OCD-ARTESIA



FORM APPROVED OMB No. 1004-0137 Expires March 31, 2007 UNITED STATES Lease Serial No. DEPARTMENT OF THE INTERIOR NMNM107368 BUREAU OF LAND MANAGEMENT 6. If Indian, Allotee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7. If Unit or CA Agreement, Name and No. **V** DRILL la. Type of work: REENTER 8. Lease Name and Well No. ✓ Single Zone lb. Type of Well ✓ Oil Well Gas Well Multiple Zone Peaches 19 Federal #1H 9. API Well No. Name of Operator 16696 OXY USA Inc. 30-015-3a. Address P.O. Box 50250 Midland, TX 79710 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory 432-685-5717 Cottonwood Draw Bone Spring Location of Well (Report location clearly and in accordance with any State requirements.*) 11. Sec, T. R. M. or Blk. and Survey or Area 330 FNL 2310 FEL NWNE(B) At surface Sec 19 T25S R27E At proposed prod. zone 330 FSL 1980 FEL SWSE(O) 12 County or Parish 13 State 14 Distance in miles and direction from nearest town or post office* 9 miles SW from Malaga, TX Eddy NM Distance from proposed 17. Spacing Unit dedicated to this well 16. No of acres in lease 3301 location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) 18. Distance from proposed location* to nearest well, drilling, completed, 20. BLM/BIA Bond No. on file 19 Proposed Depth, HL-12204'M 7853'V N/A ES0136 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 3199.2' GL 02/01/2012 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. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the Operator certification SUPO shall be filed with the appropriate Forest Service Office) Such other site specific information and/or plans as may be required by the authorized officer. 25. Signature Name (Printed/Typed) David Stewart Title Regulatory Advisor david_stewart@oxy.com Approved by (Signature) Name (Printed/Typed) /s/ Don Peterson Title Office **FIELD MANAGER 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. APPROVAL FOR TWO YEARS Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

OPERATOR CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this day of Oct., 2011.

Name:	Peter Lawrence	Koo	
Position:	_Reservoir Management Tea	eam Leader	
Address:	_5 Greenway Plaza, Suite 1	110, Houston, TX 77046	
Telephone: _	713-215-7644		
E-mail: (option	onal):peter_lawrenc	ce@oxy.com	
Company: _	OXY USA Inc		
Field Repres	sentative (if not above signat	atory):Dusty Weaver	
Address (If d	lifferent from above): _P.O.	. Box 50250 Midland, TX 79710	
Telephone (i	f different from above):	432-685-5723	
E-mail (if diff	erent from above):	calvin_weaver@oxy.com	

District 1

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brozos Rd., Aztec, NM 87410

District N

1220 S. St. Francis Dr., Sonto 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

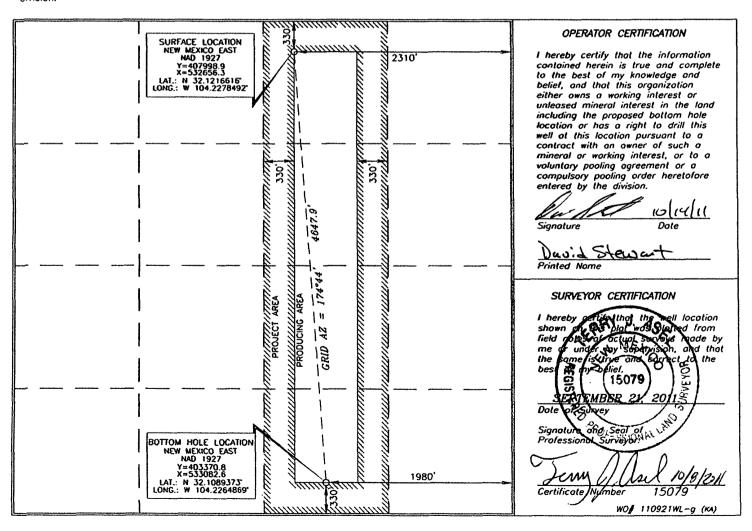
Fee Lease-3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT Pool Code Pool Name 97494 raw Bone Sprin 30-015-Well Number Property Name Property Sode 19' FEDERAL 1H **PEACHES** OCRID No. Operator Name Elevation 16696 OXY USA INC. 3199.2'

Surface Location UL or lot no. Section Lot Idn Feet from the North/South line | Feet Irom the East/West line Township Ronge County В 19 25 SOUTH 27 EAST, N.M.P.M. 330 NORTH 2310 **EAST EDDY** Bottom Hole Location If Different From Surface UL or lot no. Section Township East/West line Ronge Lot Idn Feet from the North/South line Feet from the County 25 SOUTH 27 EAST, N.M.P.M. 330 SOUTH 1980 **EAST EDDY Dedicated Acres** Joint or Infill Consolidation Code Order No. 160

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.



DRILLING PROGRAM

AMENDED

Operator Name/Number:

OXY USA Inc.

Lease Name/Number:

Peaches 19 Federal #1H

Federal Lease No. NMNM107368

Pool Name/Number:

Cottonwood Draw Bone Spring

TVD

16696 97494

Surface Location:

330 FNL 2310 FEL NWNE(B) Sec 19 T25S R27E

Bottom Hole Location:

330 FSL 1980 FEL SWSE(O) Sec 19 T25S R27E

Proposed TD:

Pilot Hole 8756' **Horizontal Lateral** 7853' 12204' TMD

SL - Lat: 32.1216616 BH - Lat: 32.1089373 Long: 104.2278492 Long: 104.2264869 X = 532656.3

Y = 407998.9

NAD - 1927

Elevation:

X = 533082.6

Y = 403370.8

NAD - 1927

끜

3199.2' GL

1. Geologic Name of Surface Formation:

a. Permian

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

Geological Marker	<u>Depth</u>	<u>Type</u>
a. Fresh Water	245-350'	Water
b. Rustler Anhydrite	430'	Formation
c. Top Salt	996'	Formation
d. Bottom Salt	1593'	Formation
e. Delaware	1825'	Oil/Gas
f. Bell Canyon	2034'	Oil/Gas
g. Cherry Canyon	2896'	Oil/Gas
h. Brushy Canyon	3912'	Oil/Gas
i. Bone Spring	6182'	Oil/Gas
j. 1st Bone Spring 🖱	6665'	Oil/Gas
k. 2nd Bone Spring	7315'	Oil/Gas
I. 3rd Bone Spring	8495'	Oil/Gas
m. Wolfcamp	8730'	Oil/Gas

3. Casing Program:

<u>Hole</u> <u>Size</u>	<u>Interval</u>	OD Csg	Weight	<u>Collar</u>	<u>Grade</u>	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	950'	13-3/8"	48	ST&C	H-40	New	2.25	2.68	2.6
				Hole filled v	vith 8.4# M u	ıdbı	770#	1730#	,
12-1/4"	1925'	9-5/8"	40	LT&C	J-55	New	6.9	1.28	3.1
				Hole filled v	vith 10# Mu	d_	2570#	3950#	
8-1/2"	12204' M	5-1/2"	17	LT&C	N-80	New	1.81	1.54	1.84
DVT (@ 6000' - POS	T @ 1975'		Hole filled v	vith 9.2# Mu	ıdbı	6280#	7740#	

Collapse and burst loads calculated using Stress Check with anticipated loads

4. Cement Program

a. 13-3/8" Surface Circulate cement to surface w/ 1010sx PP cmt w/ 4% Bentonite + .125#/sx Poly-E-Flake + 2% CaCl2, 14.8ppg 1.35 yield 1708# 24hr CS 100% Excess.

Intermediate Circulate cement to surface w/ 420sx HES light PP cmt w/ 5% Salt + .125#/sx b. 9-5/8"

Poly-E-Flake + 5#/sx Gilsonite, 12.4ppg 2.13 yield 511# 24hs CS 105% Excess followed

by 200sx PP cmt w/ 1% CaCl2, 14.8ppg 1.34 yield 2125# 24hr CS 105% Excess

5-1/2"

Production

Cement 1st stage w/ 1650sx Super H w/ .5% Halad-344 + .4% CFR-3 + 3#/sx Gilsonite + .3% HR-800 + .125#/sx Poly-E-Flake, 13.2ppg 1.61 yield 1372# 24hr CS 35% Excess, Calc TOC-6000'

Cement 2nd stage w/ 880sx HES Light PP w/ 5#/sx Gilsonite + .125#/sx Poly-E-Flake + 3#/sx Salt, 12.4ppg 2.09 yield 511# 24hr CS 35% Excess followed by 200sx PPC w/ 1% CaCl2, 14.8ppg 1.35 yield 1925# 24hr CS 35% Excess, Calc TOC-1975'
Cement 3rd stage w/ 160sx HES Light PP cmt w/ 3#/sx Salt, 12.4ppg 1.98 yield 511# 24hr CS 35% Excess followed by 150sx PP cmt w/ 2% CaCl2, 14.8ppg 1.35 yield 2025# 24hr CS 35% Excess, Circ Surface

Cot

d. Pilot Hole Plug

Cement w/ 205sx CL H cmt w/ 50/50 Poz + .5% CFR-3, 14.4ppg 1.22 yield 1850# 24hr CS 35% excess from 8756-8080' followed by 220sx CL H cmt w/ 50/50 Poz + .5% CFR-3, 14.4ppg 1.22 yield 1720# 24hr CS 35% Excess from 8080-7580' followed by 275sx PPC w/ 3% KCl + .75% CFR-3 + .2% HR-601, 17.5ppg .97 yield 4594# 24hr CS 35% Excess from 7580-7080'.

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

5. Pressure Control Equipment:

Surface None

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

The 13 5/8" 10M blowout prevention equipment will be installed and operational after setting the 13 3/8" surface casing and the 5K conventional wellhead. Respectfully request that BOPE be treated as a 5M stack and tested as such.

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

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

OXY requests that the entire system be tested as a 5000psi WP rating.

OXY also requests a variance to connect the BOP outlet to the choke manifold using a co-flex hose that <u>is</u> manufactured by Contitech Rubber Industrial KFT. It is a 3" ID X 35' flexible hose rated to 10000psi working pressure. It has been tested to 15000psi and is built to API Spec 16C. Once the flex line is installed, it will be tied down with safety clamps,-see attached for certifications.

6. Proposed Mud Circulation System

<u>Depth</u>	Mud Wt.	<u>Visc</u>	Fluid	Type System
·	ppq	sec	Loss	
0 - 950'	8.4-9.2	38-42	NC ·	Fresh Water/Spud Mud
950 - 1925"	9.8-10.2	28-29	NC	Brine Water
1925 - 7000'	8.6-8.8	28-29	NĊ	Fresh Water
7000 - 8756' (Pilot)	9.0-9.8	34-36	8-10	Cut Brine Gel/LSND
7080 - 12204'(Curve/Lateral)	9.0-9.4	34-36	8-10	Cut Brine Gel/LSND

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

7. Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the BLM.

8. Logging, Coring and Testing Program:

- a. Drill stem tests are not anticipated but if done will be based on geological sample shows.
- b. The open hole electrical logging program will consist of GR from kick-off point to TD. See Co. A
- c. No coring program is planned but if done will be sidewall rotary cores.
- d. Mud logging program will be initiated from 4000' to TD.

9. Potential Hazards:

No abnormal pressures, temperatures or H₂S gas are expected. The highest anticipated pressure gradient would be .54psi/ft. If H₂S is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

10. Anticipated Starting Date and Duration of Operations:

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



Drilling Services

Proposal



OCCIDENTAL PERMIAN LTD.

PEACHES 19 FED #1H

EDDY CO., NM

WELL FILE: PILOT PLAN 1

LATERAL PLAN 2

OCTOBER 10, 2011

Weatherford International, Ltd.

P.O. Box 61028 Midland, TX 79711 USA +1.432.561.8892 Main +1.432.561.8895 Fax www.weatherford.com



750

2250

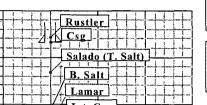
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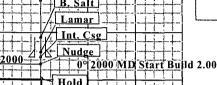
Peaches 19 Fed #1H Eddy Co, New Mexico

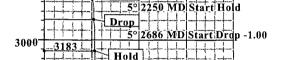
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	133.81	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	133.81	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2250.00	5.00	133.81	2249.68	-7.55	7.87	2.00	133.81	8.24	
4	2686.09	5.00	133.81	2684.11	-33.86	35.30	0.00	0.00	36.95	
5	3186.09	0.00	133.81	3183.48	-48.95	51.03	1.00	180.00	53.42	
6	8758.61	0.00	133.81	8756.00	-48.95	51.03	0.00	0.00	53.42	Pbhl Pilot

No.	TVDPath	MDPath	Formation
1	430.00	430.00	Rustler
2	996.00	996.00	Salado (T. Salt)
3	1593.00	1593.00	B. Salt
4	1825.00	1825.00	Lamar
5	6182.00	6184.61	T. Bone Spring Limestone
6	6665.00	6667.61	T. BSPG 1st Sand
7	7055.00	7057.61	T. BSPG2 Limestone
8	7315.00	7317.61	T. BSPG 2nd Sand
9	7870.00	7872.61	Harkey Sand Target Depth
10	8495.00	8497.61	T. BSPG 3rd Sand
11	8730.00	8732.61	T. Wolfcamp

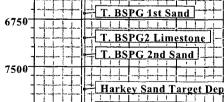
\$	KB ELEV: 3223.2 GL ELEV: 3199.2	
+	Rustler	



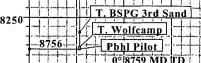








T. Bone Spring Limeston



-750	0	750	1500	2250
Vertical	Section	at 174.7	4° [1500ft	/in]

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
1H	0.00	0.00	407998.90	532656.30	32°07'17.981N	104°13'40.257W	N/A

TARGET DETAILS

			IARGE	IDEIAILS			
Name	TVD	+N/-S	÷E/-W	Northing	Easting	Shape	
Pbhl Pilot	8756.00	-48.95	51.03	407949.95	532707.33	Circle (Radius: 50)	

SITE DETAILS

Peaches 19 Fed #1H

Site Centre Northing: 407998.90 Easting: 532656.30

Ground Level: 3199.20 Positional Uncertainty: 0.00 Convergence: 0.06

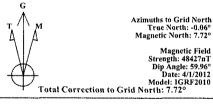
FIELD DETAILS

Eddy Co, NM (Nad 27)

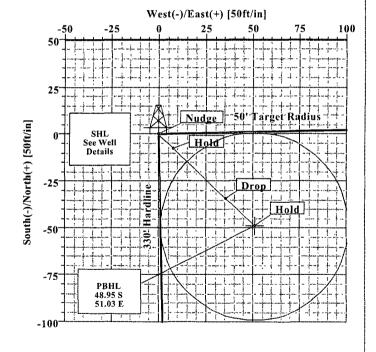
Geodetic System: US State Plane Coordinate System 1927 Ellipsoid: NAD27 (Clarke 1866) Zone: New Mexico, Eastern Zone

Magnetic Model: IGRF2010

System Datum: Mean Sea Level Local North: Grid North



Weatherford



LEGEND Plan #1

Plan: Plan #1 (1H/Pilot)

Created By: Keith Noack

Date: 10/11/2011





Company: Occidental Permian Ltd. Field: Eddy Co. NM (Nad 27) Eddy Co NM (Nad.27)
Site: Peaches 19 Fed #1H
Well: 1H
Wellis Pilot

Yes

Date: 10/11/2011 Time: 09:29:22 Co-ordinate(NE) Reference:

Well: 1H; Grid North SITE 3223.2

Page:

Vertical (TVD) Reference: Section (VS) Reference: Survey Calculation Method:

Well (0.00N,0.00E 174.74Azi) Minimum Curvature **Db:** Sybase

Date Composed:

Version: Tied-to:

10/10/2011

From Surface

Field:

Principal:

Eddy Co, NM (Nad 27)

Map System: US State Plane Coordinate System 1927

Geo Datum: NAD27 (Clarke 1866) Sys Datum: Mean Sea Level

Map Zone:

New Mexico, Eastern Zone

Coordinate System: Well Centre Geomagnetic Model: IGRF2010

Site:

Peaches 19 Fed #1H

Site Position: From: Map **Position Uncertainty:** Northing: Easting:

407998.90 ft 532656 30 ft Latitude: Longitude:

32 7 17.981 N 104 13 40.257 W

North Reference:

Grid

Ground Level:

0.00 ft 3199.20 ft

Grid Convergence:

0.06 deg

Well: Well Position:

Wellpath:

Field Strength:

Vertical Section:

Pilot

+N/-S+E/-W 0.00 ft Northing: 0.00 ft Easting:

407998.90 ft 532656.30 ft Slot Name: Latitude: Longitude:

32 7 17.981 N 104 13 40.257 W

Position Uncertainty: 0.00 ft

Current Datum: Magnetic Data:

SITE 4/1/2012

ft

0.00

48427 nT Depth From (TVD)

Height 3223.20 ft

+N/-S ft 0.00

Drilled From: Lateral Tie-on Depth:

Mean Sea Level **Above System Datum:** Declination: 7.78 deg

Mag Dip Angle: +E/-W

59.96 deg Direction

0.00 ft

ft deg 0.00 174.74

Plan Section Information

MD ft	Incl deg	Azim deg	TVD	+N/-Š	+E/-W	DLS deg/100ft	Build deg/100ft	Turn deg/100f	∛√TFO deg	Target
0.00	0.00	133.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	133.81	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2250.00	5.00	133.81	2249.68	-7.55	7 87	2.00	2.00	0.00	133.81	
2686 09	5.00	133.81	2684.11	-33.86	35.30	0.00	0.00	0.00	0.00	
3186.09	0.00	133.81	3183.48	-48.95	51.03	1.00	-1.00	0.00	180.00	
8758.61	0.00	133.81	8756.00	-48.95	51.03	0.00	0.00	0 00	0 00	Pbhl Pilot

Survey

Survey										
MD.	Incl	Azim	TVD	N/S	EW	VS	DLS 🔻	MapN	MapE	Comment
() () () () () () () () () ()	andeg:	deg	深度的 1. 数据	in the state of th	Influence in the contract of t	ft d	leg/100ft	指广新transaction	Waltzin	
0.	0.00	133.81	0.00	0.00	0.00	0.00	0.00	407998.90	532656 30	
100.	0.00	133.81	100.00	0.00	0.00	0.00	0.00	407998.90	532656.30	}
200.	0.00	133.81	200.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
300.	0.00	133.81	300.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
400.	00.0	133.81	400.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
430.		133.81	430.00	0.00	0.00	0.00	0.00	407998.90	532656.30	Rustler
500.		133.81	500.00	0.00	0.00	0.00	0.00	407998.90	532656.30	Csg
600.		133.81	600.00	0.00	0.00	0.00	0.00	407998.90	532656.30	}
700.	0.00	133.81	700 00	0.00	0.00	0.00	0.00	407998.90	532656.30	
800.	0.00	133.81	800.00	0.00	0.00	0.00	0.00	407998.90	532656.30	Ì
										}
900.	0.00	133.81	900.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
996.	0.00	133.81	996.00	0.00	0.00	0.00	0.00	407998.90	532656.30	Salado (T. Salt)
1000.	00.0	133.81	1000.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
1100.	0.00	133.81	1100.00	0.00	0.00	0 00	0.00	407998.90	532656.30	
. 1200.	0.00	133.81	1200 00	0.00	0.00	0.00	0.00	407998.90	532656.30	
Ì										İ





Date: 10/11/2011 Time: 09:29:22' Page: 2:
Co-ordinate(NE) Reference: Well: 1H; Grid North
Vertical (TVD) Reference: SITE 3223:2
Section (VS) Reference: Well (0.00N 0.00E, 174, 74Azi);
Survey Calculation Method: Minimum Curvature, Db; Sybase

Company: Occidental Permian Ltd., Field: Eddy Co. NM (Nad 27) Site: Peaches 19:Fed #1H Well: 1H Wellpath: Pilot

Survey										
MD ft	Incl deg	Azim deg.	TVD ft	N/S	E/W	ft.	DLS eg/100ft	MapN ft	MapE Z	Comment
1300.00	0.00	133.81	1300.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
1400.00	0.00	133.81	1400.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
1500.00	0.00	133.81	1500.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
1593,00	0.00	133.81	1593.00	0.00	0.00	0.00	0.00	407998.90	532656.30	B. Salt
1600.00	0.00	133.81	1600.00	0.00	0.00	0.00	0 00	407998.90	532656.30	
							,			
1700.00	0 00	133.81	1700.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
1800.00	0.00	133.81	1800.00	0.00	0.00	0.00	0.00	407998.90	532656.30	
1825.00	0.00	133.81	1825.00	0.00	0.00	0.00	0.00	407998.90	532656.30	Lamar
1900.00	0.00	133.81	1900.00	0.00	0.00	0.00	0.00	407998.90	532656.30	Int. Csg
2000.00	0.00	133.81	2000.00	0.00	0.00	0.00	0.00	407998.90	532656.30	Nudge
2100.00	2 00	133.81	2099.98	-1.21	1.26	1.32	2.00	407997 69	532657.56	Ì
2200 00	4.00	133.81	2199.84	-4.83	5.04	5.27	2.00	407994.07	532661.34	
2250.00	5.00	133.81	2249.68	-7.55	7.87	8.24	2.00	407991.35	532664.17	Hold
2300.00	5.00	133.81	2299.49	-10.56	11.01	11.53	0.00	407988 34	532667.31	
2400.00	5.00	133.81	2399.11	-16.60	17.30	18.11	0.00	407982.30	532673.60	
2500.00		133.81	2498.73	-22.63	23 59	24.70	0.00	407976.27	532679.89	
2600.00	5.00	133.81	2598.35	-28.66	29.88	31.28	0.00	407970.24	532686.18	}
2686.09	5.00	133.81	2684.11	-33.86	35.30	36.95	0.00	407965.04	532691.60	Drop
2700.00	4.86	133.81	2697.97	-34 68	36.16	37.85	1.00	407964.22	532692.46	
2800.00	3.86	133.81	2797.68	-39.95	41.65	43.60	1.00	407958.95	532697.95	
2900.00	2.86	133.81	2897.51	-44.01	45 88	48.03	1.00	407954.89	532702.18	
3000.00	1.86	133.81	2997.42	-46.86	48.85	51.14	1.00	407952.04	532705.15	
3100.00	0.86	133.81	3097.39	-48.50	50.56	52.93	1 00	407950.40	532706.86	
3186.09	0.00	133.81	3183.48	-48.95	51.03	53.42	1.00	407949.95	532707.33	Hold
3200.00	0.00	133.81	3197.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
3300.00	0.00	133.81	3297.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
3400.00	0.00	133.81	3397.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
3500.00	0.00	133.81	3497.39	-48.95	51.03	53.42	0.00	407949.95	532707 33	
3600.00	0.00	133.81	3597.39	-48.95	51.03	53.42	0.00	407949.95	532707,33	
3700.00	0.00	133.81	3697.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
3800.00	0.00	133.81	3797.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
3900.00	0.00	133.81	3897.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
4000.00	0.00	133.81	3997.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
4100.00	0.00	133.81	4097.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
4200.00	0.00	133.81	4197.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	l
4300.00	0.00	133.81	4297.39	-48 95	51.03	53 42	0.00	407949.95	532707.33	
4400.00	0.00	133.81	4397.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
4500.00	0.00	133.81	4497.39	-48.95	51.03	53.42	0.00	407949.95	532707 33	
4600.00	0.00	133.81	4597.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
4700.00	0.00	133.81	4697.39	-48.95	51.03	53 42	0.00	407949 95	532707.33	
4000.00	0.00	122 04	4707 20	40.05	E4 00	E0 40	0.00	407040.05	E00707.00	
4800.00	0.00	133.81	4797.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
4900.00	0.00	133.81	4897.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5000.00	0.00	133.81	4997.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5100.00	0.00	133.81	5097.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5200.00	0.00	133.81	5197.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5300.00	0.00	133.81	5297.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5400.00	0.00	133.81	5397.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5500.00	0.00	133.81	5497.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5600.00	0.00	133.81	5597.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5700.00	0.00	133.81	5697.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5800.00	0.00	133.81	5797.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
5900.00 6000.00	0.00	133.81 133.81	5897.39 5997.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
0000.00	0.00	100.01		-48.95	51.03	53.42	0.00	407949.95	532707.33	





Company: Field: Site: Well:

Öccidental Permian Ltd. Eddy Co, NM (Nad 27)

Peaches 19 Fed #1H 1H Wellpath: Pilot

Date: 10/11/2011

Time: 09:29:22 Well: 1H, Grid North Co-ordinate(NE) Reference:

Vertical (TVD) Reference: Section (VS) Reference:

SITE 3223.2

Well (0.00N,0.00E,174.74Azi) Section (VS) Reference: Well (0.00N,0.00E,1. Survey Calculation Method: William Curvature)

Page:

Survey

- 51	irvey										
[MD	Incl -	Azim "	TVD	`N/\$	Ė/W	· VS	DLS	MapN	MapE	Comment
	ft · , .	deg	deg	ft (ft	ft	៊ុft.	deg/100ft	ft,	granifit granification	, where
	6100.00	0.00	133.81	6097.39	-48 95	51.03	53.42	0.00	407949.95	532707.33	
	6184.61	0.00	133.81	6182.00	-48.95	51.03	53.42	0.00	407949.95	532707.33	T. Bone Spring Lim
	6200.00	0.00	133.81	6197.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	6300.00	0.00	133.81	6297.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	6400.00	0.00	133.81	6397.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	6500.00	0.00	133.81	6497.39	-48 95	51.03	53.42	0.00	407949.95	532707.33	
1	6600.00	0.00	133.81	6597.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	6667.61	0.00	133.81	6665.00	-48.95	51.03	53.42	0.00	407949.95	532707.33	T. BSPG 1st Sand
	6700.00	0.00	133.81	6697.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	6800.00	0.00	133.81	6797.39	-48.95	51.03	53.42	0.00	407949.95	532707 33	
	6900.00	0.00	133.81	6897.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	7000.00	0.00	133.81	6997.39	-48.95	51.03	53.42	0.00	407949.95	532707 33	
	7057.61	0.00	133.81	7055.00	-48.95	51.03	53.42	0.00	407949.95	532707 33	T. BSPG2 Limeston
	7100.00	0.00	133.81	7097.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	7200.00	0.00	133.81	7197.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	7300.00	0.00	133.81	7297.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	7317.61	0.00	133.81	7315.00	-48.95	51.03	53.42	0.00	407949.95	532707.33	T. BSPG 2nd Sand
	7400.00	0.00	133.81	7397.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
ļ	7500.00	0.00	133.81	7497.39	-48.95	51.03	53.42	0 00	407949.95	532707.33	
	7600.00	0.00	133.81	7597.39	-4 8.95	51.03	53.42	0.00	407949.95	532707.33	ĺ
	7700.00	0.00	133.81	7697.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	7800.00	0.00	133.81	7797.39	-48.95	51 03	53.42	0.00	407949.95	532707.33	
	7872.61	0.00	133.81	7870.00	-48.95	51.03	53.42	0.00	407949.95	532707.33	Harkey Sand Targe
	7900.00	0 00	133.81	7897.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	,]
	8000.00	0.00	133.81	7997.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	8100.00	0.00	133.81	8097.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	8200.00	0.00	133.81	8197.39	-48.95	51.03	53.42	0.00	407949.95	532707 33	
	8300.00	0.00	133.81	8297.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	8400.00	0.00	133.81	8397.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	8497.61	0.00	133.81	8495.00	-48.95	51.03	53.42	0.00	407949.95	532707.33	T. BSPG 3rd Sand
	8500.00	0.00	133.81	8497.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	8600.00	0.00	133.81	8597.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	8700.00	0.00	133.81	8697.39	-48.95	51.03	53.42	0.00	407949.95	532707.33	
	8732.61	0.00	133.81	8730.00	-48.95	51.03	53.42	0.00	407949.95	532707.33	T. Wolfcamp
	8758.61	0.00	133.81	8756.00	-48.95	51.03	53.42	0.00	407949 95	532707.33	Pbhl Pilot

Targets

7	Name Description Dip. Dir.	TVD ft	+ N /- S	+E/-W .**	Map Northing ft	Map Easting	C——Deg	Latitude — >> Min Sec	Congitude Deg Min Sec	٠ , [
	Pbhl Pilot -Circle (Radius: 50) -Plan hit target	8756.00	-48.95	51.03	407949.95	532707.33	32	7 17 496 N	104 13 39.664	w

Casing Points

MD ft	TVD Ê	Diameter Vin	Hole Size	Name	
	00.00 00.00	0.000 0.000	0.000 0.000	Csg Int. Csg	





Company: Occidental Permian Ltd. Field: Eddy Co, NM (Nad 27) Field: Eddy CQ, INW, (IVAU 27)
Site: Peaches 19 Fed #1H
Well: 1H
Wellpath: Pilot

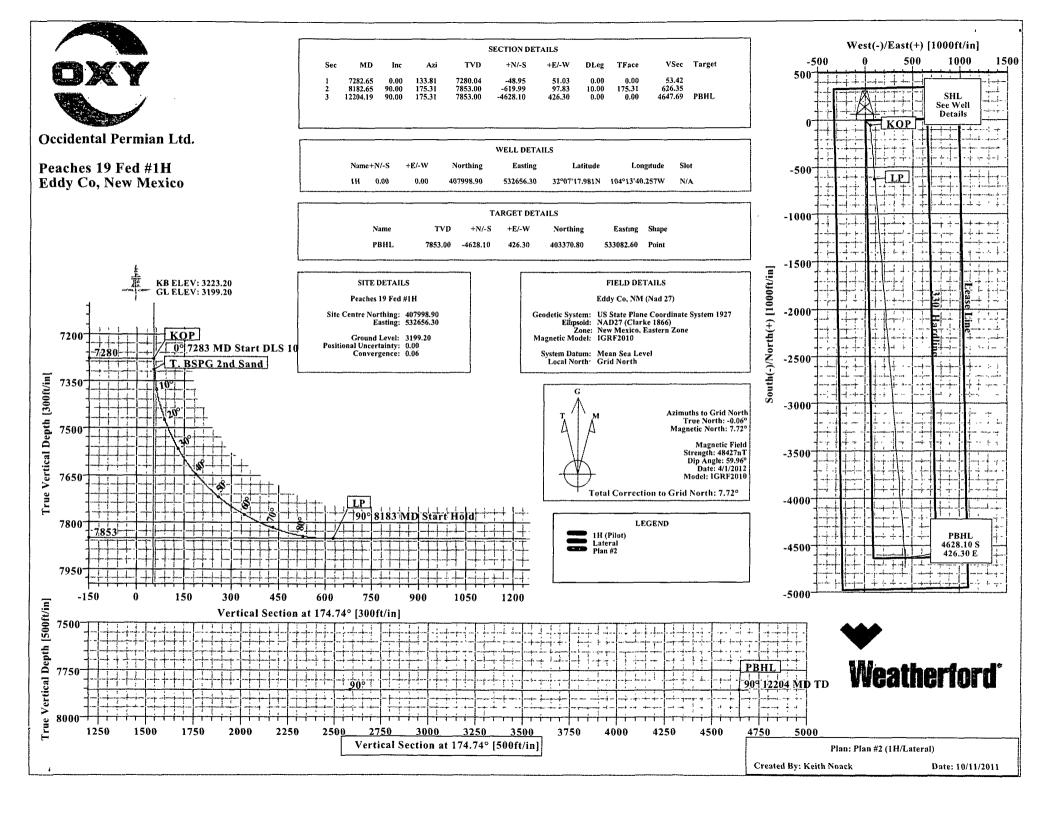
Date: 10/11/2011 Time: 09:29:22 Page: 4
Co-ordinate(NE) Reference: Well: 1H, Grid North
Vertical (TVD) Reference: SITE 3223.2
Section (VS) Reference: Well (0:00N,0.00E,174,74Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Annotation

	MD ft	TVD ft		Salada Maria		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		r, . ur is
ı	2000.00	2000.00	Nudge					
l	2250.00	2249.68	Hold					
١	2686.09	2684.11	Drop					
ı	3186.09	3183.48	Hold					
1	8758.61	8756.00	Pbhl Pilo	t				
ı	0.00.01		1 51111 110		 		 	

Formations

	munons				
3, 3, 4 1 e 7	MD. ft	TVD ft	Formations	Dip Angle deg	Dip Direction deg
4	30.00	430.00	Rustler	0.00	0.00
9	96.00	996.00	Salado (T. Salt)	0 00	0.00
15	93.00	1593.00	B. Salt	0.00	0.00
18	325.00	1825.00	Lamar	0.00	0.00
61	84.61	6182.00	T. Bone Spring Limestone	0.00	0.00
66	67.61	6665.00	T. BSPG 1st Sand	0.00	0.00
70	57.61	7055.00	T. BSPG2 Limestone	0.00	0.00
73	317.61	7315.00	T. BSPG 2nd Sand	0 00	0.00
78	372.61	7870.00	Harkey Sand Target Depth	0.00	0.00
84	97.61	8495.00	T. BSPG 3rd Sand	0.00	0.00
87	32.61	8730.00	T. Wolfcamp	0.00	0.00







Company: Occidental Permian Ltd. Field: Eddy Co. NM, Nad 27) Site: Peaches 19 Fed #1H.

Well: Wellpath: Lateral

Date: 10/11/2011 Time: 09:32:00 Co-ordinate(NE) Reference: Well: 1H, Grid North
Vertical (TVD) Reference: SITE 3223.2
Section (VS) Reference: Well: (0.00N; 0.00E; 174.74Azi)
Survey Calculation Method: Minimum Curvature Db:: Sybase.

Page:

Tied-to:

Plan #2

Yes

Date Composed: Version:

From Definitive Path

10/10/2011

Field:

Principal:

Eddy Co, NM (Nad 27)

Map System: US State Plane Coordinate System 1927

Geo Datum: NAD27 (Clarke 1866) Sys Datum: Mean Sea Level

Map Zone:

New Mexico, Eastern Zone

Coordinate System: Geomagnetic Model: Well Centre IGRF2010

Peaches 19 Fed #1H

+N/-S

SITE

Site Position: From:

Map

Northing: 407998.90 ft 532656.30 ft Easting:

Northing:

Easting:

Latitude: Longitude:

17.981 N 32 13

North Reference: Grid Convergence: 40.257 W Grid

Position Uncertainty: Ground Level:

Well Position:

Wellpath:

Current Datum:

Magnetic Data:

Field Strength:

Vertical Section:

0 00 ft 3199.20 ft

Slot Name:

0.06 deg

Well:

Lateral

407998.90 ft

Latitude:

7 32 17.981 N

+E/-WPosition Uncertainty:

0.00 ft 0.00 ft 0.00 ft

532656.30 ft

+N/-S

ft

0.00

Longitude:

13 40.257 W

48427 nT

4/1/2012

Height 3223 20 ft

Drilled From: Tie-on Depth: Pilot 7282.65 ft Mean Sea Level

Above System Datum: Declination: Mag Dip Angle:

7.78 deg 59.96 deg

+E/-W ft

0.00

Direction deg

Depth From (TVD) 0.00

174.74

Plan Section Information

	MD ft	Incl deg	Azim deg	TVD ft	+N/-S	* + E /- W	DLS deg/100ft	Build deg/100ft	T urn deg/100fi	TFO deg	Target	
l	7282.65	0.00	133.81	7280.04	-48.95	51.03	0.00	0.00	0.00	0.00		
Ĺ	8182.65	90 00	175.31	7853.00	-619.99	97.83	10.00	10.00	4.61	175.31		
ļ	12204.19	90.00	175.31	7853.00	-4628.10	426.30	0.00	0.00	0.00	0.00	PBHL	

Survey

MD	Incl	Azim	ATVD	N/S	È/W	VS Sec.	DLS	MapN	MapE	Comment
ft	deg	deg	A ft ?	in the second	i fi	vs ft	deg/100ft		e of the second	
7282.65	0.00	133.81	7280.04	-48.95	51.03	53.42	0.00	407949.95	532707 33	KOP
7300.00	1.74	175.31	7297.39	-49.21	51.05	53.69	10.00	407949.69	532707.35	
7317.63	3.50	175.31	7315.00	-50.01	51.12	54.49	10.00	407948.89	532707.42	T. BSPG 2nd Sand
7350.00	6.74	175.31	7347.23	-52.89	51.35	57.38	10.00	407946.01	532707.65	}
7400.00	11.74	175.31	7396.57	-60.89	52.01	65.40	10.00	407938.01	532708 31	
7450.00	16.74	175.31	7445.02	-73.14	53.01	77.69	10 00	407925.76	532709.31	
7500.00	21.74	175.31	7492 21	-89.55	54.36	94.16	10.00	407909.35	532710.66	
7550.00	26.74	175 31	7537.79	-110.00	56.03	114.67	10.00	407888.90	532712.33	
7600.00	31.74	175.31	7581.41	-134.33	58.03	139.08	10.00	407864.57	532714 33	
7650.00	36.74	175.31	7622.73	-162.35	60.32	167.20	10.00	407836.55	532716.62	
7700.00	41.74	175.31	7661.45	-193.86	62.91	198.82	10.00	407805.04	532719.21	
7750.00	46.74	175.31	7697.26	-228.62	65.75	233.68	10.00	407770.28	532722.05	ł
7800.00	51.74	175.31	7729.90	-266.35	68.85	271.54	10.00	407732.55	532725.15	1
7850.00	56.74	175.31	7759.11	-306.77	72.16	312.09	10.00	407692.13	532728.46	
7900.00	61.74	175 31	7784.68	-349 58	75.67	355.04	10.00	407649.32	532731.97	
7050.00	00.74	475.04	7000 44	004.44	70.04	100.00	40.00	107001 10	500705.04	
7950.00	66.74	175.31	7806.41	-394.44	79.34	400.06	10.00	407604.46	532735.64	1
8000.00	71.74	175.31	7824.13	-441.02	83.16	446.79	10.00	407557.88	532739.46	
8050.00	76 74	175.31	7837.71	-488.96	87.09	494.89	10.00	407509.94	532743.39	





Company: Occidental Permian Ltd.

Page: 10/11/2011

Fine: 09:32:00

Page: 2

Field: Eddy.Co NM (Nad-27)

Coordinate(NE) Reference: Well: 1H, Grid North

Site: Peaches 19 Fed:#1H

Vertical (TVD) Reference

SITE: 3223:2

Well: 1H

Section (VS) Reference: Well (0:00N,0:00E,174:74Azi)

Wellpath: Lateral

Survey Calculation Method: Minimum. Curvature. Db:: Sybase

Survey

MD ft	Incl , deg	Azim deg	TVD ft	N/S	E/W	vs ft	DLS * deg/100ft	MapN ft	MapE ft	Comment
8100.00	81.74	175.31	7847.05	-537.90	91.10	543.99	10.00	407461.00	532747.40	
8150.00	86.74	175.31	7852.07	-587.47	95.16	593.72	10.00	407411.43	532751.46	
8182.65	90.00	175.31	7853.00	-619.99	97.83 99.25	626.35	10.00	407378.91	532754.13	LP
8200.00	90.00	175.31	7853.00	-637.29		643.70	0.00	407361.61	532755.55	
8300.00	90.00	175.31	7853.00	-736.95	107.41	743.70	0 00	407261.95	532763.71	Ì
8400.00	90.00	175.31	7853.00	-836.62	115.58	843.69	0.00	407162.28	532771.88	
8500 00	90.00	175.31	7853.00	-936.28	123.75	943.69	0.00	407062.62	532780.05	
8600.00	90.00	175.31	7853.00	-1035.95	131.92	1043.68	0.00	406962.95	532788.22	
8700.00	90.00	175.31	7853.00	-1135 61	140.08	1143.68	0 00	406863.29	532796.38	
8800.00	90.00	175.31	7853.00	-1235.28	148.25	1243.67	0.00	406763.62	532804.55	
8900.00	90.00	175.31	7853.00	-1334.95	156.42	1343.67	0.00	406663.95	532812.72	
9000.00	90.00	175.31	7853.00	-1434.61	164.59	1443.66	0.00	406564.29	532820.89	
9100.00	90.00	175.31	7853.00	-1534.28	172.76	1543.66	0.00	406464.62	532829.06	
9200.00	90.00	175.31	7853.00	-1633.94	180.92	1643.65	0.00	406364.96	532837 22	
9300.00	90.00	175.31	7853.00	-1733.61	189.09	1743.65	0.00	406265.29	532845.39	
9400.00	90.00	175 31	7853.00	-1833.28	197.26	1843.64	0.00	406165.62	532853.56	
9500.00	90.00	175.31	7853.00	-1932.94	205.43	1943.64	0.00	406065.96	532861.73	
9600.00	90.00	175.31	7853.00	-2032.61	213.59	2043.63	0.00	405966.29	532869.89	
9700.00	90 00	175.31	7853.00	-2132.27	221.76	2143.63	0 00	405866.63	532878.06	
9800.00	90.00	175.31	7853.00	-2231.94	229 93	2243.62	0.00	405766.96	532886.23	
9900.00	90.00	175.31	7853.00	-2331.61	238.10	2343.62	0.00	405667.29	532894.40	
10000.00	90.00	175.31	7853.00	-2431.27	246.27	2443.61	0.00	405567.63	532902.57	
10100.00	90.00	175.31	7853.00	-2530.94	254.43	2543.61	0.00	405467.96	532910.73	
10200.00	90.00	175.31	7853.00	-2630.60	262.60	2643.60	0.00	405368.30	532918.90	
10300.00	90.00	175.31	7853.00	-2730.27	270.77	2743.60	0.00	405268.63	532927.07	İ
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10700.00	90.00	175.31	7853.00	-3128.93	303.44	3143.57	0.00	404869.97	532959.74	
10800.00	90.00	175.31	7853.00	-3228.60	311.61	3243.57	0.00	404770.30	532967.91	
10900.00	90.00	175.31	7853.00	-3328.26	319.78	3343.56	0.00	404670.64	532976.08	
11000.00	90.00	175.31	7853.00	-3427.93	327.94	3443.56	0.00	404570.97	532984.24	
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11700.00	90.00	175.31	7853.00	-4125.59	385.12	4143.52	0.00	403873.31	533041.42	
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Targets

Name Descript	ion TVD Dir ft	+N/-S ft	+ E /- W	Map Northing ft	Map Easting ft	∠ <u>-</u> Deg	Latitude> Min Sec	< Lo Deg M	ongitude — lin * Sec	
PBHL	7853.00	-4628.10		403370.80		32	6 32.175 N		35 353 W	





Company: Occidental Permian Ltd.
Field: Eddy Co. NM (Nad 27)
Site: Peaches/19 Fed #1H
Well: IH
Wellpath: Laferal

Date: 10/11/2011 Time: 09:32:00 Page: 3
Co-ordinate(NE) Reference: Well-4H; Grid North
Vertical (TVD) Reference: SITE 3223.2
Section (VS) Reference: Well (0:00N,0:00E;174.74Azi)
Survey Calculation Method: Minimum Curvature: Db: Sybase

Casing Points

	MD /	TVD ft	Diameter in	Hole Size	Name	
١	500.00	500.00	0.000	0.000	Sfc. Csg	
l	1900.00	1900.00	0.000	0.000	Int. Csg	

Annotation

	MD ft	TVD ft		
Н	7282.65	7280.04	KOP	
П	8182.65	7853.00	LP	
	12204.19	7853.00	PBHL	

Formations

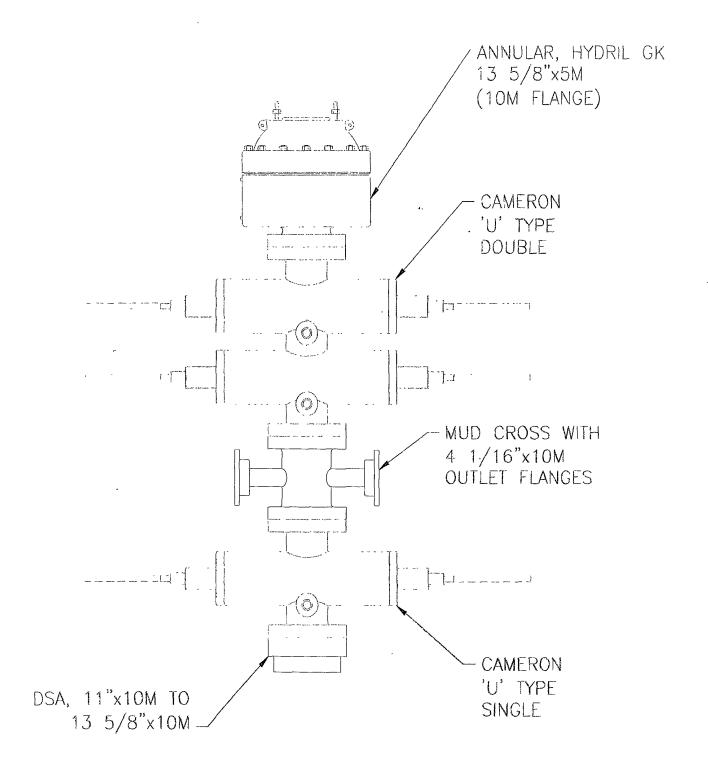
MD.	TVD	Formations	Dip Angle Dig Angle Dig	p Direction deg
	0.00	Rustler	0.00	0.00
	0.00	Salado (T. Salt)	0.00	0.00
	0.00	B. Salt	0.00	0.00
}	0.00	Lamar	0.00	0.00
	0.00	T Bone Spring Limestone	0.00	0.00
	0.00	T. BSPG 1st Sand	0.00	0.00
	0.00	T. BSPG2 Limestone	0.00	0.00
7317.63	7315.00	T. BSPG 2nd Sand	0.00	0.00
	0.00	Harkey Sand Target Depth	0.00	0.00



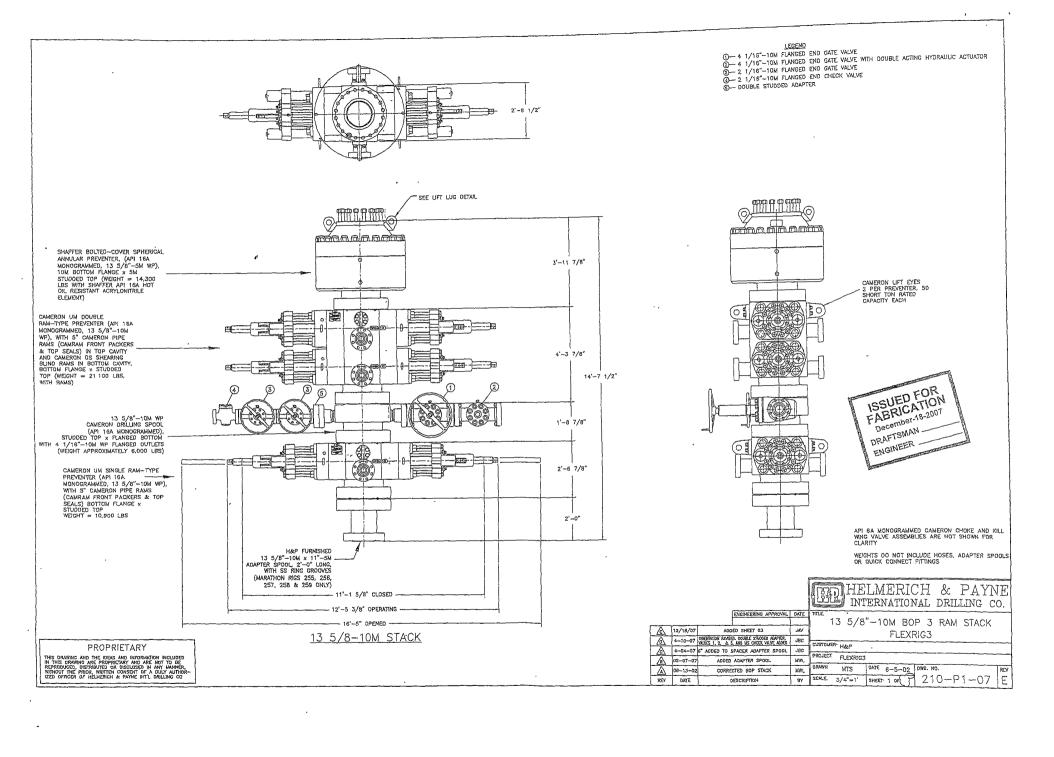
Weatherford Drilling Services

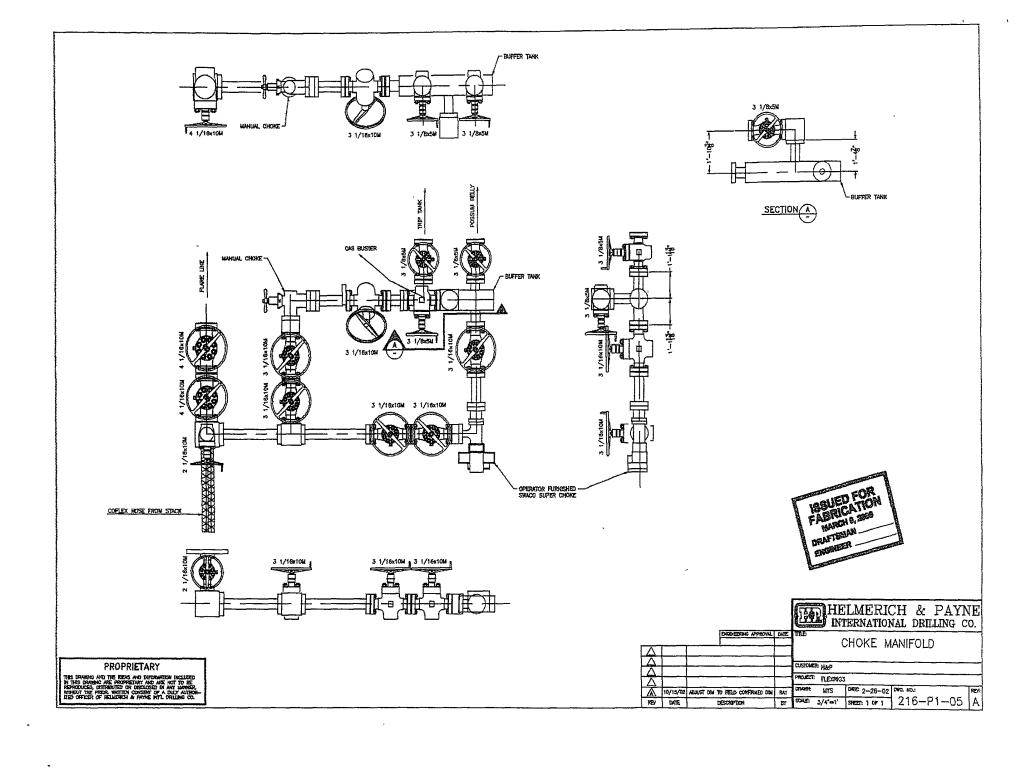
GeoDec v5.03

Report Date: Job Number:	October 10, 2011			
Customer:	Occidental Permian	T+d		
Well Name:	Peaches 19 Fed #1H			
API Number:	reaction 19 rea with			
Rig Name:				
Location:	Eddy Co, NM (Nad 2	7)		
Block:				
Engineer: KRN				
US State Plane 1927		Geodetic Latitude / Longitude	e	
System: New Mexico	East 3001 (NON-EXACT)	System: Latitude / Longitude)	
Projection: SPC27 Tr	ansverse Mercator	Projection: Geodetic Latitude	and Longitude	
Datum: NAD 1927 (N	IADCON CONUS)	Datum: NAD 1927 (NADCO	N CONUS)	
Ellipsoid: Clarke 1866	6	Ellipsoid: Clarke 1866	,	
North/South 407998	.900 USFT	Latitude 32.1216615 DEG		
East/West 532656.3	00 USFT	Longitude -104.2278491 DE	EG .	
Grid Convergence: .0	06°			
Total Correction: +7.	72°			
Geodetic Location W	GS84 Elevation	n= 0.0 Meters		
Latitude = 32	.12166° N 32°	7 min 17.981 sec		
Longitude = 104	.22785° W 104°	13 min 40.257 sec		
Magnetic Declination	= 7.78°	[True North Offset]		
Local Gravity =	.9988 g	CheckSum =	6807	
Local Field Strength	= 48423 nT	Magnetic Vector X =	24019 nT	
Magnetic Dip =	59.96°	Magnetic Vector Y =	3282 nT	
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	41917 nT	
Spud Date =	Apr 01, 2012	Magnetic Vector H =	24242 nT	
Signed:		Date:		

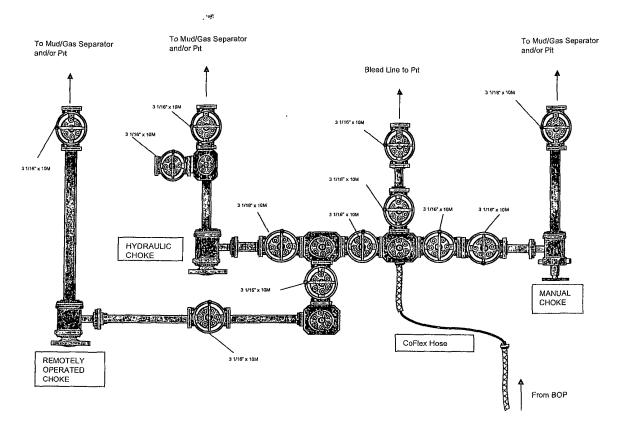


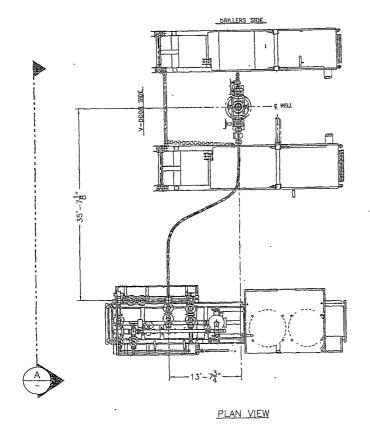
BOP STACK

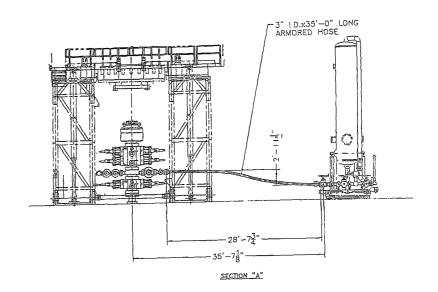




10M CHOKE MANIFOLD CONFIGURATION







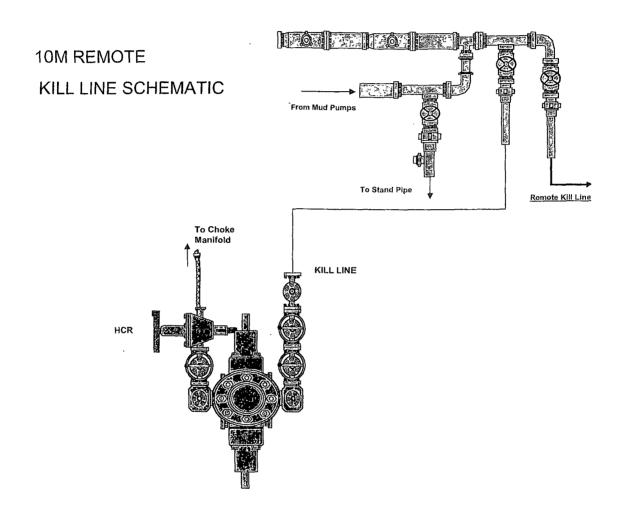


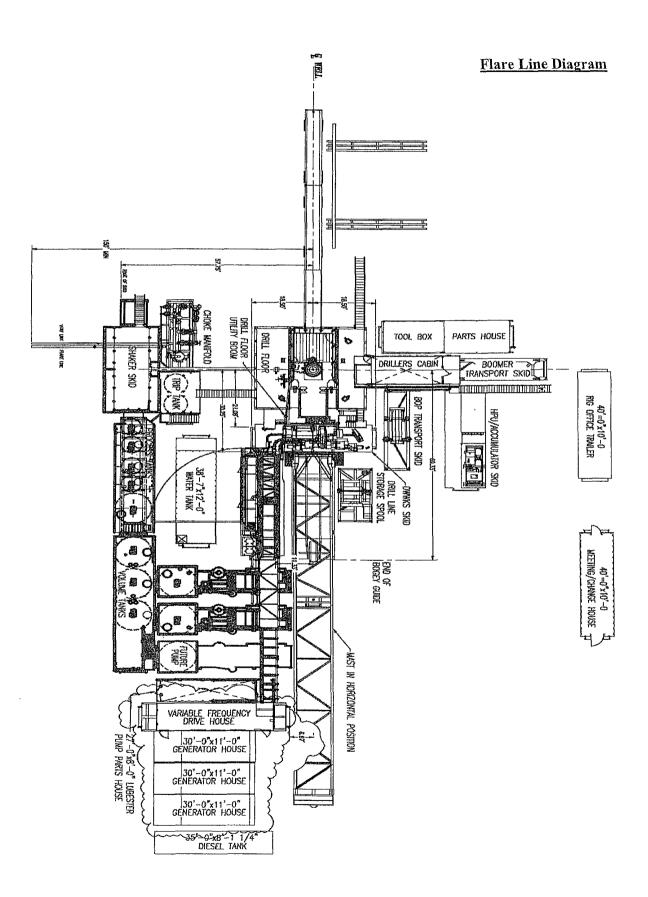
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\triangle								LEXR		_1**	
1					CUSTOME						
$\overline{\Delta}$					PROJECT.						
\triangle	12/18/07	REMOVED S	HEET TOTAL CALLOUT	JAV	DRAWN:	JBG	DATE 4	1007			KEV.
 REV	DATE	0	ESCRIPTION	BY	SCALE:	3/16"=	1' SHEET	2 OF ()	210-F	21-07	Α

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER, WITHOUT THE PROR. WRITTEN CONSENT OF A DULY AUTHOR 222D OFFICER OF HEAVERICH & PATHE MITT DRILLING TO





Coflex Hose Certification



Fluid Technology

Quality Document

CERTIFICATE OF CONFORMITY

Supplier: CONTITECH RUBBER INDUSTRIAL KFT.

Equipment: 6 pcs. Choke and Kill Hose with installed couplings

3" x 10,67 m WP: 10000 psi

Supplier File Number : 412638

Date of Shipment

: April. 2008

Customer

: Phoenix Beattle 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:

_ontiTech Rubber Industrial Rft. Quality Control Dept.

Position: Q.C. Manager

Date: 04. April. 2008

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10 20				A Company of the Comp

PHOENIX Beattie Material Identification Certificate HELMERICH & PAYNE INT'L DRILLING Coent Ref | 370-369-001 PA No | 006330 Client Page Part No Description Material Desc Material Spec WO No Batch No Oty Test Cert No Bin No Drg No Issue No HP10CK3A-35-4F1 3" 10K 16C CLK HOSE x 35ft DAL 2491 1 52777/H884 HATER SECK3-HPF3 LIFTING & SAFETY EQUIPMENT TO 2440 002440 1 N/STX SC725-200CS SAFETY CLAMP 200M 7.25T CARBON STEEL 1 2519 H655 22C SC725-132CS SAFETY CLAMP 132MM 7.25T CARBON STEEL 1 2242 H139

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 Beattle Corporation.



Coflex Hose Certification

Form No 100/12

- PHOENIX Beattie

Phoenix Beattle Corp
11635 Brittsoore Perk Brive
Houston, TX 77041
Tel: (832) 327-0141
Fax: (832) 327-0148
E-sail satisphoenixbeattle.com
www.phoenixbeattle.com

Delivery Note

Customer Order Number	370-369-001	Delivery Note Number	003078	Paga	1
Customer / Invoice Addres HELMERICH & PAYNE INT'L D 1437 SOUTH BOULDER TULSA, OK 74119		Delivery / Address HELMERICH & PAYNE IDC ATTN: JOE STEPHENSON - RI 13609 INDUSTRIAL ROAD HOUSTON, TX 77015	G 370		

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

item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Oty To Follow
1	HP10CK3A-35-4F1 3" 10K 16C C8K HOSE x 35ft OAL CN 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	J	1	
_	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
- 1	SC725-200CS SAFETY CLAMP 200MM 7.26T C/S GALVANISED	1	1	0

Continued...

All goods remain the property of Phoenix Beattle 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.

Coflex Hose Certification



Fluid Technology

Quality Document

QUALI INSPECTION A	TY CONT		ATE	CERT. N	√a.	746	
PURCHASER:	Phoenix Bea	ttle Co.		P.O. Nº:	0	02491	
CONTITECH ORDER N°:	412638	HOSE TYPE:	3" D	Cho	oke and Ki	ll Hose	
HOSE SERIAL Nº:	52777	NOMINAL / ACT	UAL LENGTH:		10,67 m	- 	
W.P. 68,96 MPa 10	iaq 0000	T.P. 103,4	MPa 1500	o psi	Duretion:	60	min.
Pressure test with water at ambient temperature See attachment. (1 page) 10 mm = 10 Min.							
→ 10 mm = 25 MPa	**************************************	COUPL	INGS			Speciment of the specim	464(SIF4HIIA
Type		Serial N°		Quality		Heat Nº	
3" coupling with	917	913	Als	SI 4130		T7998A	
4 1/16" Flange end			AIS	14130		26984	
INFOCHIP INSTALLE	ED		,			API Spec 16 riperature r	
WE CERTIFY THAT THE ABOVE PRESSURE TESTED AS ABOVE	HOSE HAS BE WITH BATISFA	EN MANUFACTUR CTORY RESULT.	red in accord	DANCE W	TH THE TER	MS OF THE OR	DER AND
Date:	Inspector	THE RESERVE THE PROPERTY OF THE PARTY OF THE	Quality Contro)		DRANGUERTS BELGET TO THE STATE OF THE STATE	
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Form No 100/12

→ PHOENIX Beattie

Phoenix Beattle Corp
11535 Brittmoore Park Brive
Houston, TX 77041
Tel: (832) 327-0141
Fax: (832) 327-0148
E-nall sail@phoeninbeattle.coa
www.phoenixbeattle.cos

Delivery Note

Customer Order Number	370-369-001	Delivery Note Number	003078	Page	2
Customer / Invoice Address HELMERICH & PAYNE INT'L I		Delivery / Address HELMERICH & PAYNE IDC ATTN: JOE STEPHENSON - RI 13609 INDUSTRIAL ROAD HOUSTON, TX 77015	G 370		

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

Item No	Beattle Part Number / Description	Qty Ordered	Qty Sent	Oty To Follow
4	SC725-132CS SAFETY CLAMP 132MM 7.25T C/S GALVANIZED C/W BOLTS	. 1	I	0
	OOCERT-HYDRO HYDROSTAYIC PRESSURE TEST CERTIFICATE	1	1	0
6	OUCERT-LOAD LOAD TEST CERTIFICATES	1	1	0
	ODFREIGHT 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
			\bigcap	

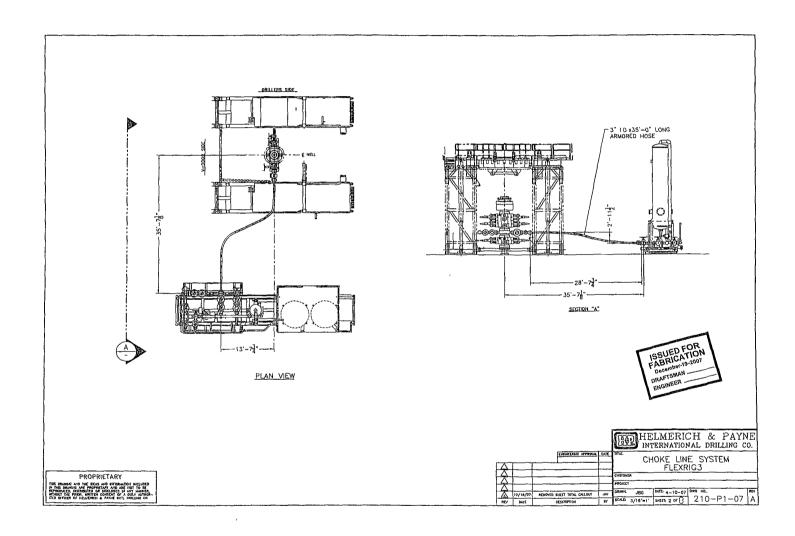
Phoenix Beattle Inspection Signature:

Received In Good Condition:

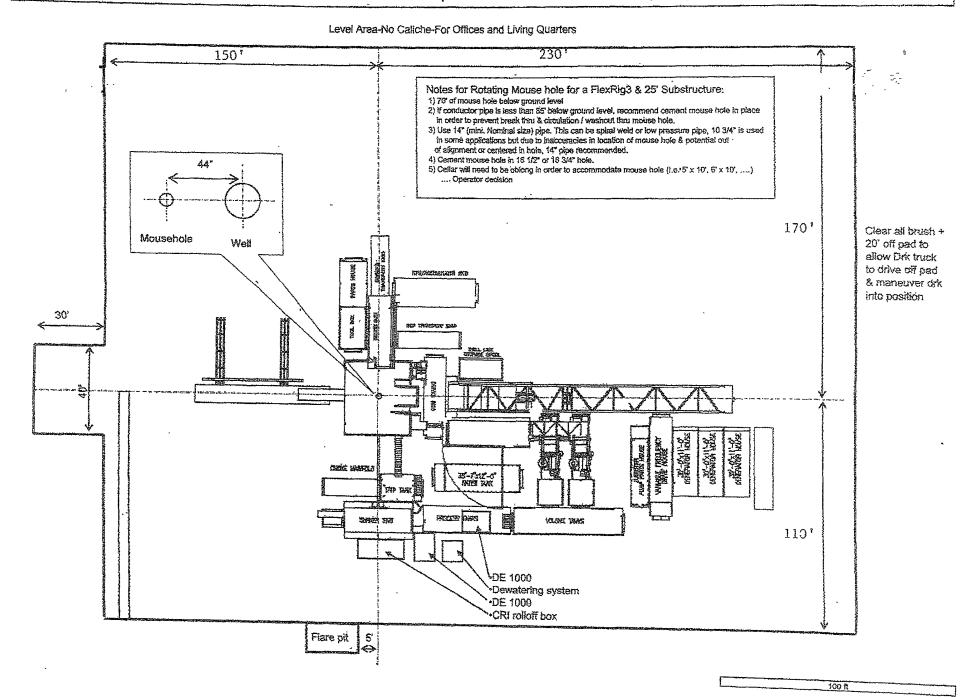
Signature

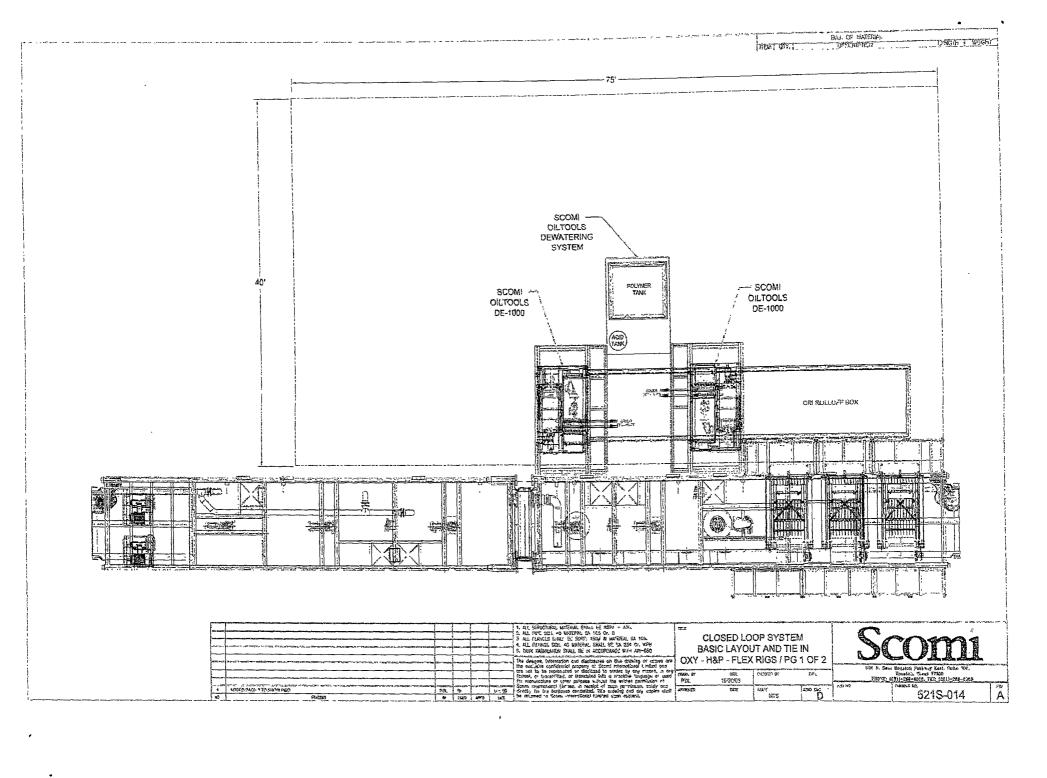
Print Name

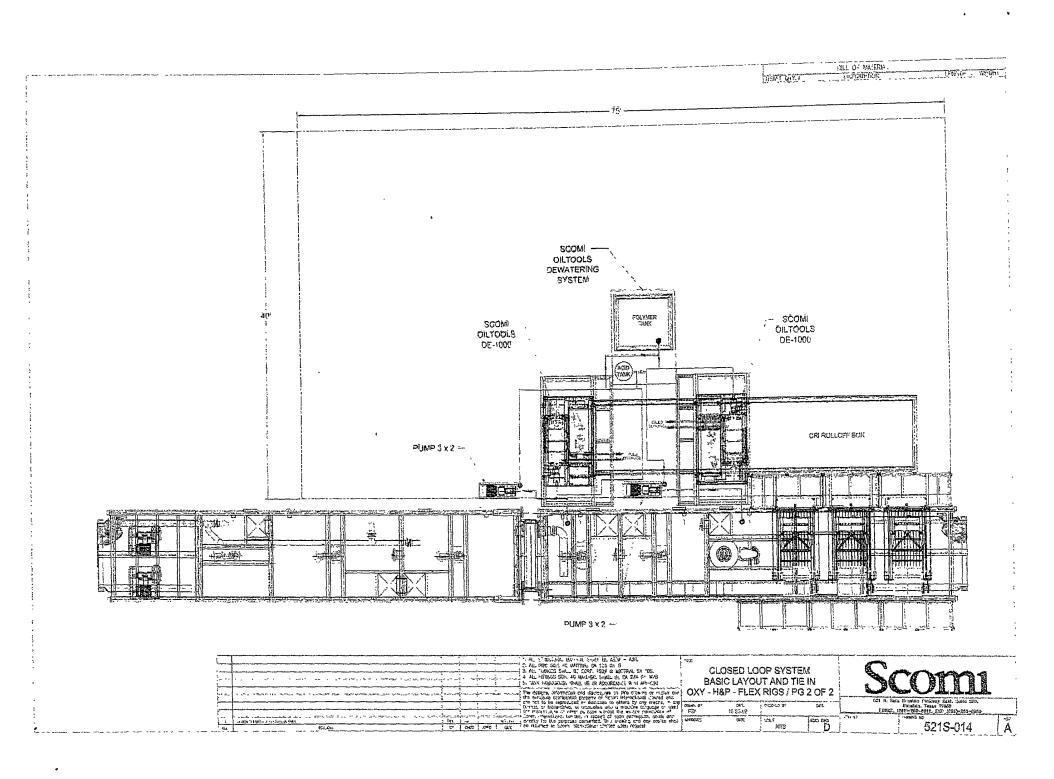
All goods remain the property of Phoenix Beattle until paid for in full. Any damage or shortage on this delivery must be advised within 5 days. Returns may be subject to a handling charge.



OXY FLEX III PAD (SCOMI Closed Loop System)







OXY USA Inc.

EMERGENCY ACTION PLAN

Peaches 19 Federal #1H

DRILLING/WORKOVER

DRILLING AND CRITICAL WELL OPERATIONS

DRILLING/WORKOVER DRILLING AND CRITICAL WELL OPERATIONS

EMERGENCY ACTION PLAN

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PHONE CONTACTS - OP DRILLING/WORKOVER	. 10
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PREFACE

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

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

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

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

10/11/2011 Page 3 of 15

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:
 - 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.

10/11/2011 Page 4 of 15

WELL CONTROL

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

Kick While Drilling - Procedures And Responsibilities

Driller:

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

Derrickman:

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

Floorman # 1:

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

Floorman # 2:

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

Floorman #3:

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

Tool Pusher/Rig Manager:

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

Oxy Representative:

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

10/11/2011 Page 5 of 15

WELL CONTROL (continued)

Kick While Tripping - Procedures and Responsibilities

Driller:

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

Derrickman: (same as while drilling)

Floor Man # 1:

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

Floor Man # 2:

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

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

H2S RELEASE

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

All Personnel

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

Rig Manager/Tool Pusher:

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

Two People Responsible For Shut-in and Rescue:

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

All Other Personnel:

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

Oxy Representative:

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

PERSONAL INJURY OR DEATH

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

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

FIRE OR EXPLOSION

Fire Fighting Philosophy

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

Contract and Oxy Personnel Deployment

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

No personnel will leave the area without direction / permission from the Senior Contract Representative onsite.

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.
- 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.

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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

		DOMD THILE	AT CHLCKLIST	
Date	Name of person tak	ing call	Pr	none # call came on
FILL OUT CO	MPLETELY IMMEDI	ATELY AFTER BO	MB THREAT	
 Where is the What does it What type of What will can Did the called Why did the What is the 	e bomb set to explode e bomb located? the bomb look like?_ of bomb is it? use the bomb to exper place the bomb? caller place the bom caller's name and ac	lode?b?_ dress?		
Callers: Sex	_AgeRaceLe	ngth of call		
DESCRIPTION	I OF CALLER'S VOI	CE (Check all that	apply)	
Calm Angry Excited Slow Loud	Rapid Crying Normal Distinct Slurred	Laughing Raspy Deep Ragged Nasal	Lisp Accent Stutter Deep Clearing Thi	
BACKGROUN	D SOUNDS:			
Street Noises Voices Office	House Noises Motor Clear	Factory Machinery Animals Other		Local Call Long Distance Phone Booth
THREAT LANG	GUAGE:			
Well-Spoke Message R	enFoul lead by Threat Make		Irrational	Taped
REMARKS.				

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NATURAL DISASTERS

Tornadoes

7

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. <u>Unsafe places</u> 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 <u>NOT</u> 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.

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Drilling Dept. Emergency Contact list

Drilling Manager	Douglas Chester	713-366-9124 office 713-918-9124 cell
Drilling Superintendent	Travis Smaford	713-215-7849 office 281-684-6897 cell
Drilling Superintendent	0	432-366-5689 office 432-893-3067 cell
Drilling Engr Supervisor		713-366-5953 office 281-468-4652 cell
Drilling Engr Supervisor	Frank Hutton	713-366-5325 office 713-855-4274 cell
HES Specialist-Drilling	Robert Lovelady	432-685-5630 office 432-813-6332 cell
HES Specialist-Drilling	Charles Bullard	432-685-5719 office 432-894-3769 cell
Construction Specialist	Dusty Weaver	432-685-5723 office 806-893-3067 cell

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OXY Permian Incident Reporting Phone List
OXY Permian Crisis Team Hotline Notification

OAT Termian incluent Reporting	I Holle List		
OXY Permian Crisis Team Hotline	Notification	(713) 935-7210	
Person	Location	Office Phone	Cell/Mobile Phone
Asset Management-Operations Areas	·		T
OXY Permian Primary President & General Manager: Michael Land	Houston	(310) 443-6255	
Asset Development Manager-Denise Woods	Houston	(713) 215-7154	(832) 830-5273
Operations Manager-Keith Sevin	Houston	(713) 366-5979	(432) 661-4121
OXY Permian CO2 President & General Manager: Vicki Hollub	Houston	(713)-215-7332	(713) 885-6347
Asset Development Manager-Andrew Falls	Houston	(713) 366-5148	(713) 918-9096
Operations Manager-Bob Barnes	Houston	(713) 215-7906	(832) 433-0763
Operations South-Frontier			
RMT Lead North-David Schellstede	Houston	(713) 366-5013	(713) 560-8061
RMT Lead South-Peter Lawrence	Houston	(713) 215-7644	(832) 830-5273
Surface Operations Team Lead-Bill Elliott	Midland	(432) 685-5845	(432) 557-6736
Well Operations Team Lead-Wes Scott	Houston	(713) 215-7171	(713) 203-4050
Well Servicing Team Lead-Brit Meadows	Midland	(432) 685-5840	(432) 661-0387
WST Coord Frontier-Terrell Rowe	Midland	(432) 685-5821	(432) 664-8888
WST Coord South-Michael Roberts	Midland	(432) 685-5913	(806) 215-0073
NM Frontier Oper Coord –Scott Hidges	Hobbs	(575) 397-8211	(432) 238-4405
NM Frontier Oper Coord -Van Barton	Carlsbad	(575) 628-4111	(575) 706-7671
HES Staff & Areas of First Contact Support HES Manager: John Kirby	Houston	(713) 366-5460	(281) 974-9523
Environmental Engineer, Air: Peggy		(, , , ,) , , , , , , , , , , , , , , ,	(202) 511 5020
Waisanen	Midland	(432) 685-5673	(432) 894-1968
Administrative Assistant: Debbie Robertson	Midland	(432) 685 5812	(432) 556-7495
Pipeline Safety: Don Bales	Midland	(432) 685-5844	(432) 894-1960
HES Lead-Pete Maciula	Midland	(432) 685-5667	(432) 557-2450
HES Lead-Chris Young	Midland	(432) 685-5952	(432) 967-8946
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-Karen Sinard	Houston	(713) 366-5485	713-857-6068
Regulatory Advisor-David Stewart	Midland	(432) 685-5717	
Sr, Regulatory Analyst-Mark Stephens	Houston	(713) 366-5158	1

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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	- <u></u>
OXY Permian Legal Tom Janiszewski	Houston	(713) 366-5529	(713) 560-8049
Y D			
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	

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DOT Juisdictional Pipelines-Incident			1
Reporting New Mexico Public Regulation		(505) 827-3549	1
Commission	Santa Fe, NM	(505) 490-2375	
DOT Juisdictional Pipelines-Incident			
Reporting Texas Railroad Commission	Austin, TX	(512) 463-6788	
EPA Hot Line	Dallas, Texas	(214) 665-6444	
Federal OSHA, Area Office	Lubbock, Texas	(806) 472-7681	
National Response Center	Washington, D. C.	(800) 424-8802	
National Infrastructure Coordinator Center		(202) 282-9201	
New Mexico Air Quality Bureau	Santa Fe, NM	(505) 827-1494	
New Mexico Oil Conservation Division	Artesia, NM	(575) 748-1283	
New Mexico Oil Conservation Division	Hobbs, NM	(575) 393-6161	
New Mexico Oil Conservation Division	Santa Fe, NM	(505) 471-1068	
		(505) 827-7152	
New Mexico OCD Environmental Bureau	Santa Fe, NM	(505) 476-3470	
New Mexico Environmental Department	Hobbs, NM	(575) 827-9329	
NM State Emergency Response Center	Santa Fe, NM	(505) 827-9222	
	District 8, 8A Midland,		
Railroad Commission of TX	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.

Local Editergency Framing 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	

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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	i
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	
W. I. G. D. I.		(575) 397-9265	
Hobbs City Police	Hobbs, NM	(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	
FinoSighting & Dans		*	
Firefighting & Rescue Amistad/Rosebud	Amistad/Rosebud, NM	(505) 622 0112]
Annstau/Ruseuttu	Amistau/Rosebud, NM	(505) 633-9113 (432) 523-4820	
Andrews	Andrews, TX	(432) 523-3111	
Artesia	Artesia, NM	(575) 746-5051	
Carlsbad	Carlsbad, NM	(575) 885-3125	

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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

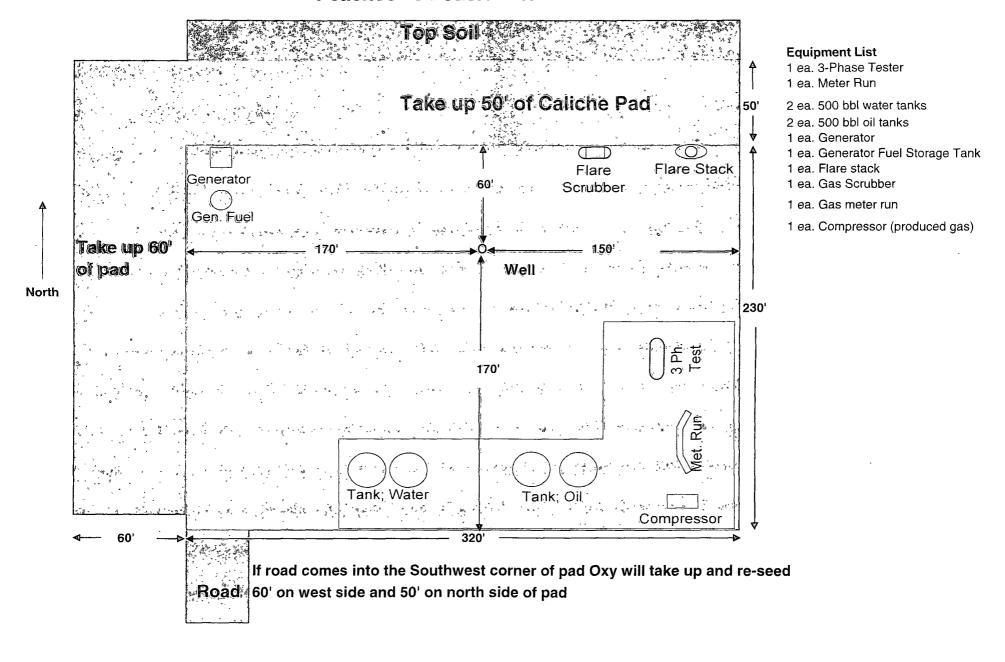
Amistad/Rosebud	Amistad/Rosebud, NM	(575) 633-9113
Andrews Ambulance	Andrews, TX	(432) 523-5675
Artesia Ambulance	Artesia, NM	(575) 746-2701
Carlsbad Ambulance	Carlsbad, NM	(575) 885-2111; 911
Clayton, NM	Clayton, NM	(575) 374-2501
Denver City Ambulance	Denver City, TX	(806) 592-3516
Eunice Ambulance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

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Peaches 19 Federal #1H



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INC.
LEASE NO.:	NM107368
WELL NAME & NO.:	1H PEACHES 19 FEDERAL
SURFACE HOLE FOOTAGE:	330' FNL & 2310' FEL
BOTTOM HOLE FOOTAGE	330' FSL & 1980' FEL
LOCATION:	Section 19, T.25 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Sites
Noxious Weeds
Special Requirements
Notification of lessee
Water bars
Erosion control
Construction
Notification
Topsoil
Closed Loop System
Federal Mineral Material Pits
. Well Pads
Roads
☐ Road Section Diagram
Medium Cave/Karst
Logging Requirements
Waste Material and Fluids
Production (Post Drilling)
Well Structures & Facilities
Pipelines
Electric Lines
Final Abandonment & Reclamation

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Notification of lessee

The lessee shall be notified prior to the construction of the access road and well pad. Lisa Ogden: 575-745-3369

Water bars

The water bars shall be constructed in the sloping portions of the road to ensure rain water does not accumulate along the road surface.

Erosion control

The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.

Any water erosion that may occur due to the construction of the well pad and access road during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 at least 3 working days prior to commencing construction of the access road and/or well pad.

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

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 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 the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

F. ON LEASE ACCESS ROADS

Road Width

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

Surfacing

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

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

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

Crowning

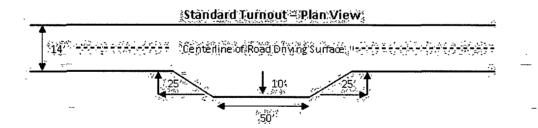
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts

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

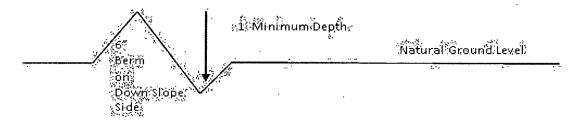


Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Culvert Installations

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

Cattleguards

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

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

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

Fence Requirement

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

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

Public Access

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

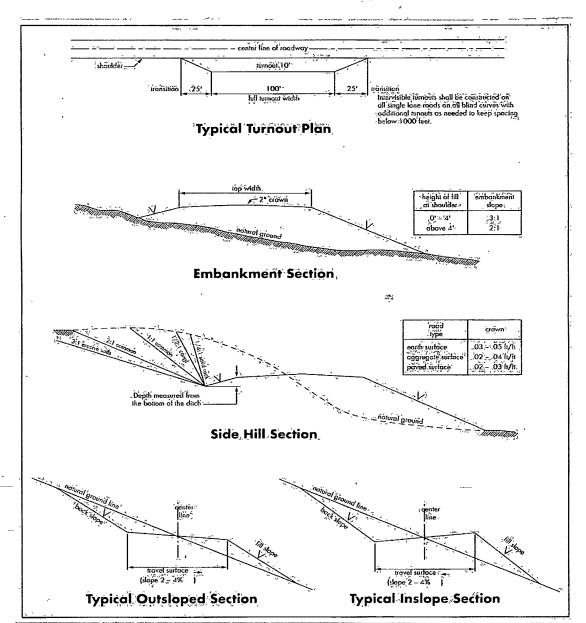


Figure 1 - Cross Sections and Plans For Typical Road Sections

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified 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 prior to drilling out the surface shoe. 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 are 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.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#).

Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

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

Medium cave/karst Possible lost circulation in the Delaware.

- 1. The 13-3/8 inch surface casing shall be set at approximately 950 feet and cemented to the surface. If salt is encountered, set casing 25 feet above the salt.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - ☐ Cement to surface. If cement does not circulate see B.1.a, c-d above.

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.

The pilot hole plugging procedure is approved as written.

- 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. Additional cement may be required excess calculates to 1%.
- 4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. If the BLM inspector questions the straightness

of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.
- 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.

CRW 050312

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Containment Structures

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

Painting Requirement

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

- B. PIPELINES (not applied for in APD)
- C. ELECTRIC LINES (not applied for in APD)

IX. INTERIM RECLAMATION

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

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

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

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below. Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

Seed Mixture 1, for Loamy 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/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

	<u>lb/acre</u>
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

^{*}Pounds of pure live seed:

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