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

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144 CLEZ
July 21, 2008

For closed-loop systems *that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure*, submit to the appropriate NMOCD District Office.

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

RECEIVED
FEB 10 2010
NMOCD ARTESIA

1.
Operator: Devon Energy Production Co., LP OGRID #: 6137
Address: 20 North Broadway OKC, OK 73102-8260
Facility or well name: Cooter 16 State #2H
API Number: 30-015-37626 OCD Permit Number: 210057
U/L or Qtr/Qtr M Section 25 Township 25S Range 29E County: Eddy County, NM
Center of Proposed Design: Latitude _____ Longitude _____ NAD: ☐1927 ☐ 1983
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☒ Above Ground Steel Tanks or ☒ Haul-off Bins

3.
Signs: Subsection C of 19.15.17.11 NMAC
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
☒ Signed in compliance with 19.15.3.103 NMAC

4.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____

5.
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.
Disposal Facility Name: CRI Disposal Facility Permit Number: R9166
Disposal Facility Name: _____ Disposal Facility Permit Number: _____
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No

Required for impacted areas which will not be used for future service and operations.
☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6.
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Judy A. Barnett Title: Regulatory Analyst
Signature: Judy A. Barnett Date: 01/27/10
e-mail address: Judith.Barnett@dvn.com Telephone: 405.228.8699

7.
OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: Denis L Wade **Approval Date:** 03/08/2010

Title: Dist II Supervisor **OCD Permit Number:** 210057

8.
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

9.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations

☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

10.
Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

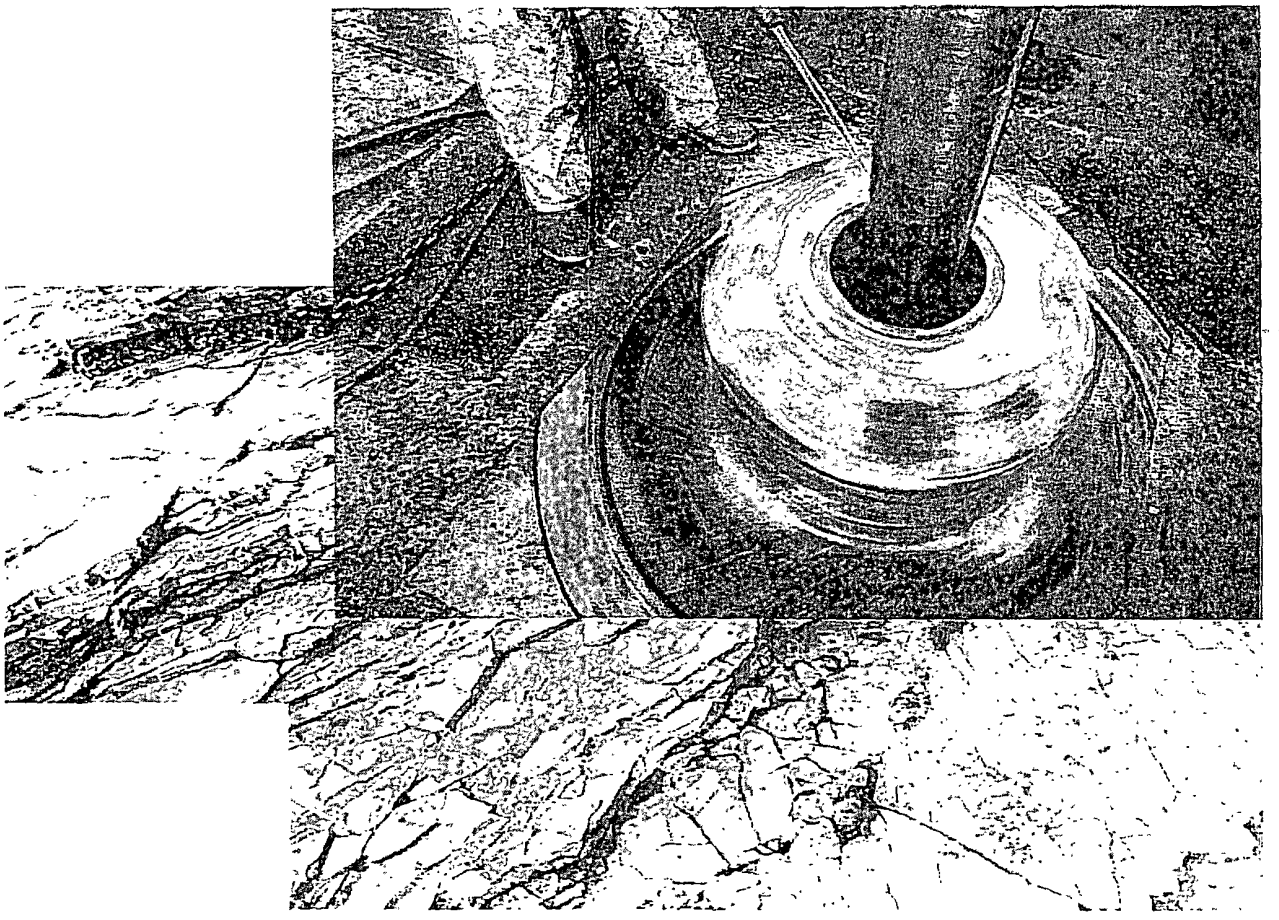
Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2008

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

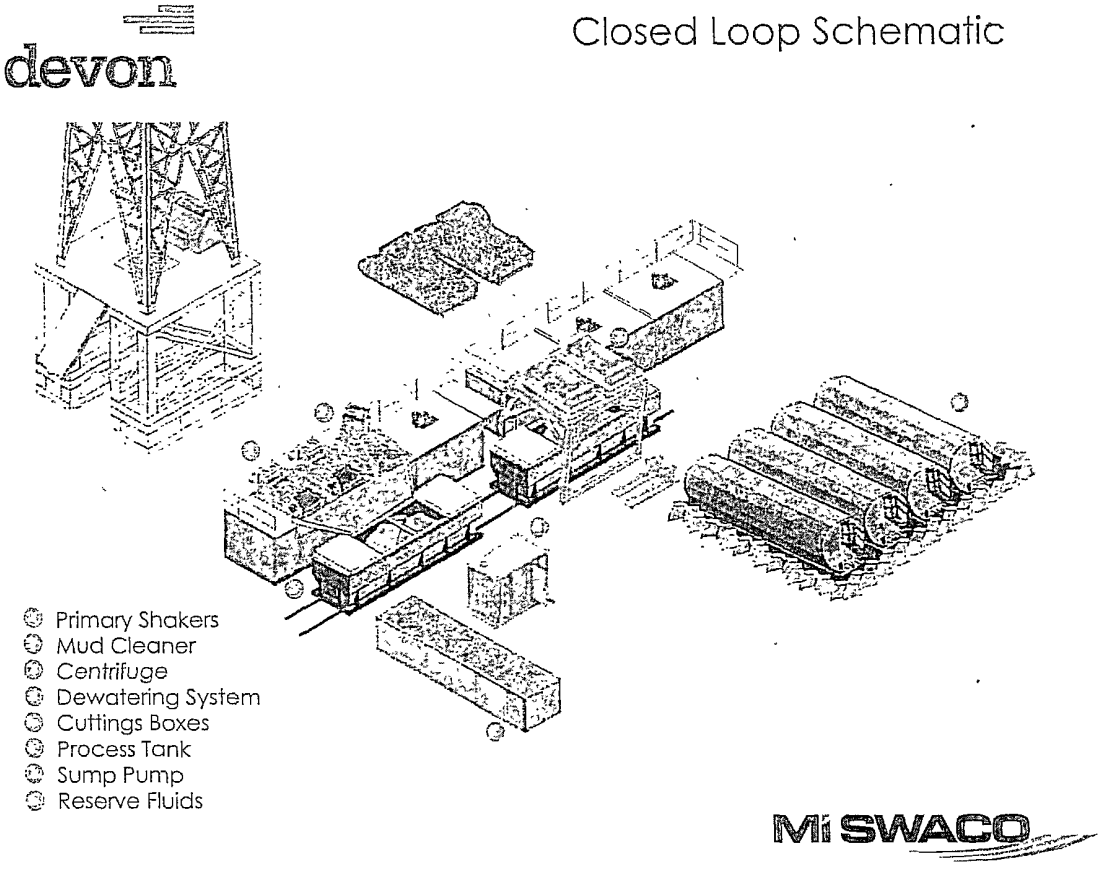
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 170' X 170' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

Weatherford®

Drilling Services

Proposal

devon

COOTER 16 STATE #2H

EDDY COUNTY, NM

WELL FILE: **PLAN 2**

FEBRUARY 2, 2010

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

devon

COOTER 16 STATE #2H
EDDY CO., NEW MEXICO

Rig H&P 372

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	
2	6967.04	0.00	0.76	6967.04	0.00	0.00	0.00	0.00	0.00	
3	7867.04	90.00	0.76	7540.00	572.91	7.63	10.00	0.76	572.96	
4	11795.04	90.00	0.76	7540.00	4500.56	59.92	0.00	0.00	4500.96	Pbhl #2

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#2H	0.00	0.00	409024.85	645468.56	32°07'26.541N	103°59'49.074W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl #2	7540.00	4500.56	59.92	413525.41	645528.48	Point

FIELD DETAILS

Eddy Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North

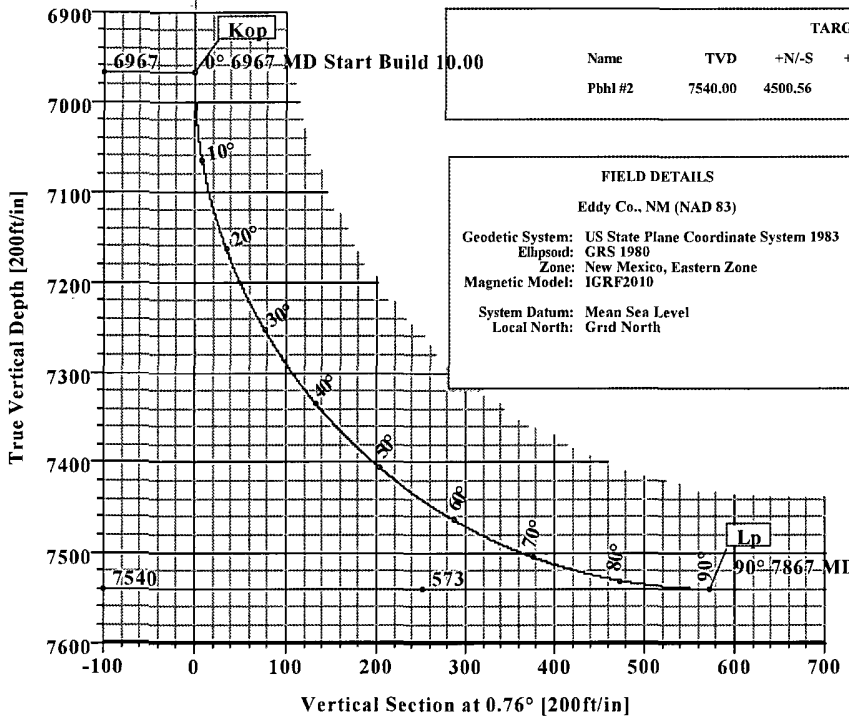
SITE DETAILS

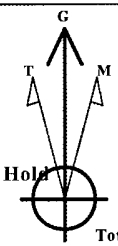
Cooter 16 State #2H

Site Centre Northing: 409024.85
Easting: 645468.56

Ground Level: 2999.00
Positional Uncertainty: 0.00
Convergence: 0.18

KB ELEV: 3024
GL ELEV: 2999

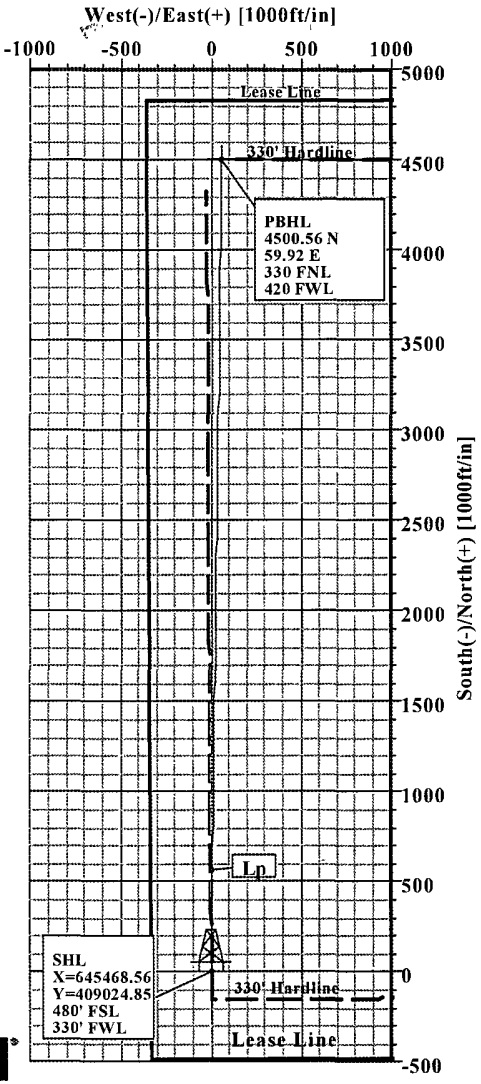




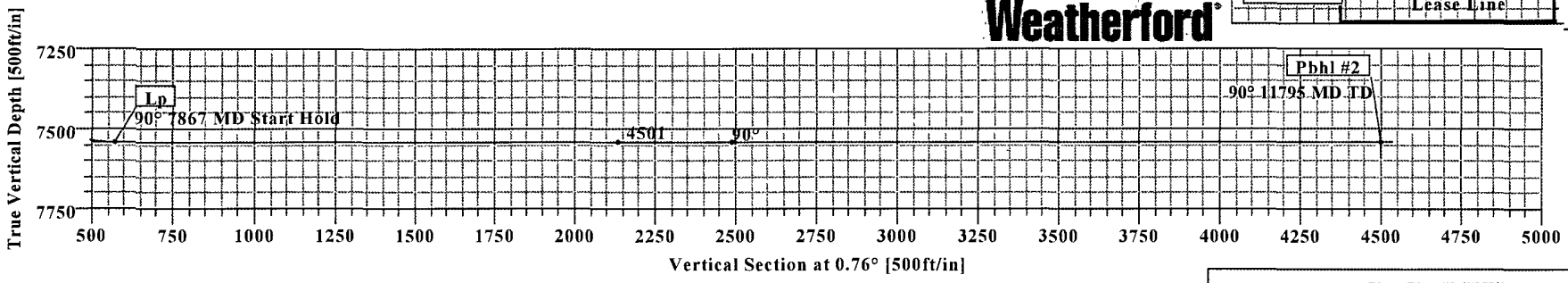
Azimuths to Grid North
True North: -0.18°
Magnetic North: 7.76°

Magnetic Field
Strength: 48671nT
Dip Angle: 60.05°
Date: 1/27/2010
Model: IGRF2010

Total Correction to Grid North: 7.76°



Weatherford



Plan: Plan #2 (#2H/1)

Created By: Russell W Joyner Date: 2/2/2010

Weatherford International Ltd.

WFT Plan Report - Geographic

Company:	Devon Energy	**Date:** 2/2/2010	**Time:** 09:04:34	**Page:**	1
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well: #2H, Grid North		
Site:	Cooter 16 State #2H	**Vertical (TVD) Reference:**	SITE 3024.0		
Well:	#2H	**Section (VS) Reference:**	Well (0.00N,0.00E,0.76Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Survey: **Start Date:**

Company: **Engineer:**

Tool: **Tied-to:**

Field: Eddy Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983 **Map Zone:** New Mexico, Eastern Zone

Geo Datum: GRS 1980 **Coordinate System:** Well Centre

Sys Datum: Mean Sea Level **Geomagnetic Model:** IGRF2010

Site: Cooter 16 State #2H

Site Position:			**Northing:**	409024.85	ft	**Latitude:**	32 7 26.541	N	
From:	Map		**Easting:**	645468.56	ft	**Longitude:**	103 59 49.074	W	
Position Uncertainty:		0.00 ft				**North Reference:**	Grid		
Ground Level:		2999.00 ft				**Grid Convergence:**	0.18	deg	

Well: #2H **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	409024.85	ft	**Latitude:**	32 7 26.541	N	
	+E/-W	0.00 ft	**Easting :**	645468.56	ft	**Longitude:**	103 59 49.074	W	
Position Uncertainty:		0.00 ft							

Wellpath: 1 **Drilled From:** Surface

Tie-on Depth: 0.00 ft

Current Datum:	SITE	**Height** 3024.00 ft	**Above System Datum:** Mean Sea Level
Magnetic Data:	1/27/2010		**Declination:** 7.94 deg
Field Strength:	48671 nT		**Mag Dip Angle:** 60.05 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	0.76

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.76	0.00	0 00	0.00	0.00	0.00	0.00	0 00	
6967.04	0.00	0.76	6967.04	0.00	0.00	0.00	0.00	0.00	0 00	
7867.04	90 00	0.76	7540.00	572.91	7.63	10.00	10.00	0.00	0.76	
11795.04	90 00	0.76	7540.00	4500.56	59.92	0.00	0.00	0.00	0.00	Pbhl #2

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
6900.00	0.00	0.76	6900.00	0.00	0.00	0.00	0.00	409024.85	645468.56	
6967.00	0.00	0.76	6967.00	0.00	0.00	0.00	0.00	409024.85	645468.56	Kop
6967.04	0.00	0.76	6967.04	0.00	0.00	0.00	0.00	409024.85	645468.56	
7000 00	3.30	0.76	6999.98	0 95	0.01	0.95	10.00	409025.80	645468.57	
7100.00	13.30	0.76	7098 81	15.36	0.20	15.36	10.00	409040.21	645468.77	
7200.00	23.30	0.76	7193.63	46.71	0.62	46.71	10.00	409071.56	645469.18	
7300.00	33.30	0.76	7281.57	94.04	1.25	94.05	10.00	409118.90	645469.81	
7400.00	43.30	0.76	7359.96	155.93	2.08	155.95	10.00	409180.78	645470.64	
7500.00	53.30	0.76	7426.40	230 49	3.07	230.51	10.00	409255.34	645471.63	
7600.00	63.30	0.76	7478.89	315.45	4.20	315.48	10.00	409340.30	645472.76	
7700.00	73.30	0.76	7515.82	408.24	5.44	408.27	10.00	409433.09	645474.00	
7800 00	83.30	0 76	7536 08	506.02	6.74	506.07	10.00	409530.88	645475.30	
7867.04	90.00	0.76	7540.00	572.91	7.63	572 96	10.00	409597.76	645476.19	Lp
7900.00	90.00	0.76	7540.00	605.86	8.07	605.92	0.00	409630.71	645476.63	
8000.00	90.00	0.76	7540.00	705.85	9.40	705.92	0.00	409730.71	645477.96	
8100.00	90.00	0.76	7540.00	805.84	10.73	805.92	0.00	409830.70	645479.29	

Weatherford International Ltd.

WFT Plan Report - Geographic

Company:	Devon Energy	**Date:** 2/2/2010	**Time:** 09:04:34	**Page:**	2
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well: #2H, Grid North		
Site:	Cooter 16 State #2H	**Vertical (TVD) Reference:**	SITE 3024.0		
Well:	#2H	**Section (VS) Reference:**	Well (0.00N,0.00E,0.76Azi)		
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
8200.00	90.00	0.76	7540 00	905.84	12.06	905.92	0.00	409930.69	645480.62	
8300.00	90.00	0.76	7540.00	1005.83	13.39	1005.92	0.00	410030.68	645481.95	
8400.00	90.00	0.76	7540.00	1105.82	14.72	1105.92	0.00	410130.67	645483.28	
8500.00	90.00	0.76	7540 00	1205.81	16.06	1205.92	0.00	410230.66	645484.62	
8600.00	90.00	0.76	7540.00	1305.80	17.39	1305.92	0.00	410330.65	645485.95	
8700.00	90.00	0.76	7540.00	1405.79	18.72	1405.92	0.00	410430.64	645487.28	
8800.00	90.00	0.76	7540.00	1505.78	20.05	1505.92	0.00	410530.64	645488.61	
8900.00	90.00	0.76	7540.00	1605.77	21.38	1605.92	0.00	410630.63	645489.94	
9000.00	90.00	0.76	7540.00	1705.76	22.71	1705.92	0.00	410730.62	645491.27	
9100.00	90.00	0.76	7540.00	1805.76	24.04	1805.92	0.00	410830.61	645492.60	
9200.00	90.00	0.76	7540.00	1905.75	25 37	1905.92	0.00	410930.60	645493.94	
9300.00	90.00	0.76	7540.00	2005.74	26.71	2005.92	0.00	411030.59	645495.27	
9400.00	90.00	0.76	7540.00	2105 73	28.04	2105.92	0.00	411130.58	645496.60	
9500.00	90.00	0.76	7540.00	2205.72	29.37	2205.92	0.00	411230.57	645497.93	
9600.00	90.00	0.76	7540.00	2305.71	30.70	2305.92	0 00	411330.56	645499.26	
9700.00	90.00	0 76	7540.00	2405.70	32.03	2405.92	0.00	411430.56	645500.59	
9800.00	90.00	0.76	7540 00	2505.69	33.36	2505.92	0 00	411530.55	645501.92	
9900.00	90.00	0.76	7540.00	2605.68	34.69	2605.92	0.00	411630.54	645503.26	
10000.00	90 00	0.76	7540.00	2705 68	36.03	2705.92	0.00	411730.53	645504.59	
10100.00	90.00	0.76	7540.00	2805.67	37.36	2805.92	0.00	411830.52	645505.92	
10200.00	90.00	0.76	7540.00	2905.66	38.69	2905.92	0.00	411930.51	645507.25	
10300.00	90.00	0.76	7540.00	3005.65	40.02	3005.92	0.00	412030.50	645508.58	
10400.00	90.00	0 76	7540.00	3105.64	41.35	3105.92	0.00	412130.49	645509.91	
10500.00	90.00	0.76	7540.00	3205.63	42.68	3205.92	0.00	412230.48	645511.24	
10600.00	90.00	0.76	7540.00	3305.62	44.01	3305.92	0.00	412330.48	645512.57	
10700.00	90.00	0.76	7540.00	3405.61	45.35	3405.92	0.00	412430.47	645513.91	
10800.00	90.00	0 76	7540.00	3505.60	46.68	3505.92	0.00	412530.46	645515.24	
10900.00	90.00	0.76	7540.00	3605.60	48.01	3605.92	0.00	412630.45	645516.57	
11000.00	90.00	0.76	7540.00	3705.59	49.34	3705.92	0.00	412730.44	645517.90	
11100.00	90.00	0.76	7540.00	3805.58	50 67	3805.92	0.00	412830.43	645519.23	
11200.00	90.00	0.76	7540.00	3905.57	52 00	3905.92	0.00	412930.42	645520.56	
11300.00	90.00	0.76	7540.00	4005.56	53.33	4005.92	0 00	413030.41	645521.89	
11400 00	90.00	0.76	7540.00	4105.55	54.66	4105.92	0 00	413130.40	645523.23	
11500.00	90.00	0.76	7540.00	4205.54	56.00	4205.92	0.00	413230.40	645524.56	
11600.00	90.00	0.76	7540.00	4305.53	57.33	4305.92	0.00	413330.39	645525.89	
11700.00	90.00	0.76	7540.00	4405.53	58.66	4405.92	0.00	413430.38	645527.22	
11795.04	90.00	0.76	7540 00	4500.56	59.92	4500.96	0.00	413525.41	645528.48	Pbhl #2

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg	Min	Sec	<--- Longitude ---> Deg	Min	Sec
Pbhl #2			7540.00	4500.56	59.92	413525.41	645528.48	32	8	11.077 N	103	59	48.214 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Weatherford International Ltd.
WFT Plan Report - Geographic

Company:	Devon Energy	**Date:** 2/2/2010	**Time:** 09:04:34	**Page:**	3
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well: #2H, Grid North		
Site:	Cooter 16 State #2H	**Vertical (TVD) Reference:**	SITE 3024.0		
Well:	#2H	**Section (VS) Reference:**	Well (0.00N,0.00E,0.76Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Annotation

MD ft	TVD ft	
6967.00	6967.00	Kop
7867.04	7540.00	Lp
11795.04	7540.00	Pbhl #2

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Weatherford®

Weatherford Drilling Services

GeoDec v5.03

Report Date:	February 02, 2010
Job Number:	
Customer:	Devon Energy
Well Name:	Cooter 16 State #2H
API Number:	
Rig Name:	
Location:	Eddy Co, NM
Block:	
Engineer:	R Joyner

US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 409024.850 USFT	Latitude 32.1240415 DEG
East/West 645468.560 USFT	Longitude -103.9969610 DEG
Grid Convergence: .18°	
Total Correction: +7.76°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.12404° N	32° 7 min 26.549 sec
Longitude =	103.99696° W	103° 59 min 49.060 sec

Magnetic Declination =	7.94°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6633
Local Field Strength =	48667 nT	Magnetic Vector X =	24062 nT
Magnetic Dip =	60.05°	Magnetic Vector Y =	3357 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42169 nT
Spud Date =	Jan 27, 2010	Magnetic Vector H =	24295 nT

Signed:_____ Date:_____