

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

R-111-POTASH

ATS-11-785
FORM APPROVED
OMB NO. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

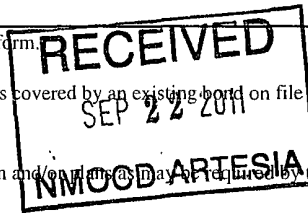
WIPP

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM62590-S NMNM62589-BH	
1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator OXY USA Inc.		8. Lease Name and Well No. Federal 23 #7H	
3a. Address P.O. Box 50250 Midland, TX 79710-0250		9. API Well No. 30-015-39436	
3b. Phone No. (include area code) 16696 432-685-5717		10. Field and Pool, or Exploratory Livingston Ridge Delaware	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 590 FNL 1955 FWL NENW(C) Sec 26 At proposed prod. zone 330 FNL 2080 FWL NWNW(C) Sec 23		11. Sec., T, R., M., or Blk. and Survey or Area S-Sec 26 BH-Sec 26 T22S R31E	
14. Distance in miles and direction from nearest town or post office* 20 miles northeast from Loving, NM		12. County or Parish Eddy	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg unit line, if any) 590'		13. State NM	
16. No. of Acres in lease 640		17. Spacing Unit dedicated to this well 160	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 176'		20. BLM/BIA Bond No. on file ES0136	
19. Proposed Depth 13539'M 8228'V		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3567.8'	
22. Approximate date work will start* 9/1/11		23. Estimated duration 30	

24. Attachments

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

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



25. Signature 	Name (Printed/Typed) David Stewart	Date 6/13/11
Title Regulatory Advisor		
Approved by (Signature) /s/ Jesse J. Juen	Name (Printed/Typed)	Date SEP 12 2011
Title ACTING STATE DIRECTOR		
Office NM STATE OFFICE		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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

*(Instructions on Reverse)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

112

DRILLING PROGRAM

Operator Name/Number:	OXY USA Inc.	16696
Lease Name/Number:	Federal 23 #7H	304816
Pool Name/Number:	Livingston Ridge Delaware	39360
Surface Location:	590 FNL 1955 FWL NENW(C) Sec 26 T22S R31E	Federal Lease No. NMNM62590
Bottom Hole Location:	330 FNL 2080 FWL NENW(C) Sec 23 T22S R31E	Federal Lease No. NMNM62589

Proposed TD: 8228' TVD 13539' TMD Elevation: 3567.8' GL
 SL - Lat: 32.3679868 Long: 103.7503323 X= 680003.1 Y= 498079.1 NAD - 1927
 BH - Lat: 32.3832268 Long: 103.7499315 X= 680096.6 Y= 503623.9 NAD - 1927

1. Geologic Name of Surface Formation:

a. Permian

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

<u>Geological Marker</u>	<u>Depth</u>	<u>Type</u>
a. Rustler	770'	---
b. Top Salt	969'	---
c. Salado	1100'	---
d. Bottom Salt	4187'	---
e. Delaware	4474'	---
f. Bell Canyon	4500'	Oil
g. Cherry Canyon	5605'	Oil
h. Brushy Canyon	6611'	Oil

3. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	<u>Condition</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
17-1/2"	840' 8 1/5	13-3/8"	48	ST&C	H-40	New	1.98	4.62	2.38
				Hole filled with 8.4# Mud			770#	1730#	
12-1/4"	4450'	9-5/8"	40	LT&C	J-55	New	1.16	1.21	2.12
				Hole filled with 10# Mud			2750#	3950#	
8-3/4"	13533' M	5-1/2"	17	BTC	N-80	New	1.6	2.69	1.89
DVT @ 6000' - POST @ 4300'				Hole filled with 9.2# Mud			6280#	7740#	

Collapse and burst loads calculated using Stress Check with anticipated loads

4. Cement Program

- a. 13-3/8" Surface Circulate cement to surface w/ + 630sx PP cmt w/ 4% Bentonite + .125#/sx Poly-E-Flake + 2% CaCl₂, 13.5ppg, 1.75 yield, 840# 24hr CS, 150% Excess followed by 300sx PP cmt w/ 2% CaCl₂, 14.8ppg, 1.35 yield, 2500#-24hr CS, 150% Excess
- b. 9-5/8" Intermediate Circulate cement to surface w/ 1310sx HES light PP cmt w/ 5% Salt + .125#/sx Poly-E-Flake + 5#/sx Gilsomite + 0.5% Halad-344 + 1% CaCl₂ + 0.3% CFR-3, 12.9ppg, 1.89 yield, 840# 24hr CS, 125% Excess followed by 200sx PP cmt w/ 0.5% WellLife 734, 14.8ppg, 1.34 yield, 1343#-24hr CS, 125% Excess

c. 5-1/2" Production Cement 1st stage w/ 2190sx Super H w/ .5% Halad-344 + .4% CFR-3 + 3#/sx Gilsonite + .3% HR-800, 13.2ppg, 1.62 yield, 1817# 24 CS, 85% Excess, Calc TOC-5995'
 Cement 2nd stage w/ 600sx HES light PP cmt w/ 1#/sx Salt + .125#/sx Pheno Seal + 5#/sx Gilsonite + 0.4% CFR-3 + 0.3% HR-800, 13.2ppg, 1.61 yield, 1536# 24hr CS, 125% Excess, Calc TOC-3075'
 Cement 3rd stage w/ 640sx HES Light PP cmt w/ 3#/sx Salt, 12.4ppg, 2.08 yield, 560# 24CS, 35% Excess followed by 150sx PP cmt w/ .125#/sx Poly-E-Flake + 5#/sx Gilsonite, 14.8ppg, 1.33 yield, 1750# 24CS, 35% Excess, Circ Surface

5. Pressure Control Equipment:

Surface None

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

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

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

OXY also requests a variance to connect the BOP outlet to the choke manifold using a co-flex hose that is manufactured by Contitech Rubber Industrial KFT. It is a 3" ID X 35' flexible hose rated to 10000psi working pressure. It has been tested 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>	<u>Mud Wt.</u> <u>ppg</u>	<u>Visc</u> <u>sec</u>	<u>Fluid</u> <u>Loss</u>	<u>Type System</u>
0 - 840' 865	8.4-8.9	32-34	NC	Fresh Water/Spud Mud
840 - 4250' 4450	9.8-10.0	28-29	NC	Brine Water
4250 - 7600'	8.6-8.8	28-29	NC	Fresh Water
7600 - TD'	9.0-9.2	50-50	8-15	LSND

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

7. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- 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.

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.
- c. No coring program is planned but if done will be sidewall rotary cores.
- d. No mudloggers are currently programmed for this well.

9. Potential Hazards:

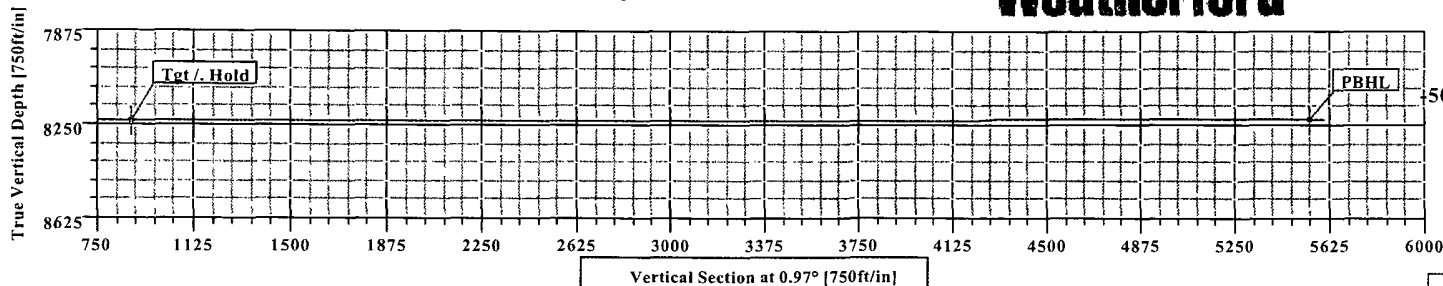
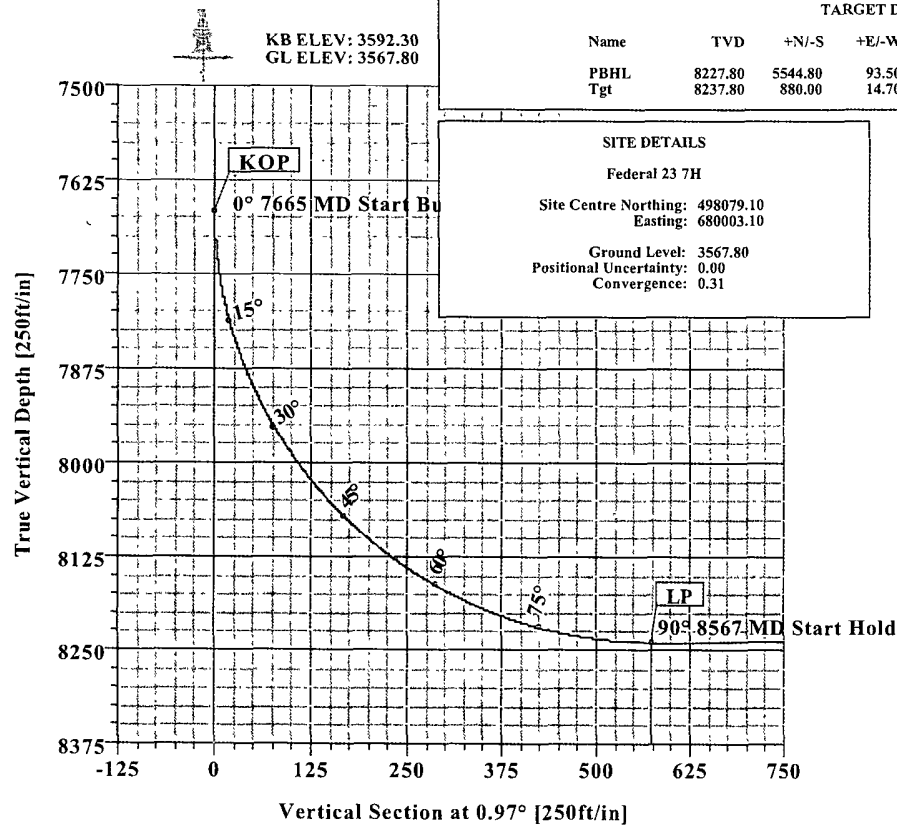
No abnormal pressures, temperatures or H₂S gas are expected. The highest anticipated pressure gradient would be 0.54psi/ft or 3700psi. If H₂S is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No.6. No lost circulation is expected to occur. All personnel will be familiar 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.



Occidental Permian Ltd.
Federal 23 7H
Eddy Co, NM



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	
2	7665.50	0.00	0.96	7665.50	0.00	0.00	0.00	0.00	0.00	
3	8566.73	90.12	0.96	8238.46	574.11	9.59	10.00	0.96	574.19	
4	8872.66	90.12	0.96	8237.80	880.00	14.70	0.00	0.00	880.12	Tgt
5	13538.14	90.12	0.98	8227.80	5544.80	93.50	0.00	89.95	5545.59	PBHL

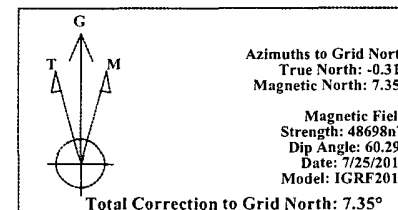
WELL DETAILS							
Name+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
7H	0.00	0.00	498079.10	680003.10	32°22'04.753N	103°45'01.196W	N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8227.80	5544.80	93.50	503623.90	680096.60	Point
Tgt	8237.80	880.00	14.70	498959.10	680017.80	Point

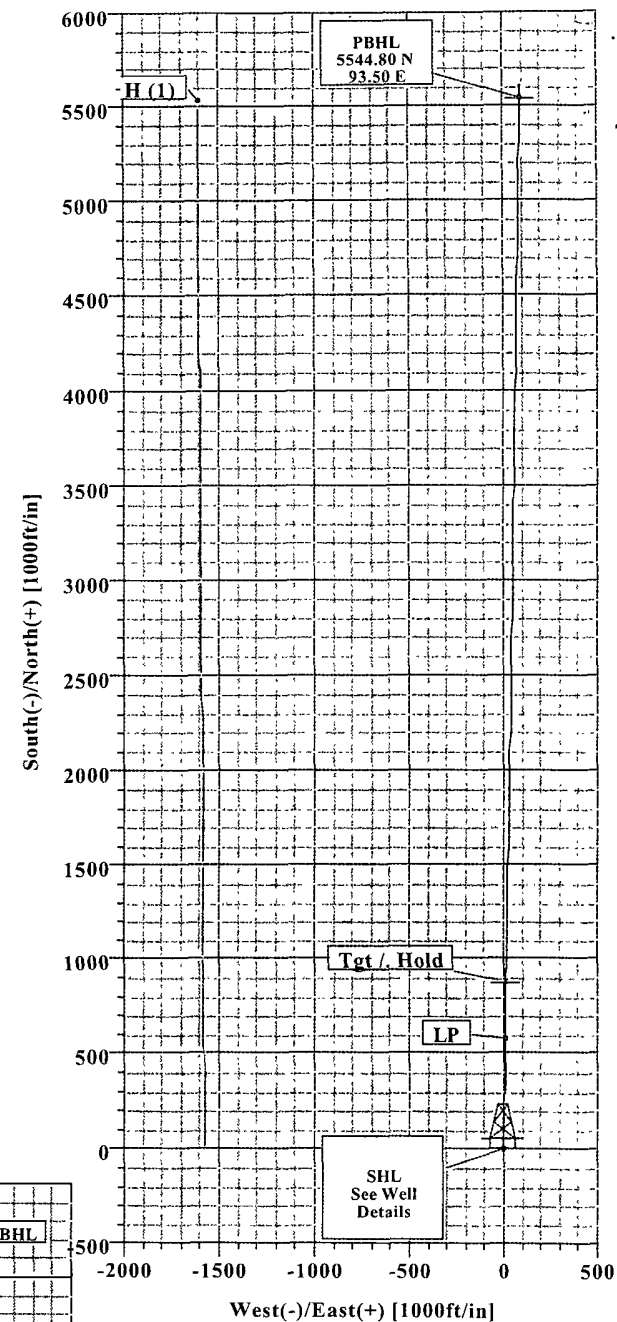
SITE DETAILS	
Federal 23 7H	
Site Centre Northing:	498079.10
Easting:	680003.10
Ground Level:	3567.80
Positional Uncertainty:	0.00
Convergence:	0.31

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

LEGEND	
	#11H (1)
	1
	Plan #1



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WFT Plan Report - X & Y's

**Weatherford**

Company: Occidental Permian Ltd	Date: 4/19/2011	Time: 09:09:43	Page: 1
Field: Eddy Co, NM (Nad 27)	Co-ordinate(NE) Reference: Well: 7H, Grid North		
Site: Federal 23 7H	Vertical (TVD) Reference: SITE 3592.3		
Well: 7H	Section (VS) Reference: Well (0.00N:0.00E:0.97Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 4/14/2011
Principal: Yes	Version: 1
	Tied-to: From Surface

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

Site: Federal 23 7H		
Site Position:	Northing: 498079.10 ft	Latitude: 32 22 4.753 N
From: Map	Easting: 680003.10 ft	Longitude: 103 45 1.196 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3567.80 ft		Grid Convergence: 0.31 deg

Well: 7H	Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 498079.10 ft	Latitude: 32 22 4.753 N
+E/-W 0.00 ft	Easting: 680003.10 ft	Longitude: 103 45 1.196 W
Position Uncertainty: 0.00 ft		

Wellpath: 1	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0.00 ft		
Magnetic Data: 4/14/2011	Above System Datum: Mean Sea Level		
Field Strength: 48726 nT	Declination: 7.70 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.29 deg		
ft	+N/-S	+E/-W	Direction
	ft	ft	deg
0.00	0.00	0.00	0.97

Plan Section Information											
MD	Incl	Azim	TVD	+N/-S	+E/-W	DLS	Build	Turn	TFO	Target	
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg		
0.00	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7665.50	0.00	0.96	7665.50	0.00	0.00	0.00	0.00	0.00	0.00		
8566.73	90.12	0.96	8238.46	574.11	9.59	10.00	10.00	0.00	0.96		
8872.66	90.12	0.96	8237.80	880.00	14.70	0.00	0.00	0.00	0.00	Tgt	
13538.14	90.12	0.98	8227.80	5544.80	93.50	0.00	0.00	0.00	89.95	PBHL	

Survey											
MD	Incl	Azim	TVD	N/S	E/W	VS	DLS	MapN	MapE	Comment	
ft	deg	deg	ft	ft	ft	ft	deg/100ft	ft	ft		
7600.00	0.00	0.96	7600.00	0.00	0.00	0.00	0.00	498079.10	680003.10		
7665.50	0.00	0.96	7665.50	0.00	0.00	0.00	0.00	498079.10	680003.10	KOP	
7700.00	3.45	0.96	7699.98	1.04	0.02	1.04	10.00	498080.14	680003.12		
7800.00	13.45	0.96	7798.77	15.71	0.26	15.71	10.00	498094.81	680003.36		
7900.00	23.45	0.96	7893.51	47.32	0.79	47.32	10.00	498126.42	680003.89		
8000.00	33.45	0.96	7981.32	94.89	1.59	94.90	10.00	498173.99	680004.69		
8100.00	43.45	0.96	8059.54	156.98	2.62	157.01	10.00	498236.08	680005.72		
8200.00	53.45	0.96	8125.78	231.72	3.87	231.75	10.00	498310.82	680006.97		
8300.00	63.45	0.96	8178.04	316.81	5.29	316.86	10.00	498395.91	680008.39		
8400.00	73.45	0.96	8214.72	409.69	6.84	409.75	10.00	498488.79	680009.94		
8500.00	83.45	0.96	8234.72	507.53	8.48	507.60	10.00	498586.63	680011.58		
8566.73	90.12	0.96	8238.46	574.11	9.59	574.19	10.00	498653.21	680012.69	LP	
8600.00	90.12	0.96	8238.38	607.37	10.15	607.46	0.00	498686.47	680013.25		
8700.00	90.12	0.96	8238.17	707.36	11.82	707.46	0.00	498786.46	680014.92		
8800.00	90.12	0.96	8237.96	807.35	13.49	807.46	0.00	498886.45	680016.59		
8872.66	90.12	0.96	8237.80	880.00	14.70	880.12	0.00	498959.10	680017.80	Tgt	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company:	Occidental Permian Ltd.	Date:	4/19/2011	Time:	09:09:43	Page:	2
Field:	Eddy Co. NM (Nad 27)	Co-ordinate(N/E) Reference:	Well: 7H- Grid North				
Site:	Federal 23-7H	Vertical (TVD) Reference:	SITE 3592.3				
Well:	7H	Section (VS) Reference:	Well (0.00N;0.00E;0.97Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Survey

MD-ft	Incl-deg	Azim-deg	TVD-ft	N/S-ft	E/W-ft	VS-ft	DLS-deg/100ft	MapN-ft	MapE-ft	Comment
8900.00	90.12	0.96	8237.74	907.33	15.16	907.46	0.00	498986.43	680018.26	
9000.00	90.12	0.96	8237.53	1007.32	16.83	1007.46	0.00	499086.42	680019.93	
9100.00	90.12	0.96	8237.31	1107.30	18.50	1107.46	0.00	499186.40	680021.60	
9200.00	90.12	0.96	8237.10	1207.29	20.17	1207.46	0.00	499286.39	680023.27	
9300.00	90.12	0.96	8236.88	1307.27	21.84	1307.46	0.00	499386.37	680024.94	
9400.00	90.12	0.96	8236.67	1407.26	23.52	1407.46	0.00	499486.36	680026.62	
9500.00	90.12	0.96	8236.46	1507.25	25.19	1507.46	0.00	499586.35	680028.29	
9600.00	90.12	0.96	8236.24	1607.23	26.87	1607.46	0.00	499686.33	680029.97	
9700.00	90.12	0.96	8236.03	1707.22	28.55	1707.46	0.00	499786.32	680031.65	
9800.00	90.12	0.96	8235.81	1807.20	30.22	1807.46	0.00	499886.30	680033.32	
9900.00	90.12	0.96	8235.60	1907.19	31.90	1907.46	0.00	499986.29	680035.00	
10000.00	90.12	0.96	8235.38	2007.17	33.58	2007.46	0.00	500086.27	680036.68	
10100.00	90.12	0.96	8235.17	2107.16	35.26	2107.46	0.00	500186.26	680038.36	
10200.00	90.12	0.96	8234.96	2207.15	36.94	2207.45	0.00	500286.25	680040.04	
10300.00	90.12	0.96	8234.74	2307.13	38.62	2307.45	0.00	500386.23	680041.72	
10400.00	90.12	0.96	8234.53	2407.12	40.30	2407.45	0.00	500486.22	680043.40	
10500.00	90.12	0.96	8234.31	2507.10	41.99	2507.45	0.00	500586.20	680045.09	
10600.00	90.12	0.96	8234.10	2607.09	43.67	2607.45	0.00	500686.19	680046.77	
10700.00	90.12	0.97	8233.88	2707.07	45.35	2707.45	0.00	500786.17	680048.45	
10800.00	90.12	0.97	8233.67	2807.06	47.04	2807.45	0.00	500886.16	680050.14	
10900.00	90.12	0.97	8233.45	2907.04	48.73	2907.45	0.00	500986.14	680051.83	
11000.00	90.12	0.97	8233.24	3007.03	50.41	3007.45	0.00	501086.13	680053.51	
11100.00	90.12	0.97	8233.03	3107.02	52.10	3107.45	0.00	501186.12	680055.20	
11200.00	90.12	0.97	8232.81	3207.00	53.79	3207.45	0.00	501286.10	680056.89	
11300.00	90.12	0.97	8232.60	3306.99	55.48	3307.45	0.00	501386.09	680058.58	
11400.00	90.12	0.97	8232.38	3406.97	57.17	3407.45	0.00	501486.07	680060.27	
11500.00	90.12	0.97	8232.17	3506.96	58.86	3507.45	0.00	501586.06	680061.96	
11600.00	90.12	0.97	8231.95	3606.94	60.55	3607.45	0.00	501686.04	680063.65	
11700.00	90.12	0.97	8231.74	3706.93	62.24	3707.45	0.00	501786.03	680065.34	
11800.00	90.12	0.97	8231.53	3806.91	63.94	3807.45	0.00	501886.01	680067.04	
11900.00	90.12	0.97	8231.31	3906.90	65.63	3907.45	0.00	501986.00	680068.73	
12000.00	90.12	0.97	8231.10	4006.89	67.33	4007.45	0.00	502085.99	680070.43	
12100.00	90.12	0.97	8230.88	4106.87	69.02	4107.45	0.00	502185.97	680072.12	
12200.00	90.12	0.97	8230.67	4206.86	70.72	4207.45	0.00	502285.96	680073.82	
12300.00	90.12	0.97	8230.45	4306.84	72.42	4307.45	0.00	502385.94	680075.52	
12400.00	90.12	0.97	8230.24	4406.83	74.12	4407.45	0.00	502485.93	680077.22	
12500.00	90.12	0.97	8230.03	4506.81	75.81	4507.45	0.00	502585.91	680078.91	
12600.00	90.12	0.97	8229.81	4606.80	77.51	4607.45	0.00	502685.90	680080.61	
12700.00	90.12	0.97	8229.60	4706.78	79.21	4707.45	0.00	502785.88	680082.31	
12800.00	90.12	0.98	8229.38	4806.77	80.92	4807.45	0.00	502885.87	680084.02	
12900.00	90.12	0.98	8229.17	4906.75	82.62	4907.45	0.00	502985.85	680085.72	
13000.00	90.12	0.98	8228.95	5006.74	84.32	5007.45	0.00	503085.84	680087.42	
13100.00	90.12	0.98	8228.74	5106.72	86.03	5107.45	0.00	503185.82	680089.13	
13200.00	90.12	0.98	8228.52	5206.71	87.73	5207.45	0.00	503285.81	680090.83	
13300.00	90.12	0.98	8228.31	5306.69	89.44	5307.45	0.00	503385.79	680092.54	
13400.00	90.12	0.98	8228.10	5406.68	91.14	5407.45	0.00	503485.78	680094.24	
13500.00	90.12	0.98	8227.88	5506.66	92.85	5507.45	0.00	503585.76	680095.95	
13538.14	90.12	0.98	8227.80	5544.80	93.50	5545.59	0.00	503623.90	680096.60	PBHL



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd. Date: 4/19/2011 Time: 09:09:43 Page: 3
Field: Eddy Co, NM (Nad 27) Co-ordinate(NE) Reference: Well: 7H Grid North
Site: Federal 23 7H Vertical (TVD) Reference: SITE 3592.3
Well: 7H Section (VS) Reference: Well (0.00N 0.00E 0.97Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Targets

Name	Description	TVD	+N/-S	+E/-W	Map	Map	Latitude	Longitude
Dip	Dir	ft	ft	ft	Northing	Easting	Deg Min Sec	Deg Min Sec
PBHL		8227.80	5544.80	93.50	503623.90	680096.60	32 22 59.617 N	103 44 59.753 W
Tgt		8237.80	880.00	14.70	498959.10	680017.80	32 22 13.460 N	103 45 0.968 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

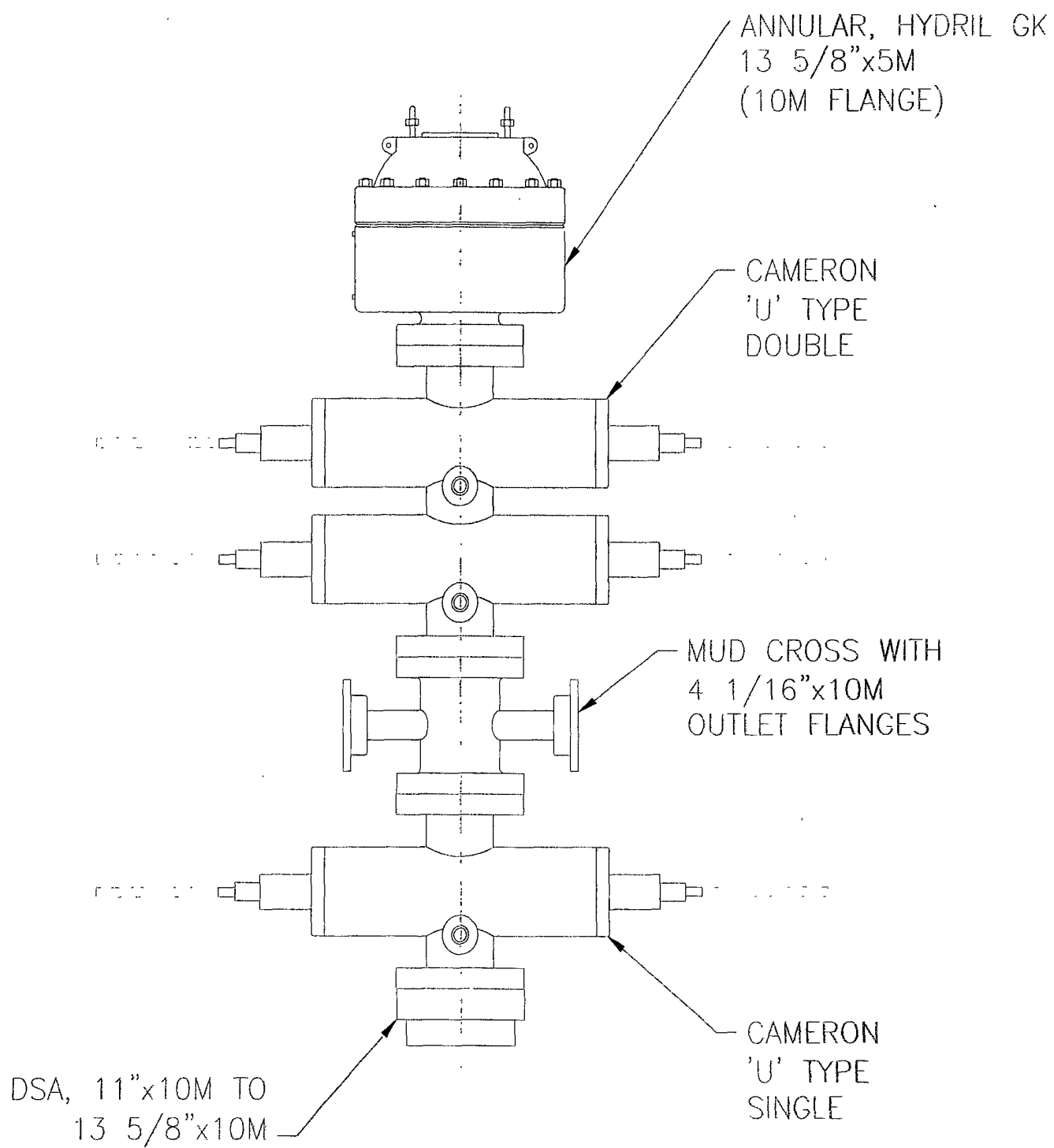
Annotation

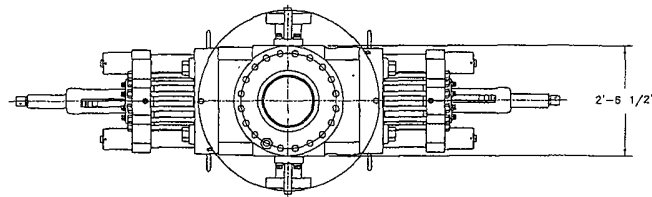
MD	TVD	
ft	ft	
7665.50	7665.50	KOP
8566.73	8238.46	LP
8872.66	8237.80	Tgt / Hold
13538.14	8227.80	PBHL

Formations

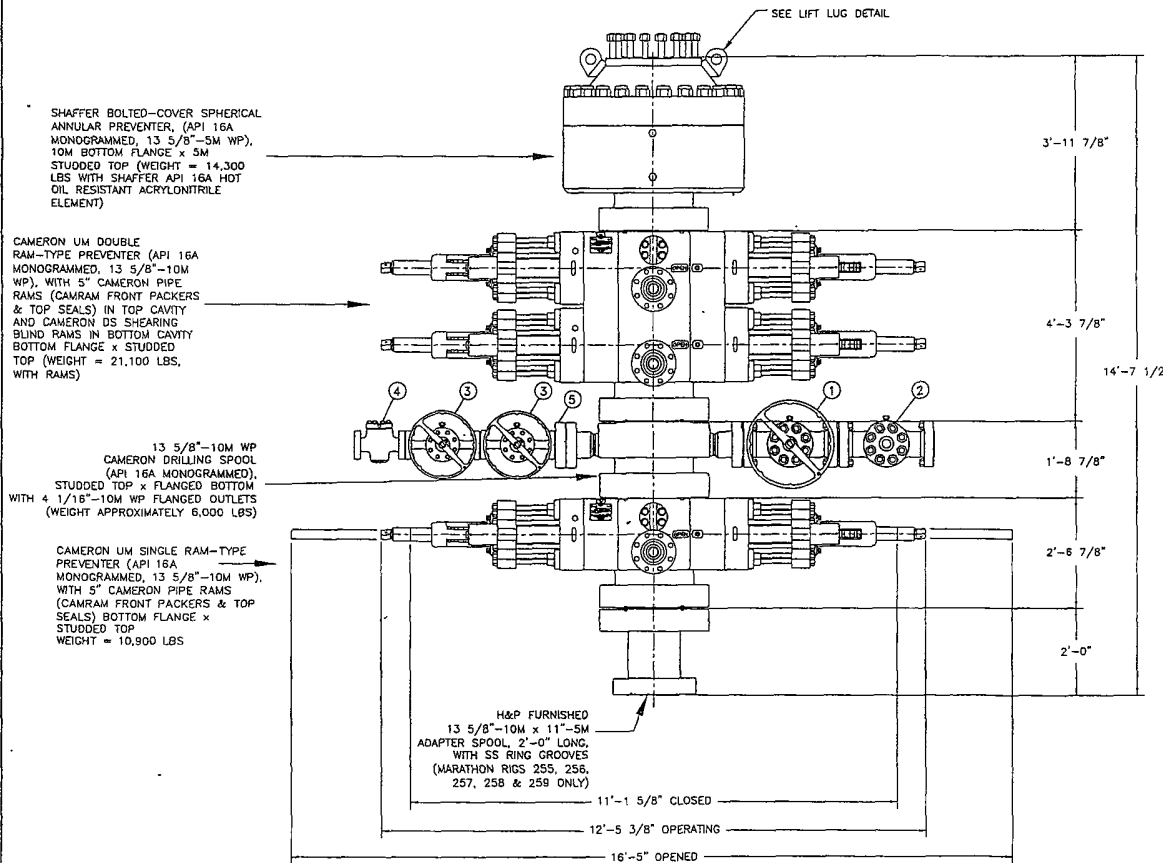
MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

BOP Diagram

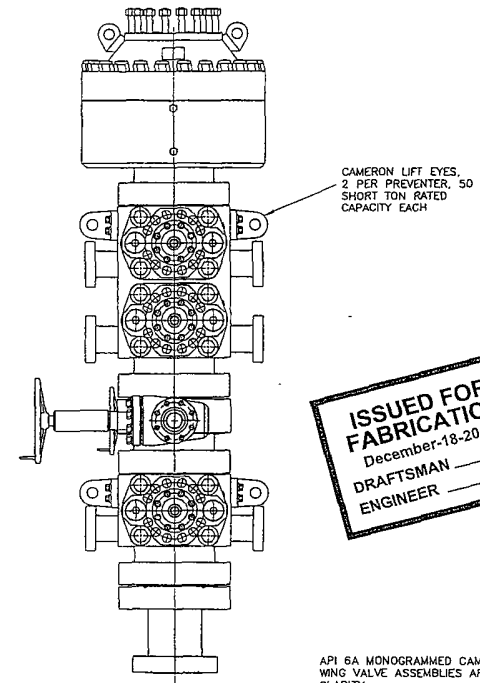




- LEGEND**
- ① 4 1/16"-10M FLANGED END GATE VALVE
 - ② 4 1/16"-10M FLANGED END GATE VALVE WITH DOUBLE ACTING HYDRAULIC ACTUATOR
 - ③ 2 1/16"-10M FLANGED END GATE VALVE
 - ④ 2 1/16"-10M FLANGED END CHECK VALVE
 - ⑤ DOUBLE STUDDED ADAPTER



13 5/8-10M STACK



ISSUED FOR FABRICATION
December-18-2007
DRAFTSMAN _____
ENGINEER _____

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

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

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER WITHOUT THE PRIOR WRITTEN CONSENT OF A DULY AUTHORIZED OFFICER OF HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

ENGINEERING APPROVAL		DATE	TITLE
12/18/07	ADDED SHEET 03	JAV	13 5/8"-10M BOP 3 RAM STACK
4-10-07	ORDINATION REVERSED DOUBLE STUDDED ADAPTER VALVES 1, 2, & 3 AND 10 CHECK VALVE ADDED	JBC	FLEXRIG3
4-04-07	ADDED TO SPACER ADAPTER SPOOL	JBC	CUSTOMER: H&P
02-07-07	ADDED ADAPTER SPOOL	MWL	PROJECT: FLEXRIG3
08-13-02	CORRECTED BOP STACK	MWL	DRAWN: MTS
REV	DATE	DESCRIPTION	DATE: 6-5-02 DWG NO: 210-P1-07
			SCALE: 3/4"=1' SHEET 1 OF 1