OCD Artesia

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NMOCD ARTESIA

Form 3160-3
(April 2004)

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. **NMNM81586**

6. If Indian, Allotee or Tribe Name — ICS 9/12/2012

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

1a. Type of work: ☑ DRILL ☐ REENTER

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

8. Lease Name and Well No. **Cedar Canyon 22 #1H** <39438>

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

9. API Well No. **30-015** 40668

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

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

10. Field and Pool, or Exploratory **Corral Draw Bone Spring** <96238>

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **1980 FSL 1980 FWl NESW(K) Sec 22 T24S R29E**
At proposed prod. zone **1980 FSL 660 FWL NWSW(L) Sec 23 T24S R29E**

11. Sec., T. R. M. or Blk. and Survey or Area **Surf-Sec 22 T24S R29E**

14. Distance in miles and direction from nearest town or post office* **6 miles northest 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) **660'**

16. No. of acres in lease ~~560ac~~ 1040 ac

17. Spacing Unit dedicated to this well **160ac**

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **332'**

19. Proposed Depth **11636'M 7906'V**

20. BLM/BIA Bond No. on file **ESB000~~326~~** 22b

21. Elevations (Show whether DF, KDB, RT, GL, etc.) **2982' GL**

22. Approximate date work will start* **09/01/2012**

23. Estimated duration **30 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)* **David Stewart** — Date 6/19/12

Title **Regulatory Advisor** — **david_stewart@oxy.com**

Approved by *(Signature)* /s/ Don Peterson — Name *(Printed/Typed)* /s/ Don Peterson — SEP - 6 2012

Title (for) FIELD MANAGER — Office CARLSBAD FIELD 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

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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 19th day of June, 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
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis
Santa Fe, New Mexico 8

OPERATOR: Please do not report production under this pool id code until OCD confirms perfs and appropriate pool designation on completion and C104 approvals.

Form C-102
August 1, 2011
to appropriate
District Office

REPORT

WELL LOCATION AND ACREAGE DE

API Number	Pool Code	Pool Name
30-015- 40668	96238	Corral Draw Bone Spring

Property Code	Property Name	Well Number
39438	CEDAR CANYON 22	1H

OGRID No.	Operator Name	Elevation
16696	OXY U.S.A. INC.	2982'

Surface Location

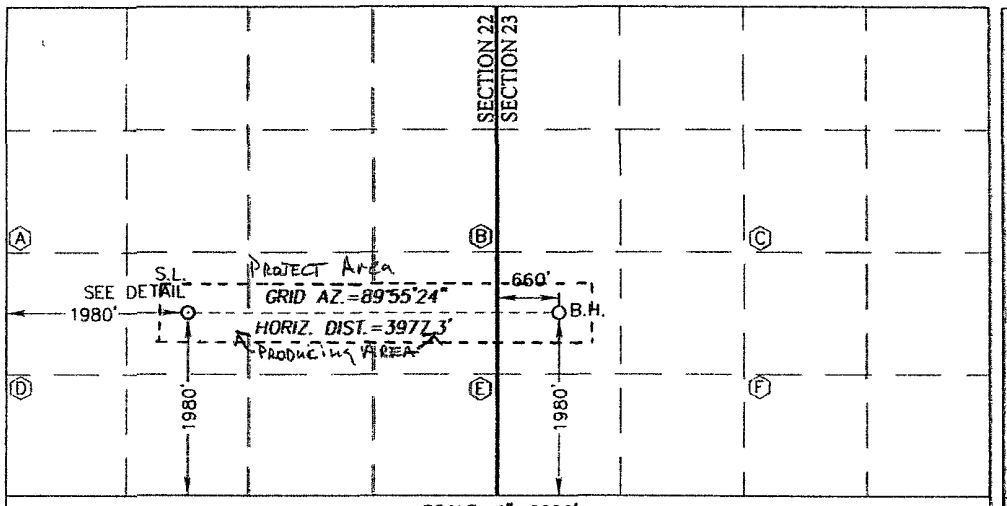
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	22	24-S	29-E		1980	SOUTH	1980	WEST	EDDY

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
L	23	24-S	29-E		1980	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160	N		11636 9/6

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

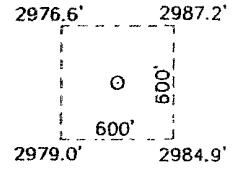


SCALE: 1"=2000'

SECTION, QUARTER & SIXTEENTH CORNER COORDINATES TABLE

- (A) - Y=437702.8 N, X=609169.1 E
- (B) - Y=437699.8 N, X=614465.5 E
- (C) - Y=437717.6 N, X=617113.7 E
- (D) - Y=436372.2 N, X=609173.0 E
- (E) - Y=436373.2 N, X=614469.0 E
- (F) - Y=436392.2 N, X=617118.5 E

DETAIL



GEODETIC COORDINATES
NAD 27 NME

SURFACE LOCATION
Y=437025.8 N
X=611150.7 E
LAT.=32.200990° N
LONG.=103.973991° W

BOTTOM HOLE LOCATION
Y=437031.1 N
X=615127.1 E
LAT.=32.200968° N
LONG.=103.961136° W

OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date 6/19/12

David Stewart - Reg. Adv.
Printed Name

david_stewart@oxy.com
E-mail Address

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.

AUGUST 9, 2011
Date of Survey

Signature & Seal of Professional Surveyor:

RONALD J. EIDSON NEW MEXICO 3239 PROFESSIONAL SURVEYOR

8/13/2012

Certificate Number		
	Gary O. Eidson	12641
	Ronald J. Eidson	3239

DSS/DSR Rel. WO: 12.13.0133 JWSC W.O.: 12.13.1052

DRILLING PROGRAM

Operator Name/Number:	**OXY USA Inc.**	**16696**
Lease Name/Number:	**Cedar Canyon 22 #1H**	
Pool Name/Number:	**Corral Draw Bone Spring**	**96238**
Surface Location:	**1980 FSL 1980 FWL NESW(K) Sec 22 T24S R29E**	**Federal Lease No. NMNM81586**
Bottom Hole Location:	**1980 FSL 660 FWL NWSW(L) Sec 23 T24S R29E**	**Federal Lease No. NMNM81586**

Proposed TD: 7906' TVD 11636' TMD **Elevation:** 2982' GL

SL - Lat: 32.200990 **Long:** 103.973991 **X=** 611150.7 **Y=** 437025.8 **NAD - 1927**

BH - Lat: 32.200968 **Long:** 103.961136 **X=** 615127.1 **Y=** 437031.1 **NAD - 1927**

1. Geologic Name of Surface Formation:

a. Permian

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

Geological Marker	Depth	Type
a. Rustler	636'	---
b. Top Salt	712'	---
c. Base Salt	2926'	---
d. Delaware	3050'	Oil
e. Bell Canyon	3146'	Oil
f. Cherry Canyon	4096'	Oil
g. Brushy Canyon	5246'	Oil
h. Bone Spring	6836'	Oil
i. 1st Bone Spring	7846'	Oil

See following page

3. Casing Program:

8/3/12

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	665'	13-3/8"	48	ST&C	H-40	New	3.19	7.17	10.09
				Hole filled with 8.9# Mud			770#	1730#	
12-1/4"	3250'	9-5/8"	40	LT&C	J-55	New	1.88	2.89	4
				Hole filled with 10# Mud			2570#	3950#	
8-3/4"	11636' M	5-1/2"	17	LT&C	N-80	New	2.1	2.59	1.76
DVT @ 6000' - POST @ 3300'				Hole filled with 9.2# Mud			6280#	7740#	

Collapse and burst loads calculated using Stress Check with anticipated loads

4. Cement Program

a. 13-3/8" Surface — Circulate cement to surface w/ 490sx PP cmt w/ 4% Bentonite + .125#/sx Poly-E-Flake + 2% CaCl2, 13.5ppg 1.75 yield 589# 24hr CS 165% Excess followed by 200sx PP cmt w/ 2% CaCl2, 14.8ppg 1.35 yield 1608# 24hr CS 165% Excess.

b. 9-5/8" Intermediate — Circulate cement to surface w/ 880sx HES light PP cmt w/ 5% Salt + .125#/sx Poly-E-Flake + 3#/sx Kol Seal, 12.9ppg 1.87 yield 840# 24hs CS 105% Excess followed by 200sx PP cmt w/ 1% CaCl2, 14.8ppg 1.33 yield 2125# 24hr CS 105% Excess.

Operator Name/Number:	**OXY USA Inc.**	**16696**
Lease Name/Number:	**Cedar Canyon 22 #1H**	
Pool Name/Number:	**Corral Draw Bone Spring**	**96238**
Surface Location:	**1980 FSL 1980 FWL NESW(K) Sec 22 T24S R29E**	**Federal Lse No. NMNM81586**
Bottom Hole Location:	**1980 FSL 660 FWL NWSW(L) Sec 23 T24S R29E**	**Federal Lse No. NMNM81586**

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

Geological Marker	Depth	Type
a. Rustler	636'	---
b. Top Salt	712'	---
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e. Bell Canyon	3146'	Oil
f. Cherry Canyon	4096'	Oil
g. Brushy Canyon	5246'	Oil
h. Bone Spring	6836'	Oil
i. 1st Bone Spring	7846'	Oil

3. Casing Program:

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
		445'	See COA						
17-1/2"	0-665'	13-3/8"	48	ST&C	H-40	New	3.19	7.17	10.09
				Hole filled with 8.9# Mud			770#	1730#	
12-1/4"	0-3250'	9-5/8"	40	LT&C	J-55	New	1.88	2.89	4
				Hole filled with 10# Mud			2570#	3950#	
8-3/4"	0-11636' M	5-1/2"	17	LT&C	N-80	New	2.1	2.59	1.76
DVT @ 6000' - POST @ 3300'				Hole filled with 9.2# Mud			6280#	7740#	

5. Pressure Control Equipment:

Surface None

Production 13-5/8" 10M three ram stack w/ 5M annular preventer, 10M Choke Manifold

All BOP's and associated equipment will be tested in accordance with Onshore Order #2 (250/5000 psi on rams for 10 minutes each and 250/3500 for 10 minutes for annular preventer, equal to 70% of working pressure) with a third party BOP testing service before drilling out the 13-3/8" casing shoe. Wellhead pressure rating will support this test and 13-3/8" casing will be protected from high pressure. Since the wellhead system is a multibowl design, this initial test will cover the requirements prior to drilling out the 9-5/8" casing shoe.

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

c. 5-1/2" Production Cement 1st stage w/ 430sx HES light PP cmt w/ 3#/sx Kol Seal + 3#/sx salt + .3% HR-601, 12.4ppg 2.08 yield 460# 24hr CS 135% Excess followed by 1610sx Super H w/ 1#/sx salt .5% Halad-344 + .4% CFR-3 + 3#/sx Kol-Seal + .3% HR-601, 13.2ppg 1.61 yield 1372# 24hr CS 135% Excess, Calc TOC-5995'
Cement 2nd stage w/ 960sx HES light PP cmt w/ 3#/sx Kol Seal + 3#/sx salt, 12.4ppg 2.07 yield 610# 24hr CS 200% Excess followed by 100sx PP cmt w/ 3#/sx Kol-Seal + 3#/sx salt .3%% HR-601, 14.8ppg 1.34 yield 1372# 24hr CS 200% Excess, Calc TOC-3295'
Cement 3rd stage w/ 400sx HES Light PP cmt w/ 3#/sx Salt, 12.4ppg 2.05 yield 511# 24hr CS 85% Excess followed by 100sx PP cmt w/ 2% CaCl2, 14.8ppg 1.35 yield 2025# 24hr CS 200% Excess, Circ Surface

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

5. Pressure Control Equipment:

Surface None

8/3/12 See previous page

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

All BOP's and associated equipment will be tested in accordance with Onshore Order #2 (250/5000 psi on rams for 10 minutes each and 250/3500 for 10 minutes for annular preventer, equal to 70% of working pressure) with a third party BOP testing service before drilling out the 13-3/8" casing shoe. Wellhead pressure rating will support this test and 13-3/8" casing will be protected from high pressure. Since the wellhead system is a multibowl design, this initial test will cover the requirements prior to drilling out the 9-5/8" casing shoe.

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

OXY also requests a variance to connect the BOP outlet to the choke manifold using a co-flex hose that is manufactured by Contitech Rubber Industrial KFT. It is a 3" ID X 35' flexible hose rated to 10000psi working pressure. It has been tested to15000psi and is built to API Spec 16C. Once the flex line is installed, it will be tied down with safety clamps, see attached for certifications.

6. Proposed Mud Circulation System

Depth	Mud Wt. ppg	Visc sec	Fluid Loss	Type System
See COA 0 - 665' 445	8.4-8.9	32-34	NC	Fresh Water/Spud Mud
665 - 3250'	9.8-10.0	28-29	NC	Brine Water
3250 - 6200'	8.6-8.8	28-29	NC	Fresh Water
6200 - TD'	9.0-9.2	30-40	8-15	LSND

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.

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.

8. Logging, Coring and Testing Program:

a. Drill stem tests are not anticipated but if done will be based on geological sample shows.
b. The open hole electrical logging program will consist of a Triple Combo from build section to base of intermediate. GR-Neutron from build section to surface. MWD-GR from kick-off point to TD.
c. No coring program is planned but if done will be sidewall rotary cores.
d. Mud logging will be initiated from the base of surface casing to TD.

9. Potential Hazards:

No abnormal pressures, temperatures or H_2S gas are expected. The highest anticipated pressure gradient would be 0.44psi/ft or 3500psi. If H_2S is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No.6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

10. Anticipated Starting Date and Duration of Operations:

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

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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 00863			ED	3	3	1	16	24S	29E	594524	3565091*	220		
C 00863 CLW199506	O		ED	3	3	1	16	24S	29E	594524	3565091*	220		
C 02713		C	ED	4	4	1	16	24S	29E	591633	3565944	230	18	212

Average Depth to Water: **18 feet**

Minimum Depth: **18 feet**

Maximum Depth: **18 feet**

Record Count: 3

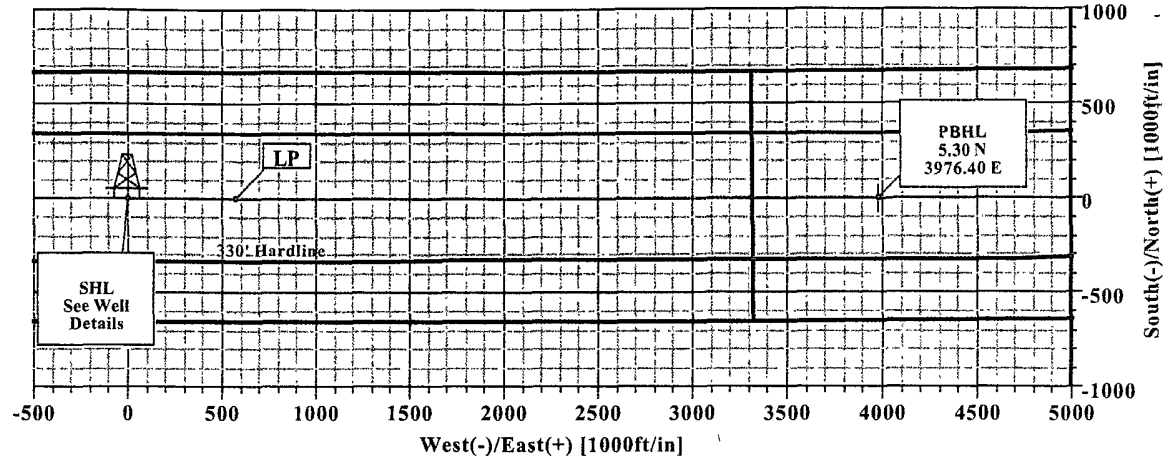
PLSS Search:

Section(s): 14, 15, 16, 21, 22, 23, 26, 27, 28 **Township:** 24S **Range:** 29E

***UTM location was derived from PLSS - see Help**

Occidental Permian Ltd.

Cedar Canyon 22 #1H
Eddy Co, New Mexico



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	89.92	0.00	0.00	0.00	0.00	0.00	0.00	
2	7333.04	0.00	89.92	7333.04	0.00	0.00	0.00	0.00	0.00	
3	8233.04	90.00	89.92	7906.00	0.76	572.96	10.00	89.92	572.96	
4	11636.49	90.00	89.92	7906.00	5.30	3976.40	0.00	0.00	3976.40	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
1H	0.00	0.00	437025.80	611150.70	32°12'03.565N	103°58'26.369W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	7906.00	5.30	3976.40	437031.10	615127.10	Point

LEGEND

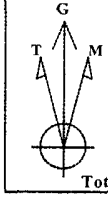
1
Plan #3

FIELD DETAILS

Eddy Co, NM (Nad 27)

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North



Azimuths to Grid North
True North: -0.19°
Magnetic North: 7.47°

Magnetic Field
Strength: 48495nT
Dip Angle: 60.07°
Date: 5/1/2012
Model: IGRF2010

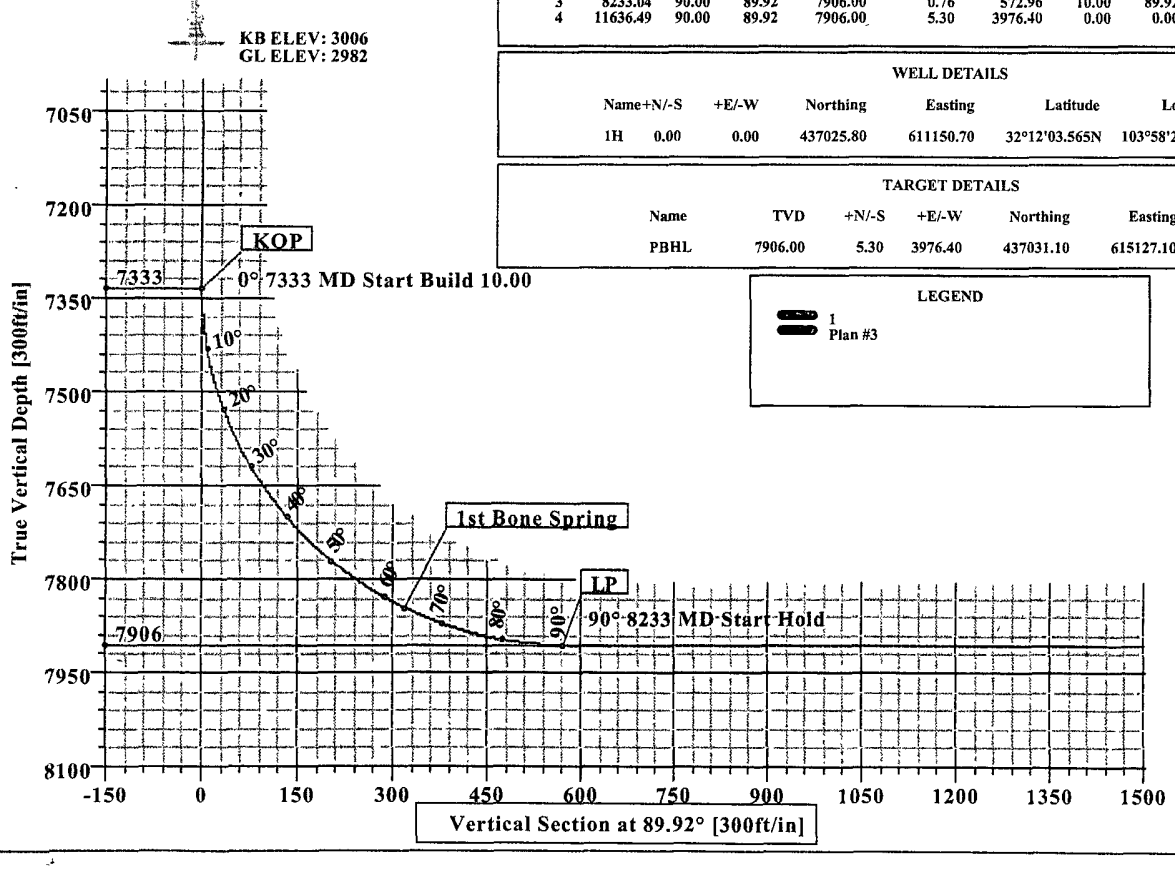
Total Correction to Grid North: 7.47°

SITE DETAILS

Cedar Canyon 22 #1H

Site Centre Northing: 437025.80
Easting: 611150.70

Ground Level: 2982.00
Positional Uncertainty: 0.00
Convergence: 0.19



Weatherford®

Plan: Plan #3 (1H/1)

Created By: Russell W. Joyner Date: 1/27/2012

DDP-2

Weatherford International Ltd.
WFT Plan Report - X & Y's

Weatherford

Company:	Occidental Permian Ltd.	Date: 1/27/2012	Time: 10:31:39	Page:	1
Field:	Eddy Co, NM (Nad 27)	Co-ordinate(NE) Reference:	Well: 1H, Grid North		
Site:	Cedar Canyon 22 #1H	Vertical (TVD) Reference:	SITE 3006.0		
Well:	1H	Section (VS) Reference:	Well (0.00N,0.00E,89.92Azi)		
Wellpath:	1	Survey Calculation Method:	Minimum Curvature	Db:	Sybase

Plan:	Plan #3	**Date Composed:**	9/27/2011
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Field:	Eddy Co, NM (Nad 27)		
Map System:	US State Plane Coordinate System 1927	**Map Zone:**	New Mexico, Eastern Zone
Geo Datum:	NAD27 (Clarke 1866)	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	IGRF2010

Site:	Cedar Canyon 22 #1H				
Site Position:		**Northing:**	437025.80 ft	**Latitude:**	32 12 3.565 N
From:	Map	**Easting:**	611150.70 ft	**Longitude:**	103 58 26.369 W
Position Uncertainty:	0.00 ft			**North Reference:**	Grid
Ground Level:	2982.00 ft			**Grid Convergence:**	0.19 deg

Well:	1H				**Slot Name:**	
Well Position:	+N/-S	0.00 ft	**Northing:**	437025.80 ft	**Latitude:**	32 12 3.565 N
	+E/-W	0.00 ft	**Easting :**	611150.70 ft	**Longitude:**	103 58 26.369 W
Position Uncertainty:		0.00 ft				

Wellpath:	1			**Drilled From:**	Surface
				Tie-on Depth:	0.00 ft
Current Datum:	SITE	**Height**	3006.00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	5/1/2012			**Declination:**	7.66 deg
Field Strength:	48495 nT			**Mag Dip Angle:**	60.07 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	89.92

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	89.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7333.04	0.00	89.92	7333.04	0.00	0.00	0.00	0.00	0.00	0.00	
8233.04	90.00	89.92	7906.00	0.76	572.96	10.00	10.00	0.00	89.92	
11636.49	90.00	89.92	7906.00	5.30	3976.40	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
7300.00	0.00	89.92	7300.00	0.00	0.00	0.00	0.00	437025.80	611150.70	
7333.04	0.00	89.92	7333.04	0.00	0.00	0.00	0.00	437025.80	611150.70	KOP
7400.00	6.70	89.92	7399.85	0.01	3.91	3.91	10.00	437025.81	611154.61	
7500.00	16.70	89.92	7497.65	0.03	24.15	24.15	10.00	437025.83	611174.85	
7600.00	26.70	89.92	7590.45	0.08	61.07	61.07	10.00	437025.88	611211.77	
7700.00	36.70	89.92	7675.42	0.15	113.55	113.55	10.00	437025.95	611264.25	
7800.00	46.70	89.92	7750.00	0.24	179.98	179.98	10.00	437026.04	611330.68	
7900.00	56.70	89.92	7811.90	0.34	258.36	258.36	10.00	437026.14	611409.06	
7968.49	63.54	89.92	7846.00	0.42	317.70	317.70	10.00	437026.22	611468.40	1st Bone Spring
8000.00	66.70	89.92	7859.26	0.46	346.29	346.29	10.00	437026.26	611496.99	
8100.00	76.70	89.92	7890.62	0.59	441.11	441.11	10.00	437026.39	611591.81	
8200.00	86.70	89.92	7905.05	0.72	539.93	539.93	10.00	437026.52	611690.63	
8233.04	90.00	89.92	7906.00	0.76	572.96	572.96	10.00	437026.56	611723.66	LP
8300.00	90.00	89.92	7906.00	0.85	639.92	639.92	0.00	437026.65	611790.62	
8400.00	90.00	89.92	7906.00	0.99	739.91	739.92	0.00	437026.79	611890.61	
8500.00	90.00	89.92	7906.00	1.12	839.91	839.92	0.00	437026.92	611990.61	
8600.00	90.00	89.92	7906.00	1.25	939.91	939.92	0.00	437027.05	612090.61	

DDP3

Weatherford International Ltd.

WFT Plan Report - X & Y's

Weatherford

Company:	Occidental Permian Ltd.	Date:	1/27/2012	Time:	10:31:39	Page:	2
Field:	Eddy Co. NM (Nad 27)	Co-ordinate(NE) Reference:	Well: 1H, Grid North				
Site:	Cedar Canyon 22 #1H	Vertical (TVD) Reference:	SITE 3006.0				
Well:	1H	Section (VS) Reference:	Well (0.00N,0.00E,89.92Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature	Db:	Sybase		

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
8700.00	90.00	89.92	7906.00	1.39	1039.91	1039.92	0.00	437027.19	612190.61	
8800.00	90.00	89.92	7906.00	1.52	1139.91	1139.92	0.00	437027.32	612290.61	
8900.00	90.00	89.92	7906.00	1.65	1239.91	1239.92	0.00	437027.45	612390.61	
9000.00	90.00	89.92	7906.00	1.79	1339.91	1339.92	0.00	437027.59	612490.61	
9100.00	90.00	89.92	7906.00	1.92	1439.91	1439.92	0.00	437027.72	612590.61	
9200.00	90.00	89.92	7906.00	2.05	1539.91	1539.92	0.00	437027.85	612690.61	
9300.00	90.00	89.92	7906.00	2.19	1639.91	1639.92	0.00	437027.99	612790.61	
9400.00	90.00	89.92	7906.00	2.32	1739.91	1739.92	0.00	437028.12	612890.61	
9500.00	90.00	89.92	7906.00	2.45	1839.91	1839.92	0.00	437028.25	612990.61	
9600.00	90.00	89.92	7906.00	2.59	1939.91	1939.92	0.00	437028.39	613090.61	
9700.00	90.00	89.92	7906.00	2.72	2039.91	2039.92	0.00	437028.52	613190.61	
9800.00	90.00	89.92	7906.00	2.85	2139.91	2139.92	0.00	437028.65	613290.61	
9900.00	90.00	89.92	7906.00	2.99	2239.91	2239.92	0.00	437028.79	613390.61	
10000.00	90.00	89.92	7906.00	3.12	2339.91	2339.92	0.00	437028.92	613490.61	
10100.00	90.00	89.92	7906.00	3.25	2439.91	2439.92	0.00	437029.05	613590.61	
10200.00	90.00	89.92	7906.00	3.39	2539.91	2539.92	0.00	437029.19	613690.61	
10300.00	90.00	89.92	7906.00	3.52	2639.91	2639.92	0.00	437029.32	613790.61	
10400.00	90.00	89.92	7906.00	3.65	2739.91	2739.92	0.00	437029.45	613890.61	
10500.00	90.00	89.92	7906.00	3.79	2839.91	2839.92	0.00	437029.59	613990.61	
10600.00	90.00	89.92	7906.00	3.92	2939.91	2939.92	0.00	437029.72	614090.61	
10700.00	90.00	89.92	7906.00	4.05	3039.91	3039.92	0.00	437029.85	614190.61	
10800.00	90.00	89.92	7906.00	4.19	3139.91	3139.92	0.00	437029.99	614290.61	
10900.00	90.00	89.92	7906.00	4.32	3239.91	3239.92	0.00	437030.12	614390.61	
11000.00	90.00	89.92	7906.00	4.45	3339.91	3339.92	0.00	437030.25	614490.61	
11100.00	90.00	89.92	7906.00	4.58	3439.91	3439.92	0.00	437030.38	614590.61	
11200.00	90.00	89.92	7906.00	4.72	3539.91	3539.92	0.00	437030.52	614690.61	
11300.00	90.00	89.92	7906.00	4.85	3639.91	3639.92	0.00	437030.65	614790.61	
11400.00	90.00	89.92	7906.00	4.98	3739.91	3739.92	0.00	437030.78	614890.61	
11500.00	90.00	89.92	7906.00	5.12	3839.91	3839.92	0.00	437030.92	614990.61	
11600.00	90.00	89.92	7906.00	5.25	3939.91	3939.92	0.00	437031.05	615090.61	
11636.49	90.00	89.92	7906.00	5.30	3976.40	3976.40	0.00	437031.10	615127.10	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg	Min	Sec	Longitude Deg	Min	Sec
PBHL			7906.00	5.30	3976.40	437031.10	615127.10	32	12	3.484 N	103	57	40.091 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
500.00	500.00	0.000	0.000	Csg 1
3000.00	3000.00	0.000	0.000	Csg 2

Annotation

MD ft	TVD ft	
7333.04	7333.04	KOP
8233.04	7906.00	LP
11636.48	7906.00	PBHL

Weatherford International Ltd.
WFT Plan Report - X & Y's

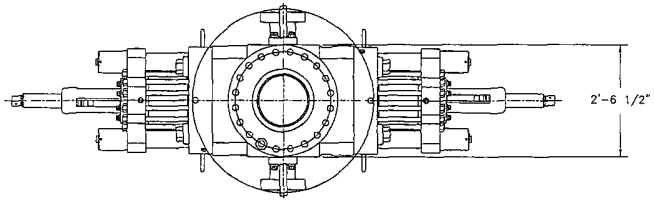
Weatherford

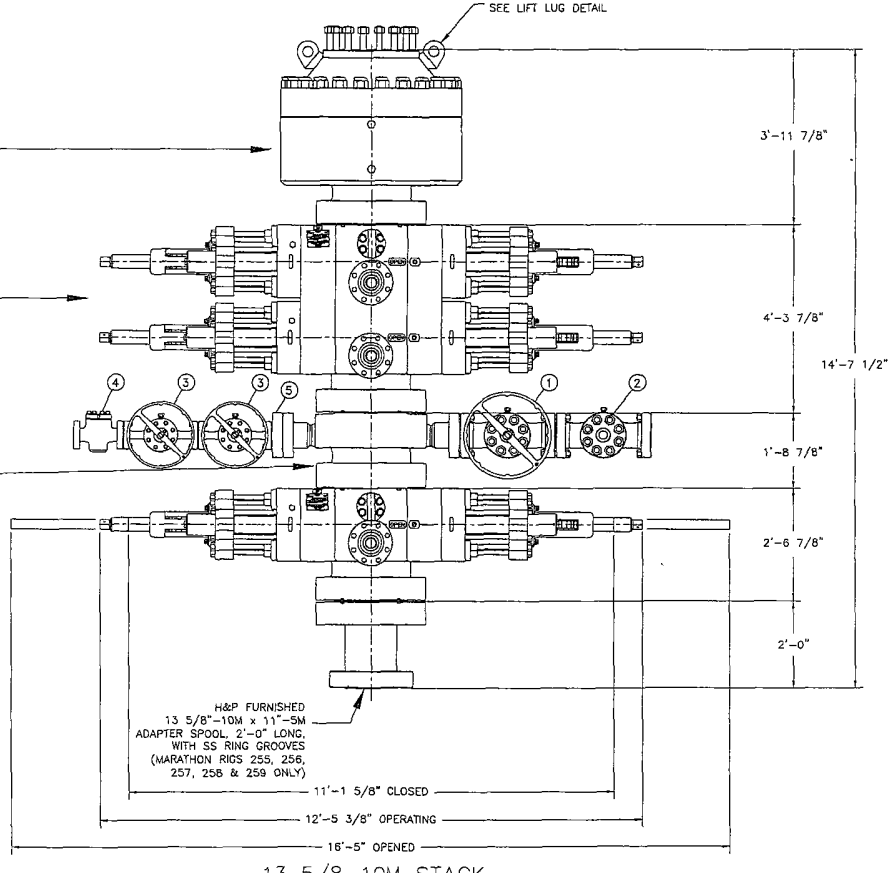
Company:	Occidental Permian Ltd.	**Date:**	1/27/2012	**Time:**	10:31:39	**Page:**	3
Field:	Eddy Co. NM (Nad 27)	**Co-ordinate(NE) Reference:**	Well: 1H, Grid North				
Site:	Cedar Canyon 22 #1H	**Vertical (TVD) Reference:**	SITE 3006.0				
Well:	1H	**Section (VS) Reference:**	Well (0.00N,0.00E,89.92Azi)				
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase		

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
7968.49	7846.00	1st Bone Spring		0.00	0.00

LEGEND
① — 4 1/16"–10M FLANGED END GATE VALVE
② — 4 1/16"–10M FLANGED END GATE VALVE WITH DOUBLE ACTING HYDRAULIC ACTUATOR
③ — 2 1/16"–10M FLANGED END GATE VALVE
④ — 2 1/16"–10M FLANGED END CHECK VALVE
⑤ — DOUBLE STUDDED ADAPTER





SHAFFER BOLTED–COVER SPHERICAL ANNULAR PREVENTER, (API 16A MONOGRAMMED, 13 5/8"–5M WP), 10M BOTTOM FLANGE x 5M STUDDED TOP (WEIGHT = 14,300 LBS WITH SHAFFER API 16A HOT OIL RESISTANT ACRYLONITRILE ELEMENT)

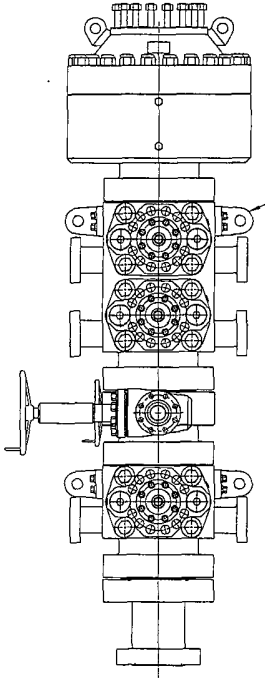
CAMERON UM DOUBLE RAM–TYPE PREVENTER (API 16A MONOGRAMMED, 13 5/8"–10M WP), WITH 5" CAMERON PIPE RAMS (CAMRAM FRONT PACKERS & TOP SEALS) IN TOP CAVITY AND CAMERON DS SHEARING BLIND RAMS IN BOTTOM CAVITY BOTTOM FLANGE x STUDDED TOP (WEIGHT = 21,100 LBS, WITH RAMS)

13 5/8"–10M WP CAMERON DRILLING SPOOL (API 16A MONOGRAMMED), STUDDED TOP x FLANGED BOTTOM WITH 4 1/16"–10M WP FLANGED OUTLETS (WEIGHT APPROXIMATELY 6,000 LBS)

CAMERON UM SINGLE RAM–TYPE PREVENTER (API 16A MONOGRAMMED, 13 5/8"–10M WP), WITH 5" CAMERON PIPE RAMS (CAMRAM FRONT PACKERS & TOP SEALS) BOTTOM FLANGE x STUDDED TOP WEIGHT = 10,900 LBS

H&P FURNISHED 13 5/8"–10M x 11"–5M ADAPTER SPOOL, 2'–0" LONG, WITH SS RING GROOVES (MARATHON RIGS 255, 256, 257, 258 & 259 ONLY)

13 5/8–10M STACK



ISSUED FOR FABRICATION
December-18-2007
DRAFTSMAN
ENGINEER

API 6A MONOGRAMMED CAMERON CHOKE AND KILL WING VALVE ASSEMBLIES ARE NOT SHOWN FOR CLARITY

WEIGHTS DO NOT INCLUDE HOSES, ADAPTER SPOOLS OR QUICK CONNECT FITTINGS

REV	DATE	DESCRIPTION	BY	ENGINEERING APPROVAL	DATE
E	12/18/07	ADDED SHEET D3	JAV		
D	4–10–07	ORIENTATION REVISED DOUBLE STUDDED ADAPTER, VALVES 1, 2, & 3, AND HS CHECK VALVE ADDED	JBG		
C	4–04–07	6" ADDED TO SPACER ADAPTER SPOOL	JBG		
B	02–07–07	ADDED ADAPTER SPOOL	MWL		
A	06–13–02	CORRECTED BOP STACK	MWL		

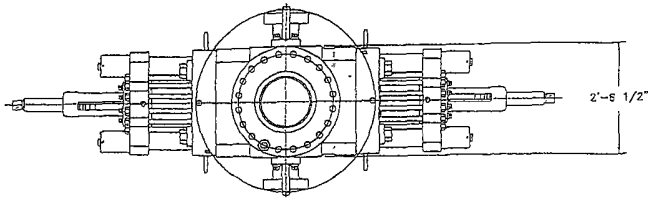
HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

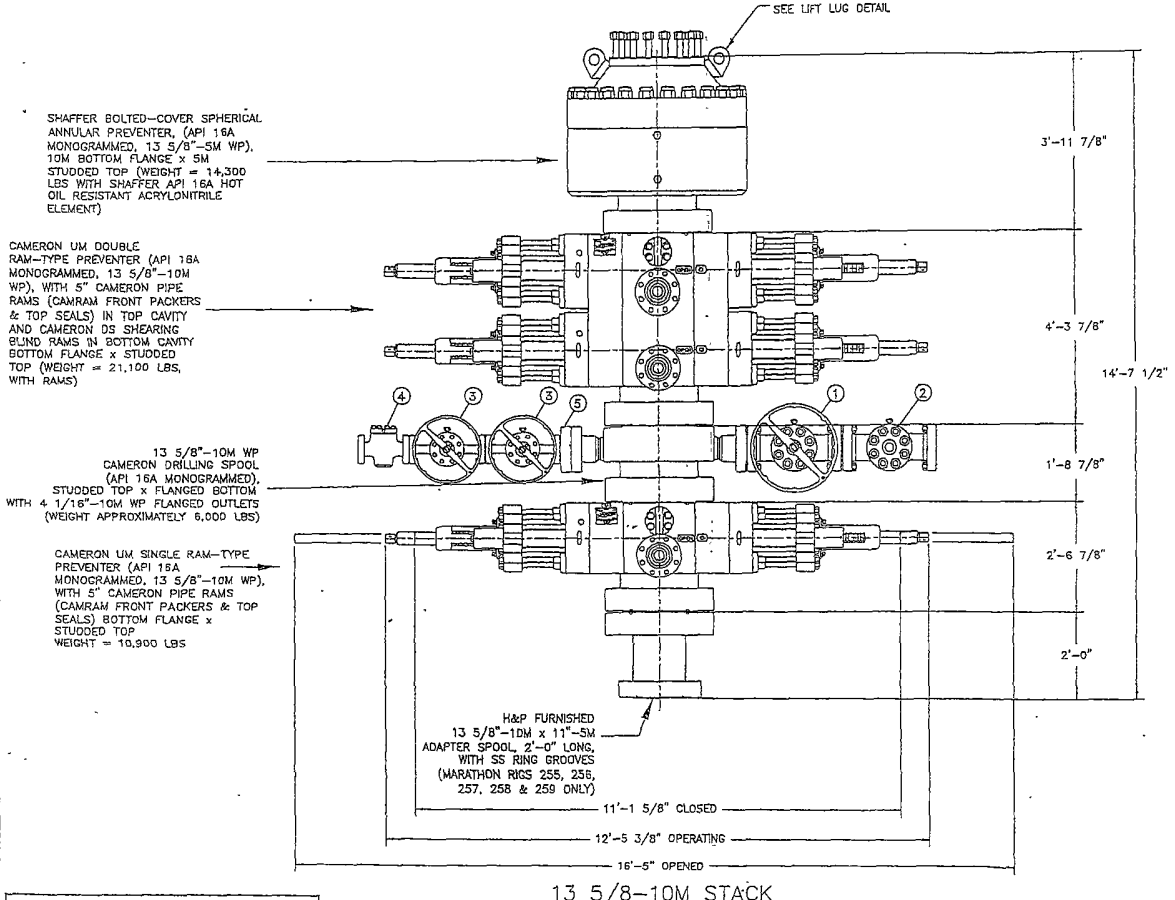
TITLE: 13 5/8"–10M BOP 3 RAM STACK
FLEXRIG3

CUSTOMER H&P
PROJECT FLEXRIG3
DRAWN MTS | DATE 6–5–02 | DWG NO 210–P1–07 | REV E
SCALE 3/4"=1' | SHEET 1 OF 1

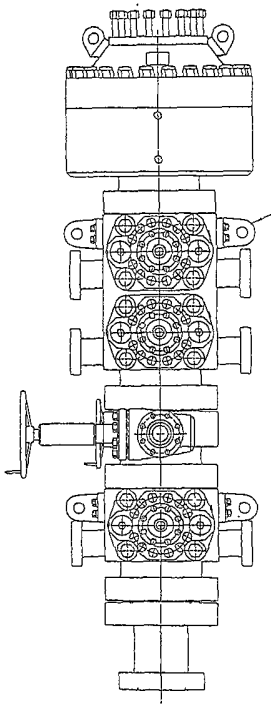
BOP-2

LEGEND
1. 4 1/16"–10M FLANGED END GATE VALVE
2. 4 1/16"–10M FLANGED END GATE VALVE WITH DOUBLE ACTING HYDRAULIC ACTUATOR
3. 2 1/16"–10M FLANGED END GATE VALVE
4. 2 1/16"–10M FLANGED END CHECK VALVE
5. DOUBLE STUDDED ADAPTER





13 5/8–10M STACK



ISSUED FOR FABRICATION
December-18-2007
DRAFTSMAN
ENGINEER

API 6A MONOGRAMMED CAMERON CHOKE AND KILL WING VALVE ASSEMBLIES ARE NOT SHOWN FOR CLARITY

WEIGHTS DO NOT INCLUDE HOSES, ADAPTER SPOOLS OR QUICK CONNECT FITTINGS

REV	DATE	DESCRIPTION	ENGINEERING APPROVAL	DATE
E	12/18/07	ADDED SHEET 03	JAV	
D	4–10–07	ORIENTATION REVISED, DOUBLE STUDDED ADAPTER, VALVES 1, 2, & 3, AND MS CHECK VALVE ADDED	JBG	
C	4–04–07	5" ADDED TO SPACER ADAPTER SPOOL	JBG	
B	02–07–07	ADDED ADAPTER SPOOL	MWL	
A	06–13–02	CORRECTED BOP STACK	MWL	

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

TITLE: 13 5/8"–10M BOP 3 RAM STACK FLEXRIG3

CUSTOMER: H&P

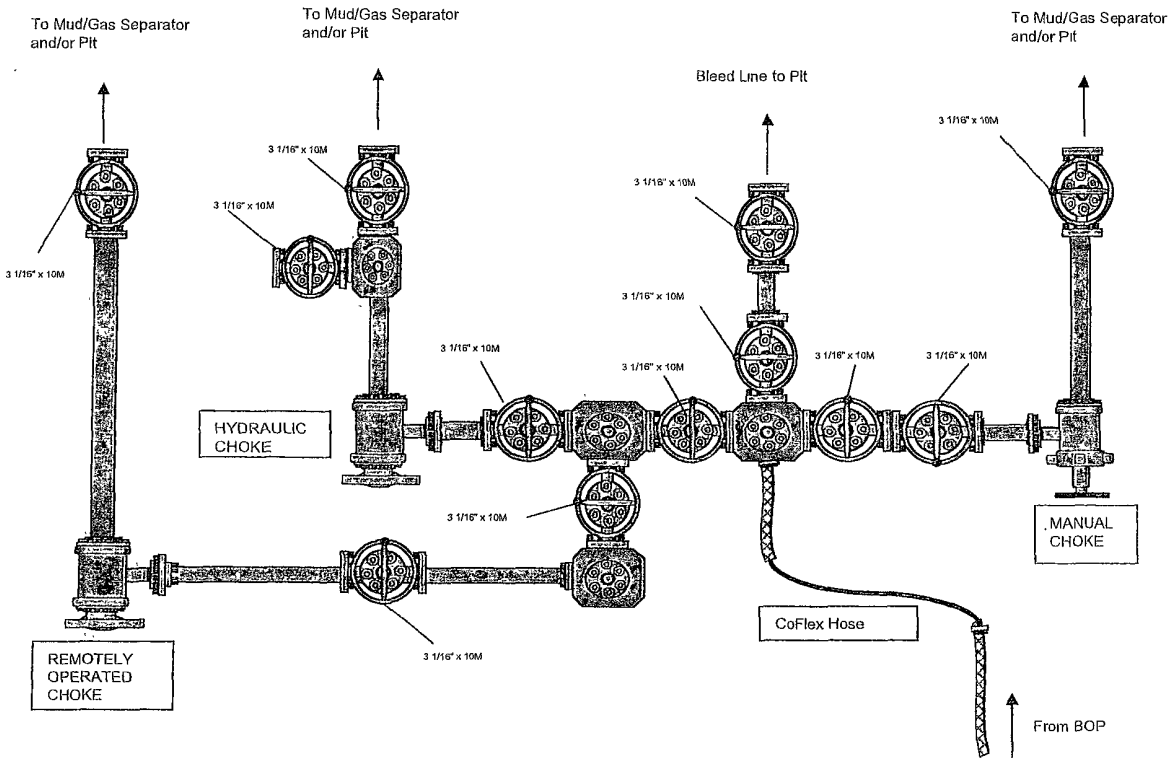
PROJECT: FLEXRIG3

DRAWN: MTS | DATE: 6–5–02 | DWG NO: 210–P1–07 | REV: E

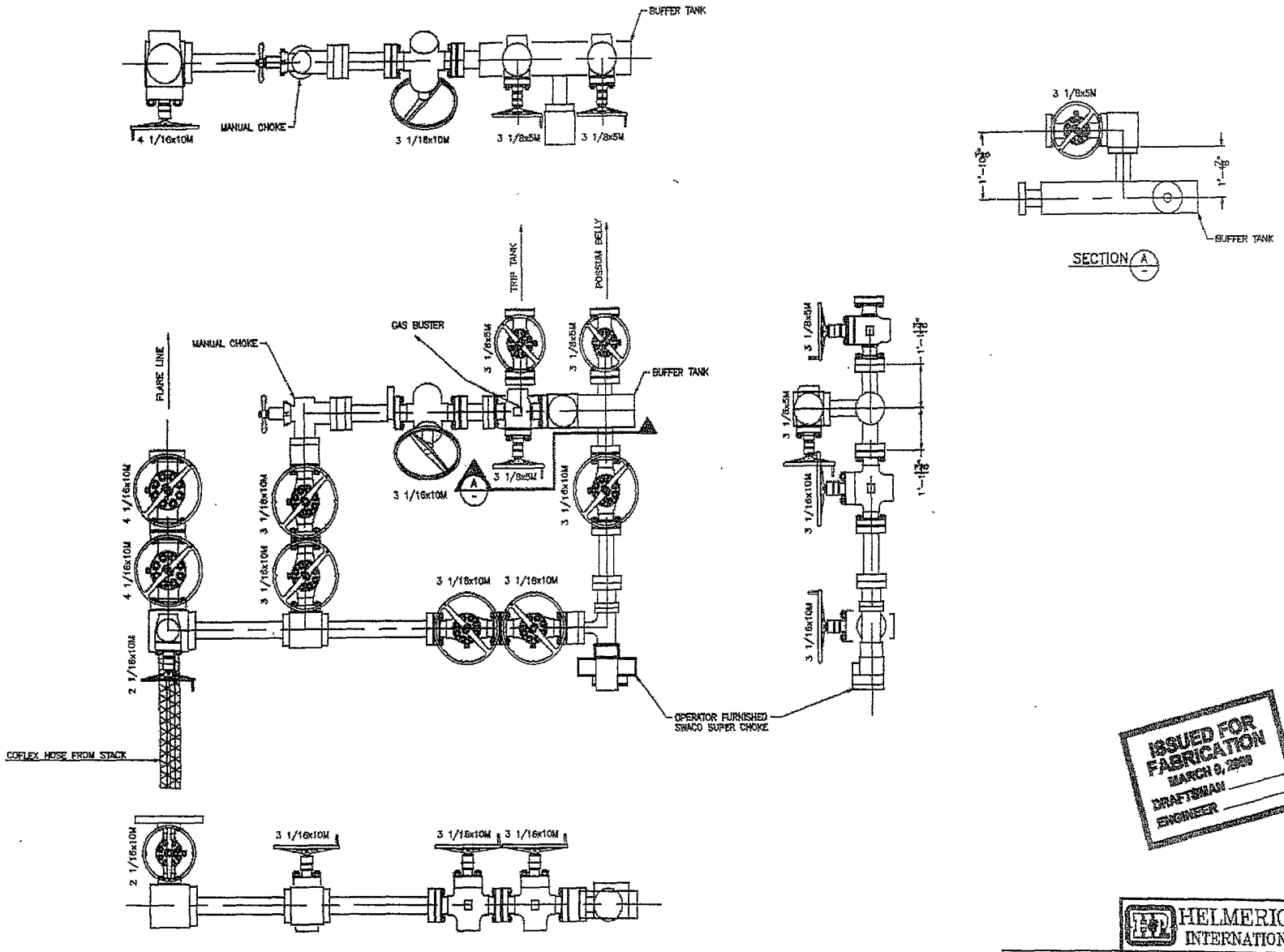
SCALE: 3/4"=1' | SHEET 1 of 3

Chk Mnfd-1

10M CHOKE MANIFOLD CONFIGURATION



Choke Manifold-2



ISSUED FOR FABRICATION
MARCH 9, 2005
DRAFTSMAN
ENGINEER

REV	DATE	DESCRIPTION	BY
1	10/15/02	ADJUST DIM TO FIELD CONFIRMED DIM	RAY

ENGINEERING APPROVAL | DATE

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

TITLE: CHOKE MANIFOLD

CUSTOMER: H&P

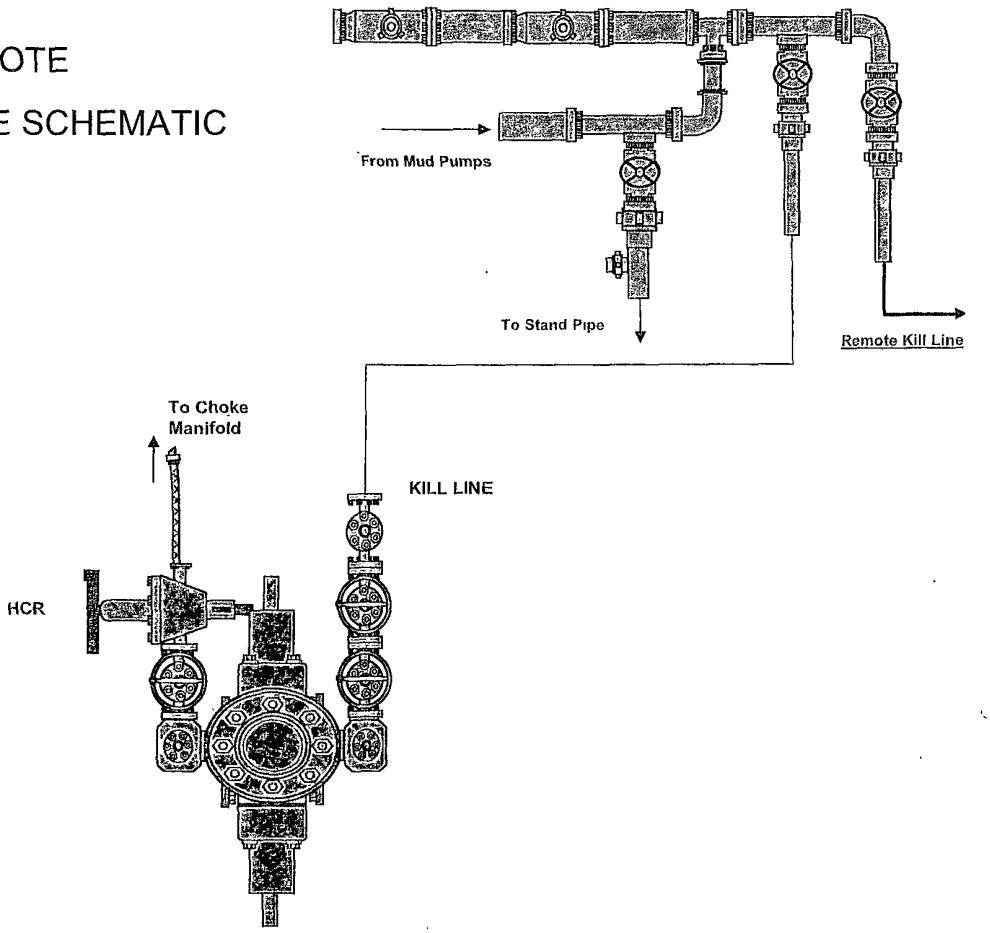
PROJECT: FLEX#63

DRAWN: MTS | DATE: 2-28-02 | DWG. NO.: 216-P1-05 | REV: A

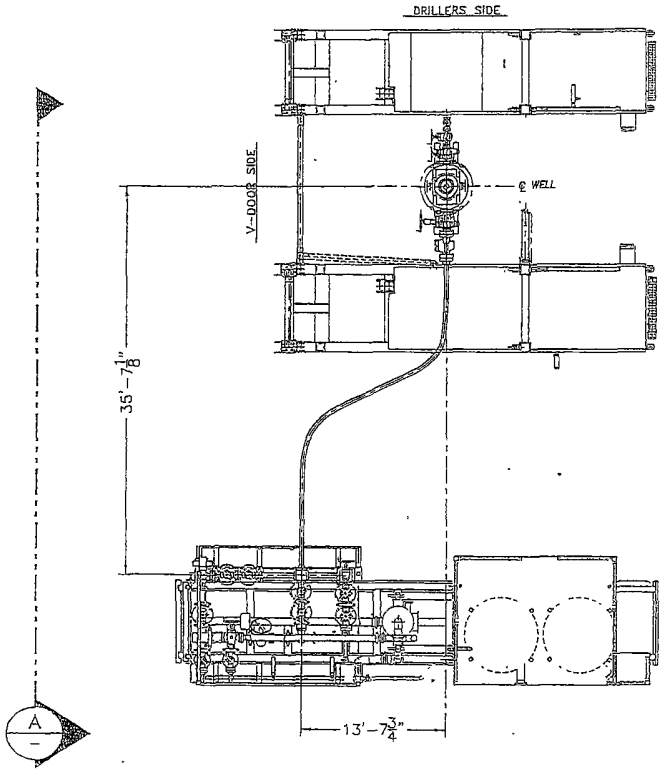
SCALE: 3/4"=1' | SHEET: 1 OF 1

Chk Mnfd-3

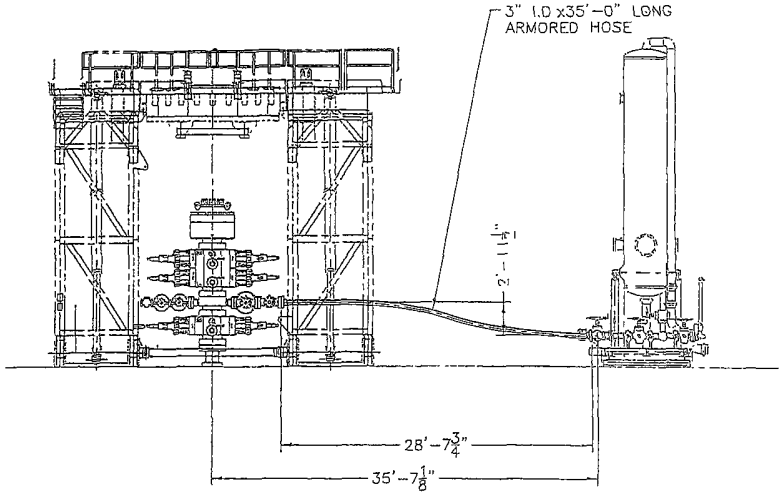
10M REMOTE KILL LINE SCHEMATIC



Flex Hose-7



PLAN VIEW



SECTION "A"

ISSUED FOR FABRICATION
December-19-2007
DRAFTSMAN
ENGINEER

REV	DATE	DESCRIPTION	BY	ENGINEERING APPROVAL	DATE
3					
2					
1					
0					
A	12/18/07	REMOVED SHEET TOTAL CALLOUT	JAV		

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: CHOKE LINE SYSTEM
FLEXRIG3

CUSTOMER:

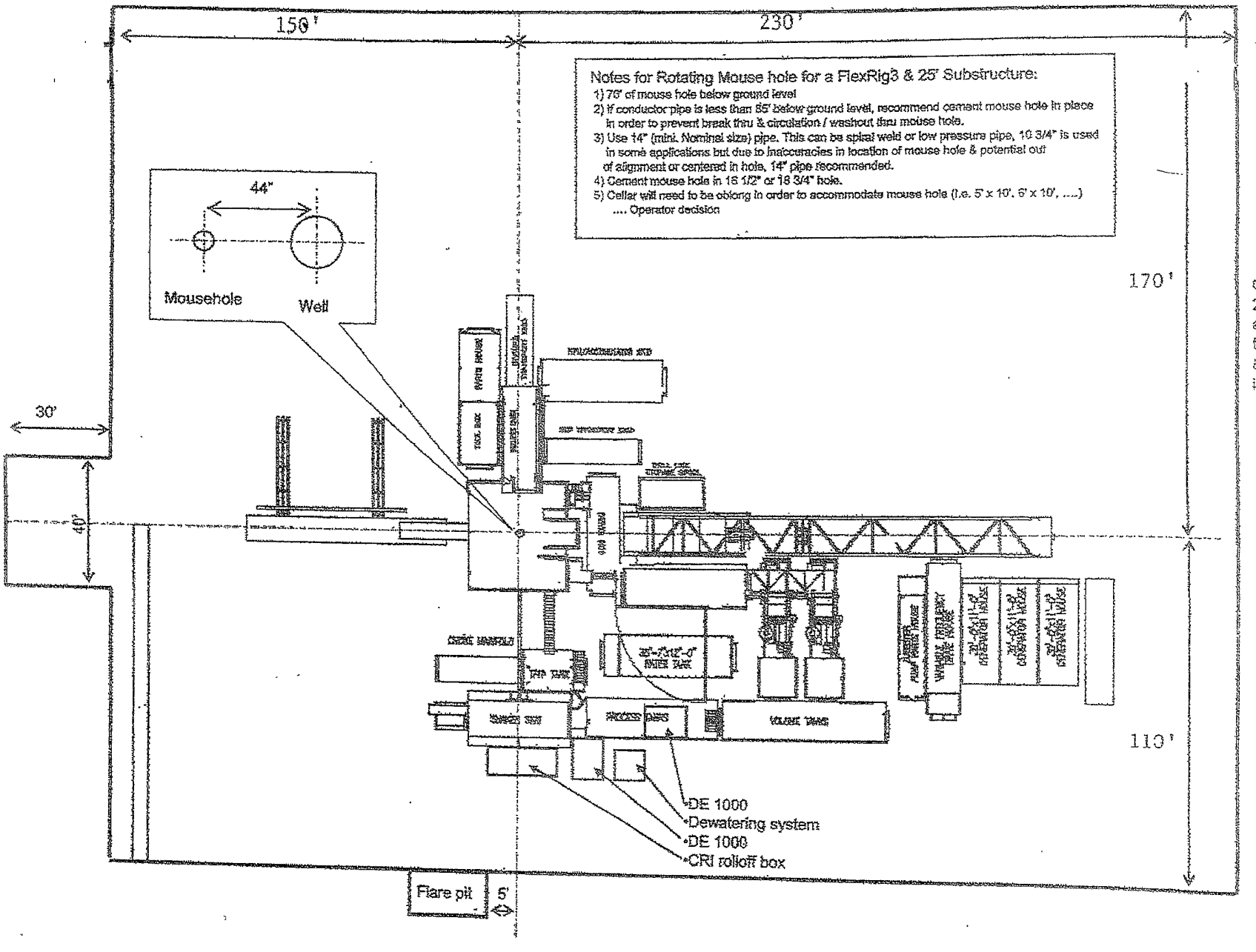
PROJECT

DRAWN: JBG | DATE: 4-10-07 | DWG NO: 210-P1-07 | REV: A

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

RL-CL-3

Level Area-No Caliche-For Offices and Living Quarters

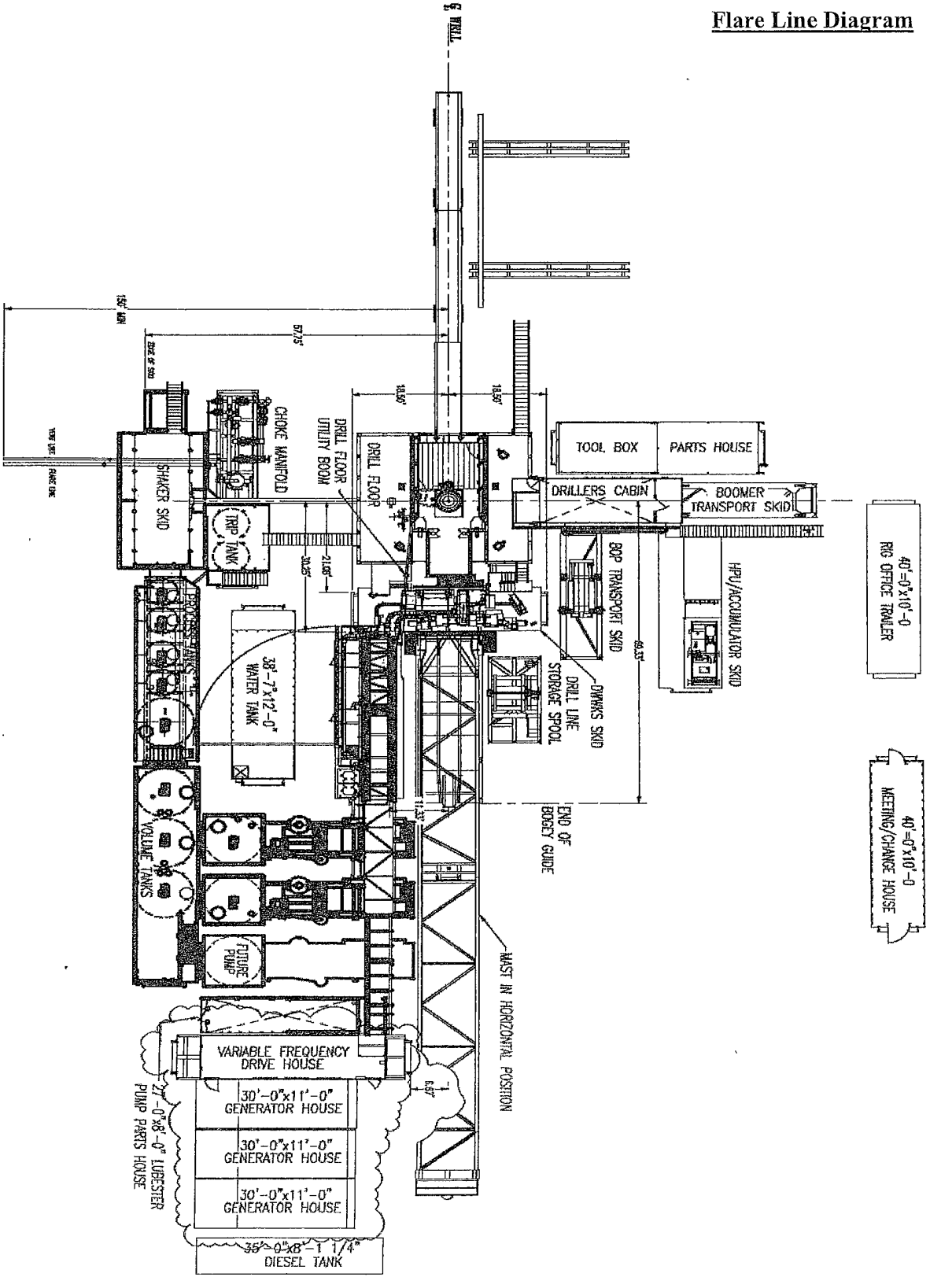


Clear all brush + 20' off pad to allow Drk truck to drive off pad & maneuver drk into position

100 ft

←N—

Flare Line Diagram



Flex Hose -1

Continental CONTITECH

Fluid Technology

Quality Document

CERTIFICATE OF CONFORMITY

Supplier : CONTITECH RUBBER INDUSTRIAL KFT.
Equipment : 6 pcs. Choke and Kill Hose with installed couplings
Type : **3" x 10,67 m WP: 10000 psi**
Supplier File Number : 412638
Date of Shipment : April. 2008
Customer : Phoenix Beattie Co.
Customer P.o. : 002491
Referenced Standards / Codes / Specifications : API Spec 16 C
Serial No.: 52754,52755,52776,52777,52778,52782

STATEMENT OF CONFORMITY

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

COUNTRY OF ORIGIN HUNGARY/EU

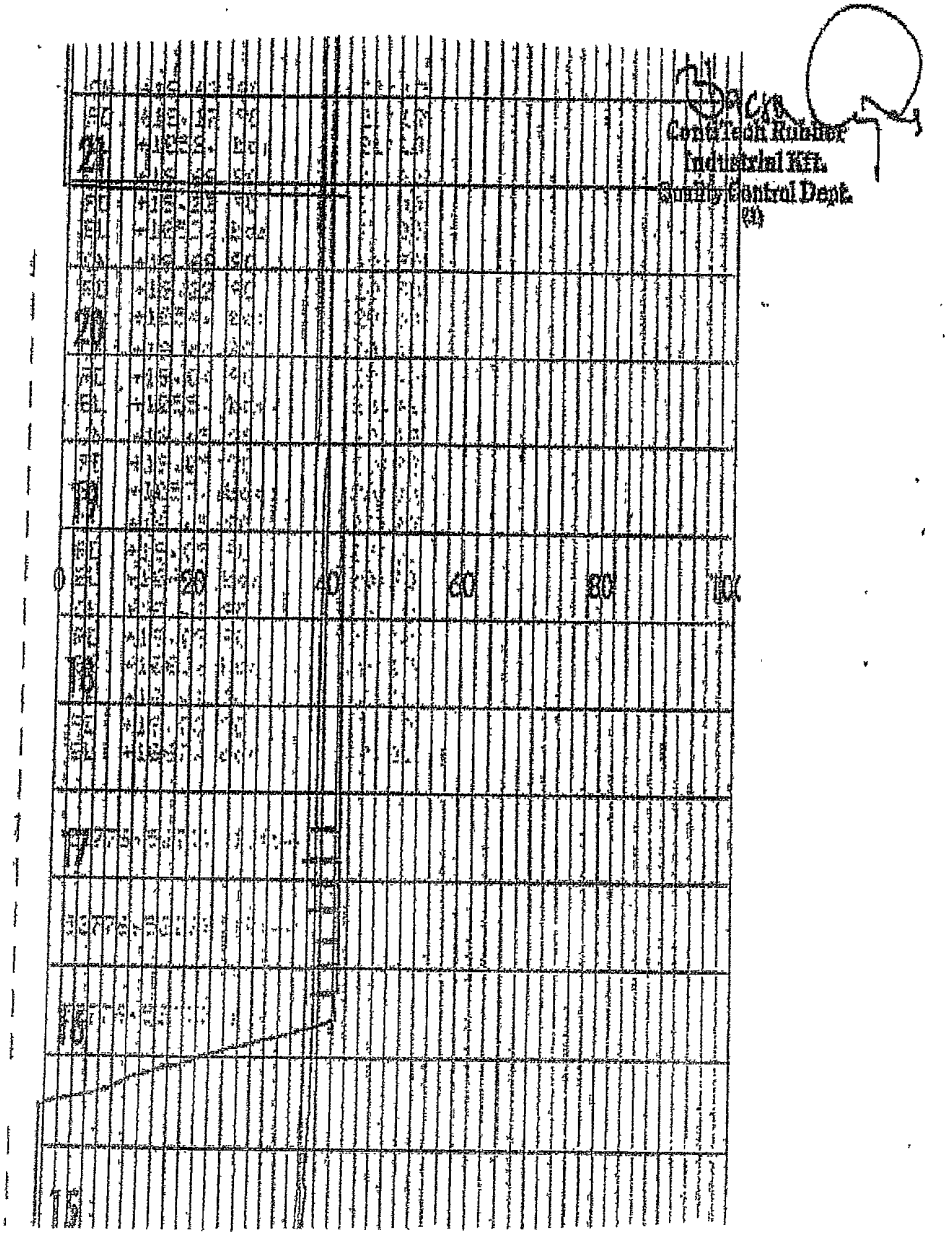
Signed : .....

ContiTech Rubber Industrial Kft. Quality Control Dept. (3)

Date: 04. April. 2008

Position: Q.C. Manager

Flex Hose-2


Conti-Tech Rubber
Industrial Kft.
Quality Control Dept.
0
20
40
60
80
100

Flex Hose-3

PHOENIX Beattie — **Material Identification Certificate**

PA No	006330	Client	HELMERICH & PAYNE INT'L DRILLING	Client Ref	370-369-001	Page	1

Part No	Description	Material Desc	Material Spec	Qty	WO No	Batch No	Test Cert No	Bin No	Drg No	Issue No
HP10CK3A-35-4F1	3" 10K 16C C&K HOSE x 35ft OAL			1	2491	52777/H884		WATER		
SECK3-HPF3	LIFTING & SAFETY EQUIPMENT TO			1	2440	002440		N/STK		
SC725-200CS	SAFETY CLAMP 200MM 7.25T	CARBON STEEL		1	2519	H665		22C		
SC725-132CS	SAFETY CLAMP 132MM 7.25T	CARBON STEEL		1	2242	H139		22		

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

06/12/10

FlexHose-4

Form No 100/12

PHOENIX Beattie

Phoenix Beattie Corp
11535 Brittmoore Park Drive
Houston, TX 77041
Tel: (832) 327-0141
Fax: (832) 327-0148
E-mail mail@phoenixbeattie.com
www.phoenixbeattie.com

Delivery Note

Customer Order Number	370-369-001	Delivery Note Number	003078	Page	1

Customer / Invoice Address
HELMERICH & PAYNE INT'L DRILLING CO
1437 SOUTH BOULDER
TULSA, OK
74119

Delivery / Address
HELMERICH & PAYNE IDC
ATTN: JOE STEPHENSON - RIG 370
13609 INDUSTRIAL ROAD
HOUSTON, TX
77015

Customer Acc No	Phoenix Beattie Contract Manager	Phoenix Beattie Reference	Date
H01	JJL	006330	05/23/2008

Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
1	HP10CK3A-35-4F1 3" 10K 16C C&K HOSE x 35ft OAL CW 4.1/16" API SPEC FLANGE E/ End 1: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange End 2: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange c/w BX155 Standard ring groove at each end Suitable for H2S Service Working pressure: 10,000psi Test pressure: 15,000psi Standard: API 16C Full specification Armor Guarding: Included Fire Rating: Not Included Temperature rating: -20 Deg C to +100 Deg C	1	1	0
2	SECK3-HPF3 LIFTING & SAFETY EQUIPMENT TO SUIT HP10CK3-35-F1 2 x 160mm ID Safety Clamps 2 x 244mm ID Lifting Collars & element C's 2 x 7ft Stainless Steel wire rope 3/4" OD 4 x 7.75t Shackles	1	1	0
3	SC725-200CS SAFETY CLAMP 200MM 7.25T C/S GALVANISED	1	1	0

Continued...

Flex Hose-5
Form No 100/12

PHOENIX Beattie

Phoenix Beattie Corp
11535 Brittmoore Park Drive
Houston, TX 77041
Tel: (832) 327-0141
Fax: (832) 327-0148
E-mail mail@phoenixbeattie.com
www.phoenixbeattie.com

Delivery Note

Customer Order Number	370-369-001	Delivery Note Number	003078	Page	2

Customer / Invoice Address	Delivery / Address
HELMERICH & PAYNE INT'L DRILLING CO 1437 SOUTH BOULDER TULSA, OK 74119	HELMERICH & PAYNE IDC ATTN: JOE STEPHENSON - RIG 370 13609 INDUSTRIAL ROAD HOUSTON, TX 77015

Customer Acc No	Phoenix Beattie Contract Manager	Phoenix Beattie Reference	Date
H01	JJL	006330	05/23/2008

Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
4	SC725-132CS SAFETY CLAMP 132MM 7.25T C/S GALVANIZED C/W BOLTS	1	1	0
5	00CERT-HYDRO HYDROSTATIC PRESSURE TEST CERTIFICATE	1	1	0
6	00CERT-LOAD LOAD TEST CERTIFICATES	1	1	0
7	00FREIGHT INBOUND / OUTBOUND FREIGHT PRE-PAY & ADD TO FINAL INVOICE NOTE: MATERIAL MUST BE ACCOMPANIED BY PAPERWORK INCLUDING THE PURCHASE ORDER, RIG NUMBER TO ENSURE PROPER PAYMENT	1	1	0

Phoenix Beattie Inspection Signature : _____

Received in Good Condition : Signature _____

Print Name _____

Date _____

All goods remain the property of Phoenix Beattie until paid for in full. Any damage or shortage on this delivery must be advised within 5 days. Returns may be subject to a handling charge.

Flex Hose-6

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 746	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 002491	
CONTITECH ORDER N°: 412636		HOSE TYPE: 3" ID		Choke and Kill Hose	
HOSE SERIAL N°: 52777		NOMINAL / ACTUAL LENGTH:		10,67 m	
W.P. 68,96 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration: 60 ~	min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 25 MPa

COUPLINGS

Type	Serial N°	Quality	Heat N°
3" coupling with	917 913	AISI 4130	T7998A
4 1/16" Flange end		AISI 4130	26984

INFOCHIP INSTALLED

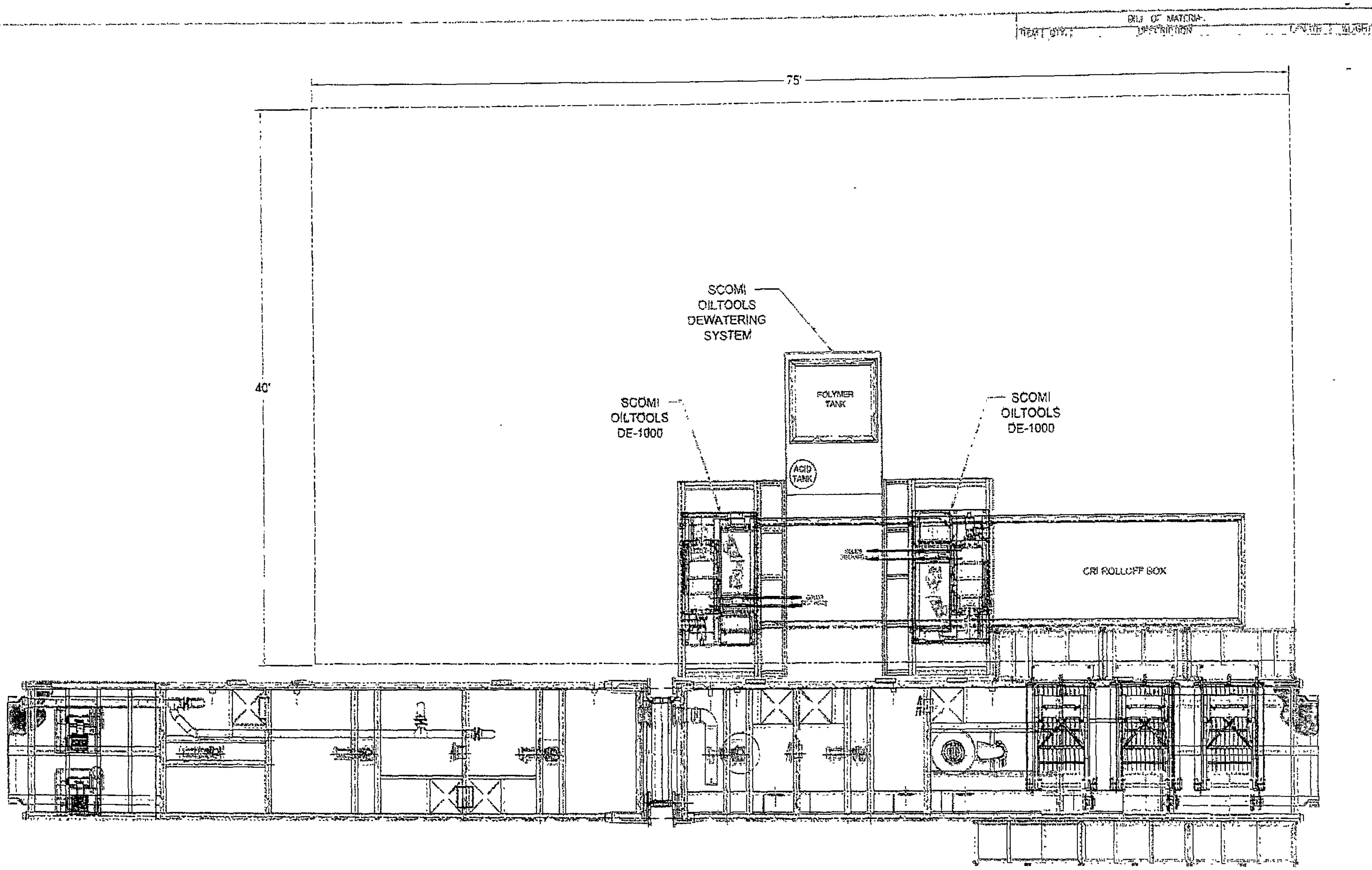
API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

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

Date:	Inspector	Quality Control
04. April. 2008		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

CL-1



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

No.	Revision		
4	ADDED PAGE 2 TO SHOW PAD		

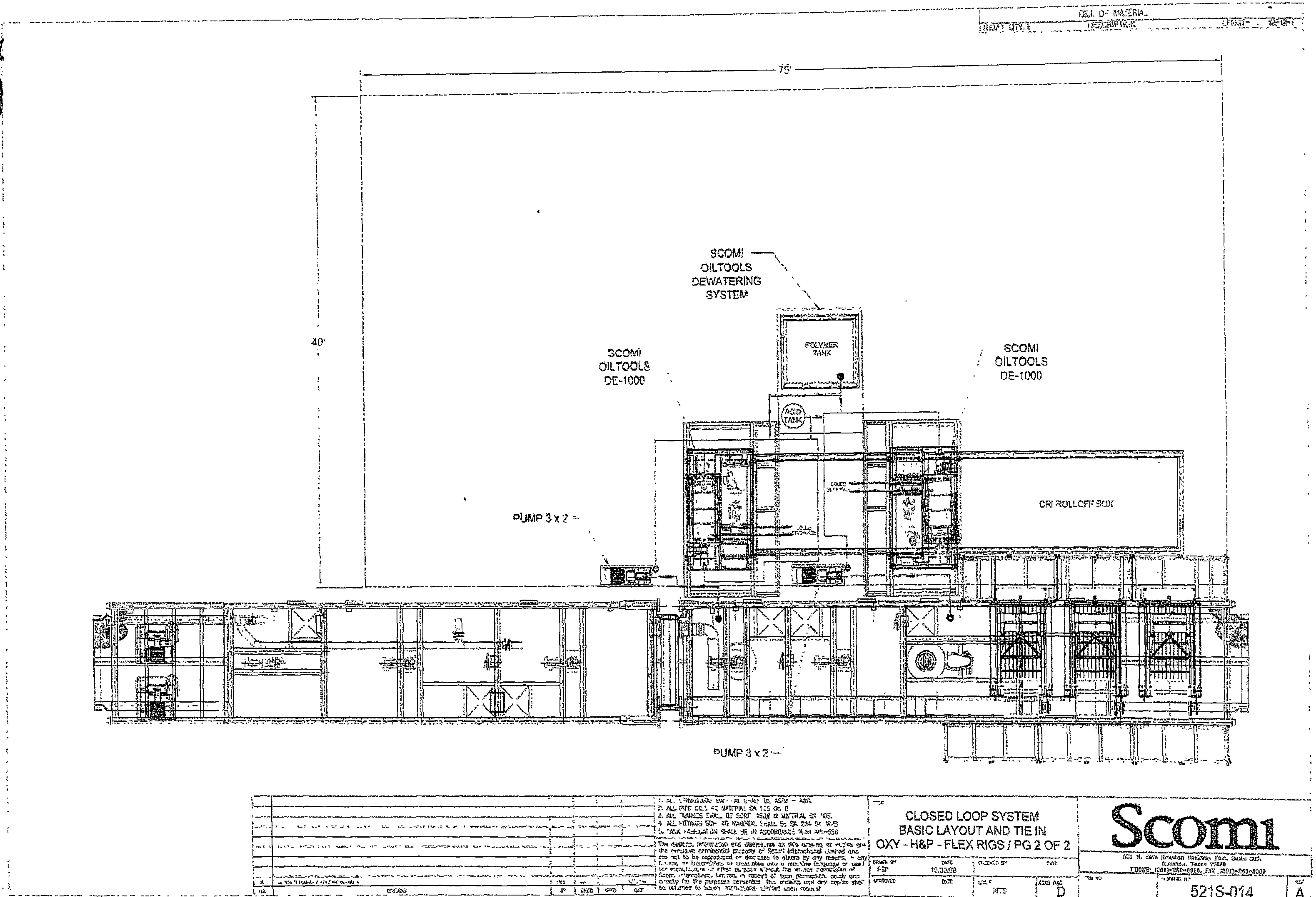
CLOSED LOOP SYSTEM BASIC LAYOUT AND TIE IN OXY - H&P - FLEX RIGS / PG 1 OF 2

Drawn by	Date	Checked by	Date
PDL	10/30/08		
Approved	Date	Scale: NTS	Size: D

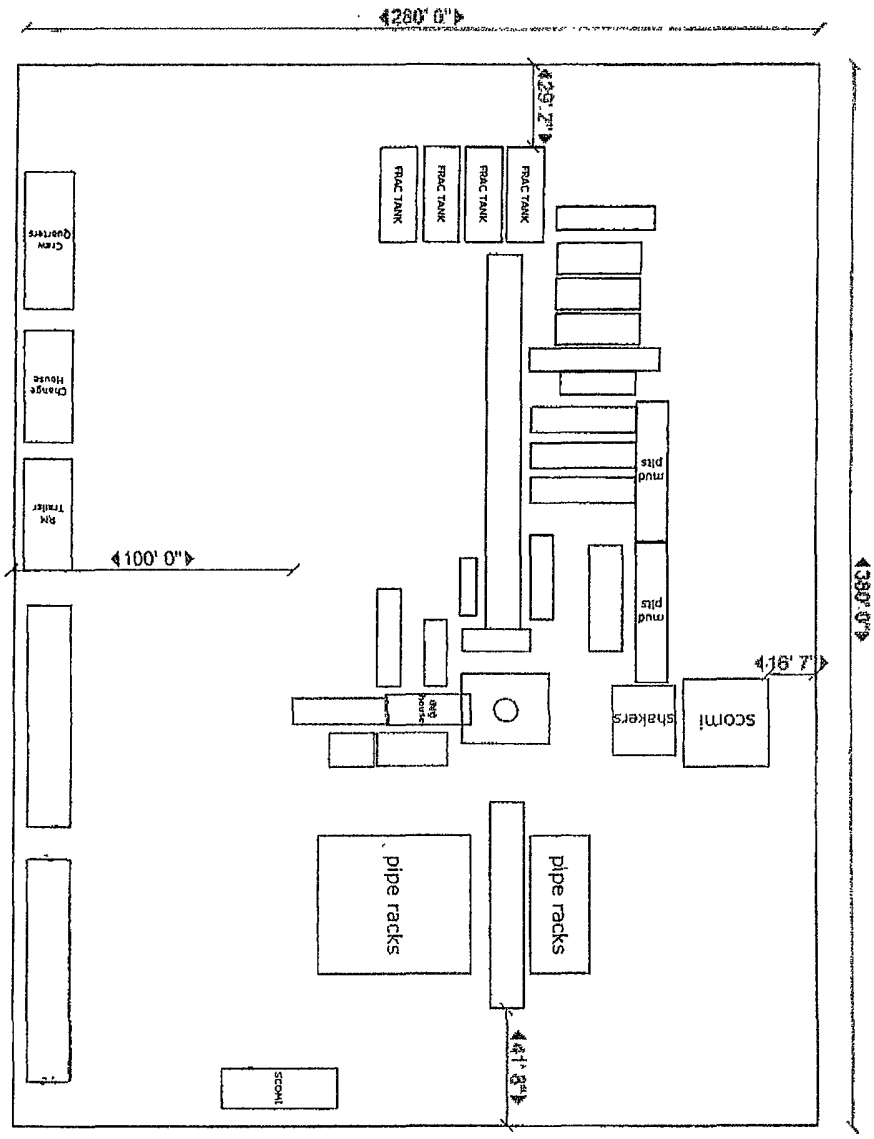
Scomi

Drawing No. 521S-014 Rev. A

CL-2


75'
40'
SCOMI OILTOOLS DEWATERING SYSTEM
POLYMER TANK
ACID TANK
SCOMI OILTOOLS DE-1000
SCOMI OILTOOLS DE-1000
CRI ROLLOFF BOX
PUMP 3 x 2
PUMP 3 x 2
CLOSED LOOP SYSTEM
BASIC LAYOUT AND TIE IN
OXY - H&P - FLEX RIGS / PG 2 OF 2
Scomi
NTS
D
521S-014
A

RL-CL-4


280' 0"
25' 2"
FRAC TANK
FRAC TANK
FRAC TANK
FRAC TANK
Crew Quarters
Change House
RM Trailer
100' 0"
mud pits
mud pits
380' 0"
16' 7"
shakers
scomi
pipe racks
pipe racks
41' 3"
SCOMI

Permian Drilling
Hydrogen Sulfide Drilling Operations Plan
Cedar Canyon 22 Federal #1H

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 Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location.

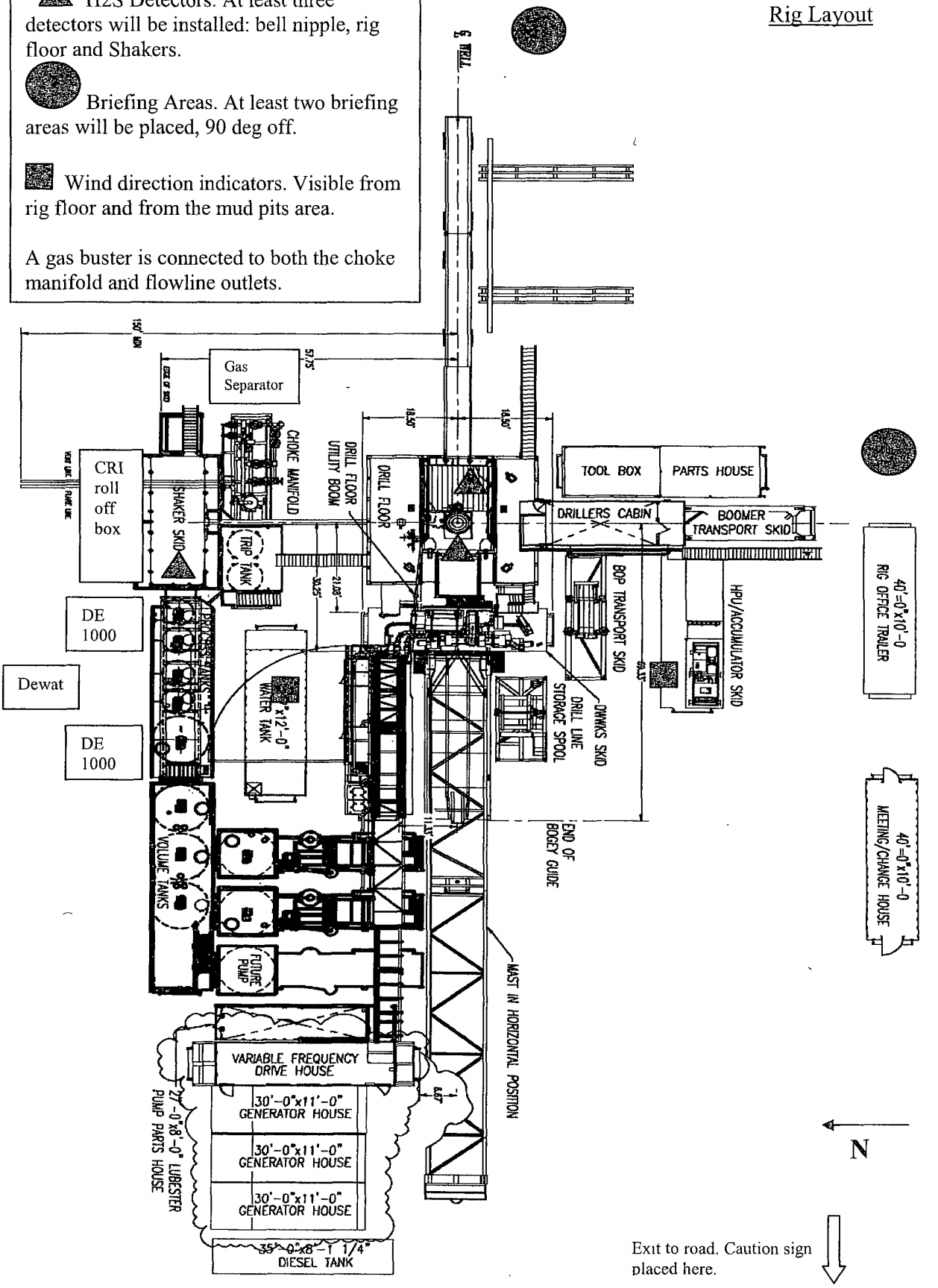
H2S Detectors. At least three detectors will be installed: bell nipple, rig floor and Shakers.

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.

Rig Layout



Exit to road. Caution sign placed here.

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

OXY USA Inc.

EMERGENCY ACTION PLAN

Cedar Canyon 22 #1H
Cedar Canyon 23 #1H

DRILLING/WORKOVER

DRILLING AND CRITICAL WELL OPERATIONS

DRILLING/WORKOVER
DRILLING AND CRITICAL WELL OPERATIONS

EMERGENCY ACTION PLAN

TABLE OF CONTENTS

PREFACE

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

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

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

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

EMERGENCY RESPONSE ACTIVATION AND GENERAL RESPONSIBILITIES

Activation of the Emergency Action Plan

A. In the event of any emergency situation, all personnel on location should first ensure that the following items are initiated. After that, they should refer to the appropriate Specific Emergency Guidance sections on pages five (5) through nine (9) in this document for further responsibilities:

1. Notify the senior ranking contract representative on site.
2. Notify Oxy representative in charge.
3. Notify civil authorities if the Oxy Representative cannot be contacted and the situation dictates.
4. Perform rescue and first aid as required (without jeopardizing additional personnel).

General Responsibilities

Oxy Permian Personnel:

A. Drill Site Manager: The Oxy Drilling/Critical Well Servicing Operations Specialist or contract personnel serving in that capacity will serve as Operations Chief Officer for all emergency incidents. The Operations Chief Officer is responsible for:

1. Notification to the Drilling/Workover Team Leader of the incident occurrence.
2. Notification to the local RMT/PMT leader of the incident occurrence, and the need for the designated local RMT/PMT Incident Commander to act in that capacity for the response effort.
3. Sole control of all tactical activities directed toward reducing the immediate hazard, establishing situational control and restoring the operations to a non-emergency state.

B. Local RMT/PMT Designated Incident Commander: The Oxy local RMT/PMT Designated Incident Commander will serve as the overall Incident Commander for the drilling or critical well servicing emergency incident. The Incident Commander is responsible for:

1. Coordinating with the Drilling Manager for notification to the Oxy Crisis Management team of the incident occurrence.
2. Establishing and managing the overall incident command structure and response from inception through restoration of normal activities in the area.

C. Drilling/Workover HES Tech: The Drilling/Workover HES Tech (or his designate) is responsible for reporting to the incident as soon as reasonably possible, to provide support to the response effort as required by the Operations Chief Officer or the Incident Commander.

Contract Drilling Personnel will immediately report to their assigned stations and perform their duties as outlined in the appropriate Specific Emergency Guidance sections on pages five (5) through nine (9) in this document.

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

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

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

WELL CONTROL

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

Kick While Drilling - Procedures And Responsibilities

Driller:

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

Derrickman:

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

Floorman # 1:

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

Floorman # 2:

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

Floorman # 3:

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

Tool Pusher/Rig Manager:

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

Oxy Representative:

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

Kick While Tripping - Procedures and Responsibilities

Driller:

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

Derrickman: (same as while drilling)

Floor Man # 1:

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

Floor Man # 2:

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

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

H2S RELEASE

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

All Personnel:

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

Rig Manager/Tool Pusher:

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

Two People Responsible For Shut-in and Rescue:

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

All Other Personnel:

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

Oxy Representative:

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

PERSONAL INJURY OR DEATH

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

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

FIRE OR EXPLOSION

Fire Fighting Philosophy

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

Contract and Oxy Personnel Deployment

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

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

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

SPILLS

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

HYDROCARBON VAPOR CLOUD RELEASE

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

The following guidelines should be followed:

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

BOMB THREAT

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

The Supervisor contacted should:

a. Realize that every bomb threat is serious.

b. Notify Corporate Security

c. Inform Police/Sheriff's Department and Fire Department

d. Contact RMT Leader or his designated relief to coordinate search efforts with the assistance of the local law enforcement agencies.

BOMB THREAT CHECKLIST

Date_____ Name of person taking call_____ Phone # call came on _____

FILL OUT COMPLETELY IMMEDIATELY AFTER BOMB THREAT

1. When is the bomb set to explode?_____
2. Where is the bomb located?_____
3. What does the bomb look like?_____
4. What type of bomb is it?_____
5. What will cause the bomb to explode?_____
6. Did the caller place the bomb?_____
7. Why did the caller place the bomb?_____
8. What is the caller's name and address?_____

Callers: Sex___ Age___Race___Length of call_____

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

___Calm	___Rapid	___Laughing	___Lisp	___Disguised
___Angry	___Crying	___Raspy	___Accent	___Familiar? Who did
___Excited	___Normal	___Deep	___Stutter	it sound like?
___Slow	___Distinct	___Ragged	___Deep	___Deep Breathing
___Loud	___Slurred	___Nasal	___Clearing Throat	

BACKGROUND SOUNDS:

___Street Noises	___House Noises	___Factory	___Music	___Local Call
		___Machinery	___Static	___Long Distance
___Voices	___Motor	___Animals	___PA System	___Phone Booth
___Office	___Clear	___Other		

THREAT LANGUAGE:

___Well-Spoken	___Foul	___Incoherent	___Irrational	___Taped
___Message Read by Threat Maker				

REMARKS:

NATURAL DISASTERS

Tornadoes

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

Indoors:

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

In the field:

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

Thunderstorms

Indoors:

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

In the field:

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

PUBLIC RELATIONS

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

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

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

Drilling Dept. Emergency Contact list

Drilling Manager	**Douglas Chester**	**713-366-9124 office** **713-918-9124 cell**
Drilling Superintendent	**Chad Frazier**	**713-215-7357 office** **806-891-9473 cell**
Drilling Superintendent	**Robert Lovelady**	**432-685-5630 office** **432-813-6332 cell**
Drilling Engr Supervisor	**Juan Pinzon**	**713-366-5058 office** **713-503-3962 cell**
Drilling Engr Supervisor	**Luis Tarazona**	**713-366-5771 office** **713-628-9526 cell**
HES Specialist-Drilling	**Charles Bullard**	**432-685-5719 office** **432-894-3769 cell**
Construction Specialist	**Dusty Weaver**	**432-685-5723 office** **806-893-3067 cell**

OXY Permian Incident Reporting Phone List

OXY Permian Crisis Team Hotline Notification (713) 935-7210

Person	Location	Office Phone	Cell/Mobile Phone
Asset Management-Operations Areas			
OXY Permian Primary President & General Manager: Michael Land	Houston	(310) 443-6255	
Asset Development Manager-Denise Woods	Houston	(713) 215-7154	(832) 830-5273
Operations Manager-Keith Sevin	Houston	(713) 366-5979	(432) 661-4121
OXY Permian CO2 President & General Manager: Vicki Hollub	Houston	(713)-215-7332	(713) 885-6347
Asset Development Manager-Andrew Falls	Houston	(713) 366-5148	(713) 918-9096
Operations Manager-Bob Barnes	Houston	(713) 215-7906	(832) 433-0763
Operations CO2-Primary			
RMT Lead North-David Schellstede	Houston	(713) 366-5013	(713) 560-8061
RMT Lead South-Peter Lawrence	Houston	(713) 215-7644	(832) 830-5273
Well Oper Manager CO2-Bill Elliott	Midland	(432) 685-5845	(432) 557-6736
Well Oper Manager Primary-Charles Wagner	Carlsbad	(575) 628-4151	(575) 725-8306
Well Servicing Manager-Brit Meadows	Midland	(432) 685-5840	(432) 661-0387
WST Coord CO2-Terrell Rowe	Midland	(432) 685-5821	(432) 664-8888
WST Coord Primary-Dalton Dean	Midland	(432) 685-5816	(806) 215-0103
NM Frontier Oper Coord –Kim Moore	Hobbs	(575) 397-8236	(575) 706-1219
NM Frontier Oper Coord -Van Barton	Carlsbad	(575) 628-4111	(575) 706-7671
HES Staff&Areas of First Contact Support			
HES Manager: John Kirby	Houston	(713) 366-5460	(281) 974-9523
Environmental Consultant: Douglas Lowrie	Midland	(432) 685-5824	(432) 208-0958
Administrative Assistant: Debbie Robertson	Midland	(432) 685 5812	(432) 556-7495
Pipeline Safety: Steven Bishop	Midland	(432) 685-5614	(432) 238-4079
HES Lead CO2-Pete Maciula	Midland	(432) 685-5667	(432) 557-2450
HES Lead Primary-Nicholas Edwards	Midland	(432) 685-5843	(432) 777-2615
HES Advisor: Marty Bryant	Midland	(432) 685-5929	(432) 634-3964
HES Specialist-Drilling: Charles Bullard	Midland	(432) 685-5719	(432) 894-3769
HES Tech & Area of Responsibility			
Hobbs RMT: Raymond Aguilarl	Hobbs	(575) 397-8251	(575) 390-6312
Primary-New Mexico: Mark Richards	Carlsbad	(575) 628-4120	(806) 111-2615
CO2-New Mexico-CJ Summers	Hobbs	(575) 397-8236	(575) 390-9228
Regulatory Affairs			
Lead CO2 - Karen Sinard	Houston	(713) 366-5485	(713) 857-6068
Lead Primary – Keith Barton	Houston	(713) 350-4959	(713) 876-1457
Regulatory Advisor-David Stewart	Midland	(432) 685-5717	(432) 638-5688
Sr, Regulatory Analyst-Mark Stephens	Houston	(713) 366-5158	
Staff Regulatory Analyst-Jennifer Duarte	Houston	(713) 513-6640	

DOT-Pipeline Response Numbers

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

OOGC HES Contacts

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

OOGC Risk Management

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

OSI

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

Gallagher Bassett

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

Axiom Medical Consulting

Medical Case Management		(877) 502-9466	

OXY Permian Legal

Tom Janiszewski	Houston	(713) 366-5529	(713) 560-8049

Human Resources

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

Corporate Security

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

Regulatory Agencies

Bureau of Land Management	Carlsbad, NM	(575) 887-6544	
Bureau of Land Management	Hobbs, NM	(575) 393-3612	
Bureau of Land Management	Roswell, NM	(575) 393-3612	
Bureau of Land Management	Santa Fe, NM	(505) 988-6030	

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

Medical Facilities

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

Local Emergency Planning Comm.

Richard H. Dolgener	Andrews County, TX	(432) 524-1401	
Joel Arnwine	Eddy County, NM	(575) 887-9511	
County Judge Judy House	Gaines County, TX	(432) 758-5411	
Myra Sande	Harding County, NM	(575) 673-2231	
Jerry Reynolds	Lea County, NM	(575) 396-8600	(575) 399-2376
Royce Creager	Loving County, TX	(432) 377-2231	
Mike Cherry	Quay County, NM	(575) 461-2476	
Della Wetsel	Union County, NM	(575) 374-8896	
Bonnie Leck	Winkler County, TX	(432) 586-6658	

Carl Whitaker	Yoakum County, TX	(806) 456-7491	

Law Enforcement - Sheriff

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

Law Enforcement - Police

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

Law Enforcement - FBI

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

Law Enforcement - DPS

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

Firefighting & Rescue

Amistad/Rosebud	Amistad/Rosebud, NM	(505) 633-9113	
Andrews	Andrews, TX	(432) 523-4820 (432) 523-3111	
Artesia	Artesia, NM	(575) 746-5051	
Carlsbad	Carlsbad, NM	(575) 885-3125	

Clayton	Clayton, NM	(575) 374-2435	
Denver City	Denver City, TX	(806) 592-5426	
Eunice	Eunice, NM	(575) 394-2111	
Hobbs	Hobbs, NM	(575) 397-9308	
Jal	Jal, NM	(575) 395-2221	
Kermit	Kermit, TX	(432) 586-3468	
Lovington	Lovington, NM	(575) 396-2359	
Maljamar	Maljamar, NM	(575) 676-4100	
Monahans	Monahans, TX	(432) 943-4343	
Nara Visa	Nara Visa, NM	(575) 461-3300	
Pecos	Pecos, TX	(432) 445-2421	
Seminole	Seminole, TX	(432) 758-3676 (432) 758-9871	

Ambulance

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

Medical Air Ambulance Service

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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA Inc
LEASE NO.:	NM81586
WELL NAME & NO.:	1H Cedar Canyon 22
SURFACE HOLE FOOTAGE:	1980' FSL & 1980' FWL
BOTTOM HOLE FOOTAGE	1980' FSL & 660' FWL, Sec.23
LOCATION:	Section 22, T.24 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

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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.