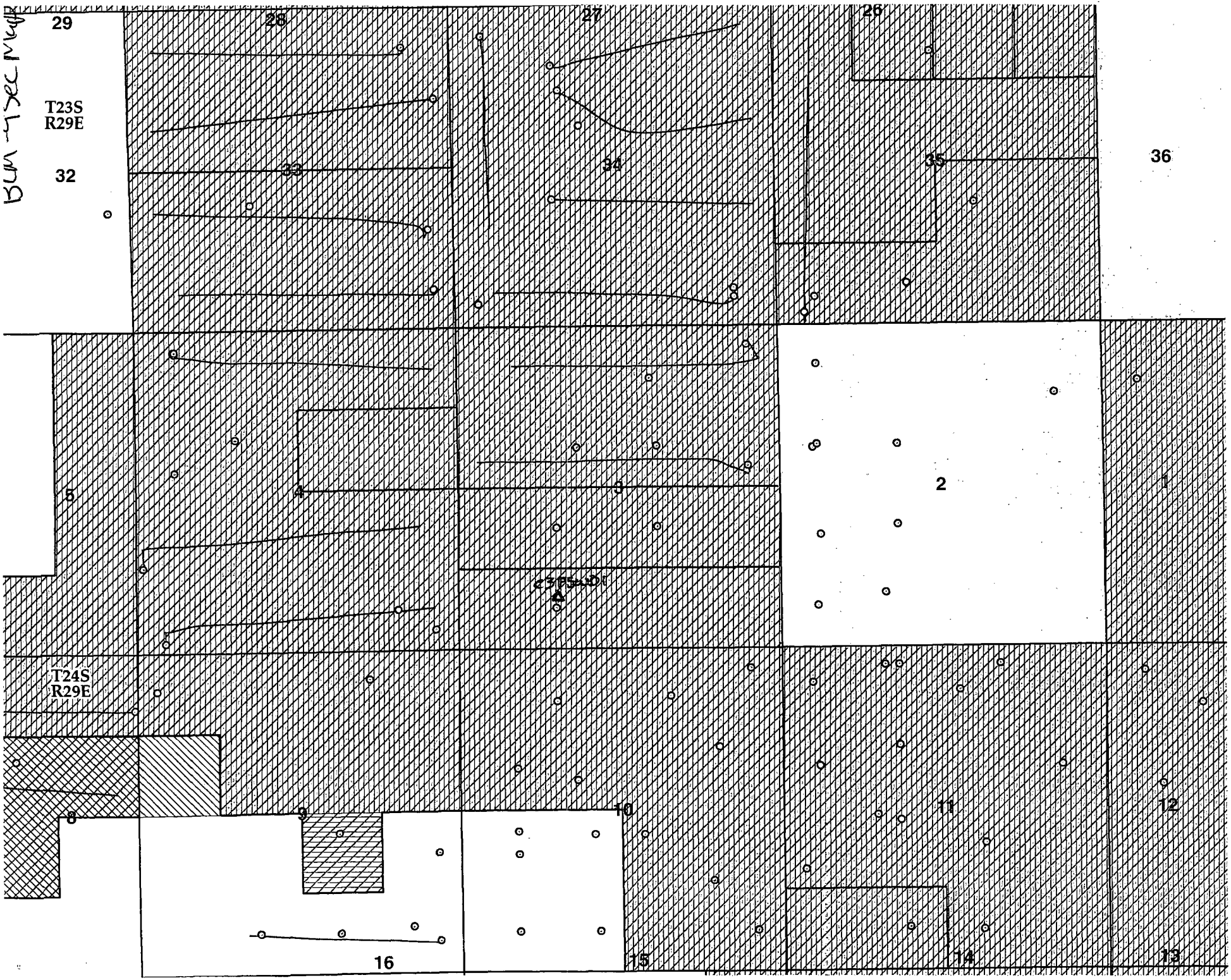


Cypress 3 Federal SWD #1 - 9 Section AOR - Well Information

API	Lease Name	Well	Operator Name	Location	Footage	Field Name	IP Prod Form Name	Form at TD Name	TD	Final Status
30015326060000	H B 11 FEDERAL	7	DEVON ENERGY PROD	24S 29E 11 NW NE SW	2550 FSL 1600 FWL	PIERCE CROSSING	BONE SPRING	BONE SPRING 1 /SD/	8401	OIL
30015382970000	H B 2 STATE	8	DEVON ENERGY PROD	24S 29E 2	1140 FNL 700 FEL	CEDAR CANYON	MORROW	MORROW	14250	GAS
30015390370000	H B `2` STATE	7H	DEVON ENERGY PROD	24S 29E 2	200 FSL 420 FWL	CEDAR CANYON				
30015329430000	H B 2 STATE	5	DEVON ENERGY PROD	24S 29E 2 C NE SW	1980 FSL 1980 FWL	CEDAR CANYON	BONE SPRING 1 /SD/	BONE SPRING	8400	OIL
30015330990000	H B 2 STATE	7	DEVON ENERGY PROD	24S 29E 2 C NW NW	660 FNL 660 FWL	CEDAR CANYON				AB-LOC
30015329440000	H B 2 STATE	6	DEVON ENERGY PROD	24S 29E 2 C SE NW	1980 FNL 1980 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	8400	OIL
30015327150000	H B 2 STATE	3	DEVON ENERGY PROD	24S 29E 2 C SW SW	660 FSL 660 FWL	CEDAR CANYON	MORROW	MORROW	14085	GAS
30015327150001	H B 2 STATE	3	DEVON ENERGY PROD	24S 29E 2 C SW SW	660 FSL 660 FWL	CEDAR CANYON	BONE SPRING	MORROW	14085	GAS-WO
30015328210000	H B 2 STATE	4	DEVON ENERGY PROD	24S 29E 2 NW SE SW	860 FSL 1780 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	8410	OIL
30015332180000	H B 2 STATE	8	DEVON ENERGY PROD	24S 29E 2 SE NW SW	1830 FSL 710 FWL	CEDAR CANYON				AB-LOC
30015256530000	STATE `HB`	1	SANTA FE ENERGY CORP	24S 29E 2 SW NW	1980 FNL 660 FWL	CEDAR CANYON	MORROW	MORROW	14030	GAS
30015325140000	H B 2 STATE	2	DEVON ENERGY PROD	24S 29E 2 SW SW NW	2030 FNL 585 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	8440	OIL
30015036920000	KERR	1	WEINER-MCDOWELL	24S 29E 3	1980 FNL 1980 FWL			UNKNOWN	3152	D&A
30015389930000	HB `3` FEDERAL	4H	UNIT PETROLEUM CO	24S 29E 3	330 FSL 330 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	11520	OIL
30015390760000	HB 3 FEDERAL	3H	UNIT PETROLEUM CO	24S 29E 3	2170 FSL 330 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	12400	OIL
30015393530000	KNOLL `AOK` FEDERAL	4H	YATES PETROLEUM CORP	24S 29E 3 NE NE	430 FNL 480 FEL	NASH DRAW SW				
30015351080000	KNOLL AOK FEDERAL	2H	YATES PETROLEUM CORP	24S 29E 3 NE NE NE	330 FNL 480 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	11861	OIL
30015279070000	HB `3` FEDERAL	3	VISION ENERGY INC	24S 29E 3 NE SW	1980 FSL 1650 FWL	CEDAR CANYON				AB-LOC
30015263190000	H B `3B` FEDERAL	1	SANTA FE ENR OP PRTN	24S 29E 3 NW NE	860 FNL 2080 FEL	CEDAR CANYON				AB-LOC
30015257660000	H B `3` FEDERAL	1	SANTA FE ENERGY CORP	24S 29E 3 NW SE	1980 FSL 1980 FEL	CEDAR CANYON	MORROW	MORROW	13935	GAS
30015257660001	H B `3` FEDERAL	1	VISION ENERGY INC	24S 29E 3 NW SE	1980 FSL 1980 FEL	CEDAR CANYON	BONE SPRING 1 /SD/	MORROW	13935	OIL-WO
30015351090000	KNOLL AOK FEDERAL	3	YATES PETROLEUM CORP	24S 29E 3 SE SE NE	2310 FNL 480 FEL	CEDAR CANYON				AB-LOC
30015359070000	KNOLL AOK FEDERAL	3H	YATES PETROLEUM CORP	24S 29E 3 SE SE NE	2310 FNL 480 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	12230	OIL
30015269990000	HB `3` FEDERAL	2	VISION ENERGY INC	24S 29E 3 SE SW	660 FSL 1650 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	8010	OIL
30015281270000	KNOLL `AOK` FEDERAL	1	YATES PETROLEUM CORP	24S 29E 3 SW NE	1980 FNL 1980 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	8250	GAS
30015285770000	CF `4` FEDERAL	1	MARALO INCORPORATED	24S 29E 4	1780 FNL 1650 FWL	WILDCAT		BONE SPRING	6860	D&A
30015285770001	JUNIPER BIP FEDERAL	5	YATES PETROLEUM CORP	24S 29E 4	1780 FNL 1650 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	9170	OIL-WO
30015285770002	JUNIPER BIP FEDERAL	5	YATES PETROLEUM CORP	24S 29E 4	1780 FNL 1650 FWL	MALAGA	BRUSHY CANYON	BONE SPRING	9170	OIL-WO
30015370540000	JUNIPER BIP FEDERAL	6H	YATES PETROLEUM CORP	24S 29E 4 N2 NW NW	330 FNL 660 FWL	CEDAR CANYON		RUSTLER ANHY	645	J&A
30015370760000	JUNIPER BIP FEDERAL	6Y	YATES PETROLEUM CORP	24S 29E 4 NW NW	330 FNL 680 FWL	CEDAR CANYON		BONE SPRING	8100	PILOT
30015370760100	JUNIPER BIP FEDERAL	6Y	YATES PETROLEUM CORP	24S 29E 4 NW NW	330 FNL 680 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	11829	OIL-WO
30015379680000	JUNIPER `BIP` FEDERAL	10H	YATES PETROLEUM CORP	24S 29E 4 NW NW	296 FNL 718 FWL	MALAGA	BRUSHY CANYON	BRUSHY CANYON	10673	OIL
30015372120000	JUNIPER BIP FEDERAL	7H	YATES PETROLEUM CORP	24S 29E 4 S2 SW NW	2310 FNL 660 FWL	WILDCAT				
	CEDAR CANYON `4` FEDERAL	1	SANTA FE ENR OP PRTN	24S 29E 4 SE SE	660 FSL 960 FEL	CEDAR CANYON				AB-LOC
	JUNIPER BIP FEDERAL	1	YATES PETROLEUM CORP	24S 29E 4 SE SE SE	330 FSL 330 FEL	CEDAR CANYON				AB-LOC
30015372520000	JUNIPER BIP FEDERAL	8H	YATES PETROLEUM CORP	24S 29E 4 SW NW SW	1375 FSL 130 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	12044	OIL
30015374070000	JUNIPER BIP FEDERAL	9H	YATES PETROLEUM CORP	24S 29E 4 SW SW	130 FSL 480 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	12043	OIL
30015206070000	CEDAR CANYON	1	SKELLY OIL COMPANY	24S 29E 9	770 FSL 770 FEL	CEDAR CANYON	MORROW	FUSSELMAN	15500	GAS
30015206070001	CEDAR CANYON	1	SKELLY OIL COMPANY	24S 29E 9	770 FSL 770 FEL	CEDAR CANYON	DELAWARE	FUSSELMAN	15500	OIL-WO
30015212530000	CEDAR CANYON 9-D	1	SKELLY OIL COMPANY	24S 29E 9	660 FSL 1980 FEL	WILDCAT		DELAWARE	4600	D&A
30015285120000	CEDAR CANYON `9`	2	POGO PRODUCING CO	24S 29E 9	660 FSL 1980 FWL	CEDAR CANYON				AB-LOC
30015381520000	JUNIPER BIP FEDERAL	11H	YATES PETROLEUM CORP	24S 29E 9	660 FNL 330 FWL	CEDAR CANYON				
30015350430000	HARROUN `9`	2	OXY U S A INC	24S 29E 9 E2 NE SE	1980 FSL 330 FEL	PIERCE CROSSING E				AB-LOC
	JUNIPER BIP FEDERAL	4	YATES PETROLEUM CORP	24S 29E 9 N2 NW SE	2310 FSL 1980 FEL	WILDCAT				AB-LOC
	CEDAR CANYON `9` FEDERAL	1	SANTA FE ENR OP PRTN	24S 29E 9 NW NE	474 FNL 1444 FEL	CEDAR CANYON				AB-LOC
30015349970000	HARROUN 9	1	POGO PRODUCING CO	24S 29E 9 SE SE SE	530 FSL 330 FEL	PIERCE CROSSING E	BONE SPRING	BONE SPRING	10680	OIL

Cypress 3 Federal SWD #1 - 9 Section AOR - Well Information

API	Lease Name	Well	Operator Name	Location	Footage	Field Name	IP Prod Form Name	Form at TD Name	TD	Final Status
30015247300000	BLAKEMORE EST FED	2	EXXON CORPORATION	23S 29E 33	2080 FSL 1980 FWL					AB-LOC
30015363210000	CYPRESS 33 FEDERAL	1H	OXY U S A INC	23S 29E 33 E2 SE SE	660 FSL 330 FEL	CEDAR CANYON	BONE SPRING 1 /SD/	BONE SPRING 1 /SD/	11694	OIL
30015369870000	CYPRESS 33 FEDERAL	3	OXY U S A INC	23S 29E 33 NE SE	1650 FSL 400 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	11980	OIL
30015356920000	CYPRESS 34 FEDERAL	3H	POGO PRODUCING CO	23S 29E 34 NW NE SW	2100 FSL 1650 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	11065	OIL
30015350530000	CYPRESS 34 FEDERAL	1	POGO PRODUCING CO	23S 29E 34 S2 SE SE	460 FSL 660 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	11759	OIL
30015305450000	COCHITI `34` FEDERAL	1	CONCHO RESOURCES INC	23S 29E 34 SE SE	600 FSL 660 FEL	CEDAR CANYON				AB-LOC
30015394300000	CYPRESS `34` FEDERAL	8H	OXY U S A INC	23S 29E 34 SW SE	575 FSL 1980 FEL	NASH DRAW SW				
30015383660000	CYPRESS `34` FEDERAL	6H	OXY U S A INC	23S 29E 34 SW SW	400 FSL 400 FWL	NASH DRAW SW	DELAWARE	BRUSHY CANYON	10422	OIL
	GOODNIGHT `35` FEDERAL	2	KUKUI OPERATING CO	23S 29E 35 C NW SE	1980 FSL 1980 FEL	CEDAR CANYON				AB-LOC
30015310960000	GOODNIGHT `35` FEDERAL	1	KUKUI OPERATING CO	23S 29E 35 E2 SE SW	660 FSL 2180 FWL	LAGUNA GRANDE	WOLFCAMP	WOLFCAMP	11593	GAS
30015310960001	GOODNIGHT 35 FEDERAL	1	KUKUI OPERATING CO	23S 29E 35 E2 SE SW	660 FSL 2180 FWL	CEDAR CANYON	BONE SPRING	WOLFCAMP	11593	OIL-WO
30015310960002	GOODNIGHT 35 FEDERAL	1	KUKUI OPERATING CO	23S 29E 35 E2 SE SW	660 FSL 2180 FWL	NASH DRAW SW	BRUSHY CANYON	WOLFCAMP	11593	OIL-WO
30015310960100	GOODNIGHT 35 FEDERAL	1	LATIGO PETROLEUM INC	23S 29E 35 E2 SE SW	660 FSL 2180 FWL	LAGUNA GRANDE		MORROW	14114	D&AW
30015318650000	GOODNIGHT `35` FEDERAL	3	KUKUI OPERATING CO	23S 29E 35 S2 SW SW	440 FSL 660 FWL	CEDAR CANYON				AB-LOC
30015338440000	GOODNIGHT 35 FEDERAL	2	LATIGO PETROLEUM INC	23S 29E 35 S2 SW SW	440 FSL 660 FWL	CEDAR CANYON				AB-LOC
30015363730000	GOODNIGHT `35` FEDERAL	2H	OXY U S A INC	23S 29E 35 SW SW SW	180 FSL 490 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING 1 /SD/	12390	GAS
30015207560000	CEDAR CANYON 10	1	SKELLY OIL COMPANY	24S 29E 10	2180 FNL 1980 FWL	CEDAR CANYON	MORROW	MISSISSIPPIAN	13859	GAS
30015207560001	CEDAR CANYON `10`	1	GETTY OIL COMPANY	24S 29E 10	2180 FNL 1980 FWL	EDDY UNDESIGNATED		MISSISSIPPIAN	13859	D&AW
30015207560002	RIVER BEND 10 FEDERAL	2	POGO PRODUCING CO	24S 29E 10	2180 FNL 1980 FWL	CEDAR CANYON	BONE SPRING	MISSISSIPPIAN	13859	OIL-WO
30015291570000	HB `10` FEDERAL	1	SANTA FE ENRG RES	24S 29E 10	1650 FNL 990 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	8290	OIL
30015299150000	HB `10A` FEDERAL	8	SANTA FE ENRG RES	24S 29E 10	660 FSL 400 FEL	CEDAR CANYON	BONE SPRING 1 /SD/	BONE SPRING 1 /SD/	8214	OIL
30015303750000	HARROUN `10`	1	POGO PRODUCING CO	24S 29E 10 E2 SE SW	660 FSL 2310 FWL	CEDAR CANYON	DELAWARE	DELAWARE	6934	OIL
30015332080000	RIVER BEND 10 FEDERAL	1	POGO PRODUCING CO	24S 29E 10 E2 SW NW	1980 FNL 990 FWL	CEDAR CANYON	BONE SPRING	BONE SPRING	8000	OIL
30015317090000	HARROUN `10`	2	POGO PRODUCING CO	24S 29E 10 E2 SW SW	660 FSL 990 FWL	PIERCE CROSSING E	BONE SPRING	BONE SPRING	8000	OIL
30015317090001	HARROUN 10	2	POGO PRODUCING CO	24S 29E 10 E2 SW SW	660 FSL 990 FWL	CEDAR CANYON	BRUSHY CANYON	BONE SPRING	8000	OIL-WO
30015340630000	H B 10 FEDERAL	4	DEVON ENERGY PROD	24S 29E 10 NE NE NE	360 FNL 460 FEL	CEDAR CANYON	BONE SPRING 1 /SD/	BONE SPRING 1 /SD/	8250	OIL
30015326180000	HARROUN 10	4	POGO PRODUCING CO	24S 29E 10 NE NE SW	2250 FSL 2250 FWL	PIERCE CROSSING E	BONE SPRING	BONE SPRING	8000	OIL
30015273660000	CEDAR CANYON `10` FEDERAL	1	MARALO INCORPORATED	24S 29E 10 NE NW	880 FNL 1650 FWL	CEDAR CANYON	BONE SPRING 1 /SD/	BONE SPRING 1 /SD/	8025	OIL
30015326170000	HARROUN 10	3	POGO PRODUCING CO	24S 29E 10 NE NW SW	2310 FSL 990 FWL	PIERCE CROSSING	BONE SPRING 1 /SD/	BONE SPRING 1 /SD/	8004	OIL
30015326170001	HARROUN 10	3	POGO PRODUCING CO	24S 29E 10 NE NW SW	2310 FSL 990 FWL	CEDAR CANYON	BRUSHY CANYON	BONE SPRING 1 /SD/	8004	OIL-WO
30015330980000	HB 10 FEDERAL	2	DEVON ENERGY PROD	24S 29E 10 NW NW SE	2240 FSL 2240 FEL	PIERCE CROSSING E	BONE SPRING	BONE SPRING	8197	OIL
30015338360000	H B 10 FEDERAL	5	DEVON ENERGY PROD	24S 29E 10 SE NW NE	810 FNL 1780 FEL	CEDAR CANYON	BONE SPRING	BONE SPRING	8100	OIL
30015317100000	HARROUN `10`	3	POGO PRODUCING CO	24S 29E 10 SE NW SW	1930 FSL 990 FWL	CEDAR CANYON				AB-LOC
30015341450000	H B 10 FEDERAL	3	DEVON ENERGY PROD	24S 29E 10 SW NE SE	1480 FSL 1110 FEL	PIERCE CROSSING	BONE SPRING	BONE SPRING	8150	OIL
30015244270000	POCHE FEDERAL	1	EXXON CORPORATION	24S 29E 11	1980 FNL 660 FEL	WILDCAT		BONE SPRING	7102	D&A-O
30015286930000	H B `11` FEDERAL	1	SANTA FE ENRG RES	24S 29E 11	1980 FNL 660 FWL	CEDAR CANYON	MORROW CLASTIC	MORROW	14010	GAS
30015292480000	H B `11` FEDERAL	2	SANTA FE ENRG RES	24S 29E 11	1650 FSL 400 FWL	PIERCE CROSSING E	BONE SPRING 1 /SD/	BONE SPRING 1 /SD/	8200	OIL
30015292490000	H B `11` FEDERAL	3	SANTA FE ENRG RES	24S 29E 11	700 FSL 2100 FWL	PIERCE CROSSING E	BONE SPRING	BONE SPRING	8300	OIL
30015295840000	HB `11` FEDERAL	5	SANTA FE ENRG RES	24S 29E 11	330 FNL 1980 FWL	CEDAR CANYON				AB-LOC
30015295850000	HB `11` FEDERAL	6	SANTA FE ENRG RES	24S 29E 11	1650 FNL 1980 FWL	PIERCE CROSSING E	BONE SPRING	BONE SPRING	8450	OIL
30015296120000	H B `11` FEDERAL	12	SANTA FE ENRG RES	24S 29E 11	660 FSL 1980 FEL	CEDAR CANYON				AB-LOC
30015296250000	HB `11` FEDERAL	4	SANTA FE ENRG RES	24S 29E 11	610 FNL 560 FWL	PIERCE CROSSING E	BONE SPRING	BONE SPRING	8505	OIL
30015297380000	H B `11` FEDERAL	9	SANTA FE ENRG RES	24S 29E 11	750 FNL 2310 FEL	CEDAR CANYON				AB-LOC
30015297390000	H B `11` FEDERAL	11	SANTA FE ENRG RES	24S 29E 11	2080 FSL 1930 FEL	CEDAR CANYON	BONE SPRING 1 /SD/	BONE SPRING 1 /SD/	8460	OIL
30015297390001	H B 11 FEDERAL	11	DEVON ENERGY PROD	24S 29E 11	2080 FSL 1930 FEL	CEDAR CANYON	DELAWARE	BONE SPRING 1 /SD/	8462	OIL-WO
	HB `11` FEDERAL	7	SANTA FE ENRG RES	24S 29E 11	2460 FSL 1980 FWL	CEDAR CANYON				AB-LOC
30015379000000	HB `11` FEDERAL	8H	DEVON ENERGY PROD	24S 29E 11 NW NE	330 FNL 1650 FEL	PIERCE CROSSING E		BONE SPRING 1 /SD/	8500	PILOT
30015379000100	HB `11` FEDERAL	8H	DEVON ENERGY PROD	24S 29E 11 NW NE	330 FNL 1650 FEL	PIERCE CROSSING E	BONE SPRING	BONE SPRING 1 /SD/	12032	OIL-WO
30015327410000	H B 11 FEDERAL	5	DEVON ENERGY PROD	24S 29E 11 NW NE NW	330 FNL 1750 FWL	PIERCE CROSSING	BONE SPRING	BONE SPRING LM	8497	OIL


BLM - 7 Sec Map
29
28
27
26
T23S
R29E
32
33
34
35
36
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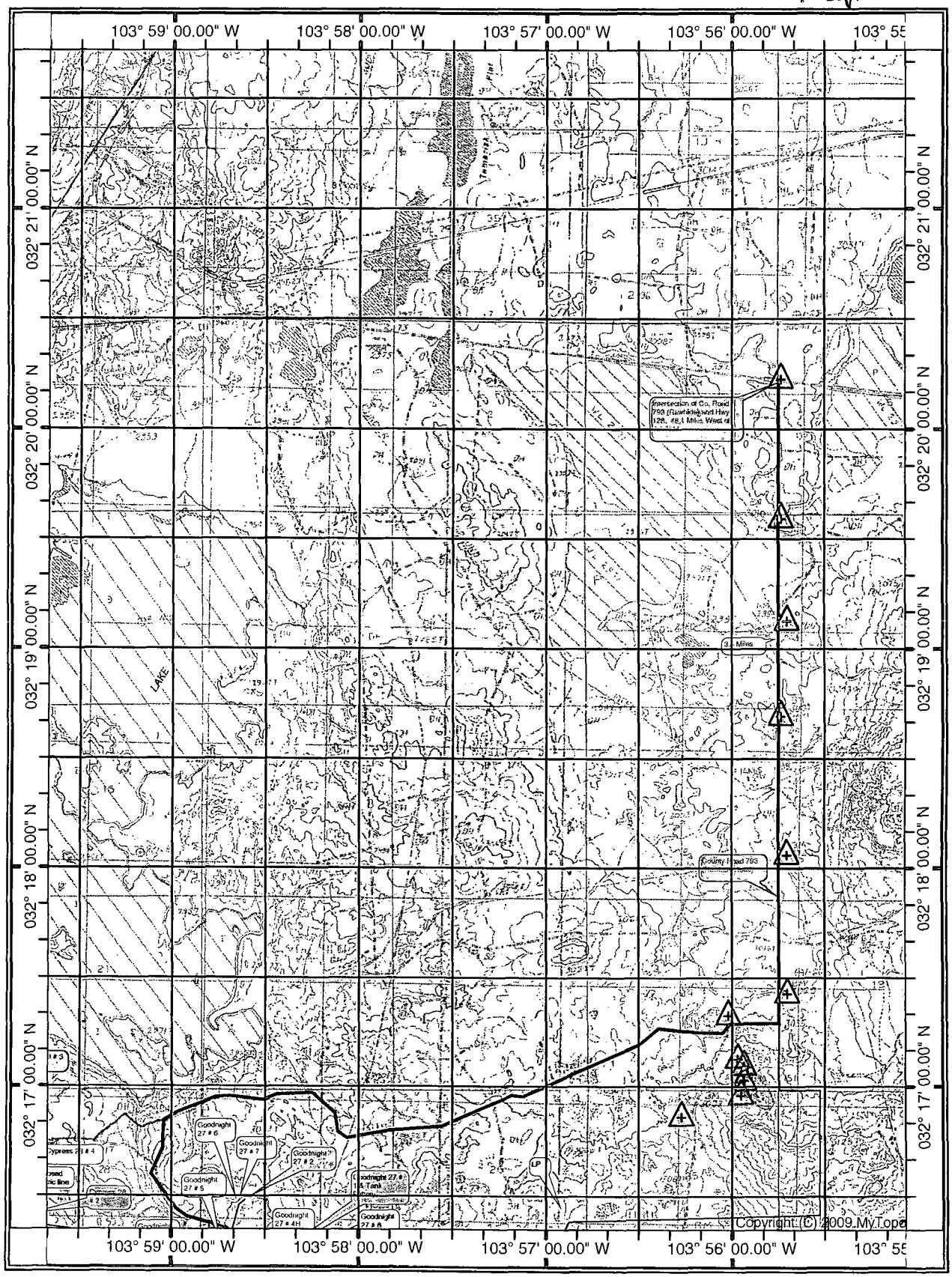
Directions
Map
) -1



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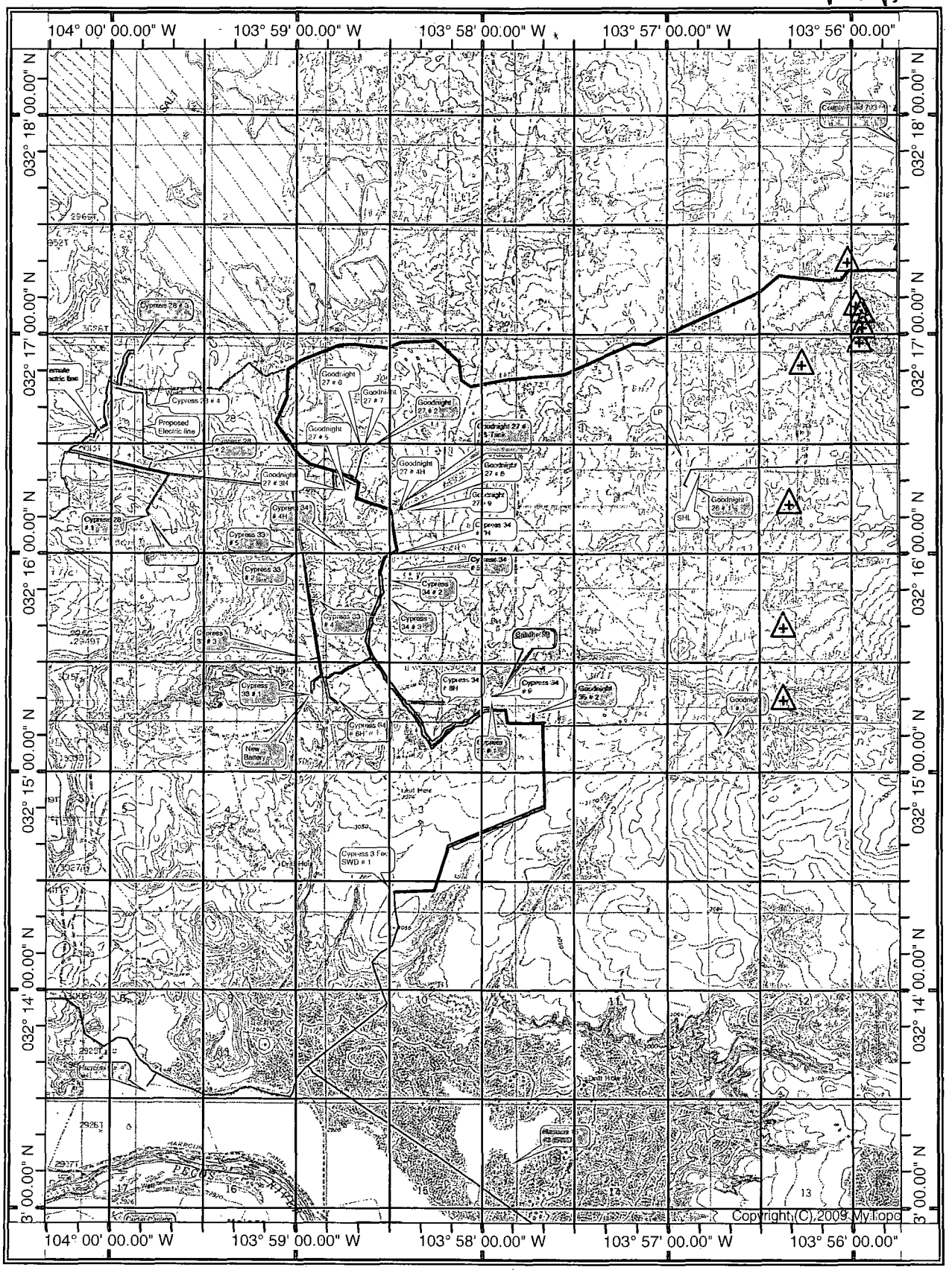
FEET

Directions 1-2
Map



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FEET

APD DATA – DRILLING PLAN – 7/25/13

OPERATOR NAME / NUMBER: OXY USA Inc 16696

LEASE NAME / NUMBER: Cypress 3 Federal SWD # 1 **Federal Lease No.** NM053373

STATE: NM **COUNTY:** Eddy

SURFACE LOCATION: 870 FSL 1681 FWL SESW(N) Sec 3 T24S R29E

SL: LAT: 32.2417292 N LONG: 103.9750371 W X: 610777.9' Y: 451844.4' NAD: 27

C-102 PLAT APPROX GR ELEV: 3043.2'

EST KB ELEV: 3059.7 (16.5' KB)

1. **GEOLOGIC NAME OF SURFACE FORMATION**
   a. Permian

2. **ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS (FROM KB)**

Formation	TV Depth Top	Expected Fluids
T. Rustler	500	-
T. Salado	570	-
B. Anhydrite/Salt	2340	-
T. Lamar	3060	-
T. Bell Canyon	3115	Formation Water
T. Cherry Canyon	3885	Formation Water
TD	3950	-

GREATEST PROJECTED TD 3950' MD/ 3950' TVD **OBJECTIVE:** Bell Canyon

3. **CASING PROGRAM (All Casing is in NEW CONDITION)**

New Surface Casing: 11.75" casing set at ± 625' MD/ 625' TVD in a 14 3/4" hole filled with 8.40 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'- 625'	375' 625'	42	H-40	ST&C	1070	1980	307	11.084	4.77	5.29	1.86	13.98

New Intermediate Casing: 8.625" casing set at ± 3050'MD / 3050'TVD in a 10 5/8" hole filled with 10 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'- 3050'	3050'	32	J-55	LT&C	2530	3930	417	7.92	7.80	2.21	2.74	4.77

NewProduction Casing: 5.5" casing set at ± 3950'MD / 3950'TVD in a 7 7/8" hole filled with 8.90 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'- 3950'	3950'	17	J-55	LT&C	4910	5320	247	4.89	4.77	2.69	3.71	4.26

Collapse and burst loads calculated using Stress Check with actual anticipated loads.

4. CEMENT PROGRAM:

Surface Interval 11 3/4"

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft^3/sk	24 Hr Comp
Surface TOC: Surface (0' –625')							
Lead: 0' – 625' (150% Excess)	530	625'	Premium Plus Cement, with 2% Calcium Chloride.	6.39	14.8	1.35	2500 psi

Intermediate Interval 8 5/8"

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft^3/sk	24 Hr Comp
Intermediate TOC: Surface (0' –3050')							
Lead: 0' –2677' (150% Excess)	640	2677'	Light Premium Plus Cement, with 5% Salt, 3 lb/sk Kol-Seal, & 0.125 lb/sk Poly-E-Flake	9.68	12.9	1.87	650 psi
Tail: 2677' –3050' (150% Excess)	200	483'	Premium Plus cement with 1% Calcium Chloride	6.36	14.8	1.34	1343 psi

Production Interval 5 1/2"

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft^3/sk	24 Hr Comp
Production TOC: Surface (0' - 3950')							
Lead: 0' – 3350' (200% Excess)	480	3350'	Light Premium Plus Cement	9.99	12.7	1.85	560 psi
Tail: 3350' – 3950' (35% Excess)	250	600'	Premium Plus, 0.5 Halad 344, 0.4% CFR 3, 3lbm/sk Kol Seal, 1 lbm/sk Salt	5.59	14.2	1.29	1817 psi

Description of Cement Additives: Poly-E-Flake (Lost Circulation Additive), Calcium Chloride – Flake (Accelerator), Kol-Seal (Lost Cirulation Additive), Halad®-344 (Low Fluid Loss Control), CFR-3 (Dispersant).

5. PRESSURE CONTROL EQUIPMENT

Surface: 0 – 625' None.

Intermediate: 0 - 3050' the minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required to drill below the surface casing shoe shall be 3000 (3M) psi. Operator will be using an 11" 5M two ram stack with 3M annular preventer and 3M Choke Manifold.

a. The 11" 3000 psi blowout prevention equipment will be installed and operational after setting the 11 3/4" surface casing and the 11 ¾" SOW x 13 5/8" 3K conventional wellhead; the rotating head body will be installed but the rubber will be installed when it becomes operationally necessary.

b. The BOP and ancillary BOPE will be tested by a third party. All equipment will be tested to 250/1386 against the surface casing (70% of casing burst) psi for 30 minutes by a third party and charted.

c. The pipe rams will be function tested every 24 hours; the blind rams will be function tested on every trip out of the hole. These tests will be documented on the Daily Driller's Log.

d. Other accessory equipment (BOPE) will include a safety valve and subs as needed to fit all drill strings, and a 2" kill line and 3" choke line having a 5000 psi WP rating, tested to 3000 psi.

Production: 0 – 3950' will be drilled with an 11" 5M two ram stack with a 3M annular preventer and 3M Choke Manifold.

a. The BOP and ancillary BOPE will be tested by a third party upon installation to the 8 5/8" intermediate casing. All equipment will be tested to 3000 psi (high) and 250 psi (low) except the annular, which will be tested to 70% of its rated working pressure (high) and also to 250 psi (low). All test will performed against a test plug with the Section B Wellhead valve open to assure that the test is not being performed against the casing.

b. The pipe rams will be function tested every 24 hours; the blind rams will be function tested on every trip out of the hole. These tests will be documented on the Daily Driller's Log.

c. Same "c" ands "d" as above

See COA

d. Oxy requests a variance to use a co-flex line between the BOP and choke manifold. (schematic attached)
Manufacturer: ContiTech Beattie Co.
Serial Number: 60220
Length: 25' Size: 3" Ends: flanges
WP rating: 5000 psi Anchors required by manufacturer: No

e. See attached BOP & Choke manifold diagrams.

See COA

6. MUD PROGRAM:

Depth	Mud Wt ppg	Vis Sec	Fluid Loss	Type System
0 – ~~625'~~ 375'	8.4 – 8.8	32 – 38	NC	Fresh Water /Spud Mud
~~625'~~ – 3050'	9.8 – 10.0	28 – 29	NC	Brine Water
3050' – 3950'	8.4– 8.9	26- 28	NC	Fresh Water

Remarks: Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times.

A. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

a. A Kelly cock will be in the drill string at all times.

b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

c. 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. **If Hydrogen Sulfide is encountered , measured amounts and formations will be reported to the BLM**

See COA

8. POTENTIAL HAZARDS:

A. H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6.

See COA

B. The bottomhole pressure is anticipated to be **between 1828 psi.**

C. No abnormal temperatures or pressures are anticipated. **The highest anticipated pressure gradient is 0.46 psi/ft**. 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.

9. 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 35 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.

10. WIRELINE LOGGING

Run Spectral Gamma/Neutron/Density/Resistivity from TD to Intermediate casing, with Gamma/Neutron to surface.

COMPANY PERSONNEL:

Name	Title	Office Phone	Mobile Phone
Carlos Mercado	Drilling Engineer	(713)366-5418	(281) 455-3481
Sebastian Millan	Drilling Engineer Supervisor	(713)350-4950	(832) 528-3268
Roger Allen	Drilling Superintendent	(713)215-7617	(281) 682-3919
Douglas Chester	Drilling Manager	(713)366-5194	(713) 918-9124

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 2, 3, 4, 9, 10, 11 **Township:** 24S **Range:** 29E

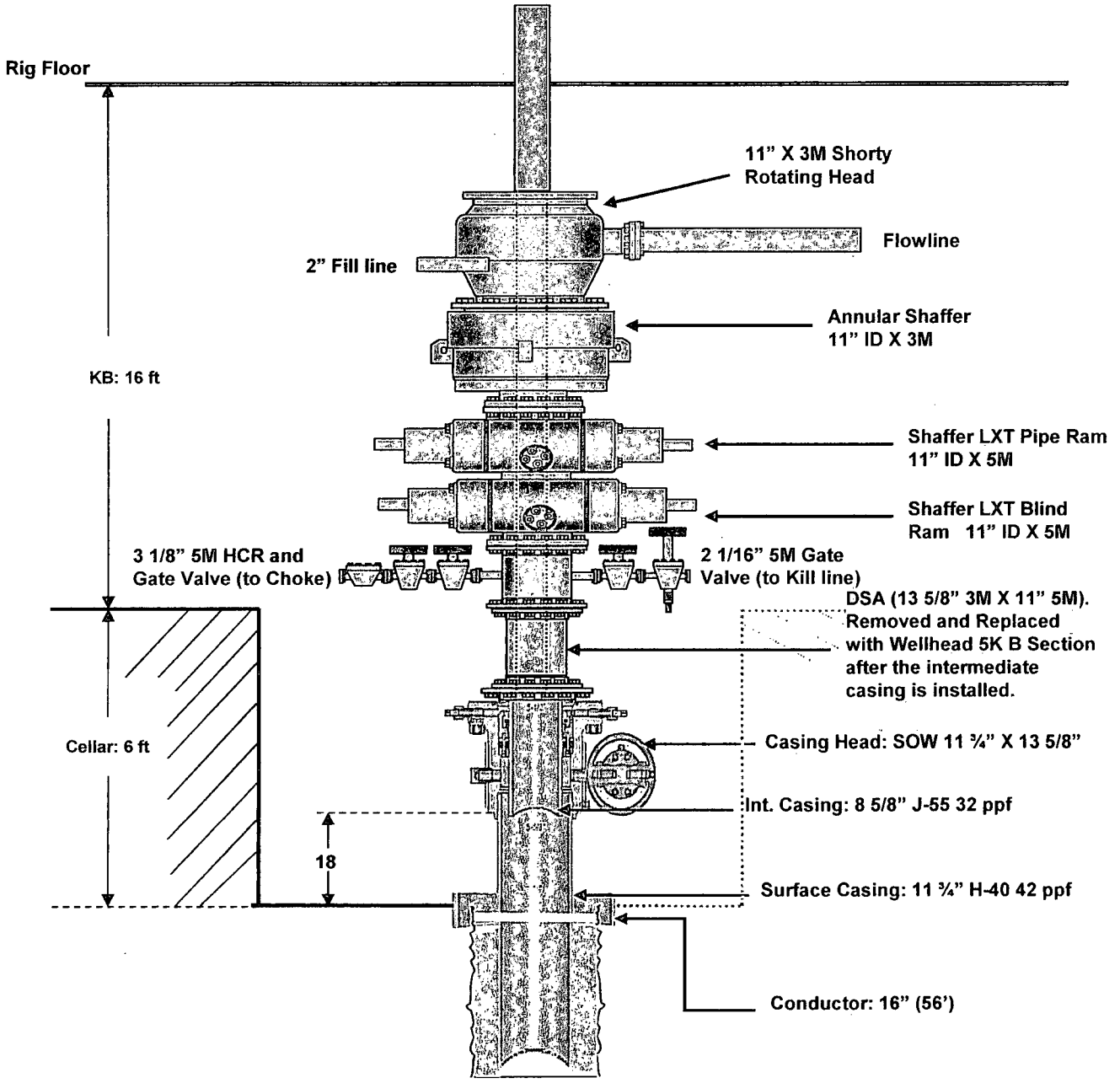
New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

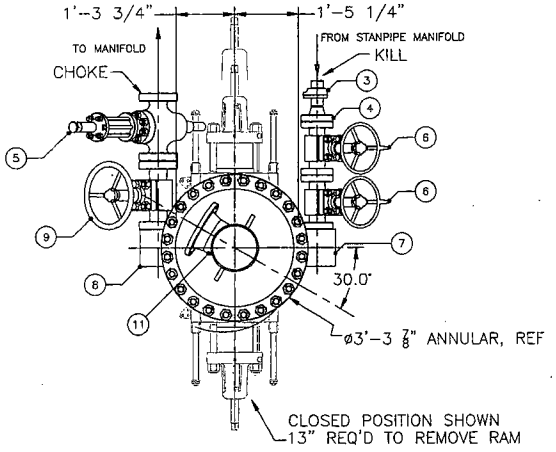
PLSS Search:

Section(s): 33, 34, 35 **Township:** 23S **Range:** 29E

BOP Diagram


Rig Floor
11" X 3M Shorty
Rotating Head
Flowline
2" Fill line
Annular Shaffer
11" ID X 3M
KB: 16 ft
Shaffer LXT Pipe Ram
11" ID X 5M
Shaffer LXT Blind
Ram 11" ID X 5M
3 1/8" 5M HCR and
Gate Valve (to Choke)
2 1/16" 5M Gate
Valve (to Kill line)
DSA (13 5/8" 3M X 11" 5M).
Removed and Replaced
with Wellhead 5K B Section
after the intermediate
casing is installed.
Cellar: 6 ft
Casing Head: SOW 11 ¾" X 13 5/8"
Int. Casing: 8 5/8" J-55 32 ppf
18
Surface Casing: 11 ¾" H-40 42 ppf
Conductor: 16" (56')

BOP-2



PROPER TORQUE FOR BOLTS

COMPONENT	FLANGE SIZE & RATING	BOLT SIZE	TORQUE (FT/LBS) CF=0.07	TORQUE (FT/LBS) CF=0.13
SPOOLS, ANNULAR & RAMS	11"x5M	1 7/8" DIA.	1890	3330
BLOCKS	3 1/8x5M	1 1/8" DIA	401	686
CHOKE VALVES	3 1/8x5M	1 1/8" DIA.	401	686
KILL VALVES	2 1/16x5M	7/8" DIA.	188	319

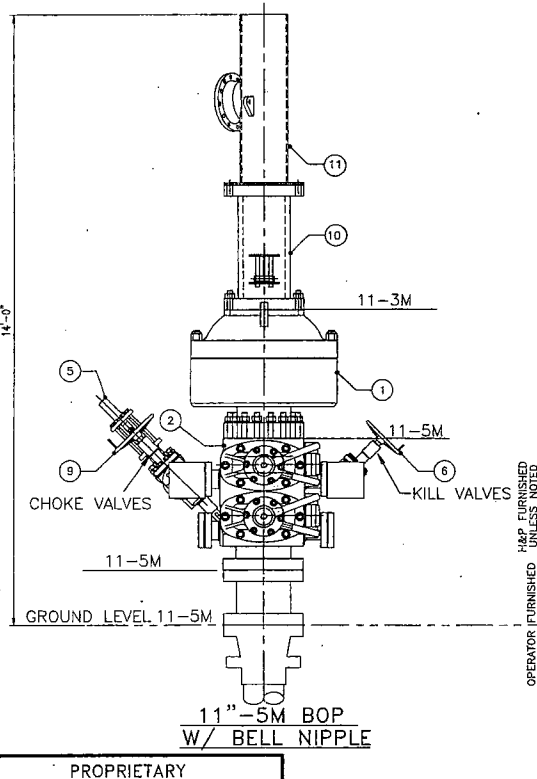
BILL OF MATERIAL

ITEM NO.	QUAN.	DESCRIPTION	PART NUMBER	WEIGHT
		11-5M BOP ASSEMBLY		
1	1	ANNULAR, 11x3M BOLTED TYPE		6005
2	1	BOP DOUBLE RAM		7600
	4	RAM ELEMENTS		444
3	1	HAMMER UNION, 2-1502# XXH (BW)		5
4	1	FLANGE, WN 2 1/16-5M API		42
5	1	VALVE, GATE FLS-HCR 3 1/8-5M		396
6	2	VALVE, GATE 2 1/16-5M		350
7	1	90° STUDDED BLOCK, 3 1/8-5M X 2 1/16-5M		240
8	1	90° STUDDED BLOCK, 3 1/8-5M X 3 1/8-5M		250
9	2	VALVE, GATE 3 1/8-5M		720
10	1	BELL NIPPLE BOP LIFTING SECTION	MK. F4M-H-318.01A	780
11	1	BELL NIPPLE EXTENSION	MK. F4M-H-319.01A	396
12	1	11"-5M x 11"-5M x 1'-3" LONG SPACER		600
		SPOOL- WORKING PRESSURE 5000 PSI		

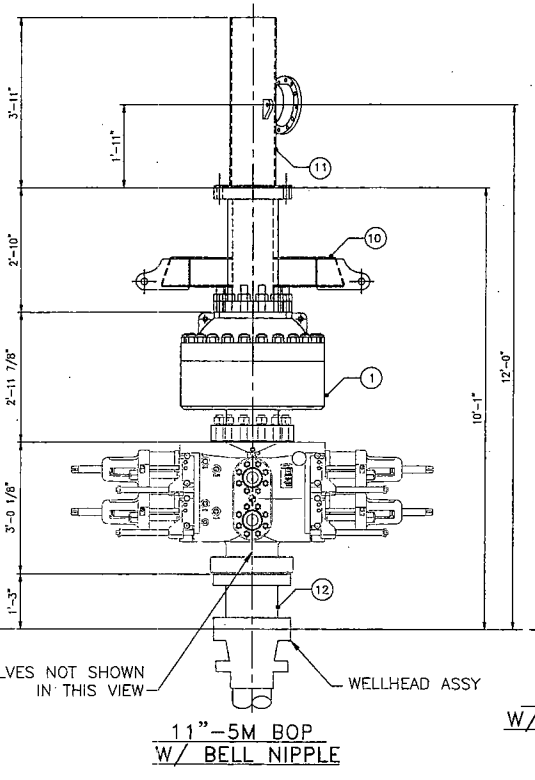
HARDWARE

ITEM NO.	QUAN.	DESCRIPTION	PART NUMBER	WEIGHT
		RINGS AND BOLTS		400

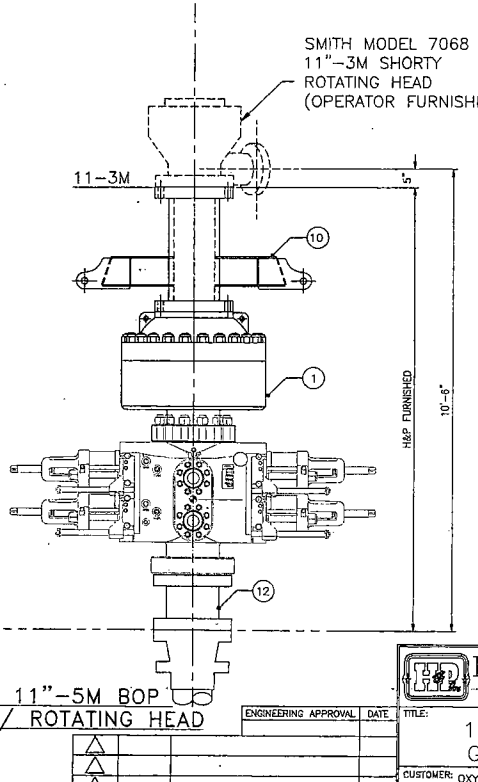
APPROX. TOTAL WEIGHT = 18,228 LBS.



11"-5M BOP
W/ BELL NIPPLE



11"-5M BOP
W/ BELL NIPPLE



11"-5M BOP
W/ ROTATING HEAD

ISSUED FOR FABRICATION
August-08-2008
DRAFTSMAN
ENGINEER

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER, WITHOUT THE PRIOR WRITTEN CONSENT OF A DULY AUTHORI...

NOTES:
1. ALL BOP RAMS SHOWN ARE SHAFFER MODEL LXT

	ENGINEERING APPROVAL	DATE

B	08/08/08	ADDED 1 OF 4 SHTS WAS 1 OF 3	DRJ

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

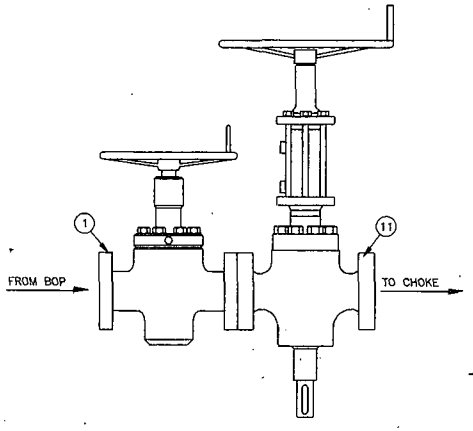
TITLE: 11-5M BOP EQUIPMENT GENERAL ARRANGEMENT

CUSTOMER: OXY-PERMIAN

PROJECT: F4M

DRAWN: D.JOHNSON | DATE: 07/24/08 | DWG. NO.: | REV:

Chk Mud#2-1

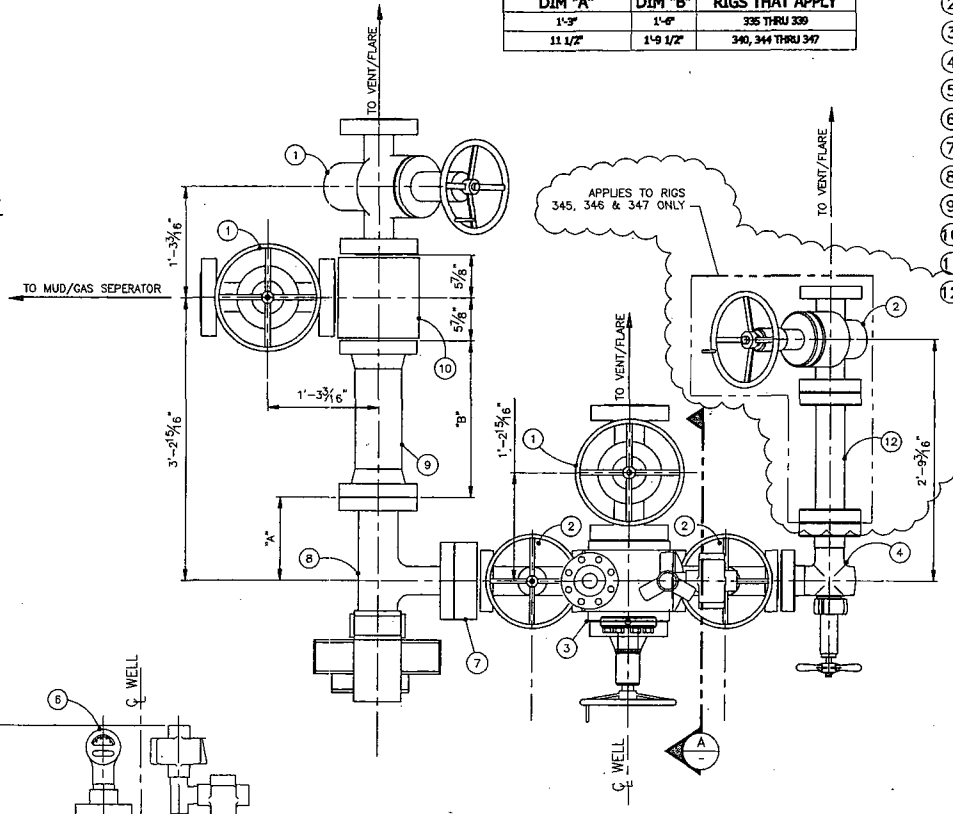


BOP SIDE OUTLET VALVES

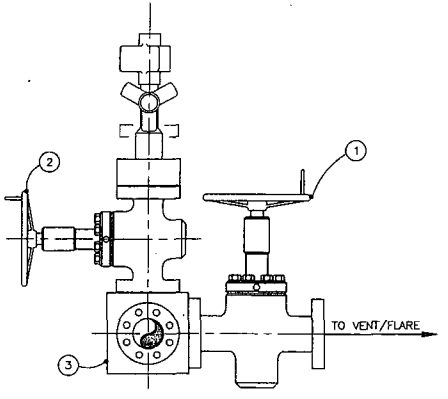
DIMENSION NOTATION		
DIM "A"	DIM "B"	RIGS THAT APPLY
1'-3"	1'-6"	335 THRU 339
11 1/2"	1'-9 1/2"	340, 344 THRU 347

LEGEND

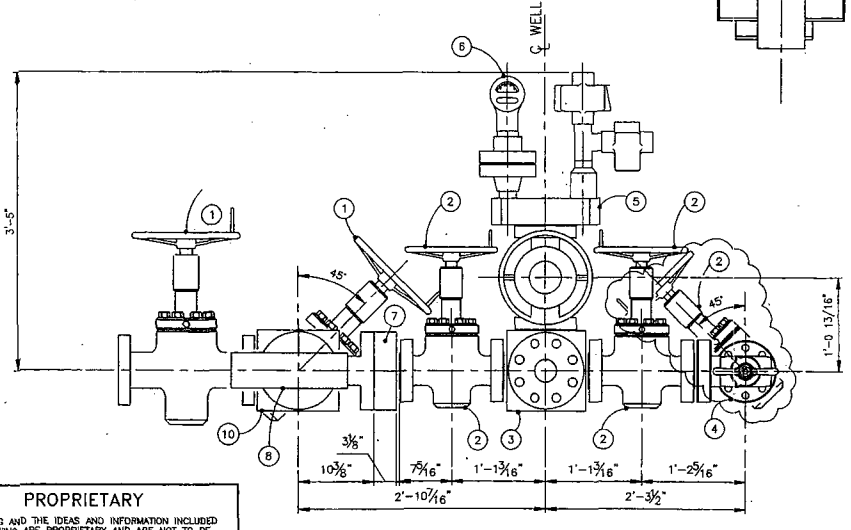
1. 3 1/8"–5M FLANGED END GATE VALVE
2. 2 1/16"–5M FLANGED END GATE VALVE
3. BLOCK WITH TRANSMITTER FLANGE AND PRESSURE GAUGE
4. 2 1/16"–5M ADJUSTABLE CHOKE
5. TRANSMITTER FLANGE
6. PRESSURE GAUGE
7. DSA 2 1/16"–5M x 3 1/16"–10M
8. 3 1/16"–10M HYDRAULIC CHOKE
9. 3 1/8"–5M x 3 1/16"–10M SPOOL
10. 3 1/8"–5M x 3 1/8"–5M STUDDED TEE
11. 3 1/8"–5M FLANGED END HCR GATE VALVE
12. 2 1/16"–5M x 2 1/16–5M SPOOL



PLAN VIEW
CHOKE MANIFOLD



VIEW A–A



ELEVATION VIEW

ISSUED FOR FABRICATION
October-17-2008
DRAFTSMAN
ENGINEER

		ENGINEERING APPROVAL	DATE
C	10-17-08	ADDED QTY (1) ITEM 2 & ITEM 12	MWL
B	09-26-08	ADD DIM. NOTATION BOX FOR DIFFERENT SIZE HYD. CHOKE	MWL
A	3/31/08	REVISED CONFIGURATION ADDING ITEMS 7 – 10	RDM

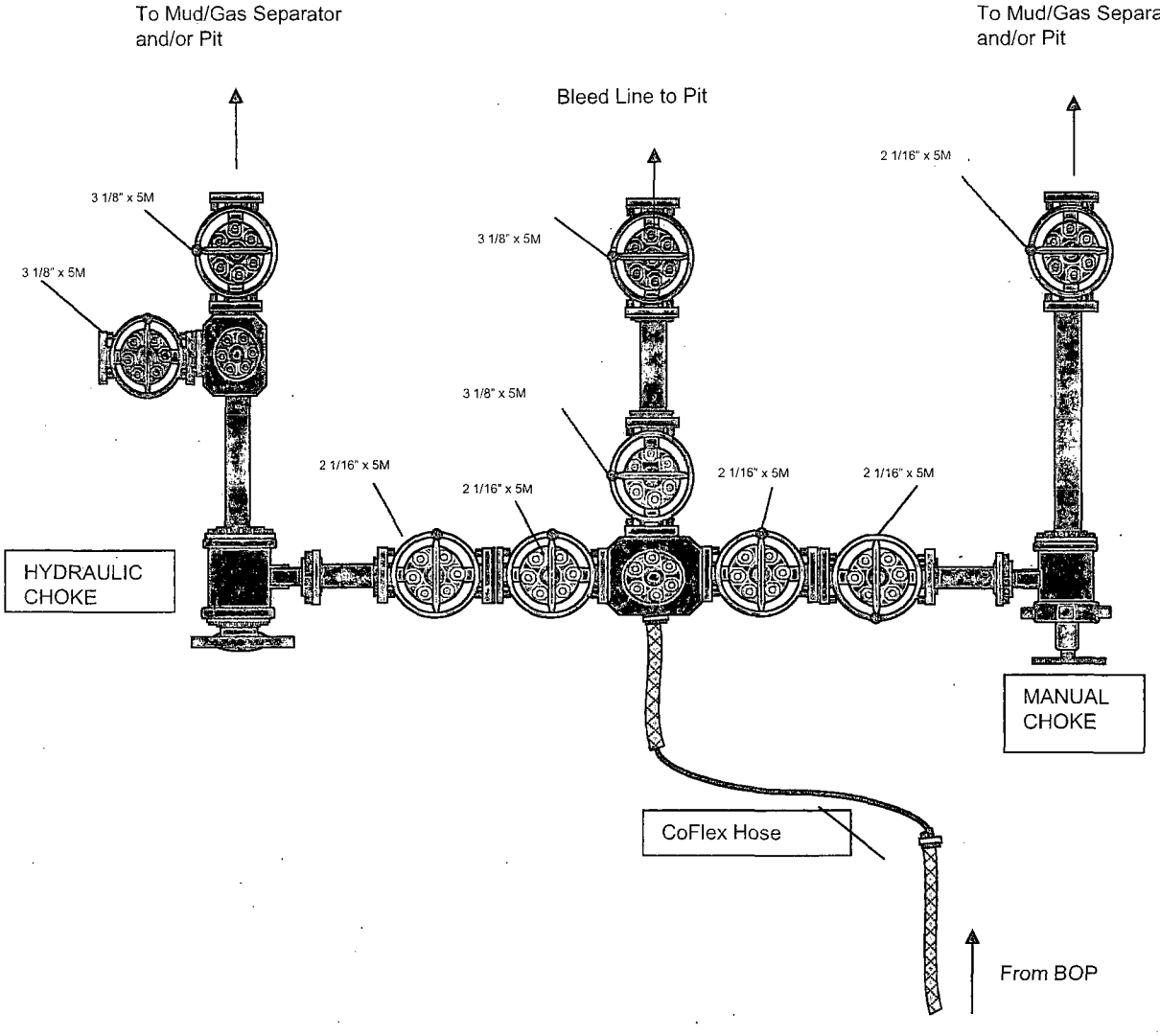
HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: CHOKE MANIFOLD DETAIL ARRANGEMENT

CUSTOMER: OXY SOUTH AMERICA
PROJECT: F4M
DRAWN: JAV | DATE: 01/07/08 | DWG. NO.: | REV:

Chk. Manifd -2

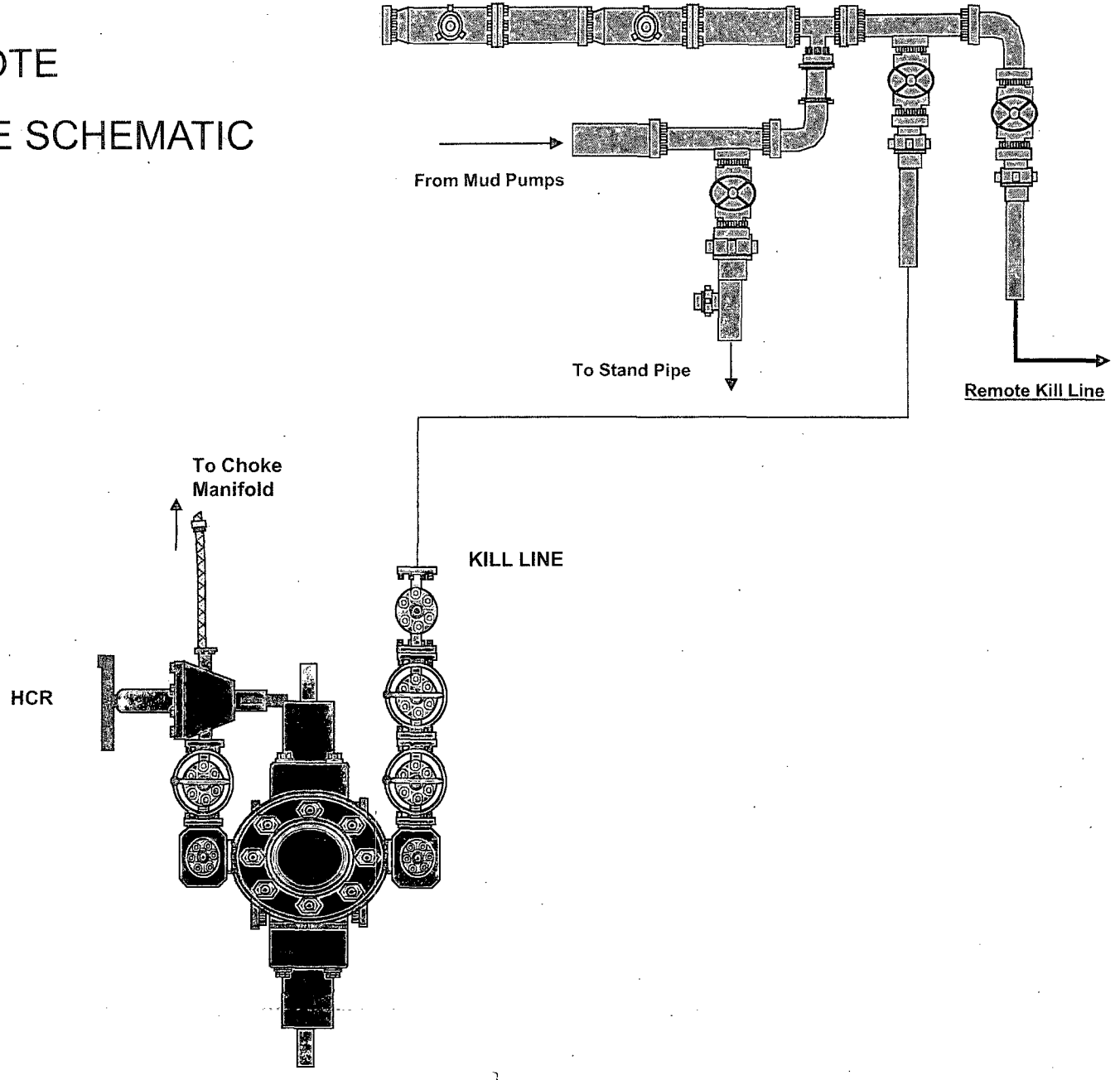
5M CHOKE MANIFOLD CONFIGURATION



ChkMnfld-3

5M REMOTE

KILL LINE SCHEMATIC



Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL	No.: QC-DB- 35 / 2011
	Page : 1 / 68
Hose No.: 60220, 60221, 60222, 60223	Revision : 0
	Date: 16. February 2011.
	Prepared by :
	Appr. by:

CHOKE AND KILL HOSES

id.: 3" 34,5 MPa x 25 ft (7,62 m) 1 pc
x 30 ft (9,14 m) 3 pcs

DATA BOOK

Purchaser:

Purchaser Order No.:

ContiTech Rubber Order No.: 490278

ContiTech Beattie Co. Order No.: 004721

ASSET # 66-0606, 66-0607, 66-0608, 66-0609

Flex Hose-2

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°:	128	
PURCHASER:	ContiTech Beattie Co.			P.O. N°:	004721	
CONTITECH ORDER N°:	490278	HOSE TYPE:	3" ID	Choke and Kill Hose		
HOSE SERIAL N°:	60220	NOMINAL / ACTUAL LENGTH:		7,62 m / 7,64 m		
W.P. 34,48 MPa	5000 psi	T.P. 68,9 MPa	10000 psi	Duration:	60	min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	160 159	AISI 4130	Y0515A
4 1/16" Flange end		AISI 4130	31694

ASSET NO. : 66-0606

API Spec 16 C

Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

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

Date:	Inspector	Quality Control
07. February 2011.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Flex Hose-3

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°:	129	
PURCHASER:	ContiTech Beattie Co.			P.O. N°:	004721	
CONTITECH ORDER N°:	490278	HOSE TYPE:	3" ID	Choke and Kill Hose		
HOSE SERIAL N°:	60221	NOMINAL / ACTUAL LENGTH:		9,14 m / 9,17 m		
W.P. 34,48 MPa	5000 psi	T.P. 68,9 MPa	10000 psi	Duration:	60	min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	155 157	AISI 4130	Y0515A
4 1/16" Flange end		AISI 4130	31694

ASSET NO. : 66-0607

API Spec 16 C

Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

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

Date:	Inspector	Quality Control
07. February 2011.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Flex Hose-4

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 130

PURCHASER:	ContiTech Beattie Co.	P.O. N°:	004721
CONTITECH ORDER N°:	490278	HOSE TYPE:	3" ID Choke and Kill Hose
HOSE SERIAL N°:	60222	NOMINAL / ACTUAL LENGTH:	9,14 m / 9,17 m

W.P.	34,48	MPa	5000	psi	T.P. 68,9	MPa	10000	psi

Duration: 60 min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	161 163	AISI 4130	Y0515A
4 1/16" Flange end		AISI 4130	31694

ASSET NO. : 66-0608

API Spec 16 C

Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

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

Date:	Inspector	Quality Control
07. February 2011.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°:	131	
PURCHASER:	ContiTech Beattie Co.			P.O. N°:	004721	
CONTITECH ORDER N°:	490278	HOSE TYPE:	3" ID	Choke and Kill Hose		
HOSE SERIAL N°:	60223	NOMINAL / ACTUAL LENGTH:		9,14 m / 9,18 m		
W.P. 34,48 MPa	5000 psi	T.P. 68,9 MPa	10000 psi	Duration:	60	min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	158 156	AISI 4130	Y0515A
4 1/16" Flange end		AISI 4130	31694

ASSET NO. : 66-0609

API Spec 16 C

Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

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

Date:	Inspector	Quality Control
07. February 2011.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Flexhose-6

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 35 / 2011
	Page: 52 / 68

ContiTech Rubber Industrial Kft. Szeged/Hungary	**Examination record Vizsgálati jegyzökönyv** **Liquid penetrant examination Festékdiffúziós vizsgálat** [X] **Magnetic particle examination Mágneses repedésvizsgálat**	Record No. Jegyzökönyv száma : 76/11

Manufacturer Gyártó	JE-ZO Kft.	Serial No. Gyári szám	155-162
Customer Megrendelö	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2104-5000
Object Tárgy	coupling(s)	Material Anyagminöség	AISI 4130
Quantity Mennyiség	8 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hökezelés	yes
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztö	Szabó T.

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Elöhívó
Dwell time Behatolási idö	Drying Szárítás	Developing time Elöhívási idö
Surface temperature A felület hömérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhetö poros vizsgálat

Equipment type Készülék tipusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesezö áram	990 A
Black light type UV-A lámpa tipusa	Superlight C 10A-HE	Field strength checking Térerömérö	Berthold disc	Field strength Térerö	4,2 kA/m
Surface temperature A felület hömérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm²

Test results
Eredmények :

satisfactory
megfelelö..... 8..... pc(s)/db

not accepted
nem megfelelö.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte	Revised by Q. C. manager Ellenörizte – MEO vezetö
Signature Dávid Ferenc Aláírás	Signature Markó László Aláírás
Place/Date Kelt Szeged, 17. 01. 2011	Place/Date Kelt Szeged, 17. 01. 2011

ContiTech Rubber Industrial Kft. QC 4

ContiTech Rubber Industrial Kft. QC 1

Flex Hose-7

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 35 / 2011
	Page: 53 / 68

ContiTech Rubber Industrial Ltd. Szeged/Hungary	**Examination record Vizsgálati jegyzõkönyv** ☒ **Liquid penetrant examination Festékdiffúziós vizsgálat** **Magnetic particle examination Mágneses repedésvizsgálat**	Record No. Jegyzõkönyv száma : 76 /a/11

Manufacturer Gyártó	JE-ZO Kft.	Serial No. Gyári szám	155-162
Customer Megrendelõ	ContiTech Rubber Industrial Ltd.	Drawing No. Rajzszám	MT 2104-5000
Object Tárgy	coupling(s) (ring grooves)	Material Anyagminõség	AISI 4130; Fox Sas 4
Quantity Mennyiség	8 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 165	Welding procedure Hegesztési eljárás	WPS No.140-72 rev.3
Written Procedure No. Vizsgálati eljárás száma	QCP-12-1	Welder Hegesztõ	Szabó T.

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	MR 68	Remover Tisztító	MR 79	Developer Elõhívó	MR70
Dwell time Behatolási idõ	10 min	Drying Szárítás	8 min	Developing time Elõhívási idõ	10 min
Surface temperature A felület hõmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 lx

Magnetic particle examination/Mágnesezhetõ poros vizsgálat

Equipment type Készülék típusa	Testing material Vizsgáló anyag	Magnetizing current Mágnesezõ áram
Black light type UV-A lámpa típusa	Field strength checking Térerõmérõ	Field strength Térerõ
Surface temperature A felület hõmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Test results
Eredmények :

satisfactory
megfelelõ..... 8..... pc(s)/db

not accepted
nem megfelelõ.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte	Revised by Q. C. manager Ellenõrizte – MEO vezetõ
Signature Dávid Ferenc Aláírás Place/Date Kelt Szeged, 17. 01. 2011	Signature Markó László Aláírás Place/Date Kelt Szeged, 17. 01. 2011

ContiTech Rubber Industrial Kft. QC 4

ContiTech Rubber Industrial Kft. QC 1

Flex Hose-8

ContiTech Rubber Industrial Kft. Szeged/Hungary	**Examination record Vizsgálati jegyzökönyv** **Liquid penetrant examination Festékdiffúziós vizsgálat** ☒ **Magnetic particle examination Mágneses repedésvizsgálat**	Record No. Jegyzökönyv száma : 87/11

Manufacturer Gyártó	JE-ZO Kft.	Serial No. Gyári szám	163-164
Customer Megrendelõ	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2104-5000
Object Tárgy	coupling(s)	Material Anyagminõség	AISI 4130
Quantity Mennyiség	2 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hökezelés	yes
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztõ	Szabó T.

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Elõhívó
Dwell time Behatolási idõ	Drying Szárítás	Developing time Elõhívási idõ
Surface temperature A felület hömérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhetõ poros vizsgálat

Equipment type Készülék típusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesezõ áram	990 A
Black light type UV-A lámpa típusa	Superlight C 10A-HE	Field strength checking Térerõmérõ	Berthold disc	Field strength Térerõ	4,2 kA/m
Surface temperature A felület hömérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm²

Test results
Eredmények :

satisfactory
megfelelõ..... 2..... pc(s)/db

not accepted
nem megfelelõ.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte	Revised by Q. C. manager Ellenõrizte – MEO vezetõ
Signature Oravecz Gábor Aláírás	Signature Markó László Aláírás
Place/Date Kelt Szeged, 19. 01. 2011	Place/Date Kelt Szeged, 19. 01. 2011

ContiTech Rubber Industrial Kft. QC 3

ContiTech Rubber Industrial Kft. QC 1

Flex Hose-9

ContiTech Rubber Industrial Ltd. Szeged/Hungary	**Examination record Vizsgálati jegyzőkönyv** [X] **Liquid penetrant examination Festékdiffúziós vizsgálat** **Magnetic particle examination Mágneses repedésvizsgálat**	Record No. Jegyzőkönyv száma : 87 /a/11

Manufacturer Gyártó	JE-ZO Kft.	Serial No. Gyári szám	163-164
Customer Megrendelő	ContiTech Rubber Industrial Ltd.	Drawing No. Rajzszám	MT 2104-5000
Object Tárgy	coupling(s) (ring grooves)	Material Anyagminőség	AISI 4130; Fox Sas 4
Quantity Mennyiség	2 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 165	Welding procedure Hegesztési eljárás	WPS No.140-72 rev.3
Written Procedure No. Vizsgálati eljárás száma	QCP-12-1	Welder Hegesztő	Szabó T.

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	MR 68	Remover Tisztító	MR 79	Developer Előhívó	MR70
Dwell time Behatolási idő	10 min	Drying Szárítás	8 min	Developing time Előhívási idő	10 min
Surface temperature A felület hőmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 lx

Magnetic particle examination/Mágnesezhető poros vizsgálat

Equipment type Készülék típusa	Testing material Vizsgáló anyag	Magnetizing current Mágnesező áram
Black light type UV-A lámpa típusa	Field strength checking Térerőmérő	Field strength Térerő
Surface temperature A felület hőmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Test results
Eredmények :

satisfactory
megfelelő..... 2..... pc(s)/db

not accepted
nem megfelelő.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte	Revised by Q. C. manager Ellenőrizte – MEO vezető
Signature Oravecz Gábor QC2 Aláírás	Signature Markó László QC 1 Aláírás
Place/Date Kelt Szeged, 19. 01. 2011	Place/Date Kelt Szeged, 19. 01. 2011

ContiTech Rubber Industrial Kft.

FlexHose-10

ContiTech Rubber Industrial Kft. Szeged/Hungary	**Examination record** **Vizsgálati jegyzõkönyv** **Liquid penetrant examination** **Festékdiffúziós vizsgálat** ☒ **Magnetic particle examination** **Mágneses repedésvizsgálat**	Record No. Jegyzőkönyv száma : 56/11

Manufacturer Gyártó	GLB Kft.	Serial No. Gyári szám	101022/1-8
Customer Megrendelõ	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2840-0040 d=246
Object Tárgy	reinforced lifting collar(s)	Material Anyagminõség	P265GH
Quantity Mennyiség	8 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hõkezelés	not
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztõ	

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Elõhívó
Dwell time Behatolási idõ	Drying Szárítás	Developing time Elõhívási idõ
Surface temperature A felület hõmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhetõ poros vizsgálat

Equipment type Készülék típusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesezõ áram	980 A
Black light type UV-A lámpa típusa	Superlight C 10A-HE	Field strength checking Térerõmérõ	Berthold disc	Field strength Térerõ	4,2 kA/m
Surface temperature A felület hõmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm²

Test results
Eredmények :

satisfactory
megfelelõ.....8..... pc(s)/db

not accepted
nem megfelelõ.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte Signature Dávid Ferenc Aláírás Place/Date Kelt Szeged, 06. 01. 2011.	Revised by Q.C. manager Ellenõrizte – MEO vezetõ Signature Markó László Aláírás Place/Date Kelt Szeged, 06. 01. 2011.

ContiTech Rubber Industrial Kft. QC 4

ContiTech Rubber Industrial Kft. QC 1

Flex Hose-L(

ContiTech Rubber Industrial Kft. Szeged/Hungary	**Examination record** **Vizsgálati jegyzökönyv** **Liquid penetrant examination** **Festékdiffúziós vizsgálat** ☒ **Magnetic particle examination** **Mágneses repedésvizsgálat**	Record No. Jegyzökönyv száma : 8/11

Manufacturer Gyártó	GLB Kft.	Serial No. Gyári szám	050835/1-8
Customer Megrendelö	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2820-0030 d=176
Object Tárgy	Safety clamp(s)	Material Anyagminöség	S355J2+AR
Quantity Mennyiség	8 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hökezelés	not
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztö	

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Elöhívó
Dwell time Behatolási idö	Drying Szárítás	Developing time Elöhívási idö
Surface temperature A felület hömérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhetö poros vizsgálat

Equipment type Készülék tipusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesezö áram	980 A
Black light type UV-A lámpa tipusa	Superlight C 10A-HE	Field strength checking Térerömérö	Berthold disc	Field strength Térerö	4,2 kA/m
Surface temperature A felület hömérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm²

Test results
Eredmények :

satisfactory
megfelelö..... 8..... pc(s)/db

not accepted
nem megfelelö.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte Signature Dávid Ferenc Aláírás Place/Date Kelt Szeged, 06. 01. 2011.	ContiTech Rubber Industrial Kft. QC 4 Revised by Q.C. manager Ellenörizte – MEO vezetö Signature Markó László Aláírás Place/Date Kelt Szeged, 06. 01. 2011.

ContiTech Rubber Industrial Kft. QC 1

Flex Hose-2

ContiTech Rubber Industrial Kft. Szeged/Hungary	**Examination record** **Vizsgálati jegyzõkönyv** **Liquid penetrant examination** **Festékdiffúziós vizsgálat** ☒ **Magnetic particle examination** **Mágneses repedésvizsgálat**	Record No. Jegyzõkönyv száma : 111/11

Manufacturer Gyártó	GLB Kft.	Serial No. Gyári szám	101053/1-2
Customer Megrendelõ	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2820-0030 d=176
Object Tárgy	Safety clamp(s)	Material Anyagminõség	S355J2+AR
Quantity Mennyiség	2 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hõkezelés	not
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztõ	

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Elõhívó
Dwell time Behatolási idõ	Drying Szárítás	Developing time Elõhívási idõ
Surface temperature A felület hõmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhetõ poros vizsgálat

Equipment type Készülék típusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesezõ áram	980 A
Black light type UV-A lámpa típusa	Superlight C 10A-HE	Field strength checking Térerõmérõ	Berthold disc	Field strength Térerõ	4,2 kA/m
Surface temperature A felület hõmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm²

Test results
Eredmények :

satisfactory
megfelelõ..... 2..... pc(s)/db

not accepted
nem megfelelõ.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte Signature Oravecz Gábor Aláírás Place/Date Kelt Szeged, 24. 01. 2011.	Revised by Q.C. manager Ellenõrizte – MEO vezetõ Signature Markó László Aláírás Place/Date Kelt Szeged, 24. 01. 2011.

ContiTech Rubber Industrial Kft. QC3

ContiTech Rubber Industrial Kft. QC 1

Flex Hose-13

ContiTech Rubber Industrial Kft. Szeged/Hungary	**Examination record** **Vizsgálati jegyzõkönyv** **Liquid penetrant examination** **Festékdiffúziós vizsgálat** [X] **Magnetic particle examination** **Mágneses repedésvizsgálat**	Record No. Jegyzõkönyv száma : 146/11

Manufacturer Gyártó	GLB Kft.	Serial No. Gyári szám	101068/1-22
Customer Megrendelõ	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2820-0030 d=176
Object Tárgy	Safety clamp(s)	Material Anyagminõség	S355J2+AR
Quantity Mennyiség	22pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hõkezelés	not
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztõ	

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Elõhívó
Dwell time Behatolási idõ	Drying Szárítás	Developing time Elõhívási idõ
Surface temperature A felület hõmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhetõ poros vizsgálat

Equipment type Készülék típusa: TSW 1000	Testing material Vizsgáló anyag: MR 76F	Magnetizing current Mágnesezõ áram: 980 A
Black light type UV-A lámpa típusa: Superlight C 10A-HE	Field strength checking Térerõmérõ: Berthold disc	Field strength Térerõ: 4,2 kA/m
Surface temperature A felület hõmérséklete: 23 °C	Surface condition Felület állapota: machined	Lighting intensity Megvilágítás: 1000 µW/cm²

Test results
Eredmények :

satisfactory
megfelelõ.....22..... pc(s)/db

not accepted
nem megfelelõ.....-..... pc(s)/db

Performed by NDE Level II. Vizsgálatot végezte Signature Oravecz Gábor Aláírás Place/Date Kelt Szeged, 24. 01. 2011.	Revised by Q.C. manager Ellenőrizte – MEO vezető Signature Markó László Aláírás Place/Date Kelt Szeged, 24. 01. 2011.

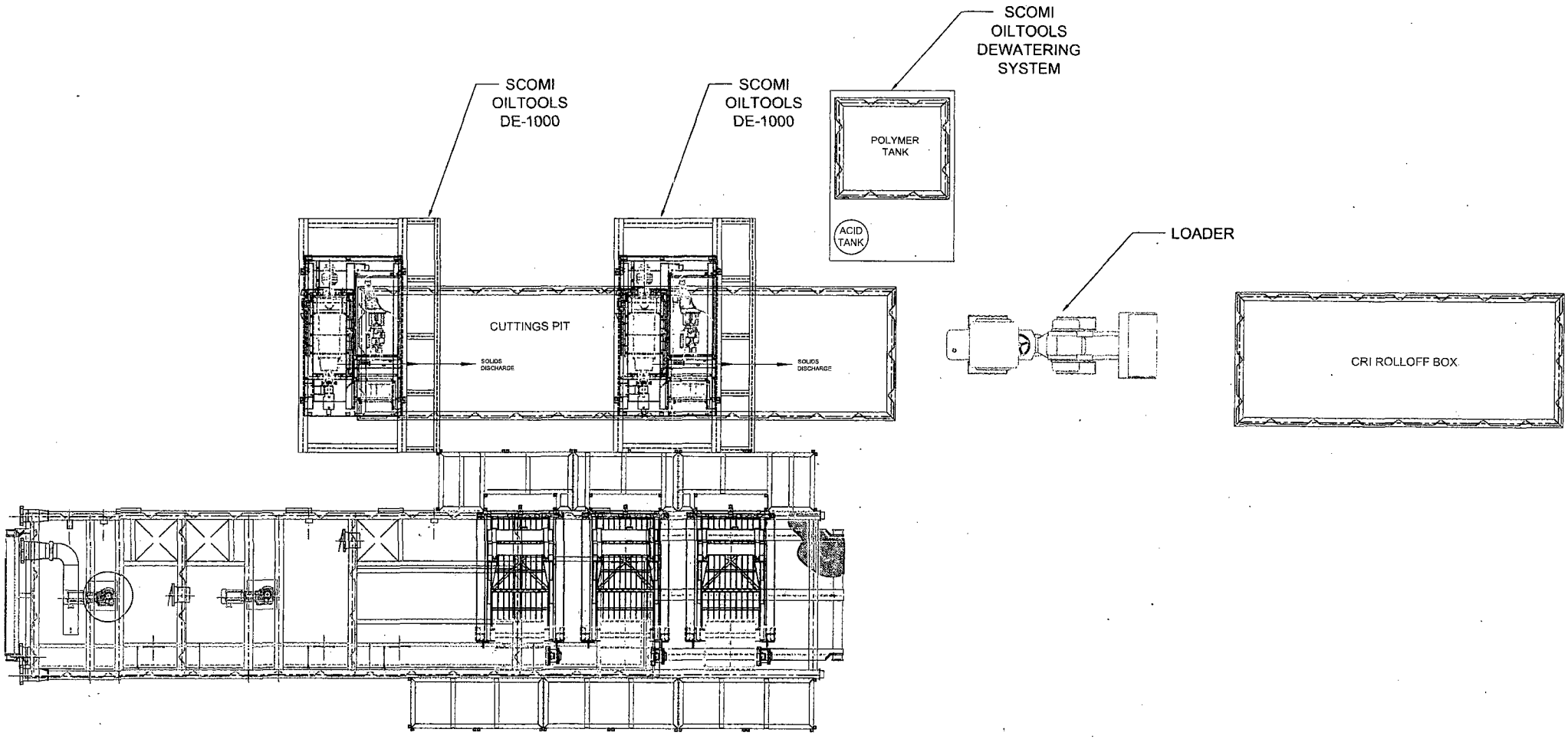
ContiTech Rubber Industrial Kft. QC3

ContiTech Rubber Industrial Kft. QC 2

CL-1

BILL OF MATERIAL

ITEM	QTY.	DESCRIPTION	LENGTH	WEIGHT



NO.	DESCRIPTION	BY	CHKD	APVD	DATE

1. ALL STRUCTURAL MATERIAL SHALL BE ASTM – A36.
2. ALL PIPE SCH. 40 MATERIAL SA 106 Gr. B
3. ALL FLANGES SHALL BE SORF. 150# & 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 :

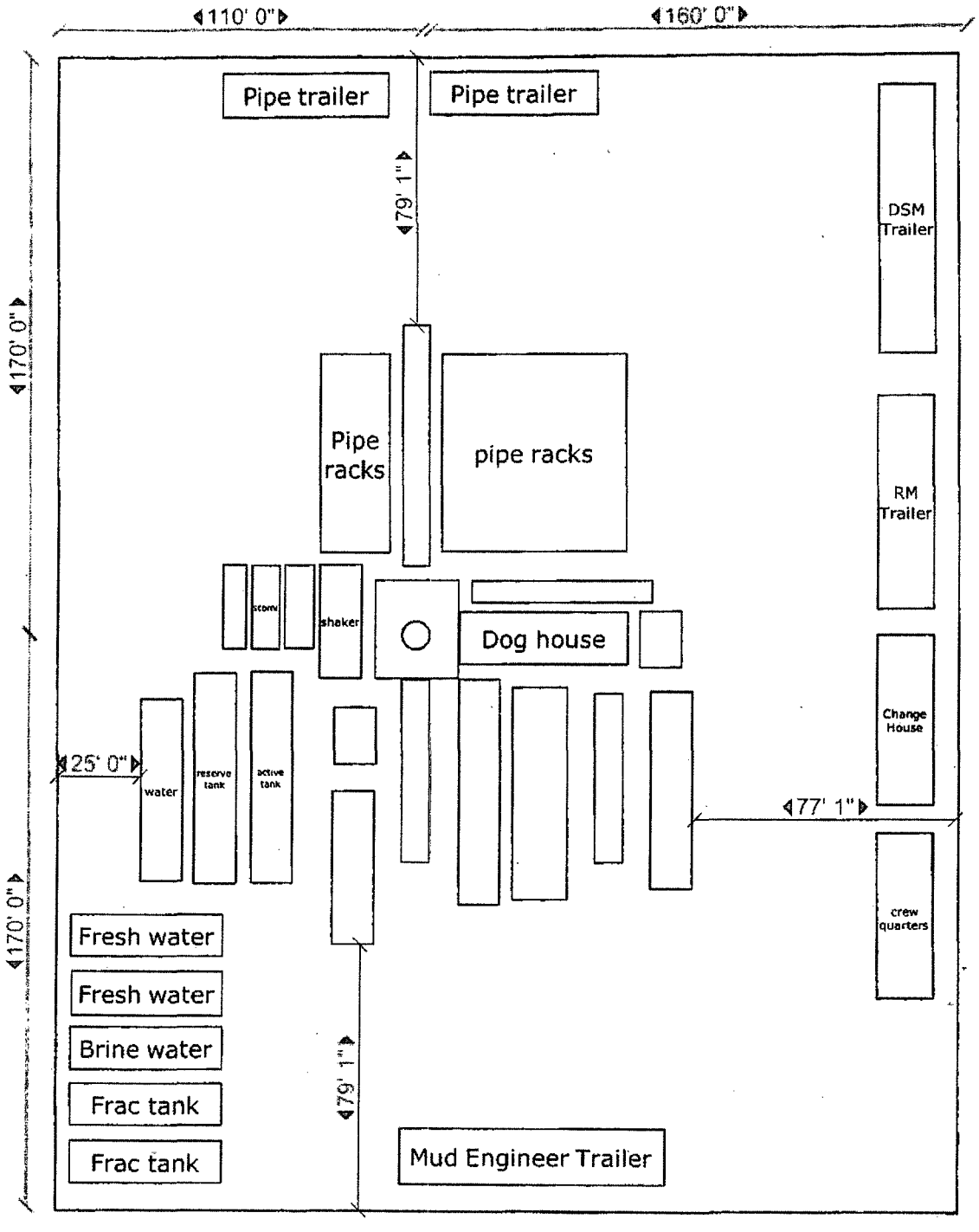
CLOSED LOOP SYSTEM
BASIC LAYOUT
OXY - H&P - FLEX 4 M

DRAWN BY	DATE	CHECKED BY	DATE
PDL	3/30/09		
APPROVED	DATE	SCALE	ACAD DWG:
		NTS	D

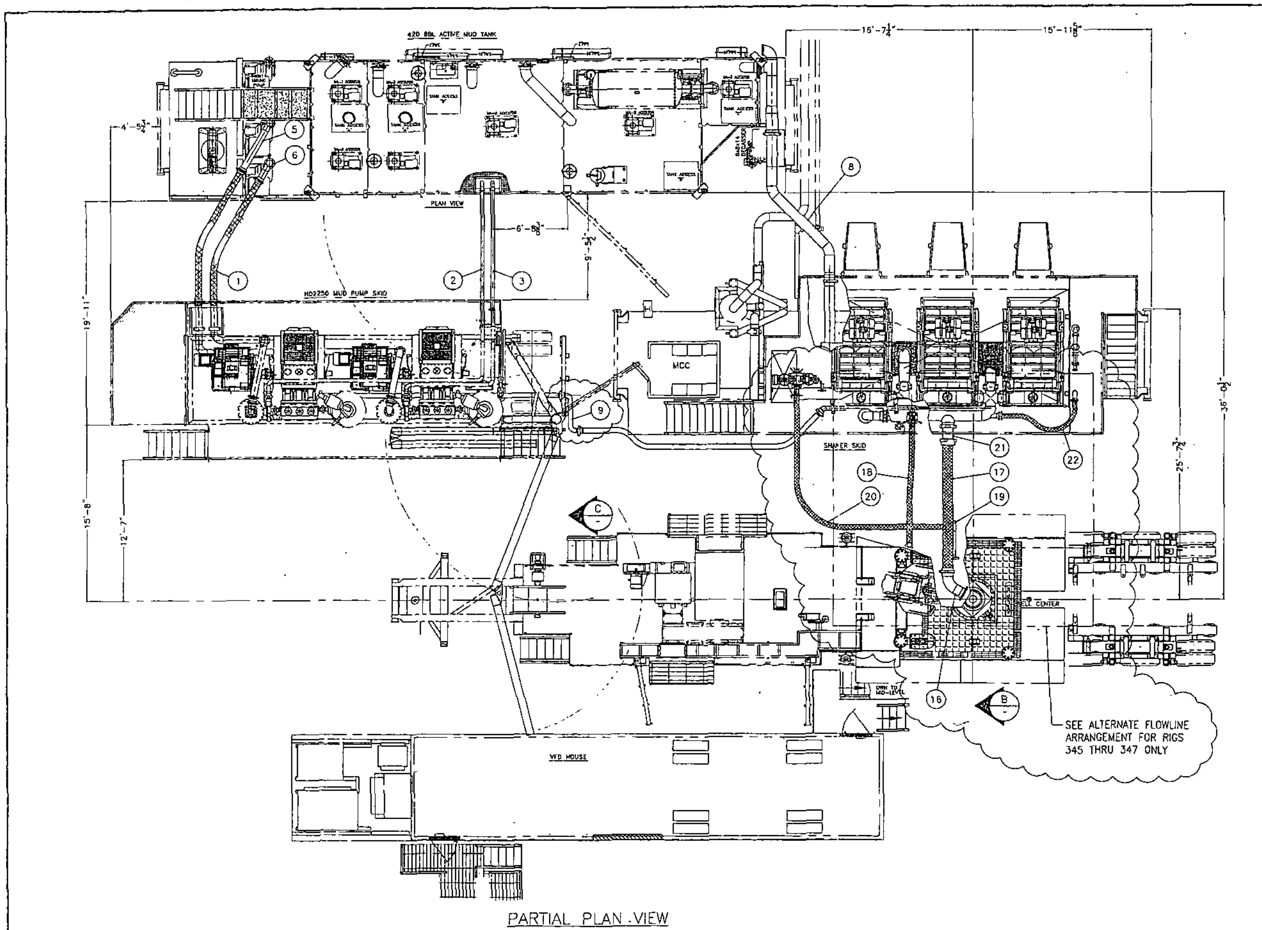
Scomi
521 N. Sam Houston Parkway East, Suite 300,
Houston, Texas 77060
PHONE: (281)-260-6016, FAX: (281)-260-6969

JOB NO. | DRAWING NO. 521S-027 | REV.

CL-2


110' 0"
160' 0"
Pipe trailer
Pipe trailer
79' 1"
DSM Trailer
170' 0"
Pipe racks
pipe racks
RM Trailer
scony
shaker
Dog house
Change House
25' 0"
water
reserve tank
active tank
77' 1"
crew quarters
170' 0"
Fresh water
Fresh water
Brine water
Frac tank
Frac tank
79' 1"
Mud Engineer Trailer

CL-3



PARTIAL PLAN VIEW

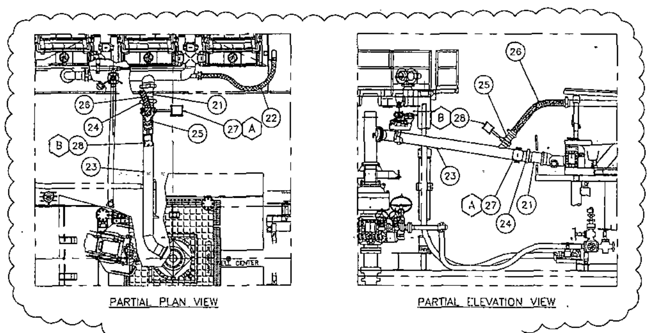
	ITEM NO.	QUAN.	DESCRIPTION	PART NUMBER	WT.
	BILL OF MATERIAL				
D	1	2	LOW PRESSURE SPOOL #1	MK.F4M-H-570.01F	239
D	2	1	POP-OFF/BLEED SPOOL #1	MK.F4M-H-570.01A	157
D	3	1	POP-OFF/BLEED SPOOL #2	MK.F4M-H-570.01B	140
D	4		DELETED		
D	5	1	LOW PRESSURE SUCTION SPOOL #1	MK.F4M-H-570.01D	199
D	6	1	LOW PRESSURE SUCTION SPOOL #2	MK.F4M-H-570.01H	101
D	7	1	HOSE-HIGH PRESSURE	MK.F4M-H-570.01G	276
D	8	1	OVERFLOW RETURN SPOOL	MK.F4M-H-563.06A	678
D	9	1	MUD PUMP/SHAKER SKID SPOOL	MK.F4M-H-570.01E	181
	10	22FT	TS 1 1/2x1 1/2x3/16 (A500)		150
D	11	1	POP-OFF PIPE HANGER SUPPORT	MK.F4M-H-570.01C	30
	12	1	L3x3x1/4 (1'-6" LG) (A36)		7
	13	1	L3x3x1/4 (1'-6" LG) (A36)		7
	14	1	PLATE, 1/4" THK. 4x2'-3 1/4" (A36)		8
	15	1	L3x3x1/4 (4'-11 3/4" LG) (A36)		25
D	16	1	SHAKER FLOWLINE	MK.F4M-H-562.02A	230
D	17	1	SHAKER FLOWLINE	MK.F4M-H-562.02B	281
D	18	1	HOSE	MK.F4M-H-563.03E	
D	19	1	SPOOL #1	MK.F4M-H-564.02A	182
D	20	1	HIGH PRESSURE HOSE, 3" I.D. x 29'-0" LG.	PHOENIX BEATTY	
			WITH 3 1/8" - 5M FLANGED ENDS		
D	21	1	SHAKER FLOWLINE	MK.F4M-H-562.02C	73
D	22	1	SHAKER SPOOL	MK.F4M-H-562.03B	177

RIGS 345 - 347 ONLY

BILL OF MATERIAL

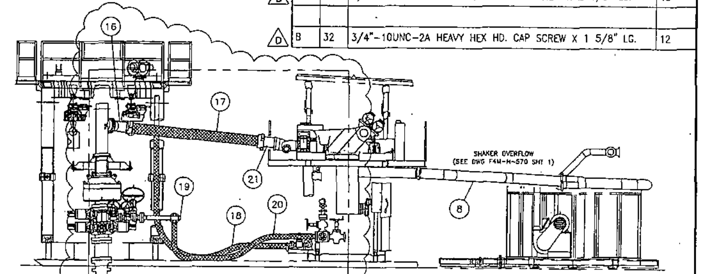
THESE ITEMS REPLACE ITEMS 16 & 17 (items 23–28)

	ITEM NO.	QUAN.	DESCRIPTION	PART NUMBER	WT.
D	23	1	SHAKER FLOWLINE	MK.F4M-H-569-04A	856
D	24	1	SHAKER FLOWLINE	MK.F4M-H-569-04B	118
D	25	1	SHAKER FLOWLINE	MK.F4M-H-569-04C	67
D	26	1	SHAKER FLOWLINE HOSE	MK.F4M-H-569-04D	77
D	27	1	FABRI - 10" AIR ACTUATED KNIFE GATE VALVE		66
D	28	1	FABRI - 6" AIR ACTUATED KNIFE GATE VALVE		52
D			HARDWARE		
D	A	24	7/8"-9UNC-2A HEAVY HEX HD. CAP SCREW X 2 1/8" LG.		18
D	B	32	3/4"-10UNC-2A HEAVY HEX HD. CAP SCREW X 1 5/8" LG.		12



ALTERNATE FLOWLINE ARRANGEMENT
(FOR RIGS 345 THRU 347 ONLY)

ISSUED FOR FABRICATION
October-23-2008
DRAFTSMAN ______
ENGINEER ______



SECTION B-B

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

REV	DATE	DESCRIPTION	BY
D	10/23/08	REV'D ITEM # WT. PER DCR 344.02; ADD ALT FLOWLINE; ADD ITEMS 16 THRU 28 & HARDWARE A & B; CORRECT MK. #'S FOR ITEMS 1 THRU 7, 8 & 11	CC/MWL
C	09/04/08	MOVE MUD TANK CLOSER TO SHAKER UPDATED PIPING	DRJ
B	08/05/08	ADDED SHT 2 & BOM	DRJ
A	07/17/08	ADDED XX-HVY PIPING TO POP-OFF	DRJ

ENGINEERING APPROVAL | DATE

TITLE: MUD SYSTEM INTERCONNECT PIPING ASSEMBLY

CUSTOMER: OXY PERMIAN

PROJECT: F4M

DRAWN: DJOHNSON | DATE: 07/08/08 | DWG. NO.: F4M-H-568 | REV: D

SCALE: 3/16"=1'-0" | SHEET: 1 OF 2

H2S-1

Permian Drilling
Hydrogen Sulfide Drilling Operations Plan
Cypress 3 Federal SWD 1

Open drill site. No homes or buildings are near the proposed location.

1. Escape

   Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southwest side of the location. Personnel need to move to a safe distance and block the entrance to location.

H2S-2

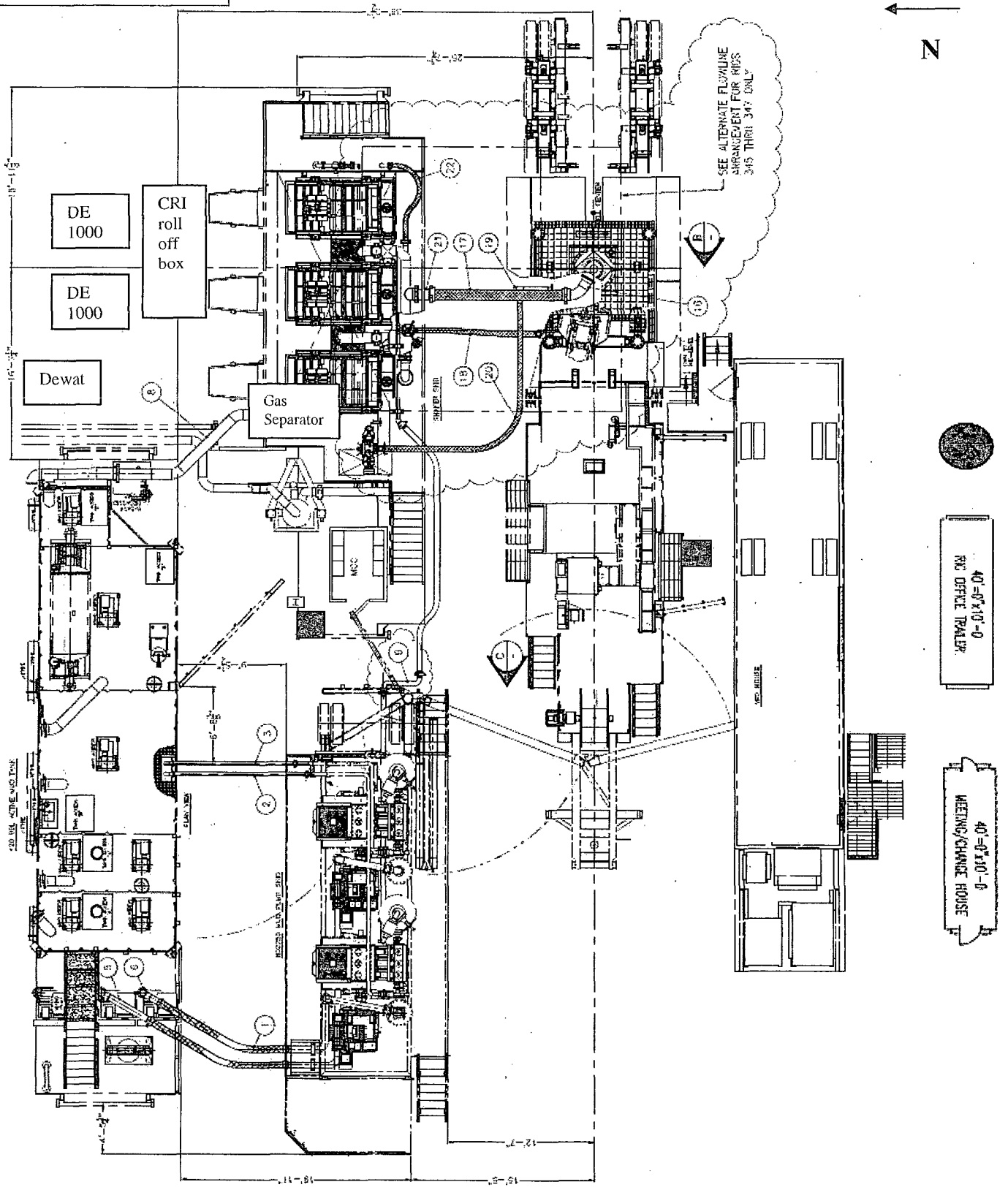
▲ H2S Detectors. At least three detectors will be installed: bell nipple, rig floor and Shakers.

Briefing Areas. At least two briefing areas will be placed, 90 deg off.

Wind direction indicators. Visible from rig floor and from the mud pits area.

A gas buster is connected to both the choke manifold and flowline outlets.

Exit to road. Caution sign placed here.



H2S-3

Permian Drilling
Hydrogen Sulfide Drilling Operations Plan
New Mexico

Scope

This contingency plan establishes guidelines for the public, all company employees, and contract employees who's work activities may involve exposure to hydrogen sulfide (H2S) gas.
While drilling this well, it is possible to encounter H2S bearing formations. At all times, the first barrier to control H2S emissions will be the drilling fluid, which will have a density high enough to control influx.

Objective

1. Provide an immediate and predetermined response plan to any condition when H2S is detected. All H2S detections in excess of 10 parts per million (ppm) concentration are considered an Emergency.

2. Prevent any and all accidents, and prevent the uncontrolled release of hydrogen sulfide into the atmosphere.

3. Provide proper evacuation procedures to cope with emergencies.

4. Provide immediate and adequate medical attention should an injury occur.

Discussion

Implementation:	This plan with all details is to be fully implemented before drilling to commence.
Emergency response Procedure:	This section outlines the conditions and denotes steps to be taken in the event of an emergency.
Emergency equipment Procedure:	This section outlines the safety and emergency equipment that will be required for the drilling of this well.
Training provisions:	This section outlines the training provisions that must be adhered to prior to drilling.
Drilling emergency call lists:	Included are the telephone numbers of all persons to be contacted should an emergency exist.
Briefing:	This section deals with the briefing of all people involved in the drilling operation.
Public safety:	Public safety personnel will be made aware of any potential evacuation and any additional support needed.
Check lists:	Status check lists and procedural check lists have been included to insure adherence to the plan.
General information:	A general information section has been included to supply support information.

Hydrogen Sulfide Training

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

1. The hazards and characteristics of H2S.
2. Proper use and maintenance of personal protective equipment and life support systems.
3. H2S detection.
4. Proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
5. Proper techniques for first aid and rescue procedures.
6. Physical effects of hydrogen sulfide on the human body.
7. Toxicity of hydrogen sulfide and sulfur dioxide.
8. Use of SCBA and supplied air equipment.
9. First aid and artificial respiration.
10. Emergency rescue.

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

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

H2S training refresher must have been taken within one year prior to drilling the well. Specifics on the well to be drilled will be discussed during the pre-spud meeting. H2S and well control (choke) drills will be performed while drilling the well, at least on a weekly basis. This plan shall be available in the well site. All personnel will be required to carry the documentation proving that the H2S training has been taken.

Service company and visiting personnel

A. Each service company that will be on this well will be notified if the zone contains H2S.

B. Each service company must provide for the training and equipment of their employees before they arrive at the well site.

C. Each service company will be expected to attend a well site briefing

Emergency Equipment Requirements

1. Well control equipment

The well shall have hydraulic BOP equipment for the anticipated pressures. Equipment is to be tested on installation and follow Oxy Well Control standard, as well as BLM Onshore Order #2.

Special control equipment:

A. Hydraulic BOP equipment with remote control on ground.
B. Rotating head
C. Gas buster equipment shall be installed before drilling out of surface pipe.

2. Protective equipment for personnel

A. Four (4) 30-minute positive pressure air packs (2 at each briefing area) on location.

B. Adequate fire extinguishers shall be located at strategic locations.

C. Radio / cell telephone communication will be available at the rig.

- Rig floor and trailers.
- Vehicle.

3. Hydrogen sulfide sensors and alarms

A. H2S sensor with alarms will be located on the rig floor, at the bell nipple, and at the flow line. These monitors will be set to alarm at 10 ppm with strobe light, and audible alarm.
B. Hand operated detectors with tubes.
C. H2S monitor tester (to be provided by contract Safety Company.)
D. There shall be one combustible gas detector on location at all times.

4. Visual Warning Systems

A. One sign located at each location entrance with the following language:

Caution – potential poison gas
Hydrogen sulfide
No admittance without authorization

Wind sock – wind streamers:

A. One 36" (in length) wind sock located at protection center, at height visible from rig floor.
B. One 36" (in length) wind sock located at height visible from pit areas.

Condition flags

A. One each condition flag to be displayed to denote conditions.

green – normal conditions
yellow – potential danger
red – danger, H2S present

B. Condition flag shall be posted at each location sign entrance.

5. Mud Program

The mud program is designed to minimize the risk of having H2S and other formation fluids at surface. Proper mud weight and safe drilling practices will be applied. H2S scavengers will be used to minimize the hazards while drilling. Below is a summary of the drilling program.

Mud inspection devices:

Garrett gas train or hatch tester for inspection of sulfide concentration in mud system.

6. Metallurgy

A. Drill string, casing, tubing, wellhead, blowout preventers, drilling spools or adapters, kill lines, choke manifold, lines and valves shall be suitable for the H2S service.
B. All the elastomers, packing, seals and ring gaskets shall be suitable for H2S service.

7. Well Testing

No drill stem test will be performed on this well.

8. Evacuation plan

Evacuation routes should be established prior to well spud for each well and discussed with all rig personnel.

9. Designated area

A. Parking and visitor area: all vehicles are to be parked at a predetermined safe distance from the wellhead.
B. There will be a designated smoking area.
C. Two briefing areas on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds perpendicularly, or at a 45-degree angle if wind direction tends to shift in the area.

Emergency procedures

A. In the event of any evidence of H2S level above 10 ppm, take the following steps:

1. The Driller will pick up off bottom, shut down the pumps, slow down the pipe rotation.

2. Secure and don escape breathing equipment, report to the upwind designated safe briefing / muster area.

3. All personnel on location will be accounted for and emergency search should begin for any missing, the Buddy System will be implemented.

4. Order non-essential personnel to leave the well site, order all essential personnel out of the danger zone and upwind to the nearest designated safe briefing / muster area.

5. Entrance to the location will be secured to a higher level than our usual "Meet and Greet" requirement, and the proper condition flag will be displayed at the entrance to the location.

6. Take steps to determine if the H2S level can be corrected or suppressed and, if so, proceed as required.

B. If uncontrollable conditions occur:

1. Take steps to protect and/or remove any public in the down-wind area from the rig – partial evacuation and isolation. Notify necessary public safety personnel and appropriate regulatory entities (i.e. BLM) of the situation.

2. Remove all personnel to the nearest upwind designated safe briefing / muster area or off location.

3. Notify public safety personnel of safe briefing / muster area.

4. An assigned crew member will blockade the entrance to the location. No unauthorized personnel will be allowed entry to the location.

5. Proceed with best plan (at the time) to regain control of the well. Maintain tight security and safety procedures.

C. Responsibility:

1. Designated personnel.

a. Shall be responsible for the total implementation of this plan.
b. Shall be in complete command during any emergency.
c. Shall designate a back-up.

All personnel:	1. On alarm, don escape unit and report to the nearest upwind designated safe briefing / muster area upw 2. Check status of personnel (buddy system). 3. Secure breathing equipment. 4. Await orders from supervisor.
Drill site manager:	1. Don escape unit if necessary and report to nearest upwind designated safe briefing / muster area. 2. Coordinate preparations of individuals to return to point of release with tool pusher and driller (using the buddy system). 3. Determine H2S concentrations. 4. Assess situation and take control measures.
Tool pusher:	1. Don escape unit Report to up nearest upwind designated safe briefing / muster area. 2. Coordinate preparation of individuals to return to point of release with tool pusher drill site manager (using the buddy system). 3. Determine H2S concentration. 4. Assess situation and take control measures.
Driller:	1. Don escape unit, shut down pumps, continue rotating DP.

	2.	Check monitor for point of release.
	3.	Report to nearest upwind designated safe briefing / muster area.
	4.	Check status of personnel (in an attempt to rescue, use the buddy system).
	5.	Assigns least essential person to notify Drill Site Manager and tool pusher by quickest means in case of their absence.
	6.	Assumes the responsibilities of the Drill Site Manager and tool pusher until they arrive should they be absent.
Derrick man Floor man #1 Floor man #2	1.	Will remain in briefing / muster area until instructed by supervisor.
Mud engineer:	1.	Report to nearest upwind designated safe briefing / muster area.
	2.	When instructed, begin check of mud for ph and H2S level. (Garett gas train.)
Safety personnel:	1.	Mask up and check status of all personnel and secure operations as instructed by drill site manager.

Taking a kick

When taking a kick during an H2S emergency, all personnel will follow standard Well control procedures after reporting to briefing area and masking up.

Open-hole logging

All unnecessary personnel off floor. Drill Site Manager and safety personnel should monitor condition, advise status and determine need for use of air equipment.

Running casing or plugging

Following the same "tripping" procedure as above. Drill Site Manager and safety personnel should determine if all personnel have access to protective equipment.

Ignition procedures

The decision to ignite the well is the responsibility of the operator (Oxy Drilling Management). The decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope controlling the blowout under the prevailing conditions at the well.

Instructions for igniting the well

1. Two people are required for the actual igniting operation. They must wear self-contained breathing units and have a safety rope attached. One man (tool pusher or safety engineer) will check the atmosphere for explosive gases with the gas monitor. The other man is responsible for igniting the well.
2. Primary method to ignite: 25 mm flare gun with range of approximately 500 feet.
3. Ignite upwind and do not approach any closer than is warranted.
4. Select the ignition site best for protection, and which offers an easy escape route.
5. Before firing, check for presence of combustible gas.
6. After lighting, continue emergency action and procedure as before.
7. All unassigned personnel will remain in briefing area until instructed by supervisor or directed by the Drill Site Manager.

Remember: After well is ignited, burning hydrogen sulfide will convert to sulfur dioxide, which is also highly toxic. **Do not assume the area is safe after the well is ignited.**

Status check list

Note: All items on this list must be completed before drilling to production casing point.

1. H2S sign at location entrance.
2. Two (2) wind socks located as required.
3. Four (4) 30-minute positive pressure air packs (2 at each Briefing area) on location for all rig personnel and mud loggers.
4. Air packs inspected and ready for use.
5. Cascade system and hose line hook-up as needed.
6. Cascade system for refilling air bottles as needed.
7. Condition flag on location and ready for use.
8. H2S detection system hooked up and tested.
9. H2S alarm system hooked up and tested.
10. Hand operated H2S detector with tubes on location.
11. 1 – 100' length of nylon rope on location.
12. All rig crew and supervisors trained as required.
13. All outside service contractors advised of potential H2S hazard on well.
14. No smoking sign posted and a designated smoking area identified.
15. Calibration of all H2S equipment shall be noted on the IADC report.

Checked by:_____ Date:_____

Procedural check list during H2S events

Perform each tour:

1. Check fire extinguishers to see that they have the proper charge.

2. Check breathing equipment to ensure that it in proper working order.

3. Make sure all the H2S detection system is operative.

Perform each week:

1. Check each piece of breathing equipment to make sure that demand or forced air regulator is working. This requires that the bottle be opened and the mask assembly be put on tight enough so that when you inhale, you receive air or feel air flow.

2. BOP skills (well control drills).

3. Check supply pressure on BOP accumulator stand by source.

4. Check breathing equipment mask assembly to see that straps are loosened and turned back, ready to put on.

5. Check pressure on breathing equipment air bottles to make sure they are charged to full volume. (Air quality checked for proper air grade "D" before bringing to location)

6. Confirm pressure on all supply air bottles.

7. Perform breathing equipment drills with on-site personnel.

8. Check the following supplies for availability.

   A. Emergency telephone list.
   B. Hand operated H2S detectors and tubes.

General evacuation plan

1. When the company approved supervisor (Drill Site Manager, consultant, rig pusher, or driller) determines the H2S gas cannot be limited to the well location and the public will be involved, he will activate the evacuation plan.

2. Drill Site Manager or designee will notify local government agency that a hazardous condition exists and evacuation needs to be implemented.

3. Company or contractor safety personnel that have been trained in the use of H2S detection equipment and self-contained breathing equipment will monitor H2S concentrations, wind directions, and area of exposure. They will delineate the outer perimeter of the hazardous gas area. Extension to the evacuation area will be determined from information gathered.

4. Law enforcement personnel (state police, police dept., fire dept., and sheriff's dept.) Will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.

5. After the discharge of gas has been controlled, company safety personnel will determine when the area is safe for re-entry.

Important: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

Emergency actions

Well blowout – if emergency

1. Evacuate all personnel to "Safe Briefing / Muster Areas" or off location if needed.
2. If sour gas – evacuate rig personnel.
3. If sour gas – evacuate public within 3000 ft radius of exposure.
4. Don SCBA and shut well in if possible using the buddy system.
5. Notify Drilling Superintendent and call 911 for emergency help (fire dept and ambulance) if needed.
6. Implement the Blowout Contingency Plan, and Drilling Emergency Action Plan.
6. Give first aid as needed.

Person down location/facility

1. If immediately possible, contact 911. Give location and wait for confirmation.
2. Don SCBA and perform rescue operation using buddy system.

Toxic effects of hydrogen sulfide

Hydrogen sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 ppm, which is .001% by volume. Hydrogen sulfide is heavier than air (specific gravity – 1.192) and colorless. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. Hydrogen sulfide is almost as toxic as hydrogen cyanide and is between five and six times more toxic than carbon monoxide. Toxicity data for hydrogen sulfide and various other gases are compared in table i. Physical effects at various hydrogen sulfide exposure levels are shown in table ii.

Table i
Toxicity of various gases

Common name	Chemical formula	Specific gravity (sc=1)	Threshold limit (1)	Hazardous limit (2)	Lethal concentration (3)
Hydrogen Cyanide	Hcn	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	H2S	1.18	10 ppm	250 ppm/hr	600 ppm
Sulfur Dioxide	So2	2.21	5 ppm	-	1000 ppm
Chlorine	Cl2	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	Co	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	Co2	1.52	5000 ppm	5%	10%
Methane	Ch4	0.55	90,000 ppm	Combustible above 5% in air	

1) threshold limit – concentration at which it is believed that all workers may be repeatedly exposed day after day without adverse effects.

2) hazardous limit – concentration that will cause death with short-term exposure.

3) lethal concentration – concentration that will cause death with short-term exposure.

Toxic effects of hydrogen sulfide

Table ii
Physical effects of hydrogen sulfide

Percent (%)	Ppm	Concentration Grains 100 std. Ft3*	Physical effects
0.001	<10	00.65	Obvious and unpleasant odor.

0.002	10	01.30	Safe for 8 hours of exposure.
0.010	100	06.48	Kill smell in 3 – 15 minutes. May sting eyes and throat.
0.020	200	12.96	Kills smell shortly; stings eyes and throat.
0.050	500	32.96	Dizziness; breathing ceases in a few minutes; needs prompt artificial respiration.
0.070	700	45.36	Unconscious quickly; death will result if not rescued promptly.
0.100	1000	64.30	Unconscious at once; followed by death within minutes.

*at 15.00 psia and 60'f.

Use of self-contained breathing equipment (SCBA)

1. Written procedures shall be prepared covering safe use of SCBA's in dangerous atmosphere, which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available SCBA.

2 SCBA's shall be inspected frequently at random to insure that they are properly used, cleaned, and maintained.

3. Anyone who may use the SCBA's shall be trained in how to insure proper face-piece to face seal. They shall wear SCBA's in normal air and then wear them in a test atmosphere. (note: such items as facial hair {beard or sideburns} and eyeglasses will not allow proper seal.) Anyone that may be reasonably expected to wear SCBA's should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses or contact lenses.

4. Maintenance and care of SCBA's:

   a. A program for maintenance and care of SCBA's shall include the following:
      1. Inspection for defects, including leak checks.
      2. Cleaning and disinfecting.
      3. Repair.
      4. Storage.

   b. Inspection, self-contained breathing apparatus for emergency use shall be inspected monthly.
      1. Fully charged cylinders.
      2. Regulator and warning device operation.
      3. Condition of face piece and connections.
      4. Rubber parts shall be maintained to keep them pliable and prevent deterioration.

   c. Routinely used SCBA's shall be collected, cleaned and disinfected as frequently as necessary to insure proper protection is provided.

5. Persons assigned tasks that requires use of self-contained breathing equipment shall be certified physically fit (medically cleared) for breathing equipment usage at least annually.

6. SCBA's should be worn when:

   A. Any employee works near the top or on top of any tank unless test reveals less than 10 ppm of H2S.

B. When breaking out any line where H2S can reasonably be expected.

C. When sampling air in areas to determine if toxic concentrations of H2S exists.

D. When working in areas where over 10 ppm H2S has been detected.

E. At any time there is a doubt as to the H2S level in the area to be entered.

Rescue
First aid for H2S poisoning

Do not panic!

Remain calm – think!

1. Don SCBA breathing equipment.

2. Remove victim(s) utilizing buddy system to fresh air as quickly as possible. (go up-wind from source or at right angle to the wind. Not down wind.)

3. Briefly apply chest pressure – arm lift method of artificial respiration to clean the victim's lungs and to avoid inhaling any toxic gas directly from the victim's lungs.

4. Provide for prompt transportation to the hospital, and continue giving artificial respiration if needed.

5. Hospital(s) or medical facilities need to be informed, before-hand, of the possibility of H2S gas poisoning – no matter how remote the possibility is.

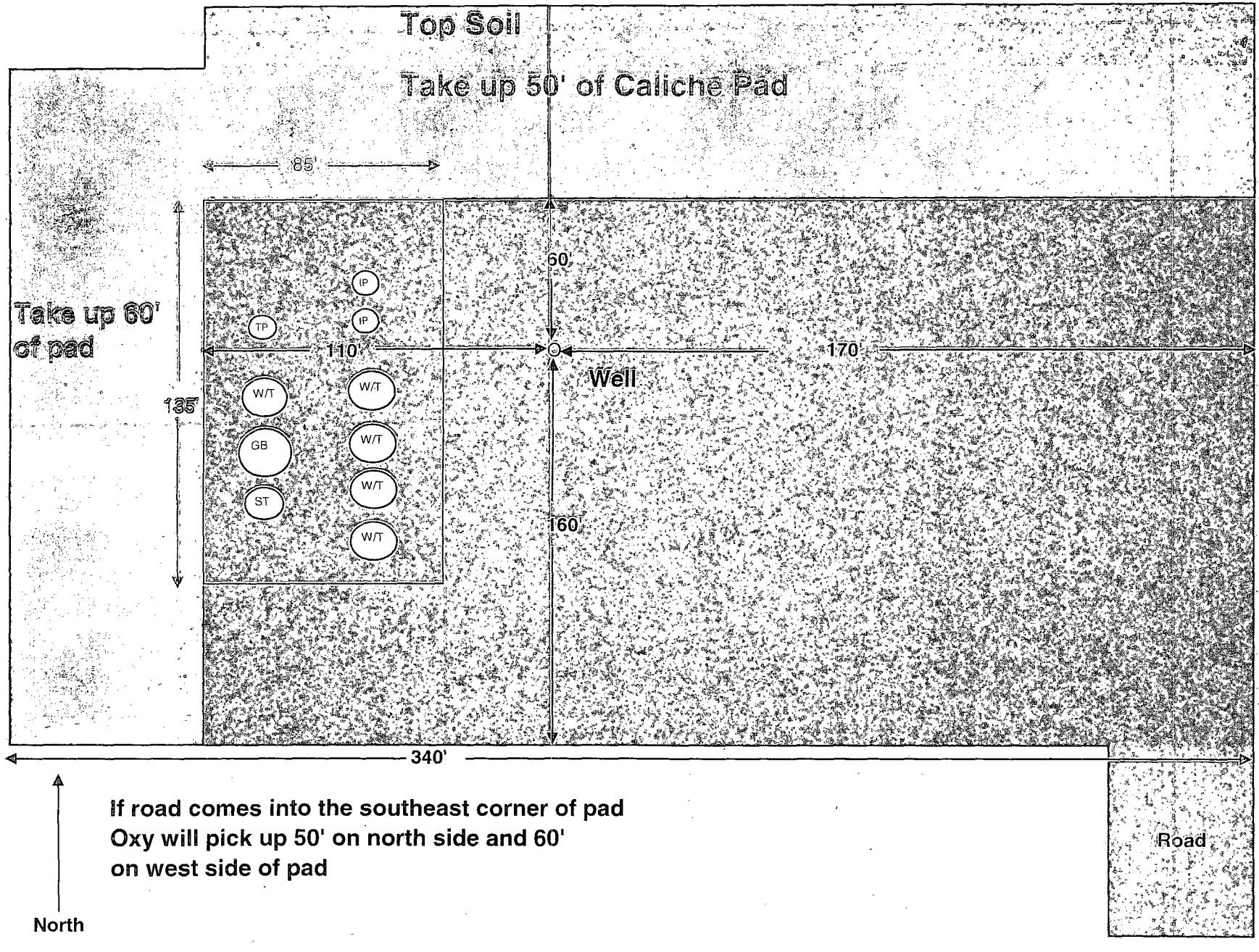
6. Notify emergency room personnel that the victim(s) has been exposed to H2S gas.

Besides basic first aid, everyone on location should have a good working knowledge of artificial respiration.

Revised CM 6/27/2012

Wellsite Facility Layout

H&P Flex 4 Rig - V-door East
Cypress 3 Federal SWD # 1



SURFACE USE PLAN OF OPERATIONS

Operator Name/Number:	**OXY USA Inc.**	**16696**
Lease Name/Number:	**Cypress 3 Federal SWD #1**	**Federal Lse No. NM053373**
Pool Name/Number:	**Cedar Canyon Delaware**	**11540**
Surface Location:	**870 FSL 1681 FWL SESW(N) Sec 3 T24S R29E**	

1. Existing Roads

a. A copy of a USGS "Remuda Basin, NM" 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 Asel, Certificate No. 15079 on 11/17/11, certified 12/14/11.

c. Directions to Location: At the intersection of Hwy 31 and Hwy 128, go east on Hwy 128 for 4.5 miles. Turn south on ECR 793 for 4.1 miles. Turn west on lease road for 3.5 miles. Turn south for 2.2 miles, turn east for 1.0 miles, turn southwest for 1.4 miles, turn west for 0.2 miles. Turn north on proposed road for 166.3' to location.

2. New or Reconstructed Access Roads:

a. A new access road will be built. The access road will run approximately 166.3' north from an existing road to the location.

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.

e. Blade, water & repair existing caliche road as required/needed.

3. Location of Existing Wells:

Existing wells within a one mile radius of the proposed well are shown on attached plat.

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

a. The Cypress 3 Federal SWD tank battery would be utilized and the necessary injection equipment will be installed at the well site. See proposed Production Facilities Layout diagram.

b. If necessary, electric power poles will be set along side of the access road.

c. All flowlines will adhere to API Standards.

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

See attached for the proposed well site layout with dimensions of the pad layout and equipment location.

V-Door East CL Tanks North Pad 270' X 340'

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 & Leslie Mahaffey, P.O. Box 161, Loving, NM 58256
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	$1,463.00	$0.18/ft over 1/4 mile	$0.00	$1,463.00
Pipeline - up to 1mile	$1,350.00	$282 per 1/4 mile	$0.00	$1,350.00
Electric Line - up to 1mile	$676.00	$0.20/ft over 1 mile	$0.00	$676.00
Total	$3,489.00		$0.00	$3,489.00

13. Bond Coverage:

Bond Coverage is Nationwide Bond No. ESB000226.

Operators Representatives:

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

Kim Moore
Production Coordinator
1017 W. Stanolind Rd.
Hobbs, NM 88240
Office Phone: 575-397-8236
Cellular: 575-706-1219

Charles Wagner
Manager Field Operations
1502 West Commerce Dr.
Carlsbad, NM 88220
Office Phone: 575-628-4151
Cellular: 575-725-8306

Roger Allen
Drilling Superintendent
P.O. Box 4294
Houston, TX 77210
Office Phone: 713-215-7617
Cellular: 281-682-3919

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

Sebastian Millan
Drilling Engineering Supervisor
P.O. Box 4294
Houston, TX 77210
Office Phone: 713-985-8750
Cellular: 713-528-3268

Anthony Tschacher
Drilling Engineer
P.O. Box 4294
Houston, TX 77210
Office Phone: 713-985-6949
Cellular: 832-270-6883

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**OXY USA Inc.**
LEASE NO.:	**NMNM-53373**
WELL NAME & NO.:	**Cypress 3 Federal SWD 1**
SURFACE HOLE FOOTAGE:	**0870' FSL & 1681' FWL**
LOCATION:	**Section 03, T. 24 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.

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)

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 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 in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 3 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

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

Payment shall be made to the BLM prior to removal of any federal mineral materials. 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 twenty (20) 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.

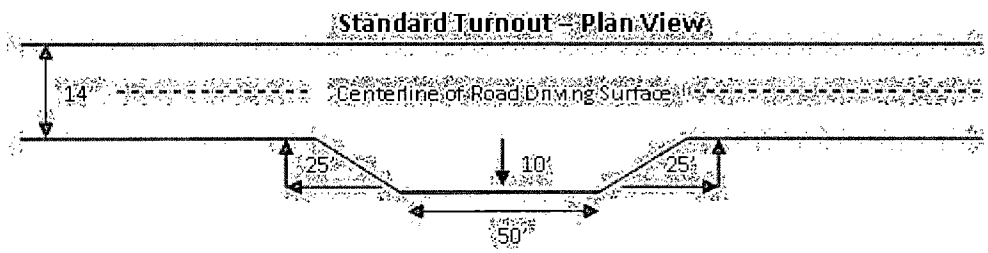
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

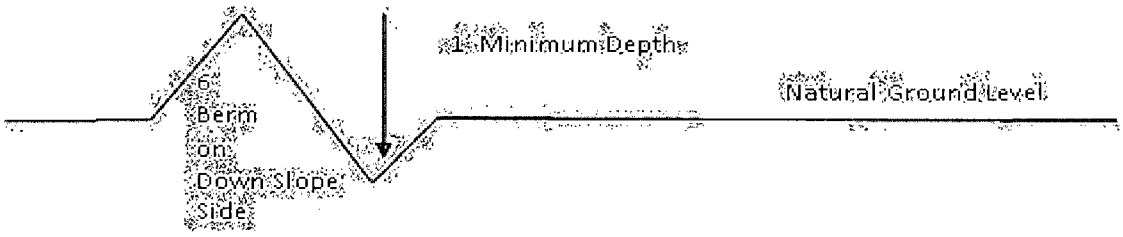
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping 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 a 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 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ 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

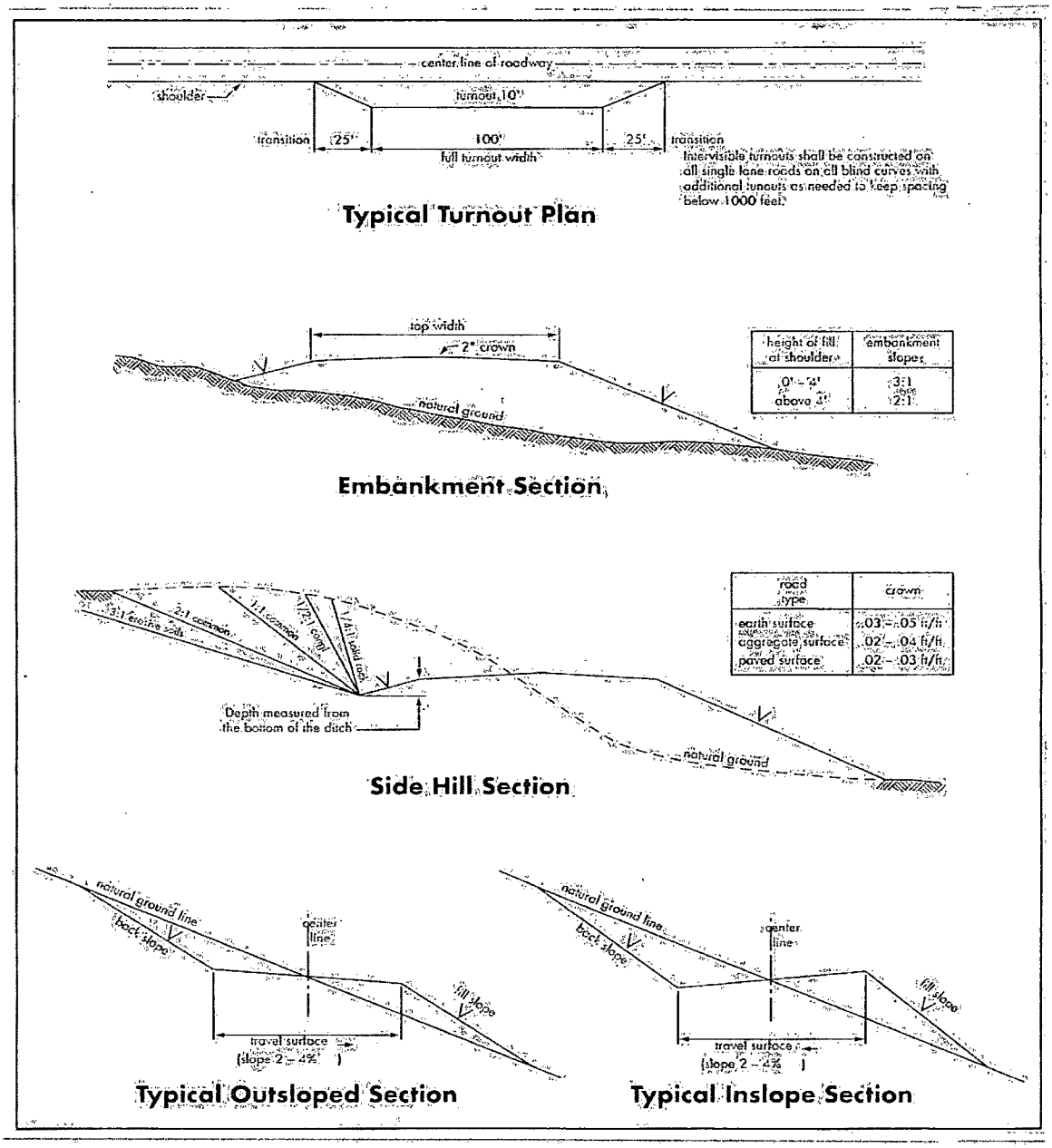
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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 in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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 is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. 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 program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

Wait on cement (WOC) time prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. 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.

Secretary's Potash
Medium Cave/Karst
Possibility of lost circulation in the Rustler and Delaware.

1. The **11-3/4** inch surface casing shall be set at approximately **375** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    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.

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

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash.**

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

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. 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 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 and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi **(Installing 5M two ram stack with 3M annular preventer and 3M choke Manifold, testing to 3,000 psi)**.

   a. **Operator is approved to test against casing to 1386 psi.** The wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.

    d. The results of the test shall be reported to the appropriate BLM office.

    e. 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.**

    f. 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. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

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

E. WELL COMPLETION

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. **Properly evaluate the injection zone utilizing open hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.**
2. **Restrict the injection fluid to the approved formation.**

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

NOTE: The 1937 Kerr 1 well is more than likely poorly plugged. Well bore shall be investigated and results provided to BLM.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 082213

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 (not applied for in APD)

C. ELECTRIC LINES (not applied for in APD)

IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 2, for Sandy 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:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed