(April 2004)

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

OMB NO. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM 60355
See Attached (next page)

1a Type of Work: [X] DRILL [ ] REENTER

6. If Indian, Allotee or Tribe Name

1b. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

7. Unit or CA Agreement Name and No.

2. Name of Operator
OXY USA WTP LP
192463

8. Lease Name and Well No. (38984)
Samantha 31-6 Federal Com 1H

3a Address
P0 BOX 4294, Houston, Texas 77210

3b Phone No. (include area code)
713-366-5360

9. API Well No.
30-015-40050

4. Location of Well (*Report location clearly and in accordance with any State equirements*)*

At surface 990 FSL 450 FWL SWSW(M)

At proposed prod. zone 330 FSL 450 FWL SWSW(M) Sec 6 T19S R31E

10. Field and Pool, or Exploratory
Hackberry; Bone Spring, North

11. Sec., T., R., M., or Blk. and Survey or Area
SL
Sec.31, T18S, R31E

14. Distance in miles and direction from nearest town or post office*
18 miles SE of Loco Hills, NM

12. County or Parish: Eddy

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any)	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
330'	664.1	200

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
359'	14384 M/8768 V	ES0136

21. Elevations (Show whether DF, KDB, RT, GL, etc	22. Approximate date work will start*	23 Estimated duration
3531.6 GL	01/15/2011	45 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.

RECEIVED
DEC 21 2011
NMOCD ARTESIA

25. Signature	Name (*Printed/Typed*)	Date
	Jereme W. Robinson	09/13/2011

Title: Sr. Regulatory Analyst

Approved by (Signautre)	Name (*Printed/Typed*)	Date
/s/George MacDonell		DEC 20 2011
Title: 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 knowlingly 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)

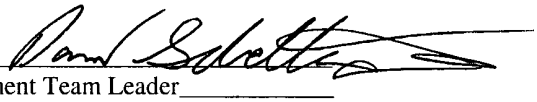
Capitan Controlled Water Basin

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 the 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 13TH day of SEPTEMBER, 2011.

Name: David Schellstede 
Position: Reservoir Management Team Leader
Address: 5 Greenway Plaza Suite 110, Houston, TX 77046
Telephone: 713-366-5013
E-mail: (optional): david_schellstede@oxy.com
Company: OXY USA Inc., OXY USA WTP LP, Occidental Permian LTD
Field Representative: (if not above signatory): Charles Wagner
Position: Operations Manager
Address: 1502 West Commerce Dr., Carlsbad, NM 88220
Telephone (if different from above): 575-628-4151
E-mail (if different from above): charles_wagner@oxy.com

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015- 40050	97056	Hackberry; Bone Spring, North

Property Code	Property Name	Well Number
38994	SAMANTHA 31-6 FEDERAL COM	1H

OGRID No.	Operator Name	Elevation
192463	OXY USA WTP LIMITED PARTNERSHIP	3531.6'

Surface Location

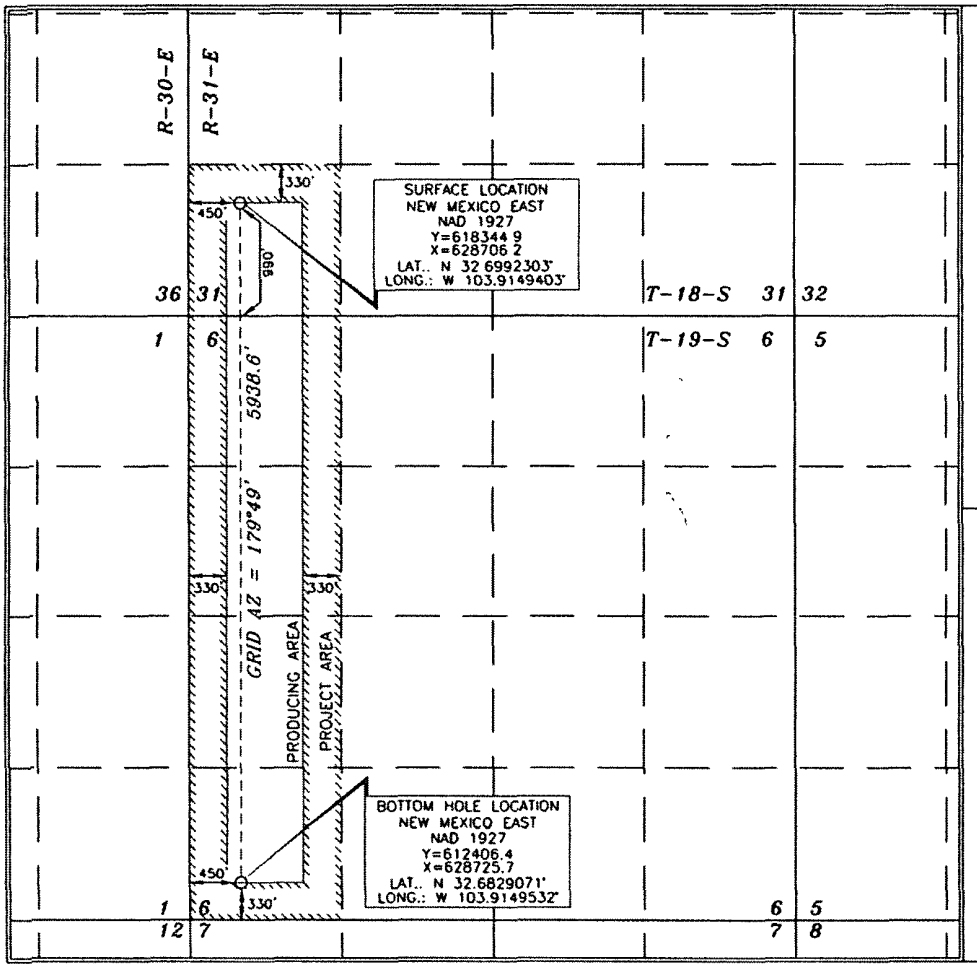
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	31	18 SOUTH	31 EAST, N.M.P.M.	(H)	990'	SOUTH	450'	WEST	EDDY

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
M	6	19 SOUTH	31 EAST, N.M.P.M.	(1)	330'	SOUTH	450'	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No
200	N		

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



OPERATOR CERTIFICATION

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

Signature — Date: 9/13/11

Printed Name: JEREME ROBINSON

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.

15079

Date of Survey: AUGUST 8, 2011

Signature and Seal of Professional Surveyor

Certificate Number: 15079 — 9/13/2011

WO# 110808WL (Rev. A) (KA)

DRILLING PROGRAM **AMENDED**

Operator Name/Number:	**OXY USA WTP LP**	**192463**
Lease Name/Number:	**Samantha 31-6 Federal Com #1H**	
Pool Name/Number:	**Benson Bone Spring**	**5200**
Surface Location:	**990 FSL 450 FWL SWSW(M) Sec 31 T18S R31E**	**Federal Lease No.NMNM0002460**
Bottom Hole Location:	**330 FSL 450 FWL SESE(M) Sec 6 T19S R31E**	**Federal Lease No.NMNM0560355**

Proposed TD: 8768' TVD 14384' TMD
SL - Lat: 32.6992302 Long: 103.9149403 X= 628706.2 Y= 618344.9 NAD - 1927
BH - Lat: 32.6829071 Long: 103.9149532 X= 628725.7 Y= 612406.4 NAD - 1927
Elevation: 3531.6' GL

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

Geological Marker	Depth	Type
a. Rustler	523'	Formation
b. Top Salt	761'	Formation
c. Bottom Salt	996'	Formation
d. Yates	2238'	Oil/Gas
e. Seven Rivers	2543'	Oil/Gas
f. Queen	3150'	Oil/Gas
g. Grayburg	3636'	Oil/Gas
h. San Andres	3815'	Oil/Gas
i. Delaware	3993'	Oil/Gas
j. Bone Spring	6048'	Oil/Gas
k. 1st Bone Spring	7650'	Oil/Gas
l. 2nd Bone Spring	8553'	Oil/Gas

Fresh Water Depth - Searched 12 sections around the proposed well on the NMOSE web-site and no water wells were found, see attached.

Casing Program:

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	~~550'~~ 590	13-3/8"	48	ST&C	H-40	New	2.69	2.33	2.16
				Hole filled with 8.6# Mud			770#	1730#	
12-1/4"	~~2200'~~ 2175	9-5/8"	40	LT&C	J-55	New	3.14	1.26	1.81
				Hole filled with 10.2# Mud			3090#	5750#	
8-1/2"	14384' M	5-1/2"	17	BT&C	N-80	New	1.65	1.29	1.7
DVT @ 6000' - POST @ 2250'				Hole filled with 9.4# Mud			6290#	7740#	

See COA

Collapse and burst loads calculated using Stress Check with anticipated loads

Cement Program

a 13-3/8" Surface — Circulate cement to surface w/ 380sx PP cmt w/ 4% Bentonite + .25#/sx Poly-E-Flake + 2% CaCl2, 13.5ppg 1.75 yield 985# 24hr CS 150% Excess followed by 200sx HES light PP cmt w/ 2% CaCl2, 14.8ppg 1.35 yield 1708# 24hr CS 150% Excess

b 9-5/8" Intermediate — Circulate cement to surface w/ 500sx HES light PP cmt w/ 5% Salt + .125#/sx Poly-E-Flake + 5#/sx Gilsonite + 1% CaCl2, 12.4ppg 1.0 yield 550# 24hs CS 105% Excess followed by 200sx PP cmt w/ 1% CaCl2, 14.8ppg 1.34 yield 2125# 24hr CS 105% Excess

See COA

c. 5-1/2" Production — Cement 1st stage w/ 2470sx Super H w/ .5% Halad-344 + .4% CFR-3 + 3#/sx Gilsonite + 3% HR-800 + .125#/sx Poly-E-Flake, 13.2ppg 1.59 yield 1400# 24hr CS 85% Excess, Calc TOC-6000'

Cement 2nd stage w/ 870sx HES Light PP w/ 5#/sx Gilsonite + .125#/sx Poly-E-Flake + 3#/sx Salt, 12.4ppg 2.09 yield 511# 24hr CS 125% Excess followed by 100sx PPC w/ 1% CaCl2, 14.8ppg 1.34 yield 1925# 24hr CS 200% Excess, Calc TOC-2250'

Cement 3rd stage w/ 340sx HES Light PP cmt w/ 3#/sx Salt, 12.4ppg 1.98 yield 511# 24hr CS 35% Excess followed by 100sx PP cmt w/ 2% CaCl2, 14.8ppg 1.35 yield 2025# 24hr CS 35% Excess, Circ Surface

6. RESSURE CONTROL EQUIPMENT

Surface: 0 – 550' None.

Intermediate: 0 - 2200' Intermediate hole will be drilled with a 13-5/8" 10M two ram stack w/ 5M annular preventer, & 10M Choke Manifold..

Production: 0 – 14384' Production hole will be drilled with a 13-5/8" 10M two ram stack w/ 5M annular preventer, & 10M Choke Manifold.

a. 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.

b. 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 system be tested at 5,000 psi WP rating.

c. Oxy also requests a variance to connect the BOP choke outlet to the choke manifold using a co-flex hose made by Contitech Rubber Industrial KFT. It is a 3" ID x 35' flexible hose rated to 10,000 psi working pressure. It has been tested to 15,000 psi and is built to API Spec 16C. Once the flex line is installed it will be tied down with safety clamps. Please see attached certifications.

d. See attached BOP & Choke manifold diagrams.

7. MUD PROGRAM:

Depth	Mud Wt ppg	Funnel Vis Sec	PV	YP	Fluid Loss	Type System
0 – 550' 590	8.4 – 9.2	38-42	2-3	2-3	NC	Fresh Water /Spud Mud
550' – 2200' 2175	9.8-10.2	-	1	1	NC	Brine Water
2200' – 8118' (vertical)	8.8-9.0	-	1	1	NC	Cut Brine
8118' - 9456' (curve)	9.0-9.4	34-36	5-8	6-10	8-10	Cut Brine Gel
9456' - 14384' (lateral)	9.0-9.4	34-36	5-8	6-10	8-10	Cut Brine Gel

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

8. 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**

9. LOGGING / CORING AND TESTING PROGRAM:

A. Mud Logger: Production Section (4860 ft - TD)

B. DST's: None

C. Open Hole Logs as follows: GR / RES / DES / in Production Section

See COA

10. POTENTIAL HAZARDS:

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

B. The bottomhole pressure is anticipated to be between 3800 psi and 3900 psi.

C. No abnormal temperatures or pressures are anticipated. **The highest anticipated pressure gradient is 0.43 psi/ft**. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

11. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 35 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

12. COMPANY PERSONNEL:

Name	Title	Office Phone	Mobile Phone
Luis Tarazona	Drilling Engineer	713-366-5771	713-628-9526
Camilo Arias	Drilling Engineer Supervisor	713-366-5953	281-468-4652
Sergio Abauat	Drilling Superintendent	713-366-5689	832-531-5636
Douglas Chester	Drilling Manager	713-366-9124	713-918-9124

Scientific Drilling

Project: Hackberry North
Site: Samantha 31-6 Federal Com #1H
Well: Samantha 31-6-Fed#1H
Wellbore: Original Wellbore
Design: Preliminary Design

OXY

PROJECT DETAILS: Hackberry North

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 Samantha 31-6 Federal Com #1H

Sec 31, T18S, R31E, NMPM
Eddy Co., New Mexico
Northing 618344 90
Easting 628706 20
Elevation 3531 60
KB DFE @ 3556 60usft (H&P-370 DFE [25ft])

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	
8118.32	0 00	0 00	8118.32	0 00	0.00	0 00	0.00	
9010 12	89.18	180 31	8691 22	-564.75	-3 02	10 00	564.74	
9455 92	89 18	180 31	8697 60	-1010 50	-5 40	0 00	1010.48	Samantha 31-6 Fed #1H EP
9515 85	89.17	179 71	8698 46	-1070 42	-5 41	1 00	1070.40	
14321.16	89 17	179.71	8767.69	-5875 17	19.18	0 00	5875 20	
14384.50	89 18	179.71	8768 60	-5938.50	19 50	0.01	5938 53	Samantha 31-6 Fed #1H PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Samantha 31-6 Fed #1H EP - plan hits target center	8697.60	-1010 50	-5 40	617334 40	628700.80	Point
Samantha 31-6 Fed #1H PBHL - plan hits target center	8768.60	-5938 50	19.50	612406 40	628725.70	Point

CASING DETAILS

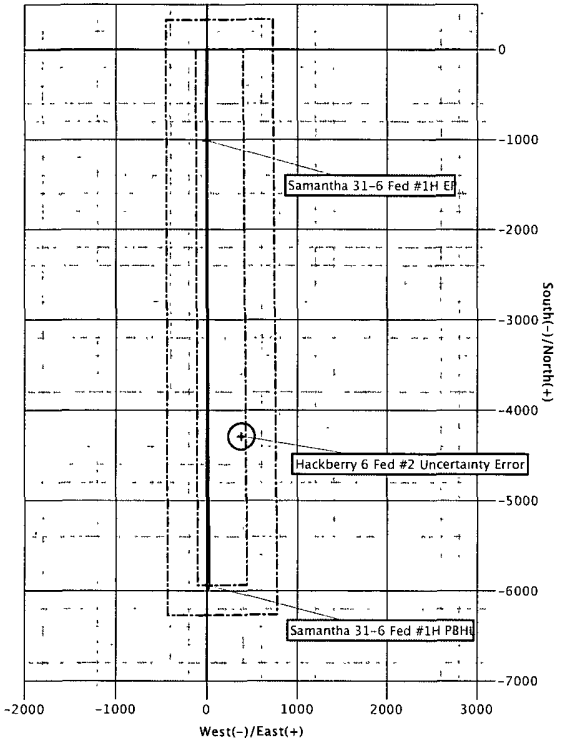
TVD	MD	Size
577 60	577 60	13-3/8
2067 60	2067.60	9-5/8
8768 60	14384 50	5-1/2

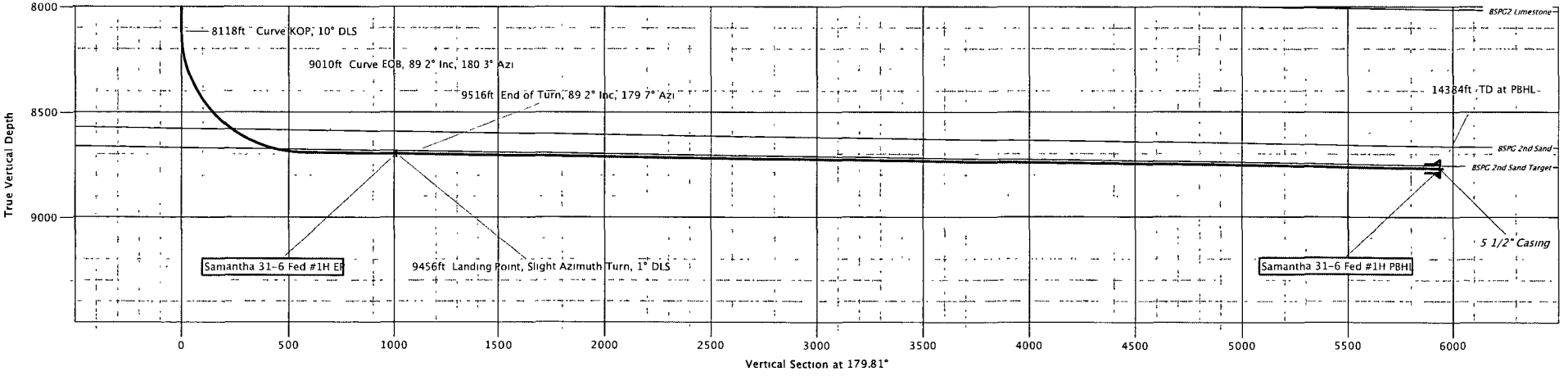
FORMATION TOP DETAILS

TVD	MD	Formation
547 60	547 60	Rustler
727 60	727 60	Salado (T. Salt)
1967 60	1967 60	Tansill (B Salt)
2567 60	2567 60	Seven Rivers
3174 60	3174 60	Queen
3839 60	3839 60	San Andres
4017 60	4017 60	Delaware - Ramsey Sand
6072 60	6072 60	Bone Spring Limestone
7292.60	7292 60	BSPG1 Limestone
7674 60	7674 60	BSPG 1st Sand
7927 60	7927 60	BSPG2 Limestone
8581 00	8656 88	BSPG 2nd Sand
8674 93	8881 13	BSPG 2nd Sand Target

Azimuths to Grid North
True North -0 23°
Magnetic North 7 49°

Magnetic Field
Strength 48809 1snT
Dip Angle 60 55°
Date 01/01/2012
Model IGRF2010





Database:	EDM-MPF	**Local Co-ordinate Reference:**	Well Samantha 31-6-Fed#1H
Company:	OXY USA WTP LP	**TVD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Project:	Hackberry North	**MD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Site:	Samantha 31-6 Federal Com #1H	**North Reference:**	Grid
Well:	Samantha 31-6-Fed#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Preliminary Design		

Project Hackberry North, New Mexico

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

Site Samantha 31-6 Federal Com #1H, Sec 31, T18S, R31E, NMPM

Site Position:		**Northing:**	618,344.90 usft	**Latitude:**	32° 41' 57.229 N
From:	Map	**Easting:**	628,706.20 usft	**Longitude:**	103° 54' 53.785 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	0 "	**Grid Convergence:**	0 23 °

Well Samantha 31-6-Fed#1H

Well Position	**+N/-S**	0 00 usft	**Northing:**	618,344 90 usft	**Latitude:**	32° 41' 57.229 N
	+E/-W	0 00 usft	**Easting:**	628,706.20 usft	**Longitude:**	103° 54' 53.785 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	3,531 60 usft

Wellbore Original Wellbore

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	01/01/12	7 71	60 55	48,809

Design Preliminary Design

Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0 00	179.81

Plan Sections

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	
8,118 32	0 00	0 00	8,118 32	0.00	0.00	0 00	0.00	0 00	0.00	
9,010.12	89.18	180 31	8,691.22	-564.75	-3 02	10 00	10.00	0 00	180.31	
9,455.92	89 18	180.31	8,697.60	-1,010.50	-5.40	0 00	0 00	0.00	0.00	Samantha 31-6 Fed #
9,515 85	89 17	179.71	8,698.46	-1,070.42	-5 41	1.00	-0 01	-1 00	-90.53	
14,321 16	89.17	179.71	8,767.69	-5,875 17	19 18	0.00	0.00	0 00	0.00	
14,384 50	89 18	179.71	8,768 60	-5,938 50	19.50	0.01	0.01	0.00	29.96	Samantha 31-6 Fed #

Database:	EDM-MPF	**Local Co-ordinate Reference:**	Well Samantha 31-6-Fed#1H
Company:	OXY USA WTP LP	**TVD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Project:	Hackberry North	**MD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Site:	Samantha 31-6 Federal Com #1H	**North Reference:**	Grid
Well:	Samantha 31-6-Fed#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Preliminary Design		

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
577 60	0.00	0.00	577.60	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8" Casing									
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
2,067 60	0.00	0.00	2,067.60	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8" Casing									
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
4,400.00	0.00	0.00	4,400.00	0 00	0.00	0 00	0.00	0 00	0 00
4,500.00	0.00	0 00	4,500.00	0.00	0.00	0 00	0.00	0.00	0.00
4,600 00	0.00	0 00	4,600 00	0.00	0.00	0.00	0 00	0.00	0.00
4,700 00	0 00	0.00	4,700.00	0 00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0 00	4,800.00	0.00	0.00	0.00	0 00	0.00	0.00
4,900 00	0.00	0.00	4,900.00	0 00	0.00	0.00	0.00	0.00	0 00

Database:	EDM-MPF	**Local Co-ordinate Reference:**	Well Samantha 31-6-Fed#1H
Company:	OXY USA WTP LP	**TVD Reference:**	DFE @ 3556 60usft (H&P-370 DFE [25ft])
Project:	Hackberry North	**MD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Site:	Samantha 31-6 Federal Com #1H	**North Reference:**	Grid
Well:	Samantha 31-6-Fed#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Preliminary Design		

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)
5,000 00	0 00	0.00	5,000 00	0 00	0.00	0.00	0.00	0.00	0.00
5,100 00	0.00	0.00	5,100 00	0 00	0.00	0.00	0.00	0.00	0.00
5,200 00	0.00	0.00	5,200 00	0.00	0.00	0.00	0.00	0.00	0.00
5,300 00	0.00	0.00	5,300.00	0.00	0.00	0.00	0 00	0 00	0.00
5,400 00	0 00	0.00	5,400 00	0 00	0.00	0.00	0.00	0.00	0.00
5,500 00	0 00	0.00	5,500 00	0 00	0.00	0.00	0.00	0.00	0 00
5,600 00	0 00	0.00	5,600 00	0 00	0 00	0.00	0.00	0.00	0 00
5,700 00	0.00	0.00	5,700.00	0 00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0 00
5,900.00	0 00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0 00
6,000.00	0 00	0.00	6,000 00	0 00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0 00	0.00	0.00	0.00	0 00	0.00
6,200 00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0 00	0.00
6,300 00	0 00	0.00	6,300.00	0 00	0.00	0.00	0.00	0.00	0.00
6,400 00	0 00	0.00	6,400 00	0 00	0.00	0.00	0.00	0.00	0 00
6,500.00	0 00	0.00	6,500.00	0 00	0.00	0.00	0.00	0.00	0 00
6,600 00	0 00	0.00	6,600 00	0 00	0.00	0.00	0.00	0.00	0.00
6,700.00	0 00	0.00	6,700 00	0 00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0 00	0.00	0.00	0.00	0.00	0 00
6,900 00	0 00	0.00	6,900 00	0 00	0.00	0.00	0.00	0.00	0 00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0 00	0.00
7,100 00	0 00	0.00	7,100 00	0.00	0.00	0 00	0 00	0 00	0 00
7,200.00	0 00	0.00	7,200 00	0 00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0 00	0.00
7,400.00	0.00	0.00	7,400.00	0 00	0.00	0.00	0 00	0 00	0.00
7,500.00	0 00	0.00	7,500.00	0.00	0.00	0.00	0.00	0 00	0.00
7,600.00	0.00	0.00	7,600.00	0 00	0.00	0.00	0.00	0 00	0.00
7,700.00	0.00	0.00	7,700 00	0.00	0.00	0 00	0 00	0.00	0 00
7,800.00	0.00	0.00	7,800 00	0 00	0.00	0.00	0.00	0.00	0 00
7,900.00	0 00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000 00	0 00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100 00	0 00	0.00	0.00	0.00	0.00	0.00
8,118 32	0.00	0.00	8,118 32	0 00	0.00	0.00	0 00	0.00	0 00
8118ft: Curve KOP, 10° DLS									
8,200 00	8.17	180 31	8,199 72	-5 81	-0.03	5.81	10.00	10.00	0.00
8,300 00	18 17	180 31	8,296 97	-28 56	-0.15	28.56	10 00	10.00	0.00
8,400.00	28.17	180 31	8,388 79	-67 86	-0.36	67 85	10.00	10.00	0.00
8,500.00	38.17	180 31	8,472.39	-122 49	-0.65	122.49	10.00	10.00	0.00
8,600.00	48.17	180.31	8,545.23	-190.82	-1.02	190 82	10.00	10.00	0.00
8,700.00	58.17	180 31	8,605.10	-270 76	-1.45	270.75	10.00	10.00	0.00
8,800 00	68 17	180.31	8,650.19	-359.88	-1.92	359 87	10.00	10 00	0.00
8,900 00	78 17	180 31	8,679.11	-455 47	-2.43	455.46	10 00	10 00	0 00
9,000.00	88 17	180 31	8,690.99	-554 63	-2.96	554.62	10.00	10 00	0 00
9,010.12	89.18	180 31	8,691.22	-564.75	-3.02	564 74	10.00	10.00	0.00
9010ft: Curve EOB, 89.2° Inc, 180.3° Azi									
9,100.00	89.18	180.31	8,692.51	-654 62	-3.50	654 60	0.00	0.00	0.00
9,200 00	89.18	180 31	8,693.94	-754.61	-4.03	754.59	0 00	0.00	0 00
9,300.00	89.18	180 31	8,695 37	-854.60	-4 57	854.58	0.00	0.00	0 00
9,400.00	89.18	180 31	8,696.80	-954.58	-5.10	954.56	0 00	0.00	0.00
9,455.92	89.18	180.31	8,697.60	-1,010.50	-5 40	1,010 48	0.00	0.00	0.00
9456ft: Landing Point, Slight Azimuth Turn, 1° DLS									
9,500.00	89.18	179 87	8,698 23	-1,054 57	-5.47	1,054.55	1 00	-0 01	-1.00
9,515.85	89.17	179 71	8,698 46	-1,070 42	-5 41	1,070.40	1 00	-0 01	-1.00

Database:	EDM-MPF	**Local Co-ordinate Reference:**	Well Samantha 31-6-Fed#1H
Company:	OXY USA WTP LP	**TVD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Project:	Hackberry North	**MD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Site:	Samantha 31-6 Federal Com #1H	**North Reference:**	Grid
Well:	Samantha 31-6-Fed#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Preliminary Design		

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)
9516ft: End of Turn, 89.2° Inc, 179.7° Azi									
9,600.00	89 17	179.71	8,699.67	-1,154 56	-4.98	1,154 54	0.00	0.00	0 00
9,700 00	89.17	179 71	8,701 11	-1,254 55	-4.46	1,254 53	0.00	0.00	0 00
9,800 00	89.17	179 71	8,702 55	-1,354.54	-3 95	1,354.52	0 00	0.00	0 00
9,900 00	89.17	179 71	8,704.00	-1,454.53	-3 44	1,454.51	0 00	0.00	0.00
10,000 00	89.17	179 71	8,705 44	-1,554.51	-2 93	1,554.50	0 00	0.00	0.00
10,100.00	89 17	179 71	8,706.88	-1,654.50	-2.42	1,654.49	0.00	0 00	0.00
10,200 00	89.17	179 71	8,708 32	-1,754.49	-1 91	1,754.47	0 00	0 00	0 00
10,300 00	89 17	179.71	8,709.76	-1,854.48	-1.40	1,854.46	0.00	0.00	0.00
10,400 00	89.17	179 71	8,711.20	-1,954 47	-0.88	1,954.45	0.00	0.00	0.00
10,500.00	89.17	179.71	8,712.64	-2,054 46	-0.37	2,054.44	0.00	0.00	0.00
10,600 00	89.17	179.71	8,714.08	-2,154 44	0.14	2,154.43	0.00	0.00	0.00
10,700.00	89 17	179.71	8,715 52	-2,254 43	0.65	2,254.42	0.00	0 00	0.00
10,800 00	89 17	179 71	8,716.96	-2,354 42	1.16	2,354 41	0.00	0.00	0 00
10,900.00	89 17	179 71	8,718.40	-2,454.41	1.67	2,454 40	0 00	0 00	0 00
11,000.00	89.17	179 71	8,719.84	-2,554 40	2.19	2,554 39	0 00	0.00	0 00
11,100.00	89 17	179 71	8,721.28	-2,654 39	2.70	2,654 38	0 00	0.00	0 00
11,200.00	89.17	179 71	8,722 72	-2,754.37	3 21	2,754.37	0 00	0.00	0.00
11,300.00	89 17	179 71	8,724.16	-2,854 36	3.72	2,854 36	0 00	0.00	0.00
11,400 00	89.17	179 71	8,725 61	-2,954.35	4 23	2,954.35	0 00	0.00	0.00
11,500.00	89.17	179.71	8,727.05	-3,054.34	4 74	3,054.34	0.00	0.00	0 00
11,600.00	89.17	179.71	8,728 49	-3,154.33	5 26	3,154.33	0.00	0.00	0.00
11,700 00	89.17	179.71	8,729.93	-3,254.32	5 77	3,254.32	0.00	0.00	0.00
11,800 00	89.17	179.71	8,731 37	-3,354 30	6 28	3,354.31	0.00	0.00	0.00
11,900.00	89.17	179.71	8,732 81	-3,454 29	6 79	3,454.30	0.00	0.00	0.00
12,000 00	89.17	179.71	8,734.25	-3,554 28	7.30	3,554 29	0.00	0.00	0.00
12,100.00	89 17	179.71	8,735.69	-3,654.27	7.81	3,654.27	0.00	0.00	0.00
12,200.00	89 17	179.71	8,737.13	-3,754.26	8.33	3,754.26	0.00	0.00	0 00
12,300 00	89 17	179.71	8,738.57	-3,854.25	8.84	3,854 25	0.00	0.00	0 00
12,400.00	89 17	179 71	8,740.01	-3,954.23	9.35	3,954 24	0.00	0.00	0 00
12,500 00	89.17	179 71	8,741.45	-4,054.22	9.86	4,054.23	0 00	0.00	0 00
12,600.00	89.17	179 71	8,742.89	-4,154.21	10.37	4,154.22	0 00	0.00	0 00
12,700 00	89.17	179 71	8,744 33	-4,254.20	10 88	4,254 21	0.00	0.00	0 00
12,800.00	89.17	179 71	8,745 78	-4,354.19	11 40	4,354.20	0 00	0.00	0 00
12,900 00	89 17	179 71	8,747.22	-4,454 18	11.91	4,454.19	0 00	0.00	0 00
13,000 00	89 17	179.71	8,748 66	-4,554 16	12 42	4,554 18	0 00	0 00	0.00
13,100 00	89 17	179.71	8,750.10	-4,654 15	12.93	4,654 17	0.00	0.00	0 00
13,200.00	89 17	179 71	8,751.54	-4,754 14	13.44	4,754 16	0.00	0.00	0 00
13,300.00	89.17	179 71	8,752.98	-4,854 13	13.95	4,854.15	0.00	0 00	0.00
13,400.00	89.17	179 71	8,754 42	-4,954.12	14.46	4,954.14	0 00	0.00	0.00
13,500.00	89.17	179 71	8,755.86	-5,054.11	14.98	5,054 13	0 00	0.00	0.00
13,600.00	89 17	179.71	8,757.30	-5,154 09	15.49	5,154.12	0 00	0.00	0.00
13,700 00	89.17	179.71	8,758 74	-5,254.08	16.00	5,254.11	0 00	0.00	0.00
13,800 00	89 17	179.71	8,760.18	-5,354.07	16 51	5,354.10	0 00	0.00	0 00
13,900 00	89 17	179.71	8,761.62	-5,454 06	17.02	5,454.08	0 00	0 00	0 00
14,000 00	89.17	179.71	8,763 06	-5,554 05	17.53	5,554.07	0 00	0 00	0.00
14,100.00	89 17	179.71	8,764.50	-5,654.03	18 05	5,654.06	0.00	0 00	0.00
14,200.00	89.17	179.71	8,765 95	-5,754 02	18.56	5,754.05	0.00	0.00	0.00
14,300 00	89 17	179 71	8,767 39	-5,854 01	19.07	5,854.04	0.00	0 00	0.00
14,321 16	89 17	179 71	8,767 69	-5,875.17	19.18	5,875.20	0.00	0.00	0.00
14,384.50	89 18	179 71	8,768 60	-5,938.50	19.50	5,938.53	0.01	0.01	0.00
14384ft: TD at PBHL									

Scientific Drilling

Scientific Drilling
Planning Report

Database:	EDM-MPF	**Local Co-ordinate Reference:**	Well Samantha 31-6-Fed#1H
Company:	OXY USA WTP LP	**TVD Reference:**	DFE @ 3556.60usft (H&P-370 DFE [25ft])
Project:	Hackberry North	**MD Reference:**	DFE @ 3556 60usft (H&P-370 DFE [25ft])
Site:	Samantha 31-6 Federal Com #1H	**North Reference:**	Grid
Well:	Samantha 31-6-Fed#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Preliminary Design		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Samantha 31-6 Fed #1H - plan hits target center - Point	0.00	0.00	8,697.60	-1,010.50	-5.40	617,334.40	628,700 80	32° 41' 47.230 N	103° 54' 53.895 W
Samantha 31-6 Fed #1H - plan hits target center - Point	0.00	0.00	8,768 60	-5,938.50	19 50	612,406 40	628,725.70	32° 40' 58.465 N	103° 54' 53.831 W

Casing Points

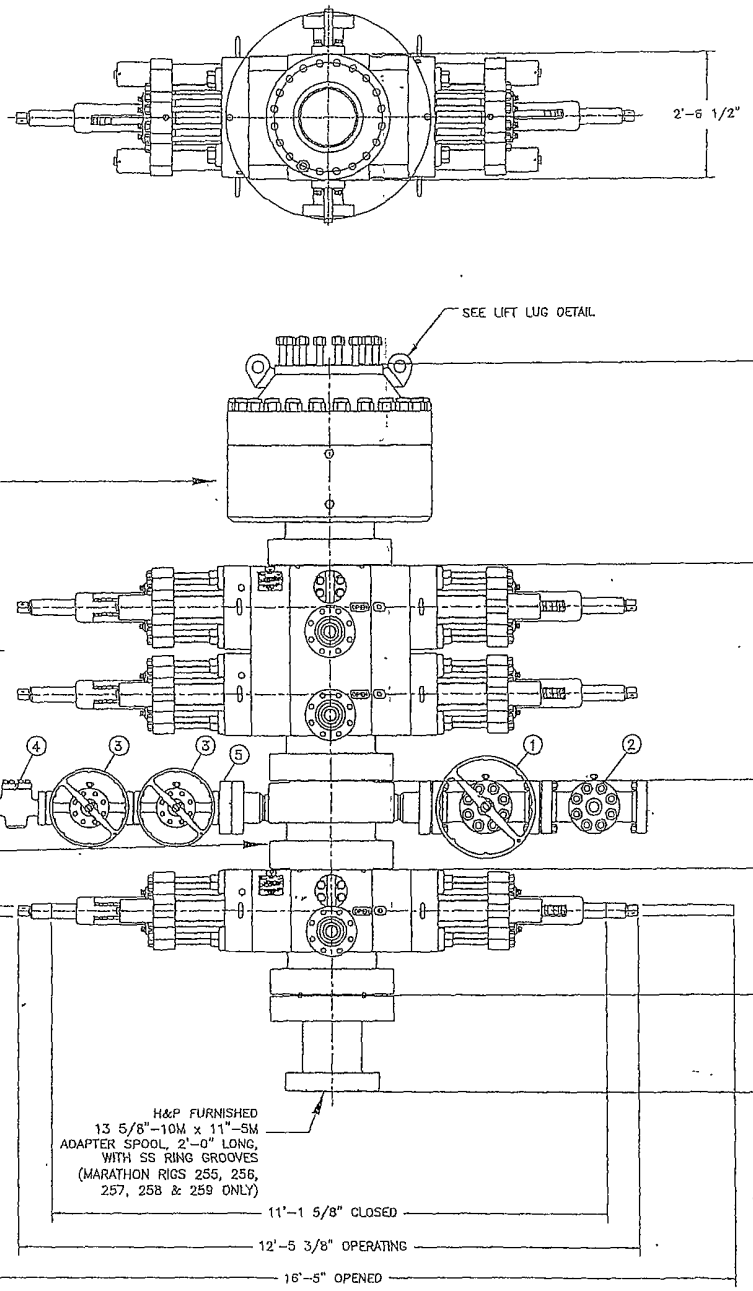
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
577.60	577.60	13 3/8" Casing	13-3/8	17-1/2
2,067 60	2,067.60	9 5/8" Casing	9-5/8	12-1/4
14,384 50	8,768.60	5 1/2" Casing	5-1/2	8-1/2

Formations

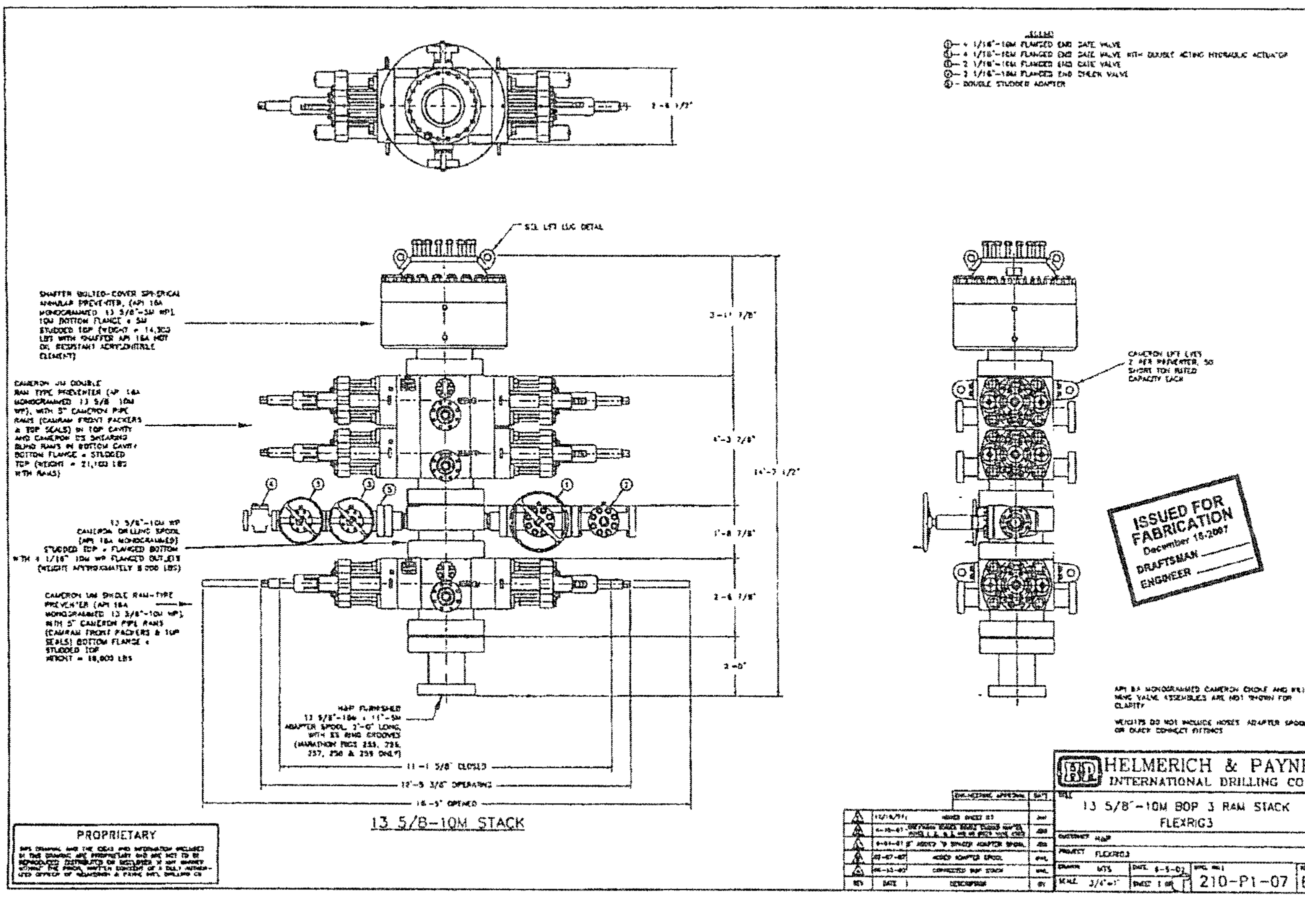
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
547.60	547 60	Rustler		0.83	179.71
727.60	727.60	Salado (T Salt)		0.83	179 71
1,967.60	1,967.60	Tansill (B. Salt)		0.83	179 71
2,567.60	2,567.60	Seven Rivers		0.83	179.71
3,174 60	3,174.60	Queen		0.83	179.71
3,839 60	3,839.60	San Andres		0.83	179.71
4,017.60	4,017.60	Delaware - Ramsey Sand		0.83	179.71
6,072 60	6,072.60	Bone Spring Limestone		0 83	179.71
7,292.60	7,292 60	BSPG1 Limestone		0 83	179.71
7,674 60	7,674.60	BSPG 1st Sand		0.83	179 71
7,927 60	7,927 60	BSPG2 Limestone		0 83	179.71
8,656 88	8,581.00	BSPG 2nd Sand		0.83	179 71
8,881.13	8,674 93	BSPG 2nd Sand Target		0.83	179 71

Plan Annotations

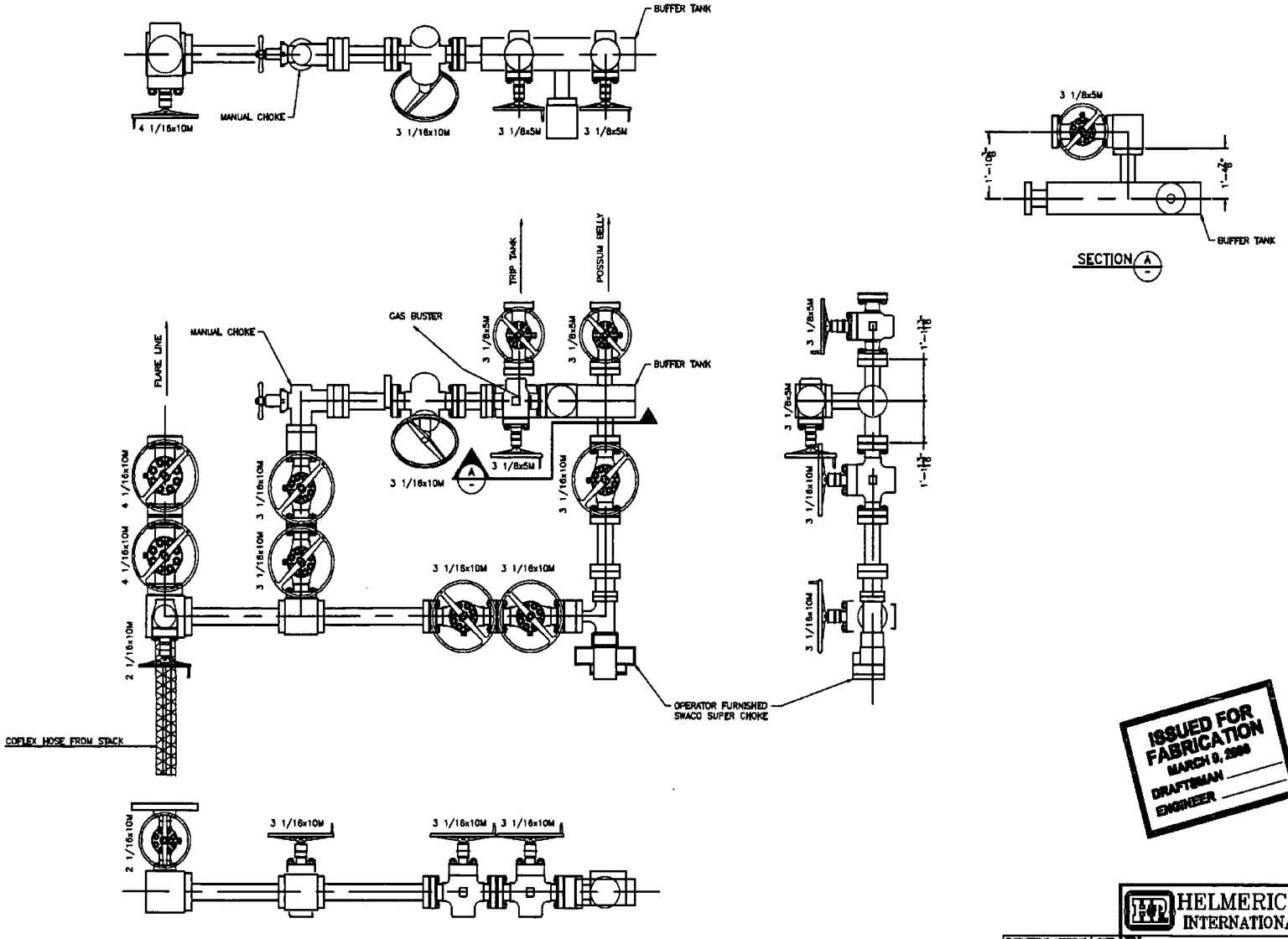
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,118.32	8,118 32	0.00	0.00	8118ft: Curve KOP, 10° DLS
9,010 12	8,691.22	-564.75	-3 02	9010ft: Curve EOB, 89 2° Inc, 180.3° Azi
9,455.92	8,697 60	-1,010 50	-5.40	9456ft. Landing Point, Slight Azimuth Turn, 1° DLS
9,515.85	8,698 46	-1,070 42	-5.41	9516ft End of Turn, 89.2° Inc, 179.7° Azi
14,384 50	8,768.60	-5,938 50	19.50	14384ft. TD at PBHL



13 5/8-10M STACK



ISSUED FOR FABRICATION
December 18-2007
DRAFTSMAN
ENGINEER
13 5/8-10M STACK
PROPRIETARY
HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.
13 5/8"-10M BOP 3 RAM STACK
FLEXRIG3
210-P1-07
E



ISSUED FOR FABRICATION
MARCH 9, 2004
DRAFTSMAN
ENGINEER

REV	DATE	DESCRIPTION	BY
1			
2			
3			
4			
5	10/15/02	ADJUST DIM TO FIELD CONFIRMED DIM	RAY

ENGINEERING APPROVAL | DATE

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

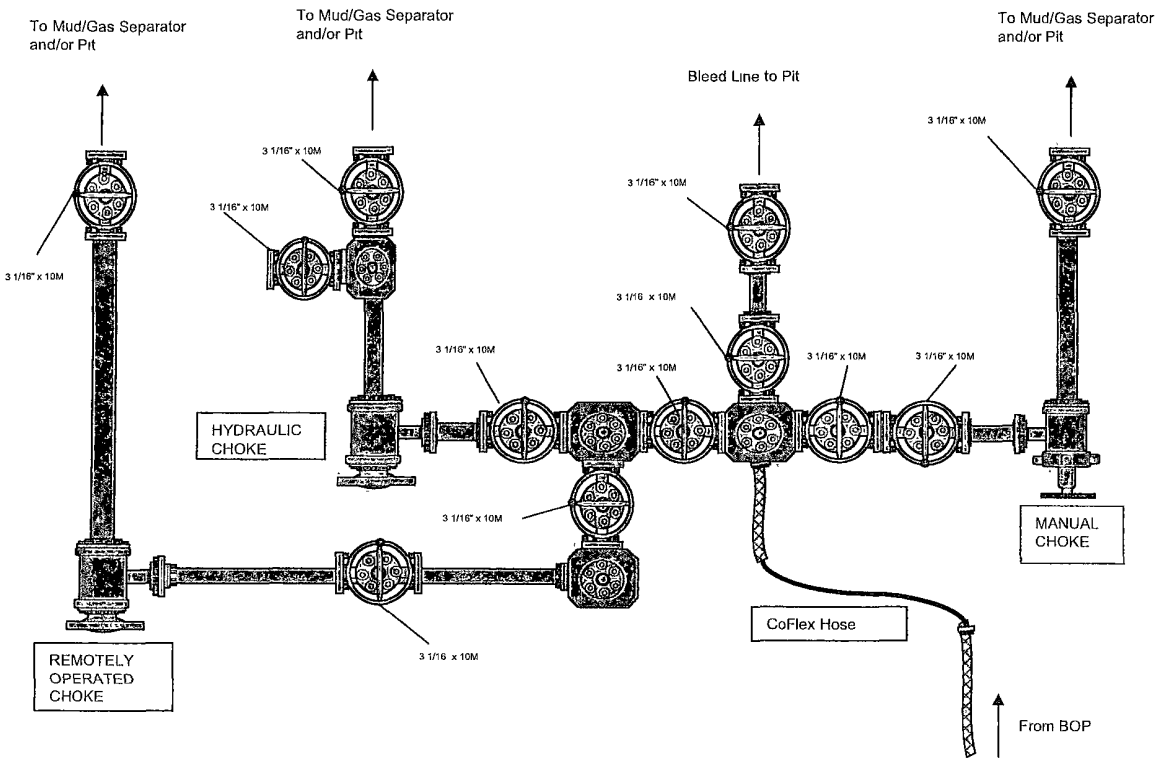
TITLE: CHOKE MANIFOLD

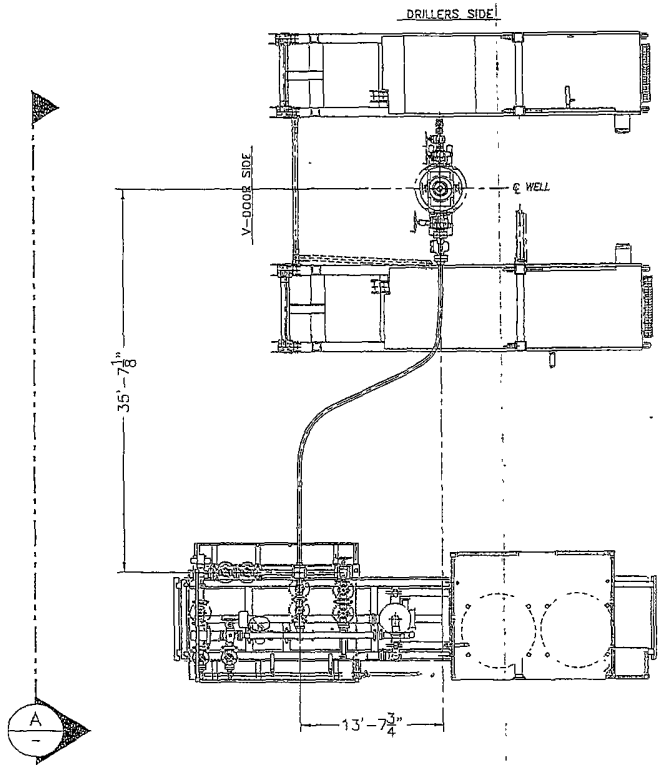
CUSTOMER: H&P

PROJECT: FLEXRIG3

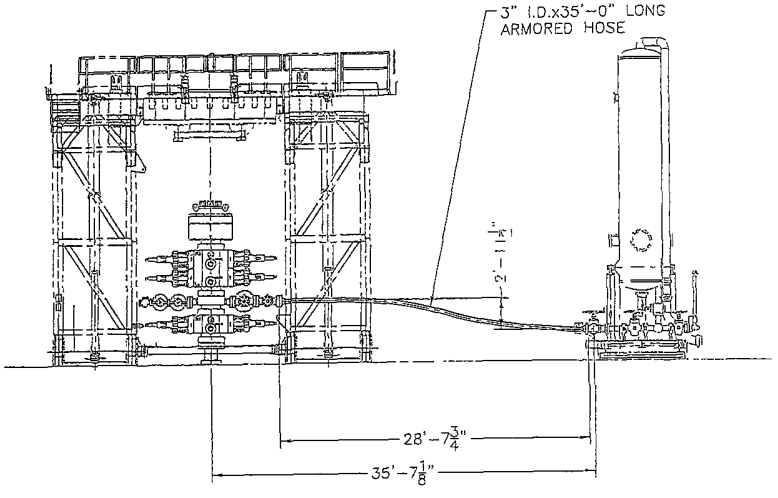
DRAWN: MTS	DATE: 2-28-02	DWG. NO.: 216-P1-05	REV: A
SCALE: 3/4"=1'	SHEET: 1 OF 1		

10M CHOKE MANIFOLD CONFIGURATION





PLAN VIEW



SECTION "A"

ISSUED FOR FABRICATION
December-19-2007
DRAFTSMAN
ENGINEER

REV	DATE	DESCRIPTION	BY
1	12/19/07	REMOVED SHEET TOTAL CALLOUT	JAV

ENGINEERING APPROVAL | DATE

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: CHOKE LINE SYSTEM
FLEXRIG3

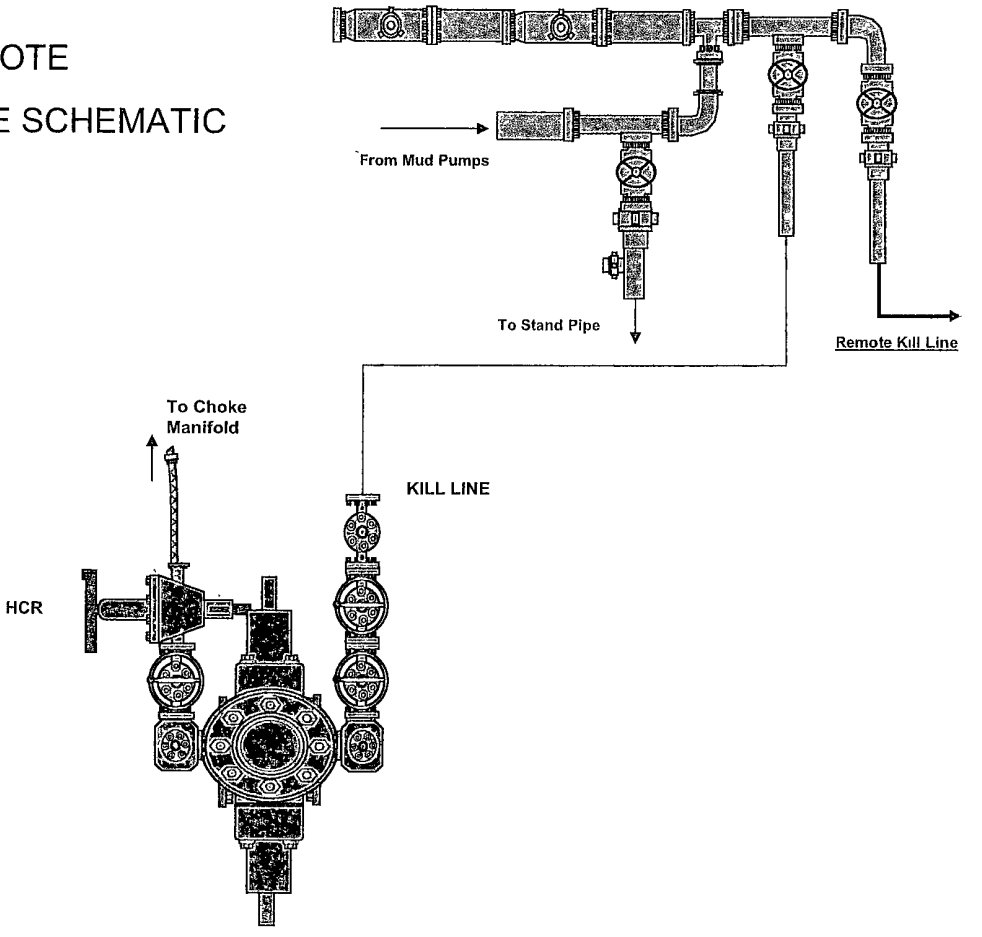
CUSTOMER:

PROJECT:

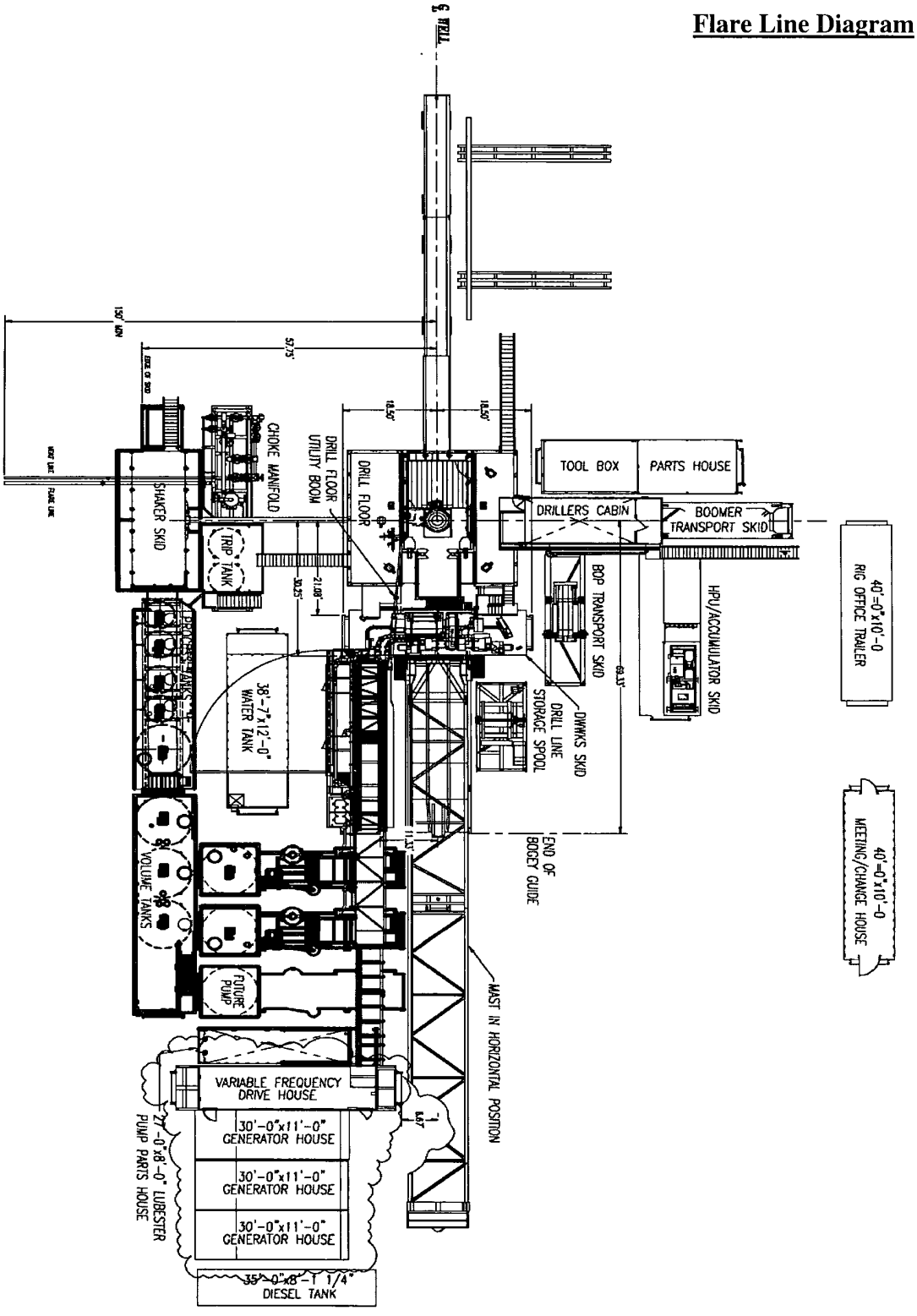
DRAWN: JBG | DATE: 4-10-07 | DWG NO: 210-P1-07 | REV: A

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

10M REMOTE
KILL LINE SCHEMATIC



Flare Line Diagram



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

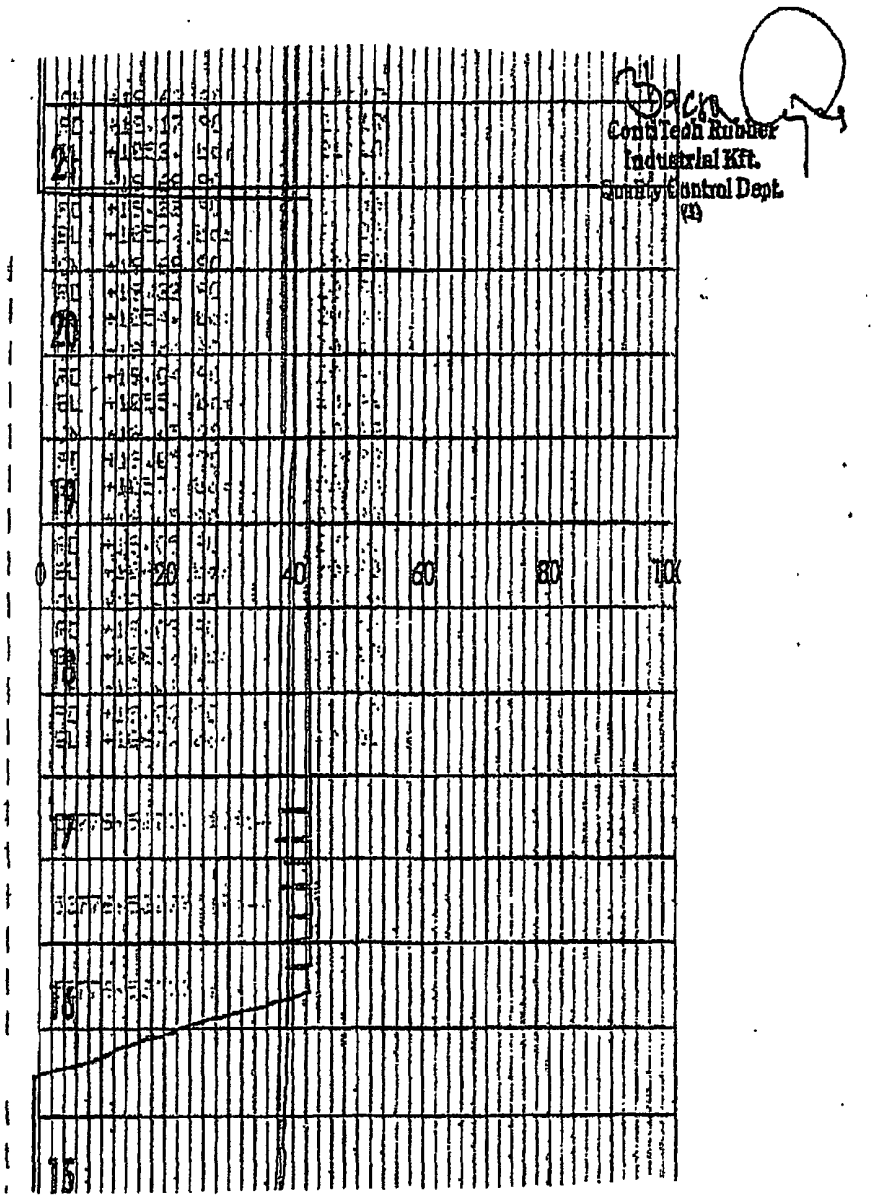
Signed : .....

ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Date: 04. April. 2008

Position: Q.C. Manager

Coflex Hose Certification



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.

05/13/08

Coflex Hose Certification

Form No 100/12

PHOENIX Beattie

Phoenix Beattie Corp
11535 Brittsoore 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...

Coflex Hose Certification

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°:	412638	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)

Coflex Hose Certification

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 sales@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

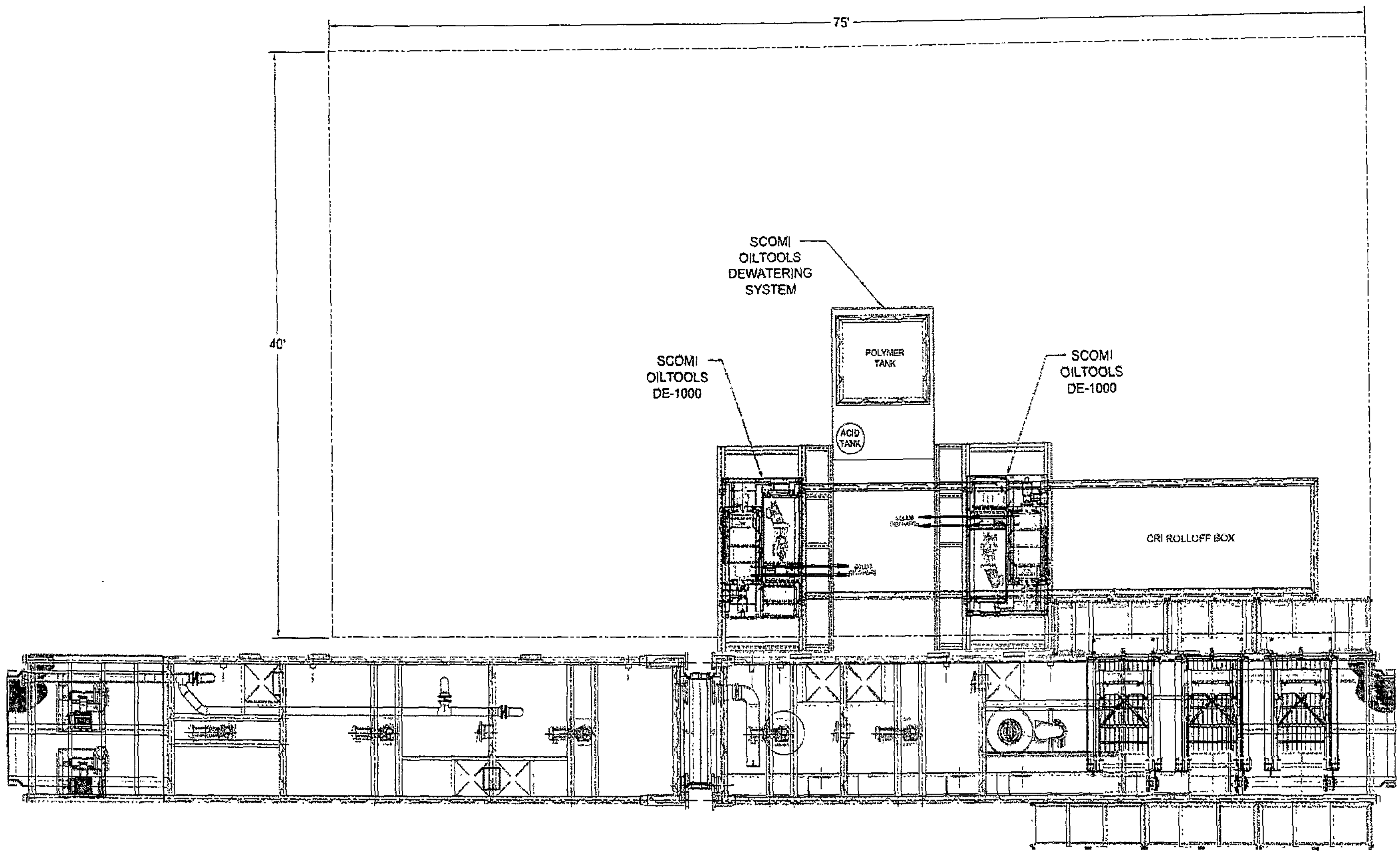
Print Name

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.

BILL OF MATERIAL

ITEM	QTY.	DESCRIPTION	LENGTH	WEIGHT



A	ADDED PAGE 2 TO SHOW P&ID	PDL			5/12/09
NO.	REVISIONS	BY	CHK'D	APP'D	DATE

1. ALL STRUCTURAL MATERIAL SHALL BE ASTM – A36.
2. ALL PIPE SCH. 40 MATERIAL SA 106 Gr. B
3. ALL FLANGES SHALL BE SORF. 150# & MATERIAL SA 105
4. ALL FITTINGS SCH. 40 MATERIAL SHALL BE SA 234 Gr. WPB.
5. TANK FABRICATION SHALL BE IN ACCORDANCE WITH API–650.

TITLE

CLOSED LOOP SYSTEM BASIC LAYOUT 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	ACAD DWG
		NTS	D

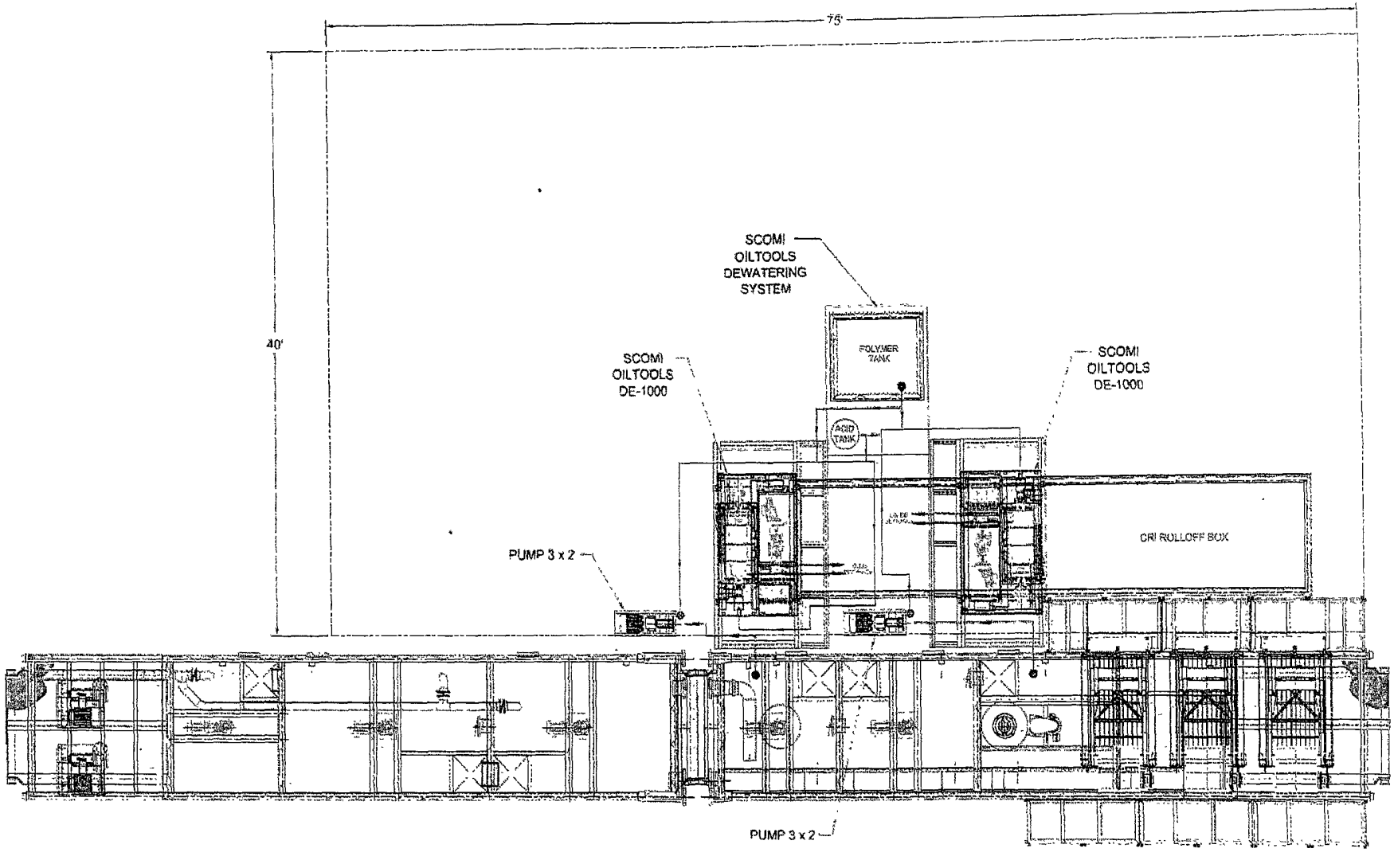
Scomi

501 N. Sam Houston Parkway East, Suite 200, Houston, Texas 77060
PHONE: (281)-260-8015, FAX: (281)-260-6960

JOB NO.	DRAWING NO.	REV
	521S-014	A

BILL OF MATERIAL

ITEM	QTY.	DESCRIPTION	PART #	MFGR



1. ALL STRUCTURAL MATERIAL SHALL BE ASTM - A36.
2. ALL PIPE SCH. 40 MATERIAL SA 106 Gr. B
3. ALL FLANGES SHALL BE 300#, 150# @ MATERIAL SA 105.
4. ALL FITTINGS SCH. 40 MATERIAL SHALL BE SA 234 Gr. WPB
5. ANY FABRICATION SHALL BE IN ACCORDANCE WITH ANSI-B31

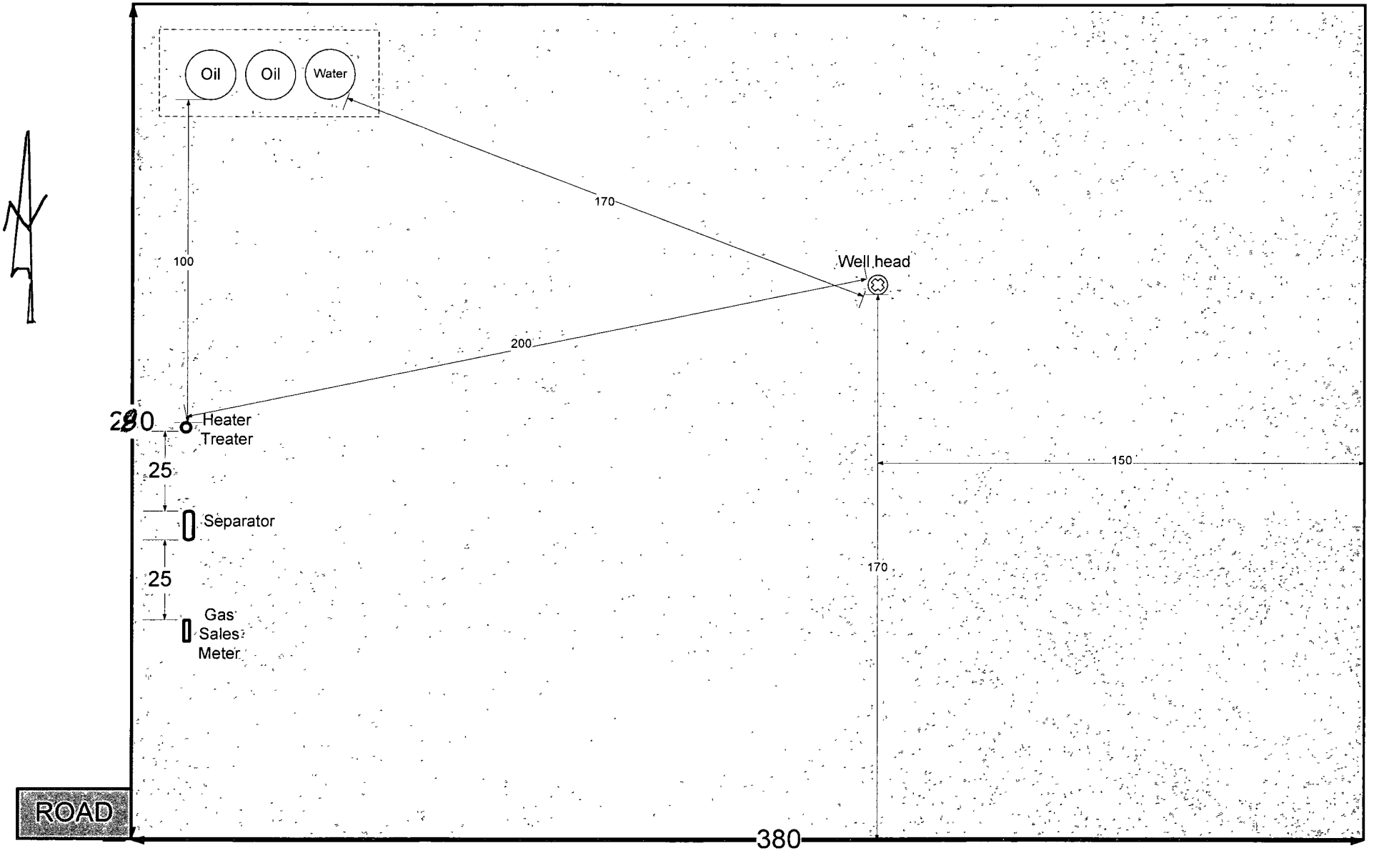
NO.	REVISIONS / ISSUED FOR	BY	CHKD	APPD	DATE
A	ENGLAS				

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

DRAWN BY	DATE	CHECKED BY	DATE
F.D.	10/23/2008		
APPROVED	DATE	SCALE	ADD'L SHEET
		NTS	D

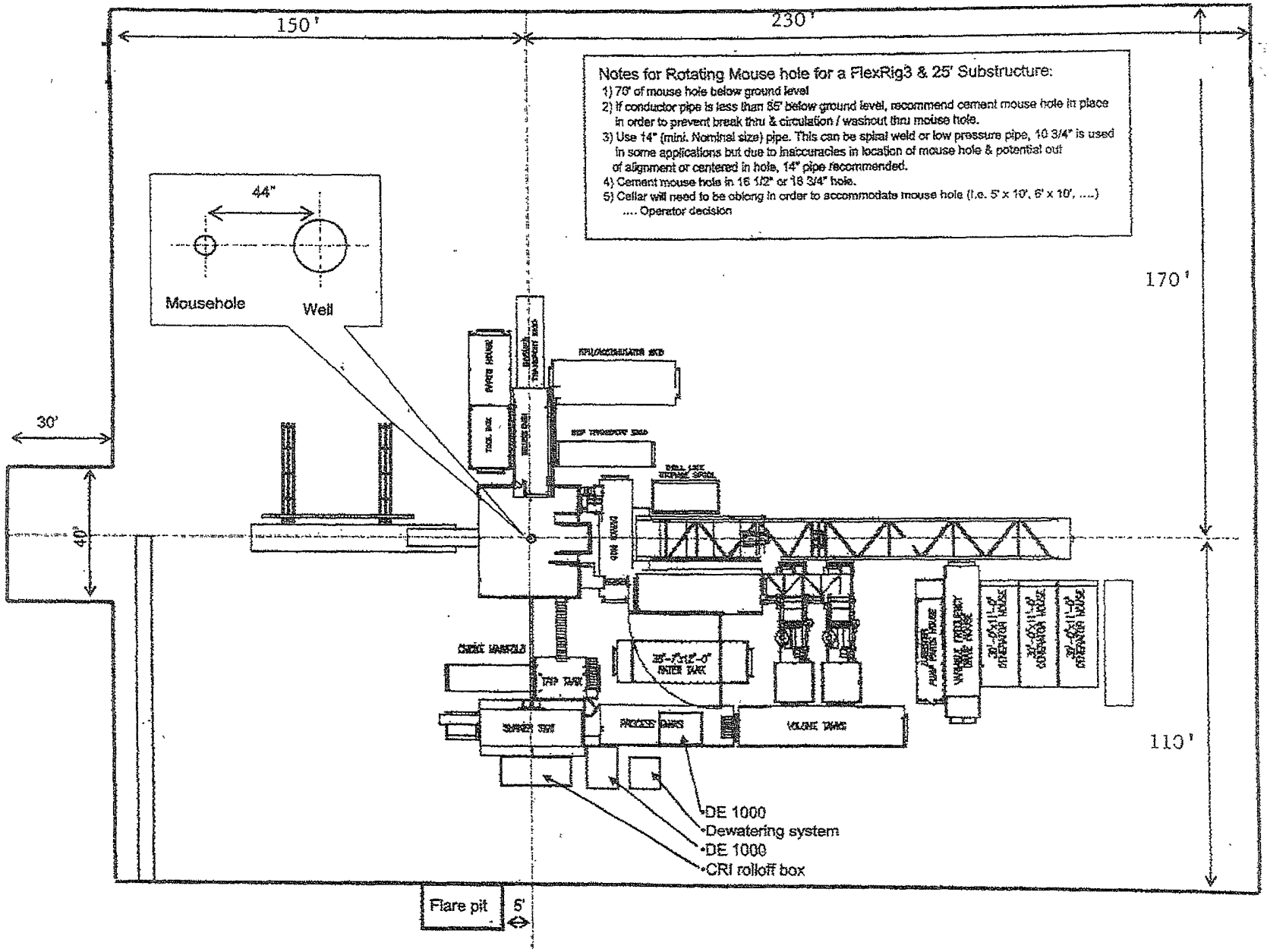
Scomi
601 N. Sam Houston Parkway East, Suite 600,
Houston, Texas 77060
PHONE: (281)-260-6000, FAX: (281)-260-6060

TITLE NO.	DRAWING NO.	REV.
	521S-014	A


Oil
Oil
Water
170
100
Well head
200
280
Heater
Treater
25
Separator
25
Gas
Sales
Meter
150
170
ROAD
380

OXY FLEX III PAD (SCOMI Closed Loop System)

Level Area-No Caliche-For Offices and Living Quarters



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

OXY USA WTP LP

"OXY Permian" Business Unit

EMERGENCY ACTION PLAN

Samantha 31-6 Federal Com #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.

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	**Richard Jackson**	**713-215-7235 office** **281-467-6383 cell**
Drilling Superintendent	**Nelson Emery**	**713-215-7357 office** **281-467-2862 cell**
Drilling Superintendent	**Sergio Abauat**	**432-366-5689 office** **432-893-3067 cell**
HES Specialist-Drilling	**Brian Bielss**	**432-685-5719 office** **432-813-6335 cell**
HES Specialist-Drilling	**Robert Lovelady**	**432-685-5630 office** **432-813-6332 cell**
Drilling Coordinator	**Drue Dunaway**	**432-685-5715 office** **432-556-3288 cell**
Drilling Coordinator	**Kevin Videtich**	**806-592-6213 office** **806-891-2000 cell**

OXY Permian Incident Reporting Phone List

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

Person	Location	Office Phone	Cell/Mobile Phone
Asset Management-Operations Areas			
OXY Permian President & General Manager: Ken Dillon	Houston	(713) 366-5140	(661) 333-9315
Operations Support Manager: Vicki Hollub	Houston	(713)-215-7332	(713) 885-6347
Asset Development Manager-Jeff Simmons	Houston	(713) 366-5124	(713) 560-8073
Public Affairs: Stacey Crews	Houston	(713) 366-5304	(713) 416-8381
Operations South-Frontier			
RMT Lead Frontier-Barry Beresik	Houston	(713) 366-5016	(713) 560-8061
RMT Lead South-Keith Brown	Houston	(713) 366-5354	(713) 264-1114
Surface Operations Team Lead-Bill Elliott	Midland	(432) 685-5845	(432) 557-6736
Well Operations Team Lead-Leamon Hood	Midland	(432) 685-5794	(432) 634-4486
Well Servicing Team Lead-Keith Sevin	Midland	(432) 685-5749	(432) 661-4121
WST Coord Frontier-Terrell Rowe	Midland	(432) 685-5821	(432) 664-8888
WST Coord South-Randy Baker	Midland	(432) 685-5913	(432) 661-3892
NM Frontier Oper Coord –Marvin McElroy	Carlsbad	(432) 652-8607	(806) 215-6750
NM-South Oper Coord-Gilbert Williams	Seminole	(432) 385-2778	(806) 215-0009
NM Frontier Oper Coord -Van Barton	Carlsbad	(575) 628-4111	(575) 706-7671
Completion Specialist-Dale Redding	Hobbs	(432) 385-3206	
HES Staff & Areas of First Contact Support			
HES Manager: John Kirby	Houston	(713) 366-5460	(281) 974-9523
Environmental Engineer, Air: Peggy Waisanen	Midland	(432) 685-5673	(432) 894-1968
Administrative Assistant: Judy Browning	Midland	(432) 685 5692	(432) 661 1048
Environmental Consultant: Dennis Newman	Houston	(713) 366-5485	(713) 560-8060
Safety Engineer: Derek Purvis	Houston	(713) 366-5932	(713) 582-1848
Pipeline Safety: Don Bales	Midland	(432) 685-5844	(432) 894-1960
HES Lead-Pete Maciula	Midland	(432) 685-5667	(432) 557-2450
HES Specialist: Eddie Gonzales	Midland	(432) 685-5929	(432) 556-6790
HES Specialist-Drilling: Robert Lovelady	Midland	(432) 685-5630	(432) 813-6332
HES Tech & Area of Responsibility			
Wasson San Andres RMT: Mark Andersen	Denver City	(806) 592-6299	(806) 215-0077
Hobbs RMT: Steve Bishop	Hobbs	(575) 397-8251	(575) 390-4784
Frontier-New Mexico: Rick Kerby	Carlsbad	(575) 887-8337	(575) 631-4972
South-New Mexico-CJ Summers	Hobbs	(575) 397-8236	(575) 390-9228
Regulatory Affairs			
Lead-Liz Bush-Ivie	Houston	(713) 366-5303	832-474-3701

Regulatory Analyst-David Stewart	Midland	(432) 685-5717	
Regulatory Analyst-Elizabeth Casbeer	Midland	(432) 685-5755	
Regulatory Analyst-Mark Stephens	Houston	(713) 366-5158	

DOT-Pipeline Response Numbers

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

OOGC HES Contacts

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

OOGC Risk Management

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

OSI

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

Gallagher Bassett

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

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

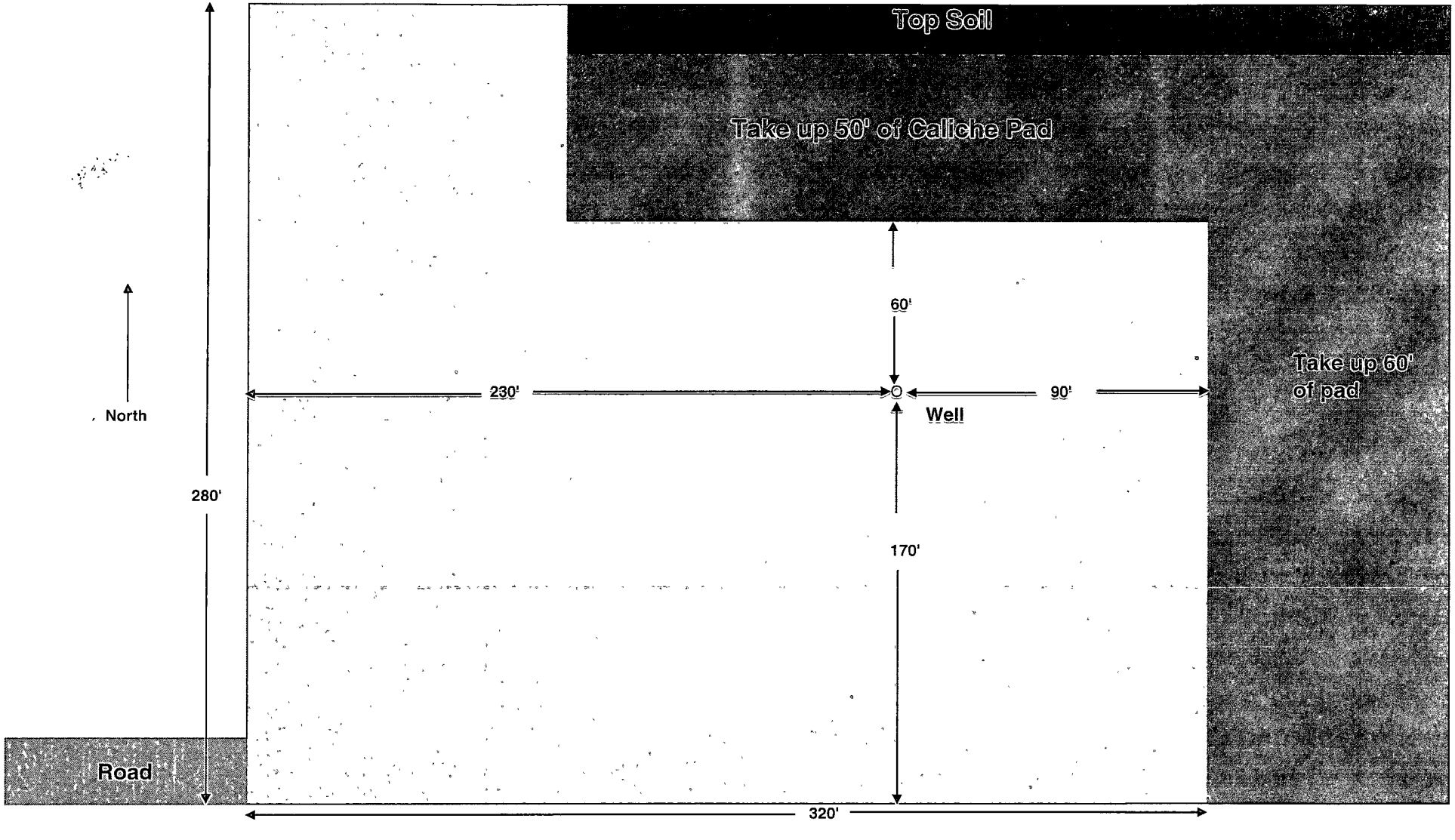
Amistad/Rosebud	Amistad/Rosebud, NM	(575) 633-9113	
Andrews Ambulance	Andrews, TX	(432) 523-5675	
Artesia Ambulance	Artesia, NM	(575) 746-2701	
Carlsbad Ambulance	Carlsbad, NM	(575) 885-2111; 911	
Clayton, NM	Clayton, NM	(575) 374-2501	
Denver City Ambulance	Denver City, TX	(806) 592-3516	
Eunice Ambulance	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	

Per Dusty
Road Moved.

H & P Flex 3 Rig
Samantha 31-6 Federal Com. #1H



If road comes into the Southwest corner of pad Oxy will take up and re-seed 60' on east side and 50' on north side of pad

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA WTP LP
LEASE NO.:	NMNM560355
WELL NAME & NO.:	Samantha 31-6 Federal Com 1H
SURFACE HOLE FOOTAGE:	990' FSL & 450' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 450' FWL Section 6, T. 19 S. R. 31 E., NMPM
LOCATION:	Section 31, T. 18 S., R. 31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 4 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call theCarlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

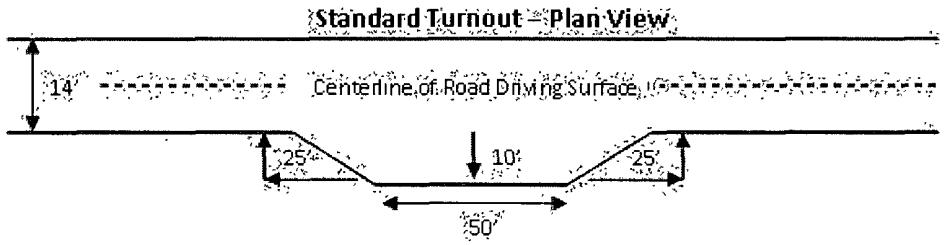
Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

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

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

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

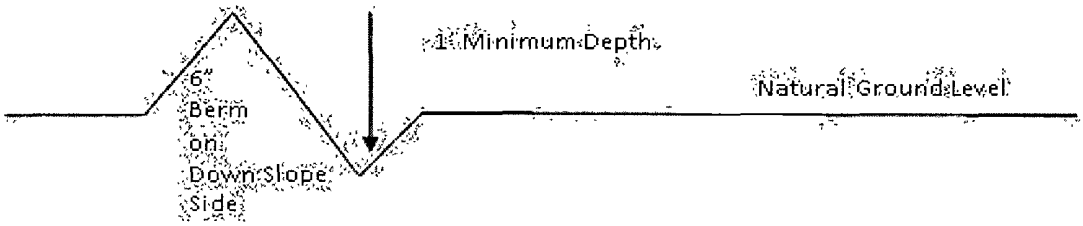
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

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

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

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

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

Fence Requirement

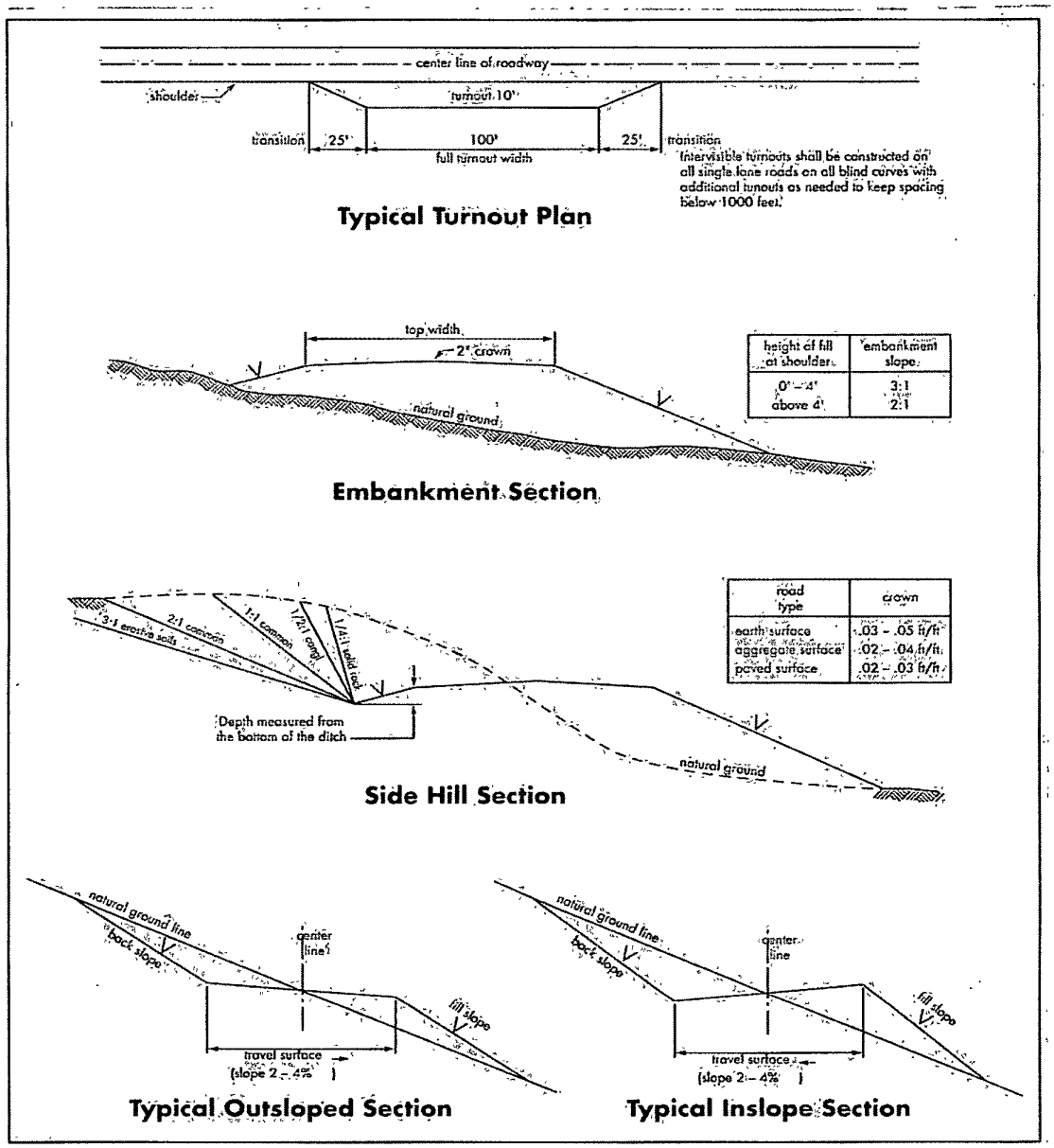
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

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

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

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Possible water flows in the Salado and Artesia group
Possible lost circulation in the Artesia group.

1. The **13-3/8** inch surface casing shall be set at approximately **590** feet **(in a competent bed below the Magenta Dolomite, a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt)** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing (**set in the Tansill formation at approximately 2175'**) is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Additional cement may be required – excess calculates to 4%.**

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

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

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

   a. First stage to DV tool:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

   b. Second stage above DV tool:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with third stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

   c. Third stage above DV tool:

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

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

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. **Variance approved to use flex line with Serial #52754, 52755, 52776, 52777, 52778, 52782 from BOP to choke manifold. Check condition of 3" flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. Anchor requirements to be onsite for review. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

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

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

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

    d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

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

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

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

B. PIPELINES (not applied for in APD)

C. ELECTRIC LINES (not applied for in APD)

IX. INTERIM RECLAMATION

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

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

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

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

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

X. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

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

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

the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

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

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

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