



ATS-12-1053

## R-111-POTASH

Form 3160-3  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
OCD ArtesiaFORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work. <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM0417696
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name TES 10/3/2012
2. Name of Operator OXY USA Inc. 16696		7. If Unit or CA Agreement, Name and No.
3a. Address P.O. Box 50250 Midland, TX 79710		8. Lease Name and Well No. Lost Tank 4 Federal #23 <304789>
3b. Phone No. (include area code) 432-685-5717		9. API Well No. 30-015- 40775
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1378 FNL 1764 FEL SWNE(G) At proposed prod. zone 680 FSL 680 FWL SWSW(M)		10. Field and Pool, or Exploratory Lost Tank Wolfcamp <97523>
14. Distance in miles and direction from nearest town or post office* 20 miles NW from Loving, NM		11. Sec., T. R. M. or Blk. and Survey or Area Sec 4 T22S R31E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 680'	16. No. of acres in lease 1238.63ac	17. Spacing Unit dedicated to this well 600ac
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 6-295' 24-50'	19. Proposed Depth 13454'M 12311'V	20. BLM/BIA Bond No. on file ESB000226 + NM B000862
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3449.1' GL	22. Approximate date work will start* 10/01/2012	23. Estimated duration 45days

## 24. Attachments

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

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

25. Signature 	Name (Printed/Typed) David Stewart	Date 8/2/12
Title Regulatory Advisor david_stewart@oxy.com		
Approved by (Signature) 	Name (Printed/Typed)	Date SEP 24 2012
Title STEVEN L. SEIDLITZ STATE DIRECTOR NM STATE OFFICE		

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

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

Anticipated BHP @ 8100-9375 psi

Carlsbad Controlled Water Basin

SEE ATTACHED FOR  
CONDITIONS OF APPROVALApproval Subject to General Requirements  
& Special Stipulations Attached

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-40775</b>	Pool Code <b>97573</b>	Pool Name <b>Lost Tank Wolfcamp</b>
Property Code <b>3048769</b>	Property Name <b>LOST TANK "4" FEDERAL</b>	Well Number <b>23</b>
OCRID No. <b>16696</b>	Operator Name <b>OXY USA INC.</b>	Elevation <b>3449.1'</b>

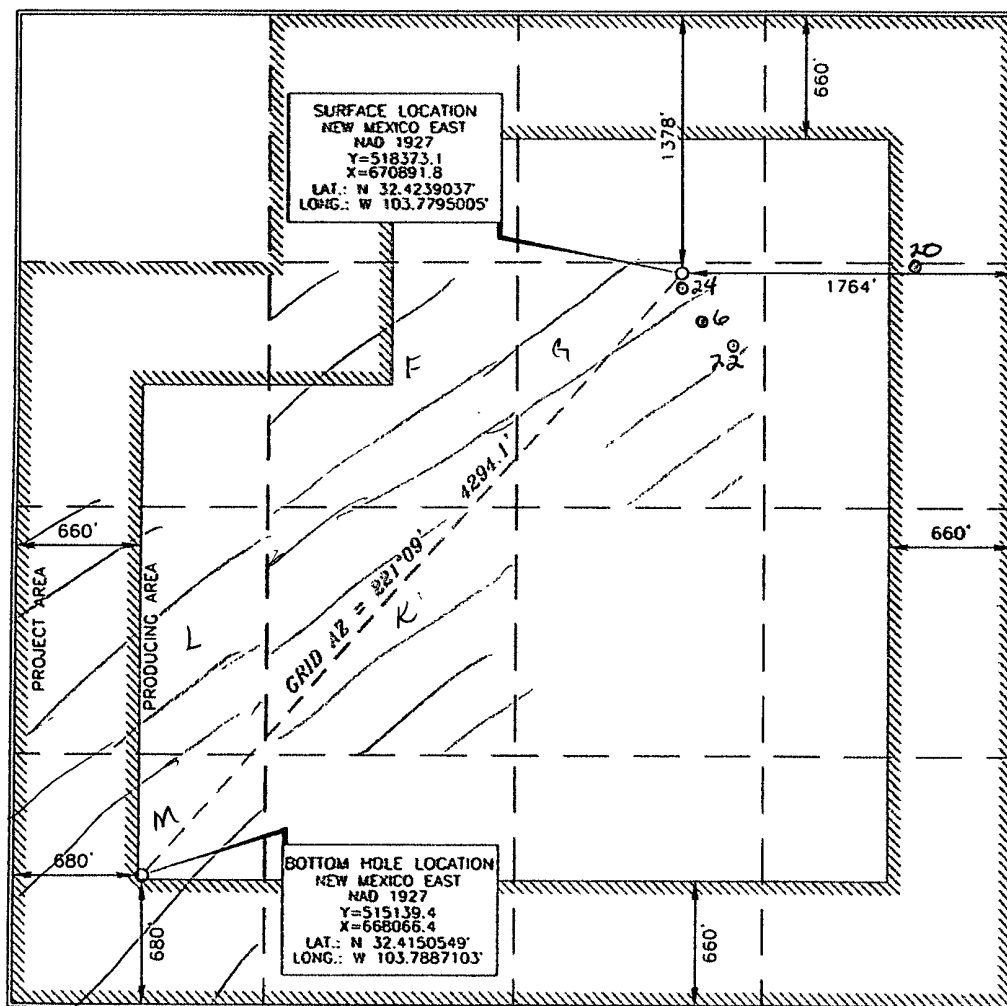
Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>G</b>	<b>4</b>	<b>22 SOUTH</b>	<b>31 EAST, N.M.P.M.</b>		<b>1378'</b>	<b>NORTH</b>	<b>1764'</b>	<b>EAST</b>	<b>EDDY</b>

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>M</b>	<b>4</b>	<b>22 SOUTH</b>	<b>31 EAST, N.M.P.M.</b>		<b>680'</b>	<b>SOUTH</b>	<b>680'</b>	<b>WEST</b>	<b>EDDY</b>
Dedicated Acres <b>600</b>		Joint or Infill <b>Y</b>	Consolidation Code	Order No.					

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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*David Stewart* 9/2/12  
Signature Date

David Stewart Reg. A&W.  
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes and is correct to the best of my knowledge and belief, and that the same is true and correct to the best of my knowledge and belief.

**NEW MEXICO**  
**REGISTERED PROFESSIONAL LAND SURVEYOR**  
**15079**  
SEPTEMBER 18, 2011  
Date of Survey


Signature and Seal of Professional Land Surveyor

*Gregory J. Hall* 9/1/2011  
Certificate Number 15079

WO# 110916WL-b (Rev. B) (KA)

### 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 \_\_\_\_\_ day of \_\_\_\_\_, 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 \_\_\_\_\_

**DRILLING PROGRAM**

Operator Name/Number: OXY USA Inc. 16696  
 Lease Name/Number: Lost Tank 4 Federal #23 304876 Federal Lse No. NMNM0417696  
 Pool Name/Number: Lost Tank Wolfcamp 97573  
 Surface Location: 1378 FNL 1764 FEL SWNE(G) Sec 4 T22S R31E  
 Bottom Hole Location: 680 FSL 680 FWL SWSW(M) Sec 4 T22S R31E

Proposed TD: 13454' TMD 12311' TVD  
 SL - Lat: 32.4239037 Long: 103.7795005 X= 670891.8 Y= 518373.1 NAD - 1927  
 BH - Lat: 32.4150549 Long: 103.7887103 X= 668066.4 Y= 515139.4 NAD - 1927  
 Elevation: 3449.1' GL

**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 Anhydrite	663'	Formation
b. Top Salt	919'	Formation
c. Bottom Salt	4157'	Formation
d. Delaware	4163'	Oil/Gas
e. Bell Canyon	4215'	Oil/Gas
f. Cherry Canyon	5143'	Oil/Gas
g. Brushy Canyon	6372'	Oil/Gas
h. Bone Spring	8032'	Oil/Gas
i. Wolfcamp	11213'	Oil/Gas

\*Fresh water is expected above the Rustler. Nearest water wells have found fresh water as deep as 450'

**3. Casing Program: \* See COA**

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0-700'	13-3/8"	48	ST&C	H-40	New	3.17	7.12	9.58
				Hole filled with 8.4# Mud			770#	1730#	
12-1/4"	0-4200'	9-5/8"	40	LT&C	J-55	New	1.42	2.19	3.1
				Hole filled with 10.2# Mud			2570#	3950#	
8-3/4"	0-12394'	7"	29	BT&C	P-110	New	4.71	6.21	6.54
DVT @ 7000' - POST @ 4300'				Hole filled with 9.4# Mud			8510#	11220#	
6-1/8"	0-13454'	4-1/2"	15	UFJ	P-110	New	1.57	1.32	2.32
	ECP @ 12150'			Hole filled with 14.5# Mud			14320#	14420#	

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/ 2% CaCl<sub>2</sub> + 4% Bentonite + .25#/sx Poly E-Flake, 13.5ppg 1.75 yield 589# 24hr CS 150% Excess followed by 300sx PP cmt w/ 2% CaCl<sub>2</sub>, 14.8ppg 1.35 yield 1608# 24hr CS 150% Excess
- b. 9-5/8" Intermediate Circulate cement to surface w/ 1250sx HES light PP cmt w/ 5% Salt + .125#/sx Poly-E-Flake + 3#/sx Kol-Seal + .5% Halad-344 + 1% CaCl<sub>2</sub>, 12.9ppg 1.91 yield 851# 24hr CS 10% Excess followed by 300sx PP cmt w/ .5% WellLife-734, 14.8ppg 1.33 yield 2125# 24hr CS 125% Excess

- c. 7" Intermediate Cement 1st stage w/ 1010sx Super H w/ .5% Halad-344 + .4% CFR-3 + 3#/sx Kol-Seal + .3% HR-800 + .125#/sx Poly-E-Flake + 1#/sx salt, 13.2ppg 1.63 yield 1950# 24hr CS 100% Excess Calc TOC-6995'
- \* See COA*
- Cement 2nd stage w/ 630sx Super H w/ .5% Halad-344 + .4% CFR-3 + 3#/sx Kol-Seal + 1#/sx salt + .125#/sx Poly-E-Flake, 13.2ppg 1.62 yield 1550# 24hr CS 100% Excess, Calc TOC-4300'
- Cement 3rd stage w/ 310sx HES Light PP cmt w/ 3#/sx Salt, 12.4ppg 2.08 yield 560# 24hr CS 10% Excess followed by 100sx PP cmt w/ 3#/sx Kol-Seal + .125#/sx Poly-E-Flake, 14.8ppg 1.34 yield 2125# 24hr CS 150% Excess, Circ Surface
- d. 4-1/2" Production Cement w/ 370sx PP cmt w/ 3#/sx Kol-Seal + .5% Halad-344 + 0.5% CFR-3 + 0.3% Super CBL + 0.2% HR-601, 15.6ppg 1.22 yield 1760# 24hr CS 10% excess, Calc TOC-10000'
- The above cement volumes could be revised pending the caliper measurement.

##### 5. Pressure Control Equipment:

*\* See COA*

Surface

None

Production

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

All BOP's and associated equipment will be tested in accordance with Onshore Order #2 (250/10000 psi on rams for 10 minutes each and 250/7000 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" and 7" casing shoes.

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 10000 psi WP rating.

*\* See COA*

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 to 15000psi 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

*\* See COA*

<u>Depth</u>	<u>Mud Wt.</u> ppg	<u>Visc</u> sec	<u>Fluid</u> <u>Loss</u>	<u>Type System</u>
0 - 700'	8.4-9.2	38-42	NC	Fresh Water/Spud Mud
700 - 4200'	9.8-10.2	28-29	NC	Brine Water
4200 - 12394'	9.0-9.4	28-29	NC	Cut Brine
12394 - 13454'	12.5-14.5	34-36	8-10	Cut Brine Gel/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 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: *\* See COA*

- 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 GR/RES/DES in Production Section (12394-TD)
- c. No coring program is planned but if done will be sidewall rotary cores.
- d. Mud logging program will be initiated from 12394' to TD.

## 9. Potential Hazards:

No abnormal pressures, temperatures or H<sub>2</sub>S gas are expected. The highest anticipated pressure gradient would be 0.754 psi/ft.

If H<sub>2</sub>S is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No.6.

No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

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

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



Project: Lost Tank  
Site: Lost Tank 4 Federal #23  
Well: LT4F#23  
Wellbore: Original Wellbore  
Design: Design #1



PROJECT DETAILS: Lost Tank

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level

SITE DETAILS: Lost Tank 4 Federal #23

Northing: 518373.10  
Easting: 670891.80  
Elevation: 3449.10  
KB @ 3473.10usft (Estimated KB 24')



Azimuths to Grid North  
True North: -0.30'  
Magnetic North: 7.31'

Magnetic Field  
Strength: 48640.5nT  
Dip Angle: 60.32'  
Date: 03/09/2012  
Model: ICRF2010

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4310.00	0.00	0.00	4310.00	0.00	0.00	0.00	0.00	
5848.38	30.77	221.14	5775.50	-303.64	-265.30	2.00	403.22	
13454.43	30.77	221.14	12311.00	-3233.70	-2825.40	0.00	4294.13	LT4F-23 BHL

DESIGN TARGET DETAILS

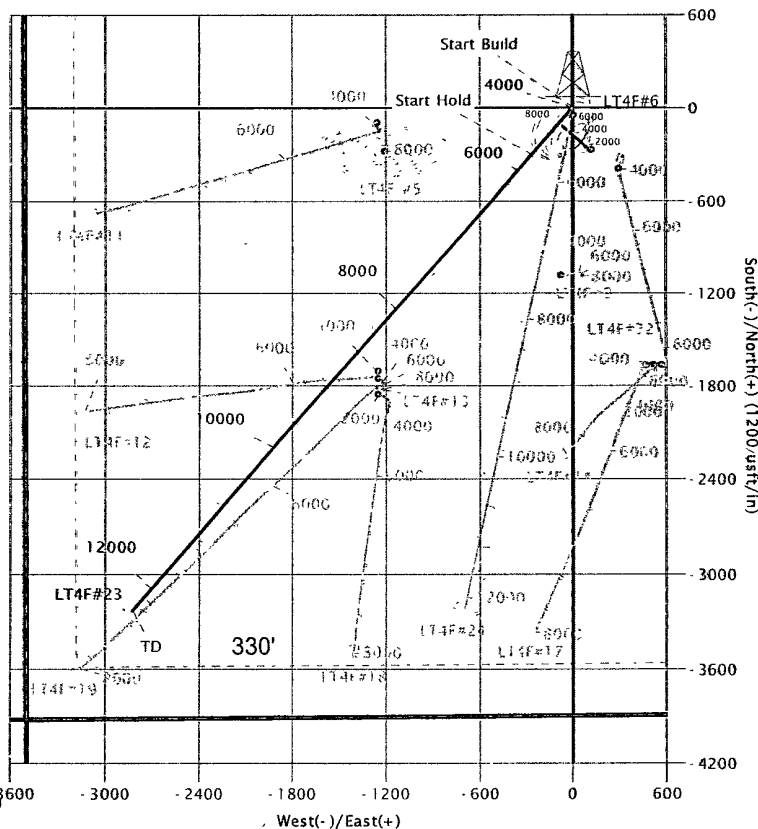
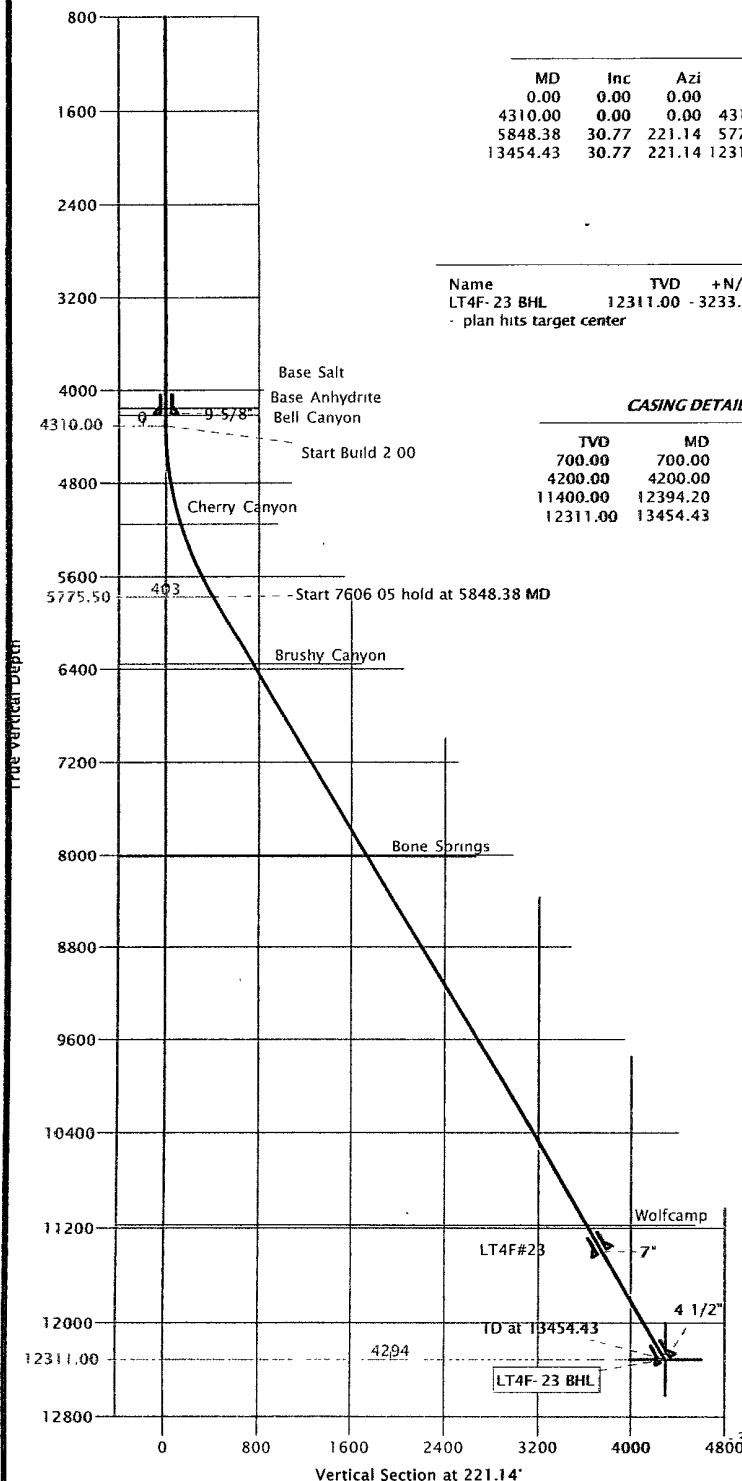
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
LT4F-23 BHL	12311.00	-3233.70	-2825.40	515139.40	668066.40	
- plan hits target center						

CASING DETAILS

TVD	MD	Size
700.00	700.00	13-3/8
4200.00	4200.00	9-5/8
11400.00	12394.20	7
12311.00	13454.43	4-1/2

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4153.00	4153.00	Base Salt
4159.00	4159.00	Base Anhydrite
4219.00	4219.00	Bell Canyon
5152.00	5164.62	Cherry Canyon
6357.00	6525.13	Brushy Canyon
8015.00	8454.72	Bone Springs
11177.00	12134.68	Wolfcamp



<b>Database:</b>	EDM-JodyBarclay-Local	<b>Local Co-ordinate Reference:</b>	Well LT4F#23
<b>Company:</b>	OXY	<b>TVD Reference:</b>	KB @ 3473.10usft (Estimated KB 24')
<b>Project:</b>	Lost Tank	<b>MD Reference:</b>	KB @ 3473.10usft (Estimated KB 24')
<b>Site:</b>	Lost Tank 4 Federal #23	<b>North Reference:</b>	Grid
<b>Well:</b>	LT4F#23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Design #1		

<b>Project</b>	Lost Tank, New Mexico		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b>	Lost Tank 4 Federal #23		
<b>Site Position:</b>		<b>Northing:</b>	518,373.10 usft
<b>From:</b>	Map	<b>Easting:</b>	670,891.80 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32° 25' 26.054 N
		<b>Longitude:</b>	103° 46' 46.202 W
		<b>Grid Convergence:</b>	0.30 °

<b>Well</b>	LT4F#23		
<b>Well Position</b>	+N/-S	0.00 usft	<b>Northing:</b> 518,373.10 usft
	+E/-W	0.00 usft	<b>Easting:</b> 670,891.80 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	3,449.10 usft
		<b>Latitude:</b>	32° 25' 26.054 N
		<b>Longitude:</b>	103° 46' 46.202 W
		<b>Ground Level:</b>	

<b>Wellbore</b>	Original Wellbore		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>
	IGRF2010	03/09/12	(°)
			7.61
			Dip Angle (°)
			60.32
			Field Strength (nT)
			48,640

<b>Design</b>	Design #1		
<b>Audit Notes:</b>			
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b> 0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			<b>Direction</b>
			(°)
			221.14

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,310.00	0.00	0.00	4,310.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,848.38	30.77	221.14	5,775.50	-303.64	-265.30	2.00	2.00	0.00	221.14	
13,454.43	30.77	221.14	12,311.00	-3,233.70	-2,825.40	0.00	0.00	0.00	0.00	LT4F-23 BHL



<b>Database:</b>	EDM-JodyBarclay-Local	<b>Local Co-ordinate Reference:</b>	Well LT4F#23
<b>Company:</b>	OXY	<b>TVD Reference:</b>	KB @ 3473.10usft (Estimated KB 24')
<b>Project:</b>	Lost Tank	<b>MD Reference:</b>	KB @ 3473.10usft (Estimated KB 24')
<b>Site:</b>	Lost Tank 4 Federal #23	<b>North Reference:</b>	Grid
<b>Well:</b>	LT4F#23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,310.00	0.00	0.00	4,310.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	1.80	221.14	4,399.99	-1.06	-0.93	1.41	2.00	2.00	0.00
4,500.00	3.80	221.14	4,499.86	-4.74	-4.14	6.30	2.00	2.00	0.00
4,600.00	5.80	221.14	4,599.51	-11.04	-9.65	14.67	2.00	2.00	0.00
4,700.00	7.80	221.14	4,698.80	-19.96	-17.44	26.51	2.00	2.00	0.00
4,800.00	9.80	221.14	4,797.61	-31.48	-27.51	41.80	2.00	2.00	0.00
4,900.00	11.80	221.14	4,895.84	-45.59	-39.83	60.54	2.00	2.00	0.00
5,000.00	13.80	221.14	4,993.35	-62.27	-54.41	82.69	2.00	2.00	0.00
5,100.00	15.80	221.14	5,090.03	-81.51	-71.22	108.24	2.00	2.00	0.00
5,200.00	17.80	221.14	5,185.75	-103.27	-90.23	137.14	2.00	2.00	0.00

Database:	EDM-JodyBarday-Local	Local Co-ordinate Reference:	Well LT4F#23
Company:	OXY	TVD Reference:	KB @ 3473.10usft (Estimated KB 24')
Project:	Lost Tank	MD Reference:	KB @ 3473.10usft (Estimated KB 24')
Site:	Lost Tank 4 Federal #23	North Reference:	Grid
Well:	LT4F#23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	19.80	221.14	5,280.41	-127.54	-111.44	169.36	2.00	2.00	0.00
5,400.00	21.80	221.14	5,373.89	-154.28	-134.80	204.87	2.00	2.00	0.00
5,500.00	23.80	221.14	5,466.07	-183.46	-160.30	243.62	2.00	2.00	0.00
5,600.00	25.80	221.14	5,556.85	-215.04	-187.89	285.57	2.00	2.00	0.00
5,700.00	27.80	221.14	5,646.10	-249.00	-217.56	330.65	2.00	2.00	0.00
5,800.00	29.80	221.14	5,733.73	-285.27	-249.25	378.82	2.00	2.00	0.00
5,848.38	30.77	221.14	5,775.50	-303.64	-265.30	403.22	2.00	2.00	0.00
5,900.00	30.77	221.14	5,819.86	-323.53	-282.68	429.63	0.00	0.00	0.00
6,000.00	30.77	221.14	5,905.78	-362.05	-316.34	480.78	0.00	0.00	0.00
6,100.00	30.77	221.14	5,991.71	-400.58	-350.00	531.94	0.00	0.00	0.00
6,200.00	30.77	221.14	6,077.63	-439.10	-383.66	583.09	0.00	0.00	0.00
6,300.00	30.77	221.14	6,163.56	-477.62	-417.31	634.25	0.00	0.00	0.00
6,400.00	30.77	221.14	6,249.48	-516.14	-450.97	685.41	0.00	0.00	0.00
6,500.00	30.77	221.14	6,335.41	-554.67	-484.63	736.56	0.00	0.00	0.00
6,600.00	30.77	221.14	6,421.33	-593.19	-518.29	787.72	0.00	0.00	0.00
6,700.00	30.77	221.14	6,507.26	-631.71	-551.95	838.87	0.00	0.00	0.00
6,800.00	30.77	221.14	6,593.18	-670.23	-585.61	890.03	0.00	0.00	0.00
6,900.00	30.77	221.14	6,679.11	-708.76	-619.27	941.18	0.00	0.00	0.00
7,000.00	30.77	221.14	6,765.03	-747.28	-652.93	992.34	0.00	0.00	0.00
7,100.00	30.77	221.14	6,850.96	-785.80	-686.58	1,043.50	0.00	0.00	0.00
7,200.00	30.77	221.14	6,936.88	-824.33	-720.24	1,094.65	0.00	0.00	0.00
7,300.00	30.77	221.14	7,022.81	-862.85	-753.90	1,145.81	0.00	0.00	0.00
7,400.00	30.77	221.14	7,108.73	-901.37	-787.56	1,196.96	0.00	0.00	0.00
7,500.00	30.77	221.14	7,194.66	-939.89	-821.22	1,248.12	0.00	0.00	0.00
7,600.00	30.77	221.14	7,280.58	-978.42	-854.88	1,299.27	0.00	0.00	0.00
7,700.00	30.77	221.14	7,366.51	-1,016.94	-888.54	1,350.43	0.00	0.00	0.00
7,800.00	30.77	221.14	7,452.43	-1,055.46	-922.19	1,401.59	0.00	0.00	0.00
7,900.00	30.77	221.14	7,538.36	-1,093.98	-955.85	1,452.74	0.00	0.00	0.00
8,000.00	30.77	221.14	7,624.28	-1,132.51	-989.51	1,503.90	0.00	0.00	0.00
8,100.00	30.77	221.14	7,710.21	-1,171.03	-1,023.17	1,555.05	0.00	0.00	0.00
8,200.00	30.77	221.14	7,796.13	-1,209.55	-1,056.83	1,606.21	0.00	0.00	0.00
8,300.00	30.77	221.14	7,882.06	-1,248.07	-1,090.49	1,657.36	0.00	0.00	0.00
8,400.00	30.77	221.14	7,967.98	-1,286.60	-1,124.15	1,708.52	0.00	0.00	0.00
8,500.00	30.77	221.14	8,053.91	-1,325.12	-1,157.81	1,759.67	0.00	0.00	0.00
8,600.00	30.77	221.14	8,139.83	-1,363.64	-1,191.46	1,810.83	0.00	0.00	0.00
8,700.00	30.77	221.14	8,225.76	-1,402.17	-1,225.12	1,861.99	0.00	0.00	0.00
8,800.00	30.77	221.14	8,311.68	-1,440.69	-1,258.78	1,913.14	0.00	0.00	0.00
8,900.00	30.77	221.14	8,397.61	-1,479.21	-1,292.44	1,964.30	0.00	0.00	0.00
9,000.00	30.77	221.14	8,483.53	-1,517.73	-1,326.10	2,015.45	0.00	0.00	0.00
9,100.00	30.77	221.14	8,569.46	-1,556.26	-1,359.76	2,066.61	0.00	0.00	0.00
9,200.00	30.77	221.14	8,655.38	-1,594.78	-1,393.42	2,117.76	0.00	0.00	0.00
9,300.00	30.77	221.14	8,741.31	-1,633.30	-1,427.07	2,168.92	0.00	0.00	0.00
9,400.00	30.77	221.14	8,827.23	-1,671.82	-1,460.73	2,220.08	0.00	0.00	0.00
9,500.00	30.77	221.14	8,913.16	-1,710.35	-1,494.39	2,271.23	0.00	0.00	0.00
9,600.00	30.77	221.14	8,999.08	-1,748.87	-1,528.05	2,322.39	0.00	0.00	0.00
9,700.00	30.77	221.14	9,085.01	-1,787.39	-1,561.71	2,373.54	0.00	0.00	0.00
9,800.00	30.77	221.14	9,170.93	-1,825.91	-1,595.37	2,424.70	0.00	0.00	0.00
9,900.00	30.77	221.14	9,256.86	-1,864.44	-1,629.03	2,475.85	0.00	0.00	0.00
10,000.00	30.77	221.14	9,342.78	-1,902.96	-1,662.68	2,527.01	0.00	0.00	0.00
10,100.00	30.77	221.14	9,428.71	-1,941.48	-1,696.34	2,578.17	0.00	0.00	0.00
10,200.00	30.77	221.14	9,514.63	-1,980.01	-1,730.00	2,629.32	0.00	0.00	0.00
10,300.00	30.77	221.14	9,600.56	-2,018.53	-1,763.66	2,680.48	0.00	0.00	0.00
10,400.00	30.77	221.14	9,686.48	-2,057.05	-1,797.32	2,731.63	0.00	0.00	0.00
10,500.00	30.77	221.14	9,772.41	-2,095.57	-1,830.98	2,782.79	0.00	0.00	0.00

Database:	EDM-JodyBarclay-Local	Local Co-ordinate Reference:	Well LT4F#23
Company:	OXY	TVD Reference:	KB @ 3473.10usft (Estimated KB 24')
Project:	Lost Tank	MD Reference:	KB @ 3473.10usft (Estimated KB 24')
Site:	Lost Tank 4 Federal #23	North Reference:	Grid
Well:	LT4F#23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,600.00	30.77	221.14	9,858.33	-2,134.10	-1,864.64	2,833.94	0.00	0.00	0.00	
10,700.00	30.77	221.14	9,944.26	-2,172.62	-1,898.30	2,885.10	0.00	0.00	0.00	
10,800.00	30.77	221.14	10,030.18	-2,211.14	-1,931.95	2,936.26	0.00	0.00	0.00	
10,900.00	30.77	221.14	10,116.11	-2,249.66	-1,965.61	2,987.41	0.00	0.00	0.00	
11,000.00	30.77	221.14	10,202.03	-2,288.19	-1,999.27	3,038.57	0.00	0.00	0.00	
11,100.00	30.77	221.14	10,287.96	-2,326.71	-2,032.93	3,089.72	0.00	0.00	0.00	
11,200.00	30.77	221.14	10,373.88	-2,365.23	-2,066.59	3,140.88	0.00	0.00	0.00	
11,300.00	30.77	221.14	10,459.81	-2,403.76	-2,100.25	3,192.03	0.00	0.00	0.00	
11,400.00	30.77	221.14	10,545.73	-2,442.28	-2,133.91	3,243.19	0.00	0.00	0.00	
11,500.00	30.77	221.14	10,631.66	-2,480.80	-2,167.56	3,294.34	0.00	0.00	0.00	
11,600.00	30.77	221.14	10,717.58	-2,519.32	-2,201.22	3,345.50	0.00	0.00	0.00	
11,700.00	30.77	221.14	10,803.51	-2,557.85	-2,234.88	3,396.66	0.00	0.00	0.00	
11,800.00	30.77	221.14	10,889.43	-2,596.37	-2,268.54	3,447.81	0.00	0.00	0.00	
11,900.00	30.77	221.14	10,975.36	-2,634.89	-2,302.20	3,498.97	0.00	0.00	0.00	
12,000.00	30.77	221.14	11,061.28	-2,673.41	-2,335.86	3,550.12	0.00	0.00	0.00	
12,100.00	30.77	221.14	11,147.21	-2,711.94	-2,369.52	3,601.28	0.00	0.00	0.00	
12,200.00	30.77	221.14	11,233.13	-2,750.46	-2,403.18	3,652.43	0.00	0.00	0.00	
12,300.00	30.77	221.14	11,319.05	-2,788.98	-2,436.83	3,703.59	0.00	0.00	0.00	
12,400.00	30.77	221.14	11,404.98	-2,827.50	-2,470.49	3,754.75	0.00	0.00	0.00	
12,500.00	30.77	221.14	11,490.90	-2,866.03	-2,504.15	3,805.90	0.00	0.00	0.00	
12,600.00	30.77	221.14	11,576.83	-2,904.55	-2,537.81	3,857.06	0.00	0.00	0.00	
12,700.00	30.77	221.14	11,662.75	-2,943.07	-2,571.47	3,908.21	0.00	0.00	0.00	
12,800.00	30.77	221.14	11,748.68	-2,981.60	-2,605.13	3,959.37	0.00	0.00	0.00	
12,900.00	30.77	221.14	11,834.60	-3,020.12	-2,638.79	4,010.52	0.00	0.00	0.00	
13,000.00	30.77	221.14	11,920.53	-3,058.64	-2,672.44	4,061.68	0.00	0.00	0.00	
13,100.00	30.77	221.14	12,006.45	-3,097.16	-2,706.10	4,112.84	0.00	0.00	0.00	
13,200.00	30.77	221.14	12,092.38	-3,135.69	-2,739.76	4,163.99	0.00	0.00	0.00	
13,300.00	30.77	221.14	12,178.30	-3,174.21	-2,773.42	4,215.15	0.00	0.00	0.00	
13,400.00	30.77	221.14	12,264.23	-3,212.73	-2,807.08	4,266.30	0.00	0.00	0.00	
13,454.43	30.77	221.14	12,311.00	-3,233.70	-2,825.40	4,294.15	0.00	0.00	0.00	

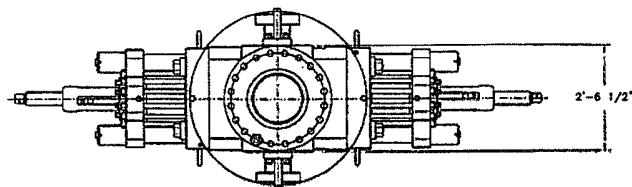
Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LT4F-23 BHL	- plan hits target center - Point	0.00	0.00	12,311.00	-3,233.70	-2,825.40	515,139.40	668,066.40	32° 24' 54.198 N	103° 47' 19.357 W

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
700.00	700.00	13 3/8"	13-3/8	17-1/2		
4,200.00	4,200.00	9 5/8"	9-5/8	12-1/4		
12,394.20	11,400.00	7"	7	8-1/2		
13,454.43	12,311.00	4 1/2"	4-1/2	6-1/8		

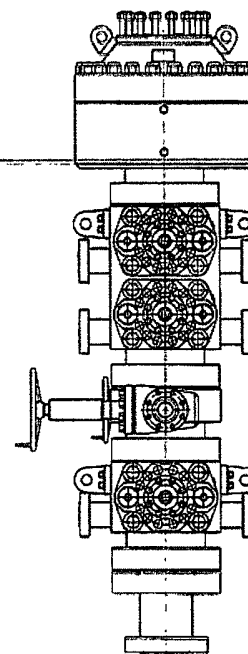
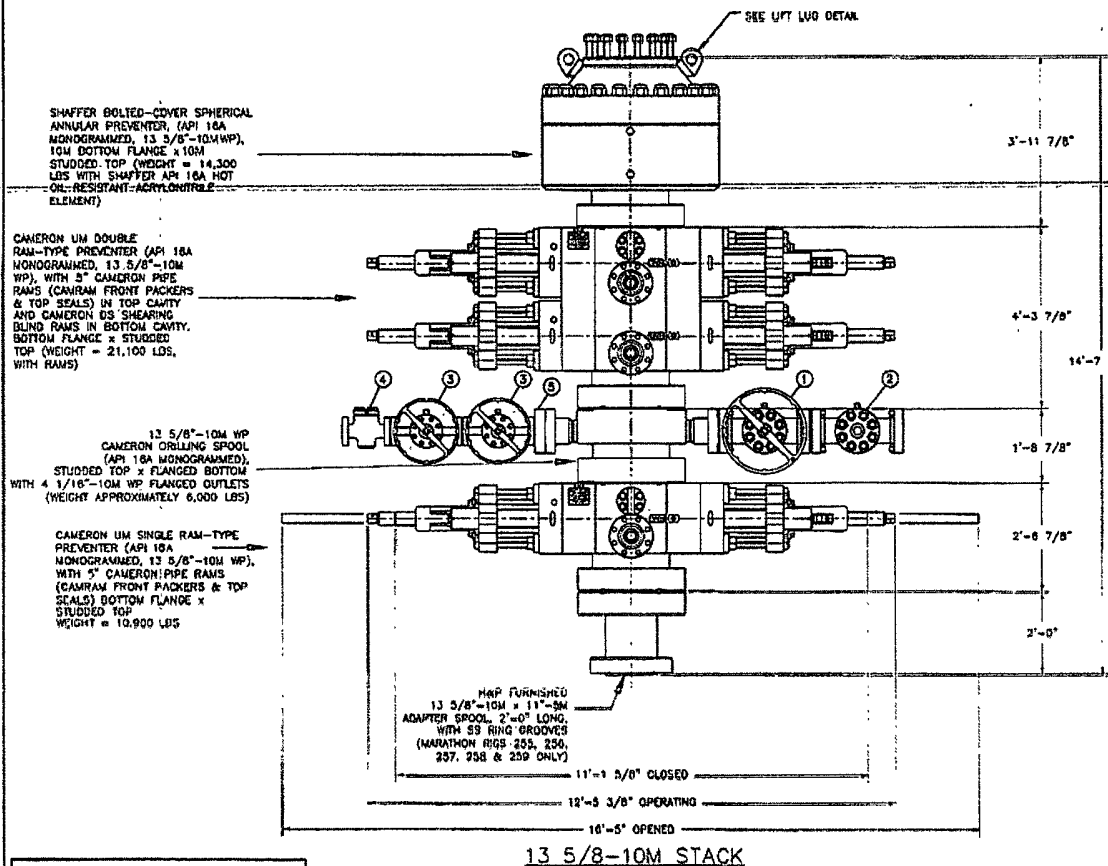
Database:	EDM-JodyBarclay-Local	Local Co-ordinate Reference:	Well LT4F#23
Company:	OXY	TVD Reference:	KB @ 3473.10usft (Estimated KB 24')
Project:	Lost Tank	MD Reference:	KB @ 3473.10usft (Estimated KB 24')
Site:	Lost Tank 4 Federal #23	North Reference:	Grid
Well:	LT4F#23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,153.00	4,153.00	Base Salt		0.00		
4,159.00	4,159.00	Base Anhydrite		0.00		
4,219.00	4,219.00	Ball Canyon		0.00		
5,164.62	5,152.00	Cherry Canyon		0.00		
6,525.13	6,357.00	Brushy Canyon		0.00		
8,454.72	8,015.00	Bone Springs		0.00		
12,134.68	11,177.00	Wolfcamp		0.00		

BOP



- 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



CAMERON LIFT EYES, 2 PER PREVENTER, 50 SHORT TON RATED CAPACITY EACH

ISSUED FOR FABRICATION  
December-18-2007  
DRAFTSMAN  
ENGINEER

API 6A MONOGRAMMED CAMERON CHOKE AND KILL VALVE ASSEMBLIES ARE NOT SHOWN FOR CLARITY  
WEIGHTS DO NOT INCLUDE HOSES, ADAPTER SPOOLS OR QUICK CONNECT FITTINGS

**HELMERICH & PAYNE**  
INTERNATIONAL DRILLING CO.

13 5/8"-10M BOP 3 RAM STACK  
FLEXRIG3

OUTLINE: M&P

PROJECT: FLEXRIG3






DRAWN: MTS DATE: 6-9-02 DWG. NO.:

SCALE: 3/4"=1' SHEET: 1 OF 1 210-P1-07

REV: E

PROPRIETARY

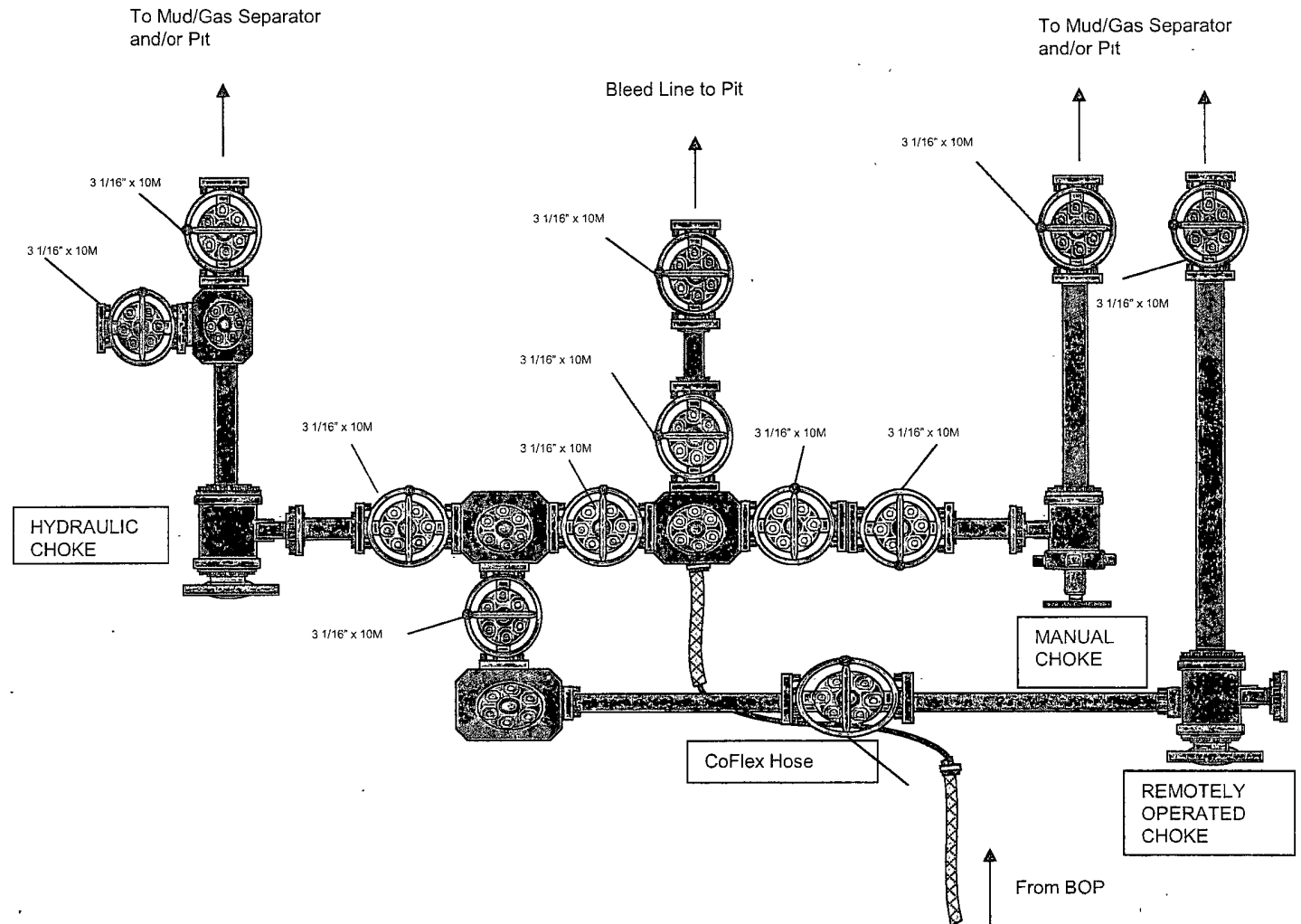
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ENGINEERING APPROVAL		DATE	TITLE
			13 5/8"-10M BOP 3 RAM STACK
	12/18/07	ADDED SHEET 03	JAY
	6-10-07	REWORKED 3000 PSI PRESSURE RATING VALVE 1, 2, 3, 4 AND 51 DETAIL VIEW 100%	JBO
	6-04-07	5" ADDED TO SPACER ADAPTER SPOOL	JBO
	02-07-07	ADDED ADAPTER SPOOL	MVL
	06-13-02	CORRECTED BOP STACK	MVL
REV	DATE	DESCRIPTION	BY

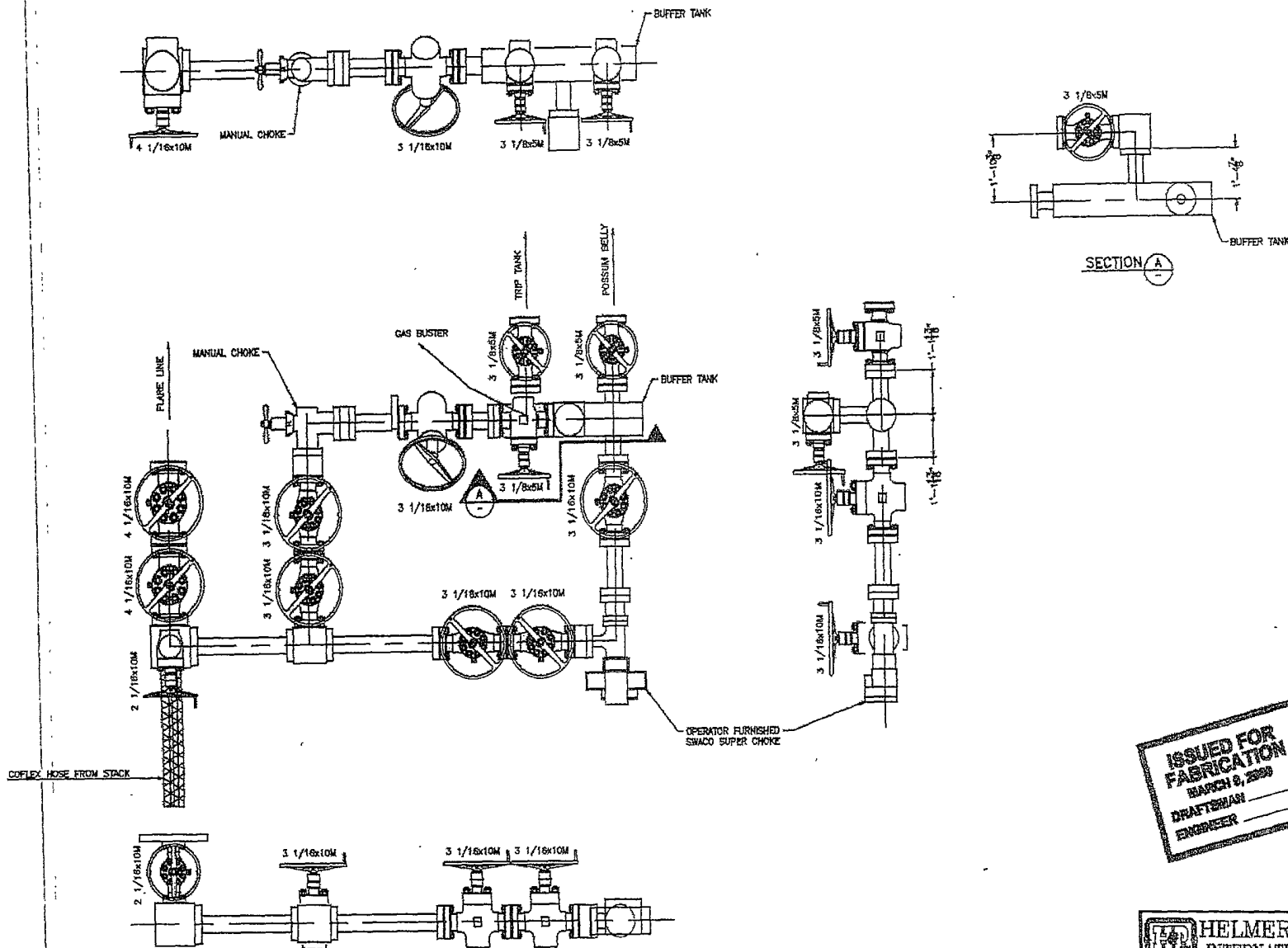
CUSTOMER: M&P	PROJECT: FLEXRIG3
DRAWN: MTS	DATE: 6-5-02
SCALE: 3/4"=1'	SHEET: 1 OF 2
	OWG. NO.:
	210-P1-07
	REV. NO.:

Chk Manifold-1

## 10M CHOKE MANIFOLD CONFIGURATION



Chk Manifold-2



**ISSUED FOR FABRICATION**  
MARCH 8, 2000  
DRAFTERMAN  
ENGINEER

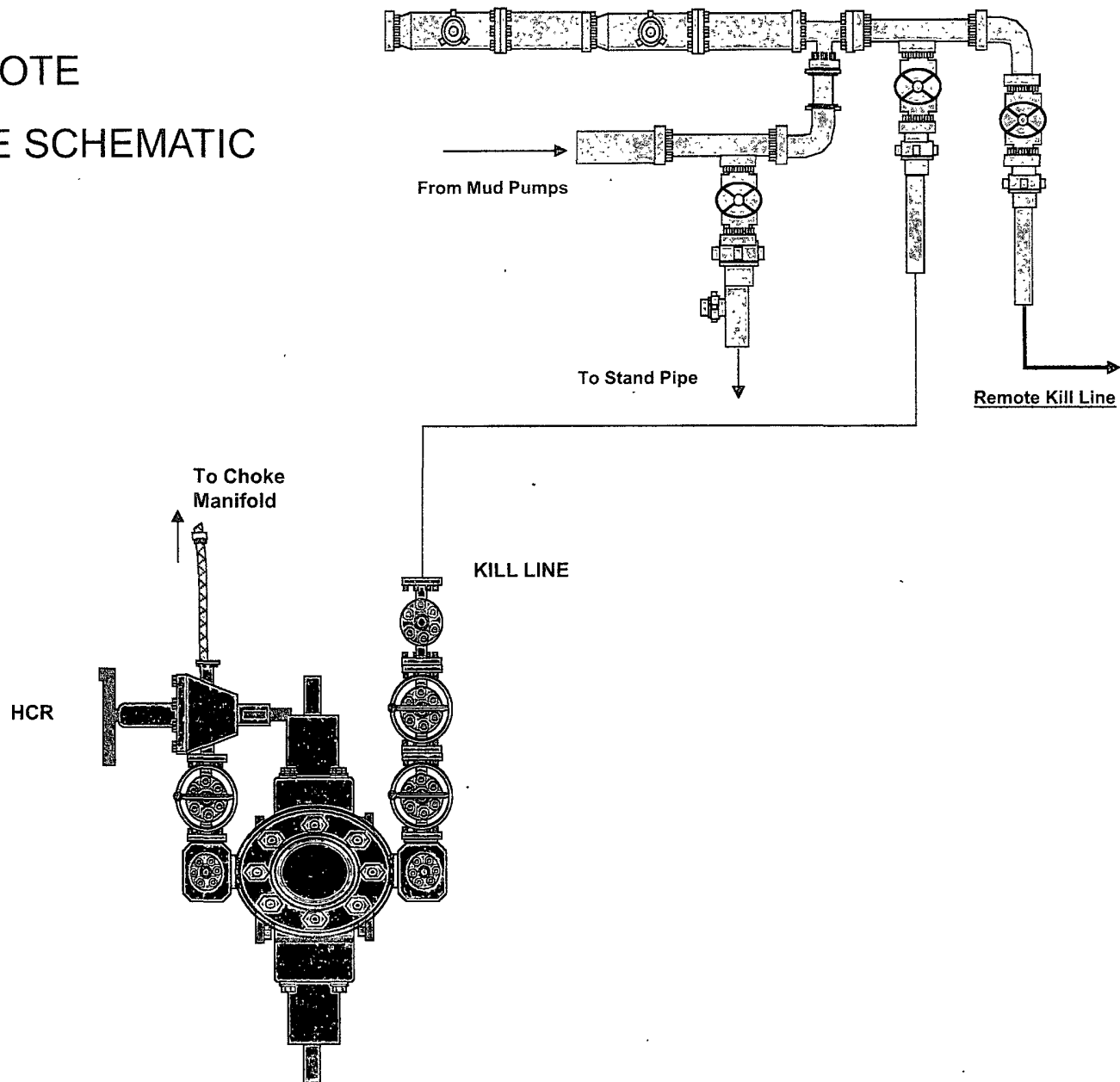
**PROPRIETARY**  
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ENGINEERING APPROVAL		DATE	TITLE	
			CHOKE MANIFOLD	
CUSTOMER		H&P		
PROJECT		FLEXRGS		
DATE	DESCRIPTION	BY	SCALE	REV
10/10/02	ADJUST DIM TO FIELD CONFIRMED DIM	RAY	3/4"=1'	216-P1-05 A

**HELMERICH & PAYNE**  
INTERNATIONAL DRILLING CO.  
DRAWN: MTS  
DATE: 2-28-02  
SHEET: 1 OF 1  
DWD. NO.:  
216-P1-05

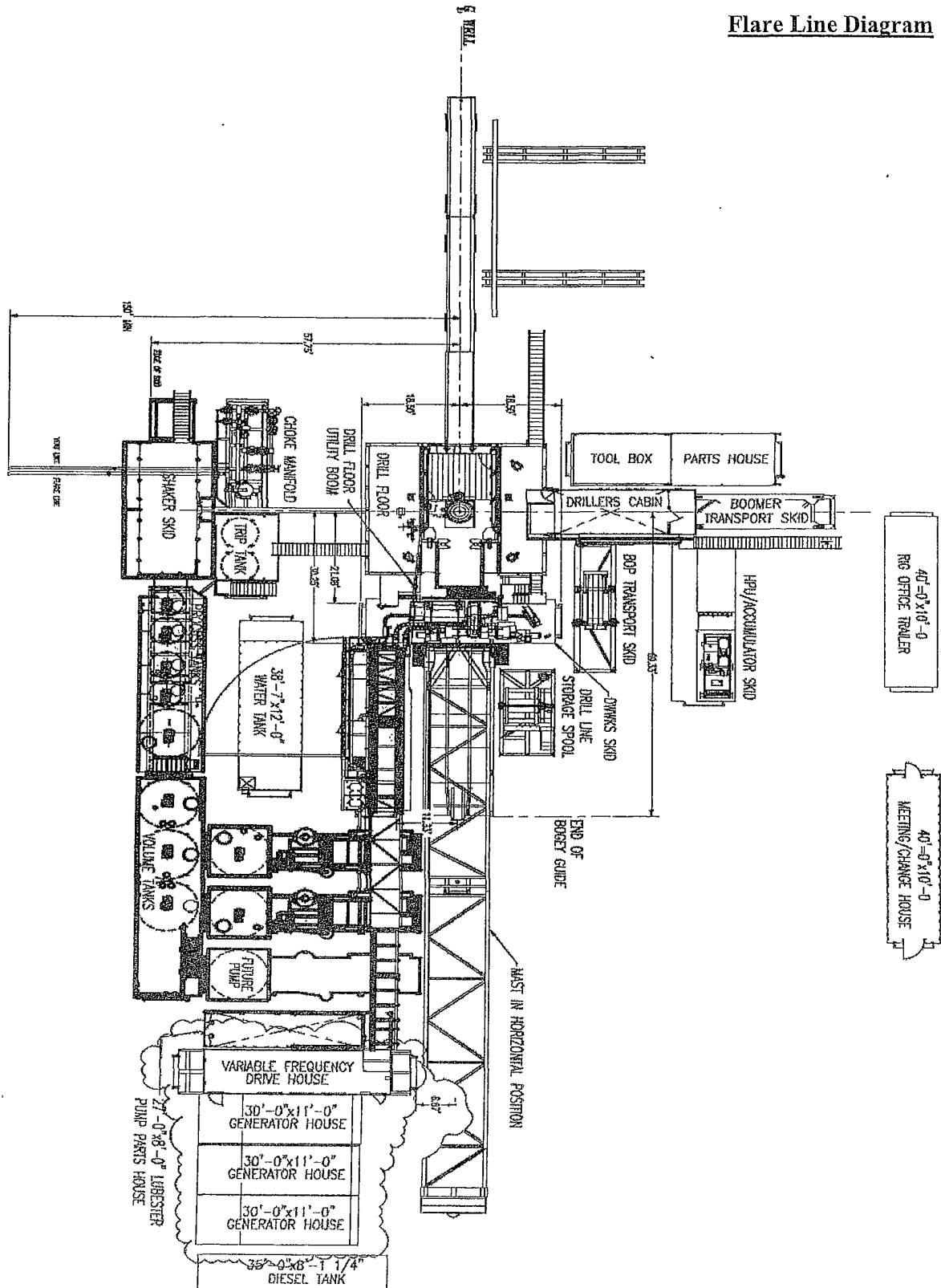
Chk Muffler-3

# 10M REMOTE KILL LINE SCHEMATIC





# Flare Line Diagram





Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 1121	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 005123	
CONTITECH ORDER N°: 505591		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 60890		NOMINAL / ACTUAL LENGTH: 10,67 m / 10,72 m			
W.P. 68,9 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
<p>Pressure test with water at ambient temperature</p> <p style="text-align: center;">See attachment. ( 1 page )</p> <p>           ↑ 10 mm = 10 Min.            → 10 mm = 20 MPa         </p>					
COUPLINGS Type		Serial N°		Quality	
3" coupling with		9409 9414		AISI 4130	
4 1/16" Flange end				AISI 4130	
				Heat N°	
				B3018A H2205	
				144004	
<b>NOT DESIGNED FOR WELL TESTING</b>				<b>API Spec 16 C</b>	
				<b>Temperature rate: "B"</b>	
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:		Inspector		Quality Control	
05. November 2011.				ContiTech Rubber Industrial Kft. Quality Control Dept. (1)	

[illegible]

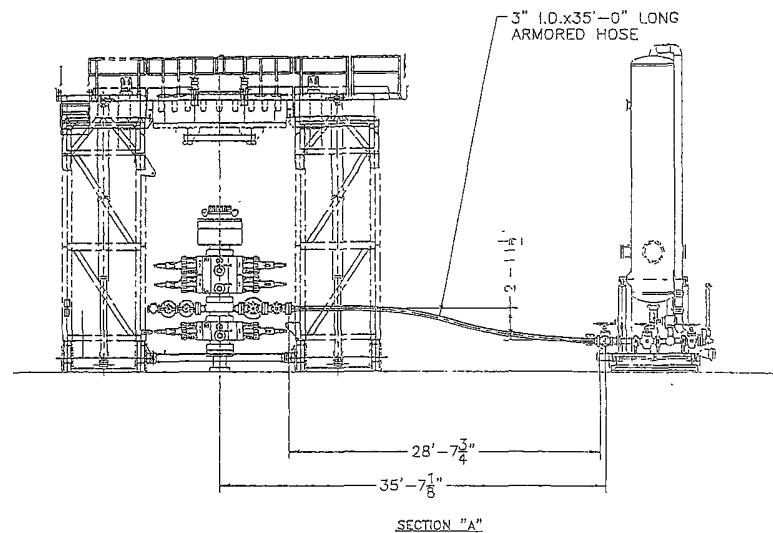
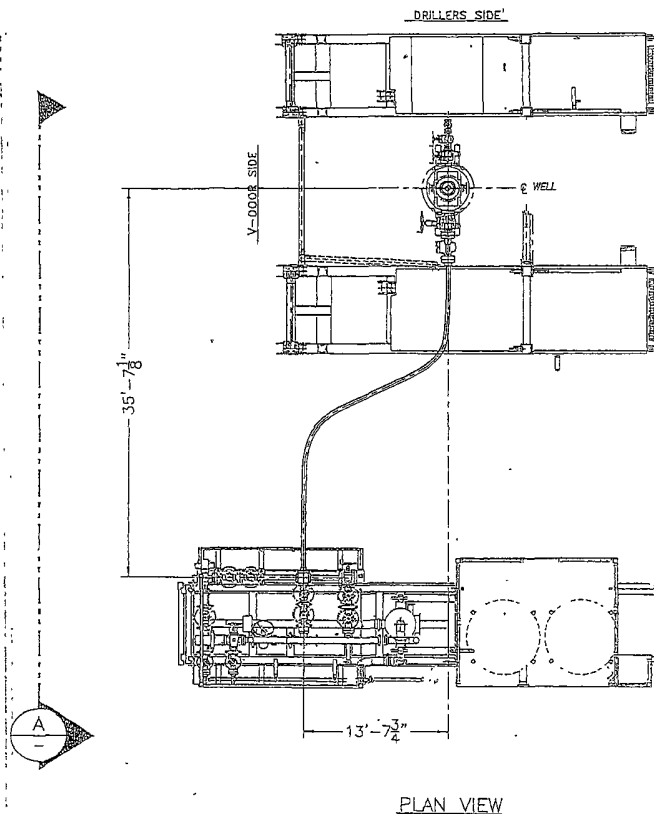
CONTITECH RUBBER Industrial Kft.	No: QC-DB- 559 / 2011
	Page: 10 / 54



## Hose Data Sheet

CRI Order No.	505591
Customer	ContiTech Beattie Co.
Customer Order No	PO5123 STOCK
Item No.	1
Hose Type	Flexible Hose
<b>Standard</b>	<b>API SPEC 16 C</b>
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSIBX155 RING GROOVE
Type of coupling other end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSI BX155 RING GROOVE
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St. steel outer wrap
Internal stripwound tube	No
Lining	OIL RESISTANT
Safety clamp	No
Lifting collar	No
Element C	No
Safety chain	No
Safety wire rope	No
Max. design temperature [°C]	100
Min. design temperature [°C]	-20
MBR operating [m]	1,60
MBR storage [m]	1,40
Type of packing	WOODEN CRATE ISPM-15

Flex Hose-4



ISSUED FOR  
FABRICATION  
December-19-2007  
DRAFTSMAN \_\_\_\_\_  
ENGINEER \_\_\_\_\_

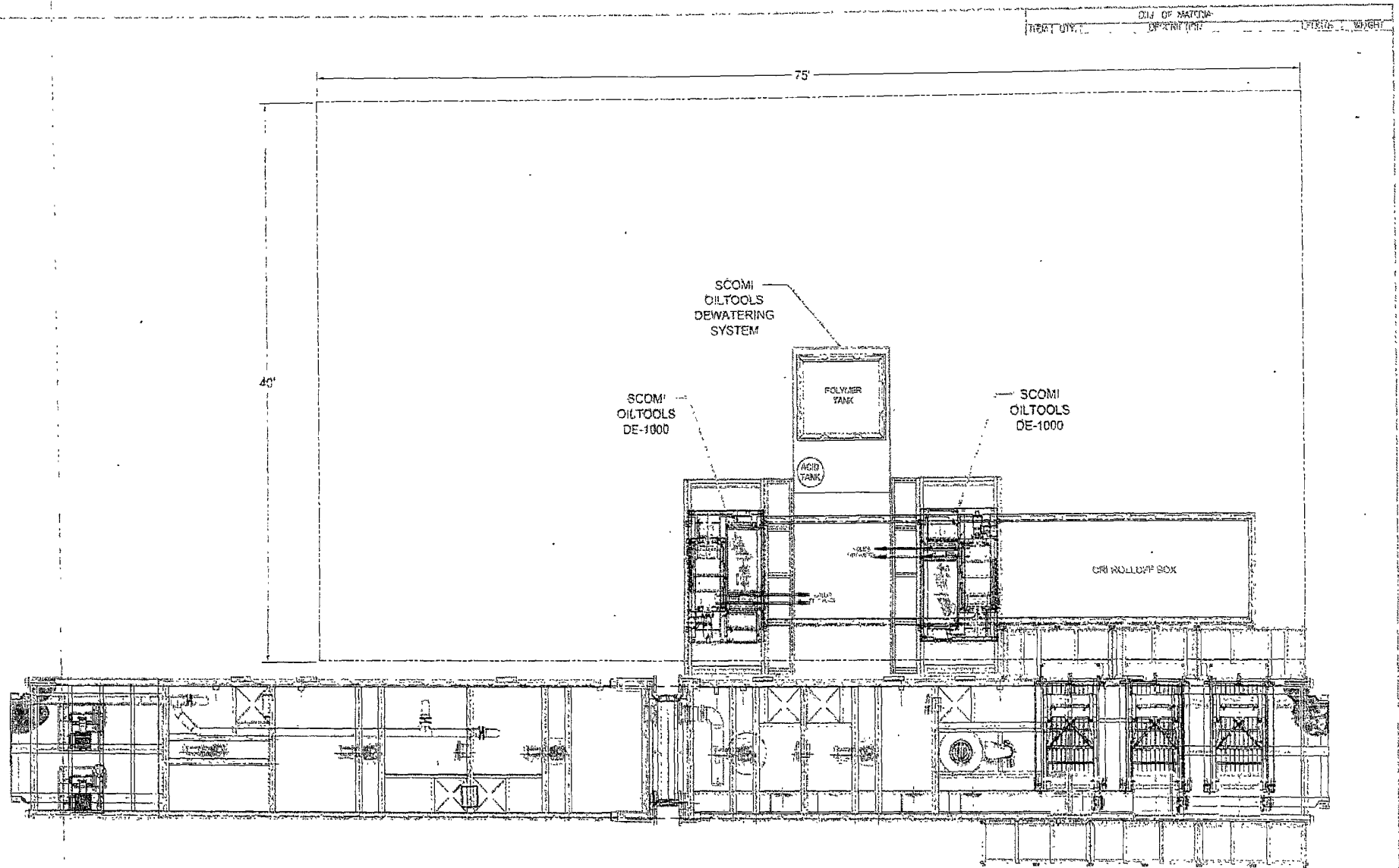
PROPRIETARY

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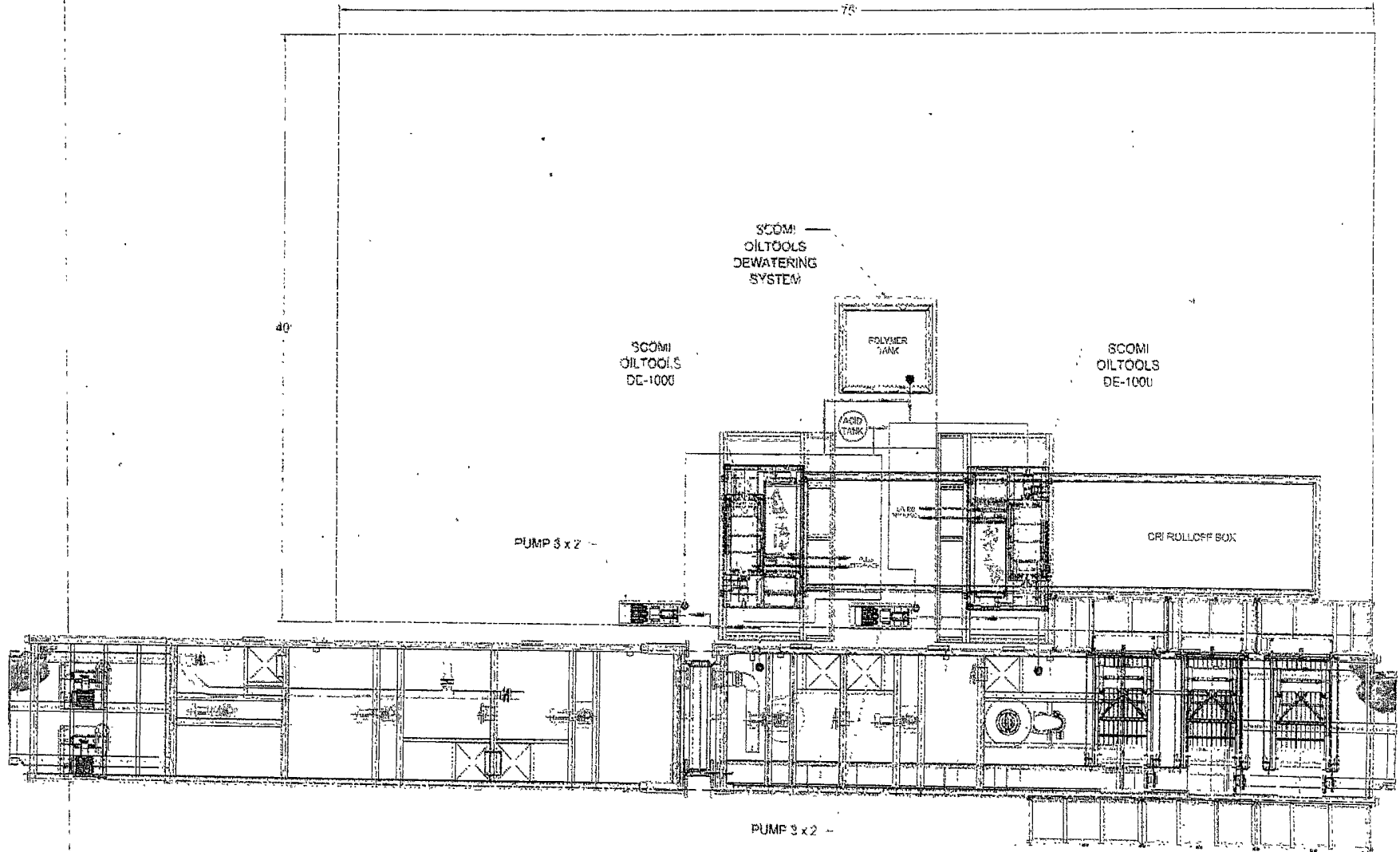
ENGINEERING APPROVAL		DATE	TITLE
△			
△			
△			
△	12/19/07	REMOVED SHEET TOTAL CALLOUT	JAY
REV	DATE	DESCRIPTION	BY

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.	
CHOKE LINE SYSTEM FLEXRIG3	
CUSTOMER	
PROJECT	
DRAWN	JBG
DATE	4-10-07
DWG. NO.	210-P1-07
SCALE	3/16"=1'
SHEET	2 OF 3
REV	A

CL-1

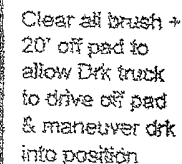


<p>1. ALL STRUCTURAL MATERIAL SHALL BE A36 - A572.</p> <p>2. ALL PIPE SHALL BE 40 WATERSIDE OR 100 OR 150.</p> <p>3. ALL FLANGES SHALL BE 1500 TO MAXIMUM EX 110.</p> <p>4. ALL FITTINGS SHALL BE 40 WATERSIDE OR 100 OR 150.</p> <p>5. TANK FABRICATION SHALL BE IN ACCORDANCE WITH API-650.</p>	<p>THE DESIGN INFORMATION AND REQUIREMENTS IN THIS DRAWING OR SPECIFICATIONS ARE THE SOLE PROPERTY OF SCOMI INTERNATIONAL LIMITED AND ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SCOMI INTERNATIONAL LIMITED. IN RESPECT OF ANY PATENT, TRADE MARK, OR OTHER INTELLECTUAL PROPERTY RIGHTS, THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMISSIONS FROM THE APPROPRIATE OWNERS.</p>	<p>TYPE: CLOSED LOOP SYSTEM BASIC LAYOUT AND TIE IN OXY - H&amp;P - FLEX RIGS / PG 1 OF 2</p> <p>DRAWN BY: PDL DATE: 10/20/00 CHECKED BY: JPL DATE: 10/20/00 APPROVED: NTS DATE: 10/20/00</p>	<p><b>Scomi</b></p> <p>101 N. 5th Street, Suite 200, Dallas, TX 75201 PHONE: 409-383-0016 FAX: 409-383-0017</p> <p>321S-014 A</p>
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[illegible]

WPA - ~~WPA~~ FBI TAB (SUCVIM GUSCU Loop system)

5-77-78



- 1) 78° of mouse hole below ground level
- 2) If conductor pipe is less than 55° below ground level, recommend cement mouse hole in place in order to prevent break thru & circulation / washout thru mouse hole.
- 3) Use 14" (min. Nominal size) pipe. This can be spiral weld or low pressure pipe, 10 3/4" is used in some applications but due to inaccuracies in location of mouse hole & potential out of alignment or centered in hole, 14" pipe recommended.
- 4) Cement mouse hole in 18 1/2" or 18 3/4" hole.
- 5) Celler will need to be oblong in order to accommodate mouse hole (i.e. 5' x 10', 6' x 10', ...)

.... Operator decision

170'

110

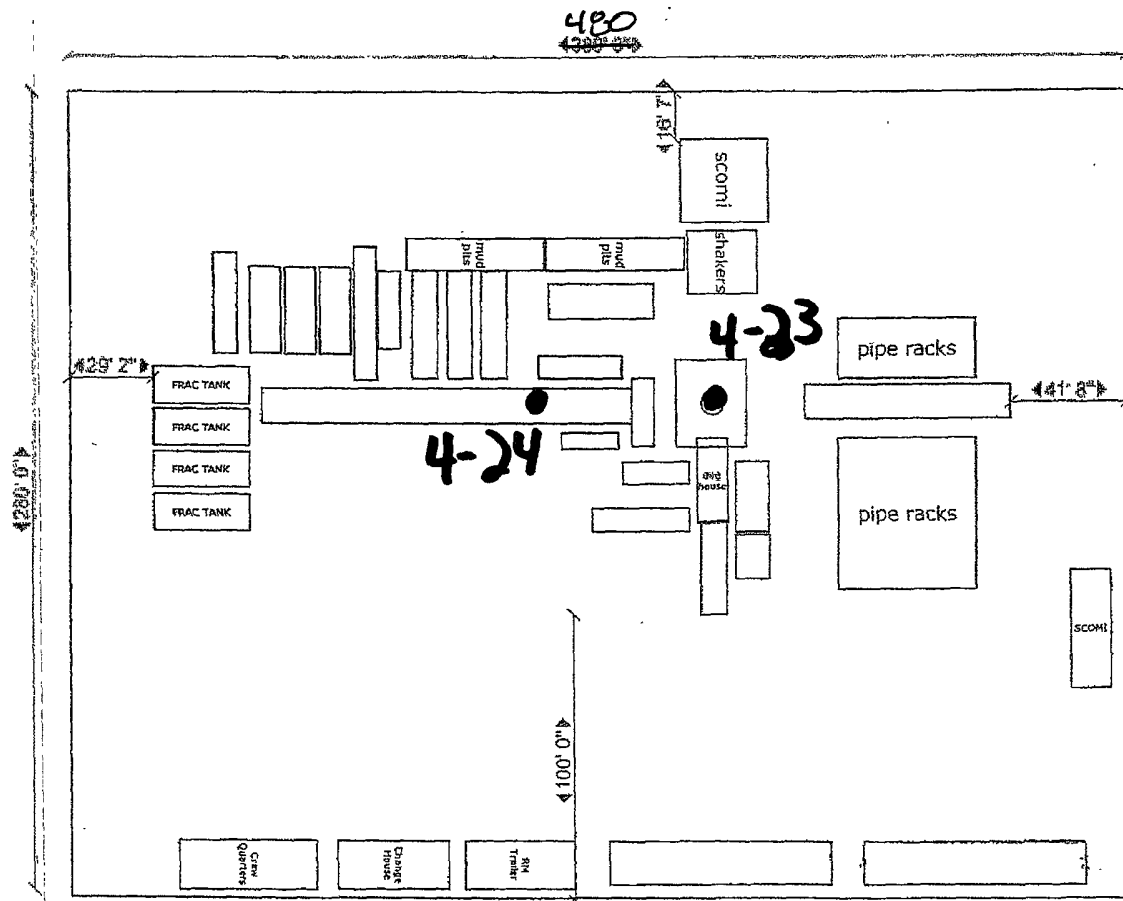
100 7

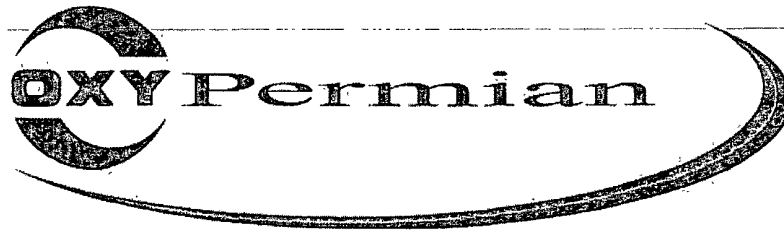
- DE 1000
- Dewatering system
- DE 1000
- CRI rolloff box



RL-CL-4

# Lost Tank 4 Federal 23+24 combined pad





## **Permian Drilling Hydrogen Sulfide Drilling Operations Plan Lost Tank 4 Federal #23**

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

### **1. Escape**

Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southwest side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then a secondary egress route should be taken.

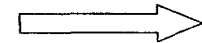
▲ H2S Detectors. At least three detectors will be installed: bell nipple, rig floor and Shakers.

● 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.

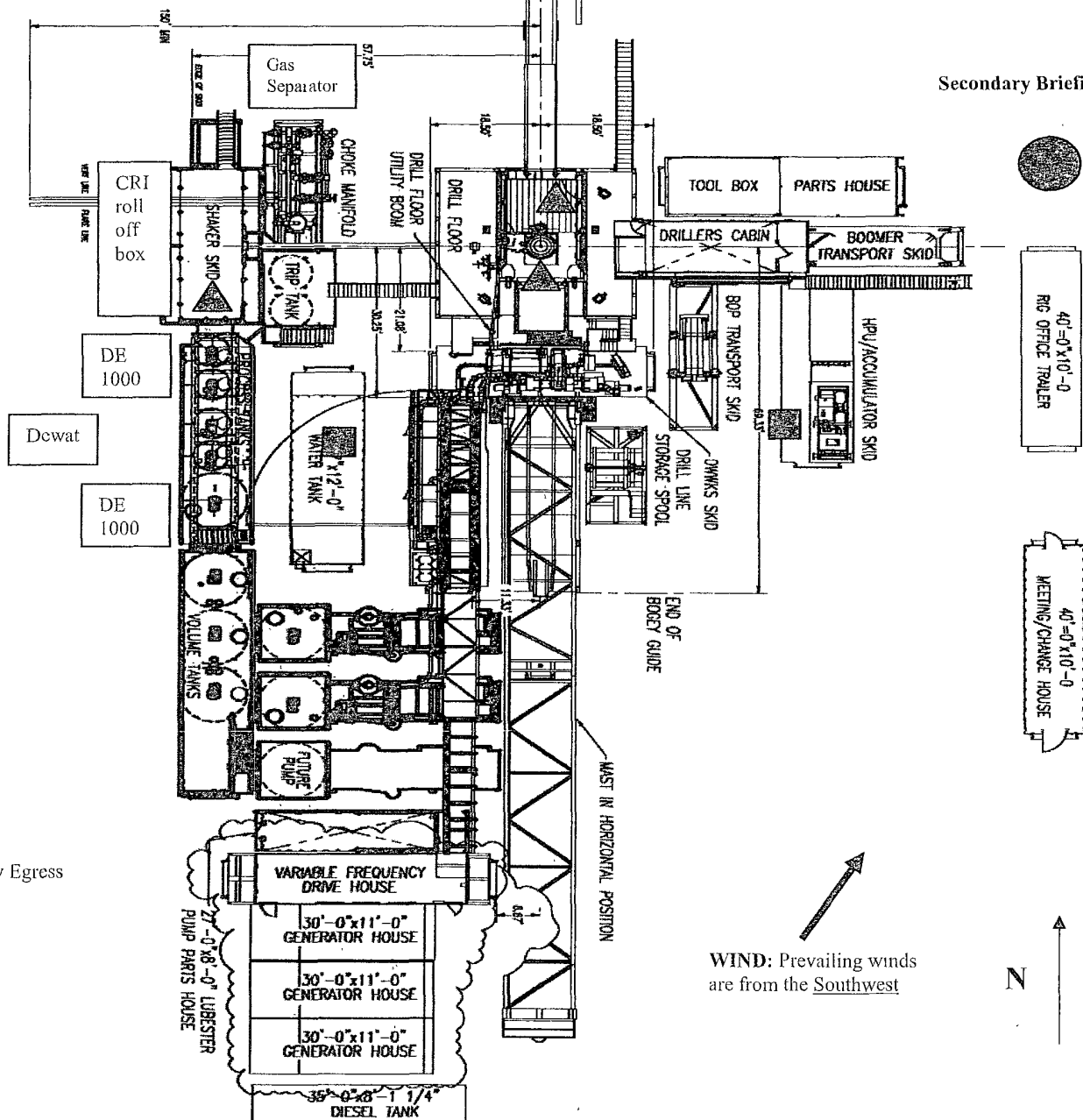
Rig-Layout



Exit to road. Caution sign placed here.

Primary Briefing Area

Secondary Briefing Area



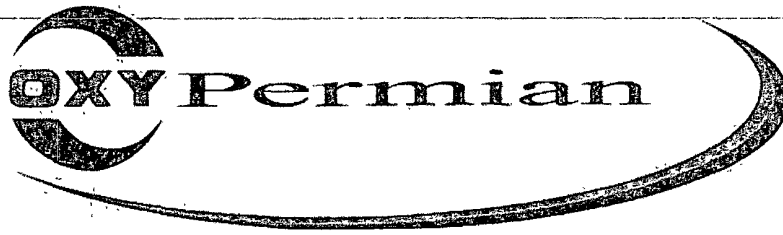
Secondary Egress



WIND: Prevailing winds are from the Southwest

N





## **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 (H<sub>2</sub>S) gas.

While drilling this well, it is possible to encounter H<sub>2</sub>S bearing formations. At all times, the first barrier to control H<sub>2</sub>S 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 H<sub>2</sub>S is detected. All H<sub>2</sub>S 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 <u>commence</u> .
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 H<sub>2</sub>S.
2. Proper use and maintenance of personal protective equipment and life support systems.
3. H<sub>2</sub>S detection.
4. Proper use of H<sub>2</sub>S 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 H<sub>2</sub>S 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 H<sub>2</sub>S Drilling Operations Plan.

H<sub>2</sub>S 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. H<sub>2</sub>S 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 H<sub>2</sub>S 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 H<sub>2</sub>S.
- 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 H<sub>2</sub>S 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 H<sub>2</sub>S 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:	<ol style="list-style-type: none"><li>1. On alarm, don escape unit and report to the nearest upwind designated safe briefing / muster area upw</li><li>2. Check status of personnel (buddy system).</li><li>3. Secure breathing equipment.</li><li>4. Await orders from supervisor.</li></ol>
Drill site manager:	<ol style="list-style-type: none"><li>1. Don escape unit if necessary and report to nearest upwind designated safe briefing / muster area.</li><li>2. Coordinate preparations of individuals to return to point of release with tool pusher and driller (using the buddy system).</li><li>3. Determine H2S concentrations.</li><li>4. Assess situation and take control measures.</li></ol>
Tool pusher:	<ol style="list-style-type: none"><li>1. Don escape unit Report to up nearest upwind designated safe briefing / muster area.</li><li>2. Coordinate preparation of individuals to return to point of release with tool pusher drill site manager (using the buddy system).</li><li>3. Determine H2S concentration.</li><li>4. Assess situation and take control measures.</li></ol>
Driller:	<ol style="list-style-type: none"><li>1. Don escape unit, shut down pumps, continue rotating DP.</li></ol>

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 H<sub>2</sub>S 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 H<sub>2</sub>S 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 is 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 H<sub>2</sub>S 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 H<sub>2</sub>S detection equipment and self-contained breathing equipment will monitor H<sub>2</sub>S 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

<u>Percent (%)</u>	<u>Ppm</u>	<u>Concentration</u> Grains 100 std. Ft3*	<u>Physical effects</u>
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)**

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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 H<sub>2</sub>S.

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**

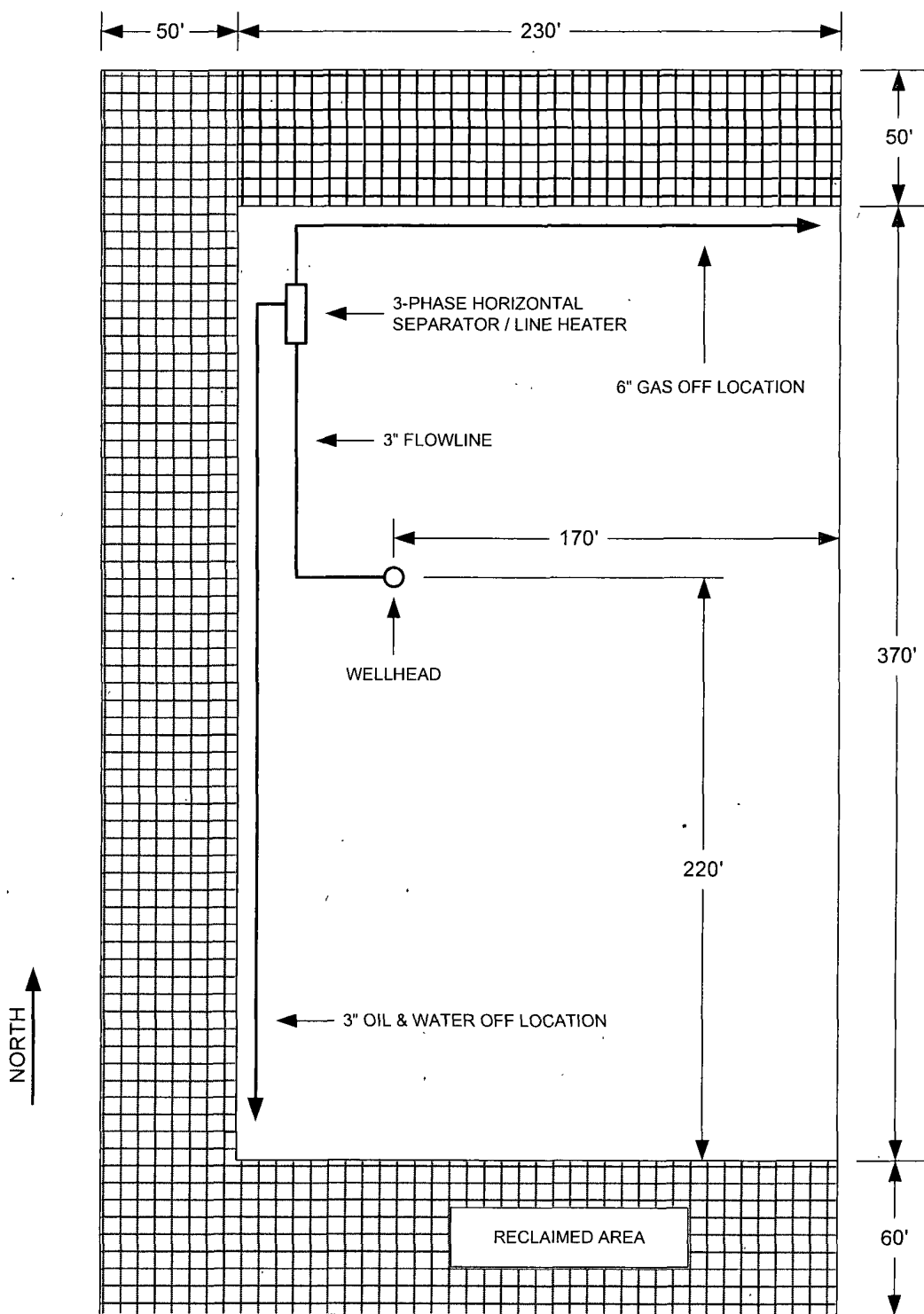
Do not panic!

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



REVISION BLOCK				<b>PRODUCTION FACILITY LAYOUT</b> <b>LOST TANK 4 FED #23</b>  <b>EDDY COUNTY, NEW MEXICO</b>
NO.	DATE	DESCRIPTION	BY	
0	7/11/12	PRELIMINARY DRAFT	JMR	
1	8/14/12	REVISED BASED ON NEW WELL PAD DIAGRAM	JMR	

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA Inc
LEASE NO.:	NM0417696
WELL NAME & NO.:	23 Lost Tank 4 Federal
SURFACE HOLE FOOTAGE:	1378' FNL & 1764' FEL
BOTTOM HOLE FOOTAGE:	680' FSL & 680' FWL
LOCATION:	Section 4, T.22 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

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