

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

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

Form C-102  
Revised October 15, 2009  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number <b>30-015-40207</b>		2 Pool Code <b>49622</b>		3 Pool Name <b>PARKWAY;BONE SPRING</b>	
4 Property Code <b>38555</b>		5 Property Name <b>CORAL PWU "28"</b>			6 Well Number <b>3H</b>
7 OGRID No. <b>6137</b>		8 Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>			9 Elevation <b>3300.8</b>

10 Surface Location

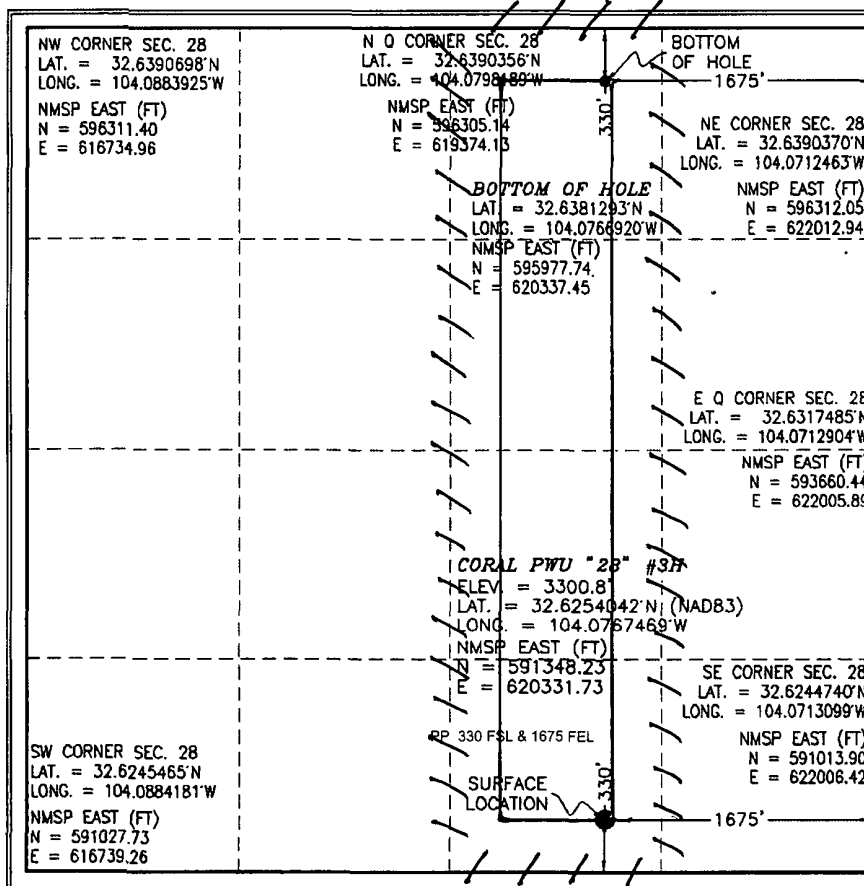
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>O</b>	<b>28</b>	<b>19 S</b>	<b>29 E</b>		<b>330</b>	<b>SOUTH</b>	<b>1675</b>	<b>EAST</b>	<b>EDDY</b>

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>B</b>	<b>28</b>	<b>19 S</b>	<b>29 E</b>		<b>330</b>	<b>NORTH</b>	<b>1675</b>	<b>EAST</b>	<b>EDDY</b>

12 Dedicated Acres <b>160</b>	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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.



17 OPERATOR CERTIFICATION

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

*D. A.*

4/4/12

Signature

Date

Printed Name

David C. Cook Regulatory Specialist

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

FEBRUARY 25 2012

Date of Survey

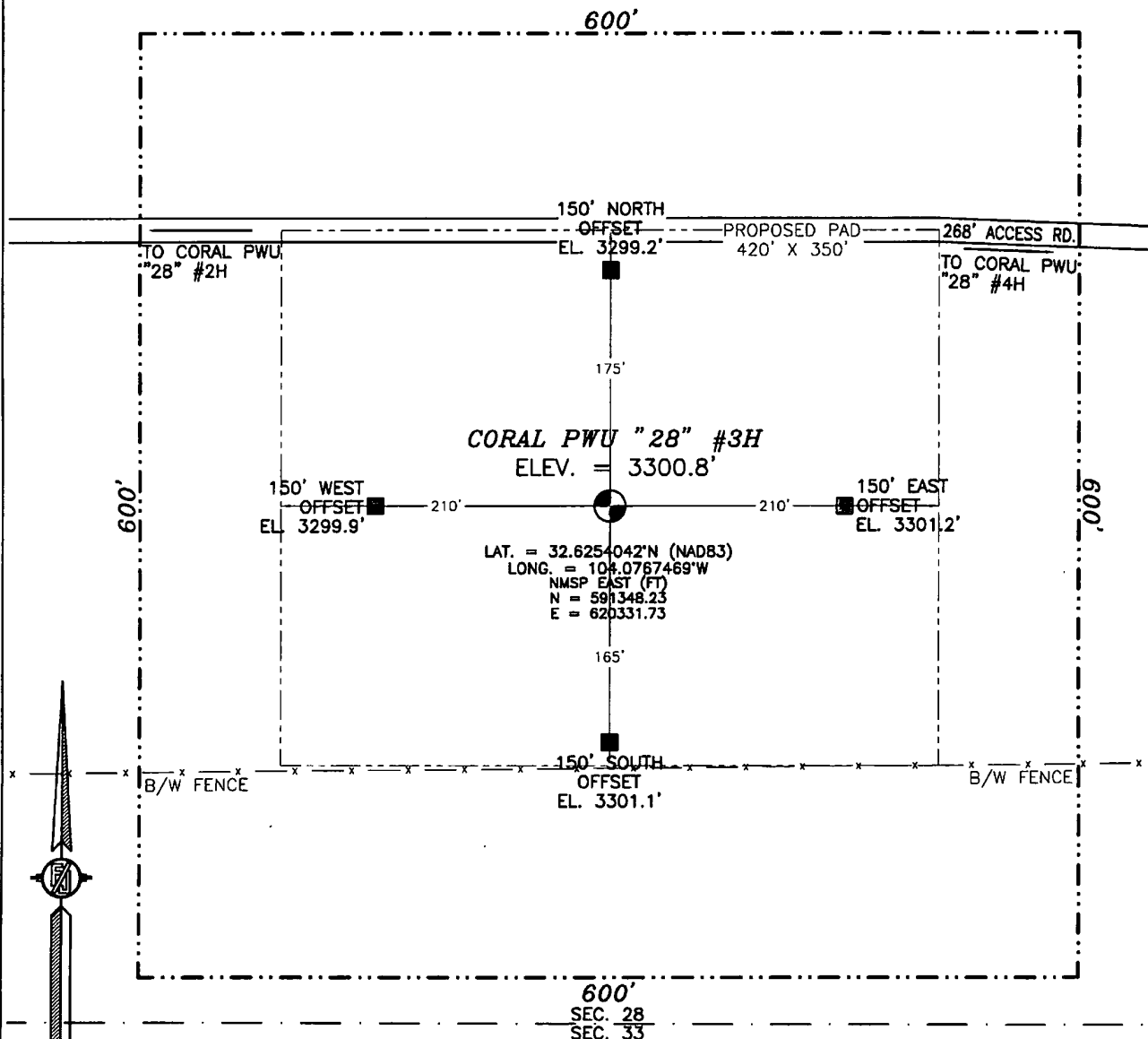
*Filix F. Jaramilla*

Signature and Seal of Professional Surveyor

Certificate Number: FILIX F. JARAMILLA PLS 12797

SURVEY NO 797

SECTION 28, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO



010 50 100 200

SCALE 1" = 100'

**DIRECTIONS TO LOCATION**

FROM CR. 235 AND CR. 210 GO SOUTHEAST ON 235 0.2 MILES  
TURN RIGHT AND GO SOUTH 1.0 MILES BEND RIGHT AND GO WEST  
0.25 MILES, TURN LEFT AND GO SOUTHEAST 0.3 MILES TURN RIGHT  
AND GO SOUTH 0.7 MILES TURN RIGHT AND GO 200' TO EXISTING  
PAD FOR CORAL PWU "28" #4H AND FROM THE NW. CORNER OF PAD  
FOLLOW THE PROPOSED ROAD SURVEY FLAGS WEST 288' TO THE NE  
CORNER OF PROPOSED PAD FOR CORAL PWU "28" #3H

DEVON ENERGY PRODUCTION COMPANY, L.P.

**CORAL PWU "28" #3H**

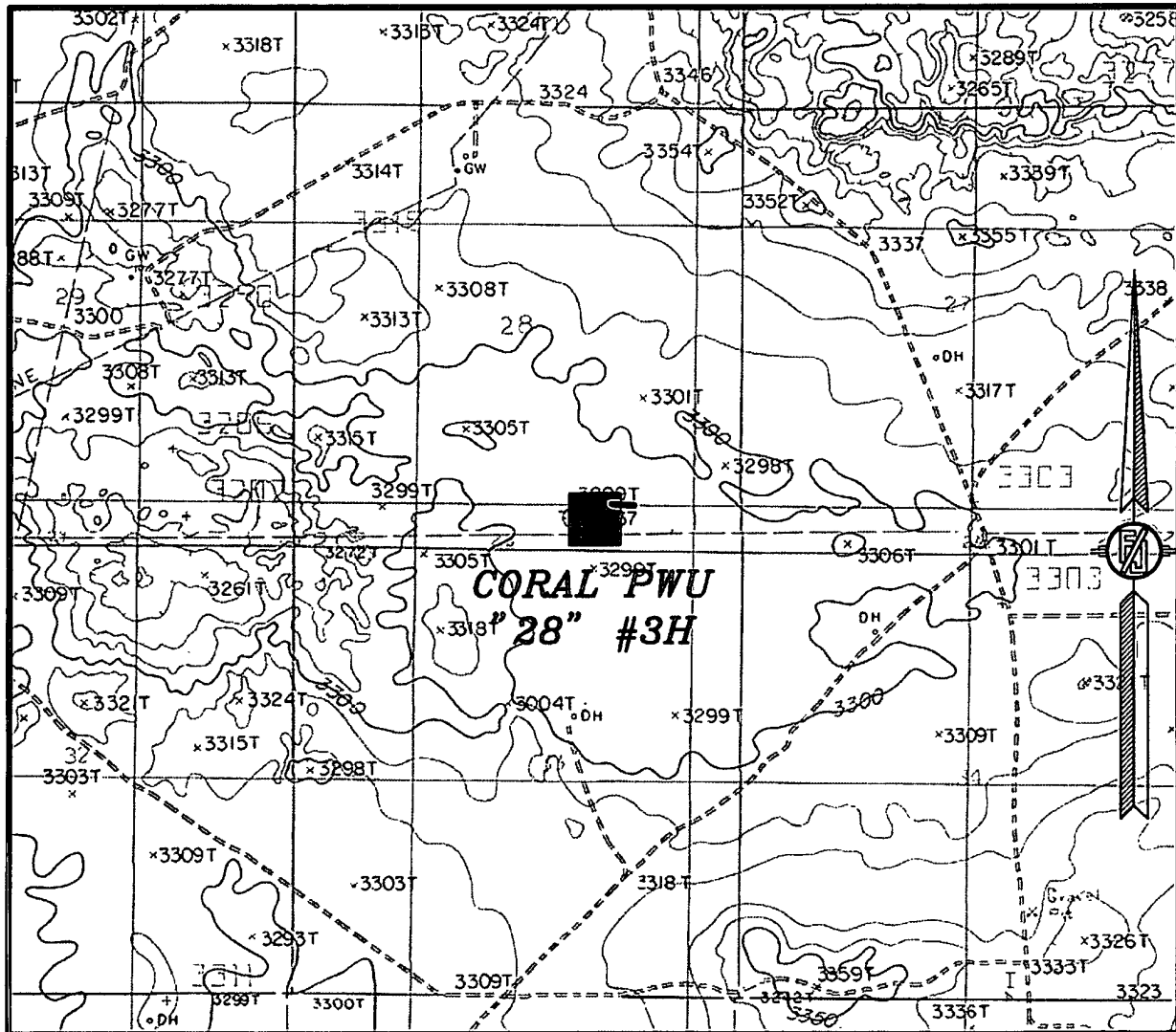
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1675 FT. FROM THE EAST LINE OF  
SECTION 28, TOWNSHIP 19 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 25, 2012

SURVEY NO. 797

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 28, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
ILLINOIS CAMP NE

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CORAL PWU "28" #3H

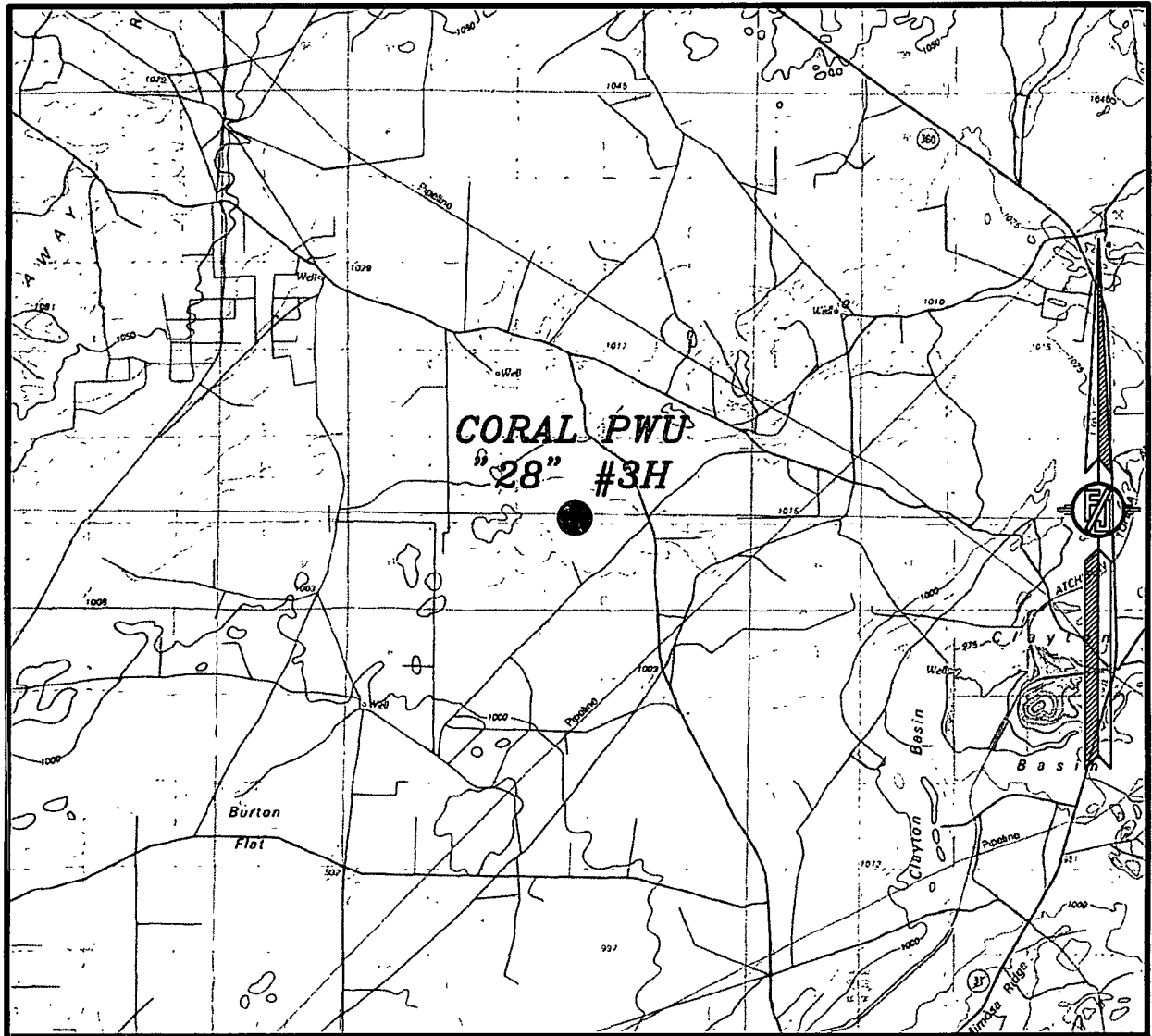
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1675 FT. FROM THE EAST LINE OF  
SECTION 28, TOWNSHIP 19 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 25, 2012

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MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 28, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
VICINITY MAP



NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

CORAL PWU "28" #3H

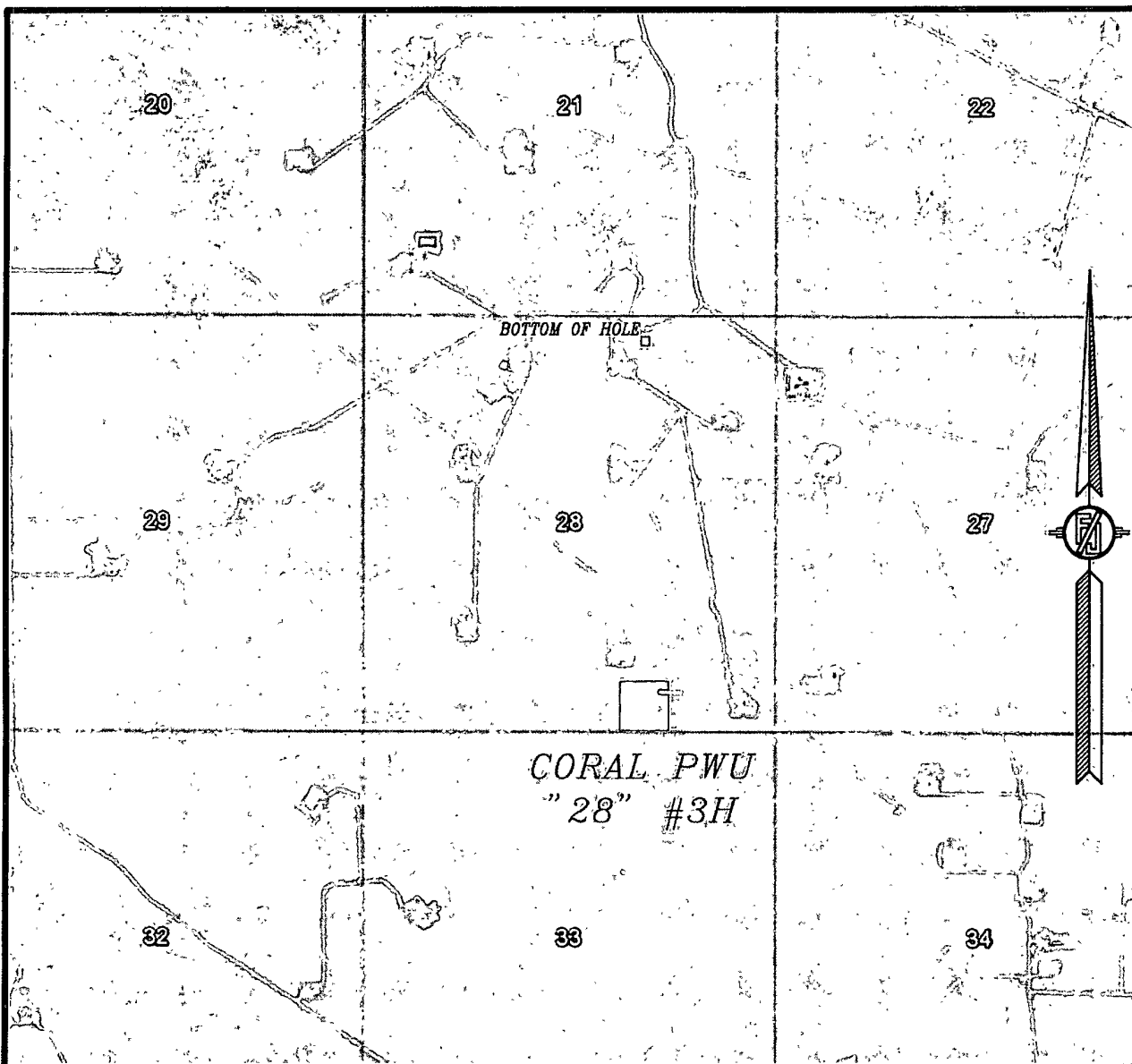
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1675 FT. FROM THE EAST LINE OF  
SECTION 28, TOWNSHIP 19 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 25, 2012

SURVEY NO. 797

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 28, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
JUNE 2011

DEVON ENERGY PRODUCTION COMPANY, L.P.

CORAL PWU "28" #3H

LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1675 FT. FROM THE EAST LINE OF  
SECTION 28, TOWNSHIP 19 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

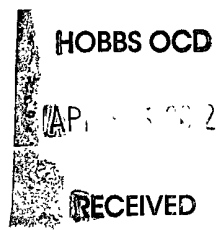
FEBRUARY 25, 2012

SURVEY NO. 797

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341



**Weatherford<sup>®</sup>**



**HOBBS OCD**

**APR 25 2012**

**RECEIVED**

## **Drilling Services**

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## **Proposal**

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**CORRAL PWU28 3H**

**EDDY COUNTY, NM**

**WELL FILE: PLAN 1**

**APRIL 16, 2012**

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**Weatherford International, Ltd.**

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

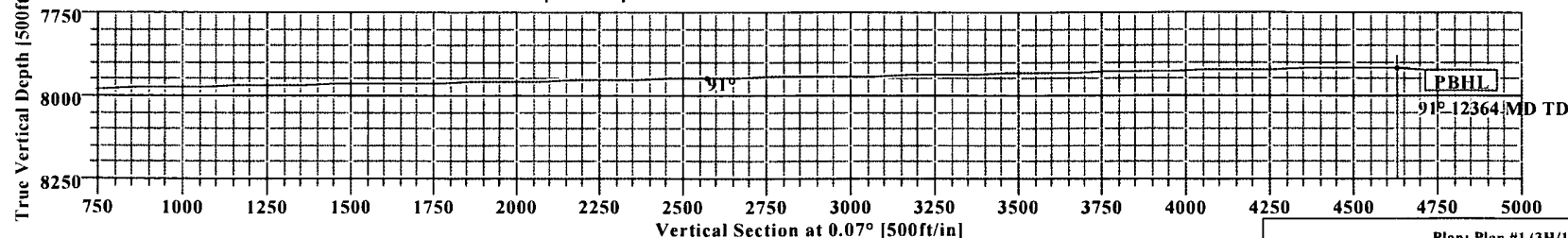
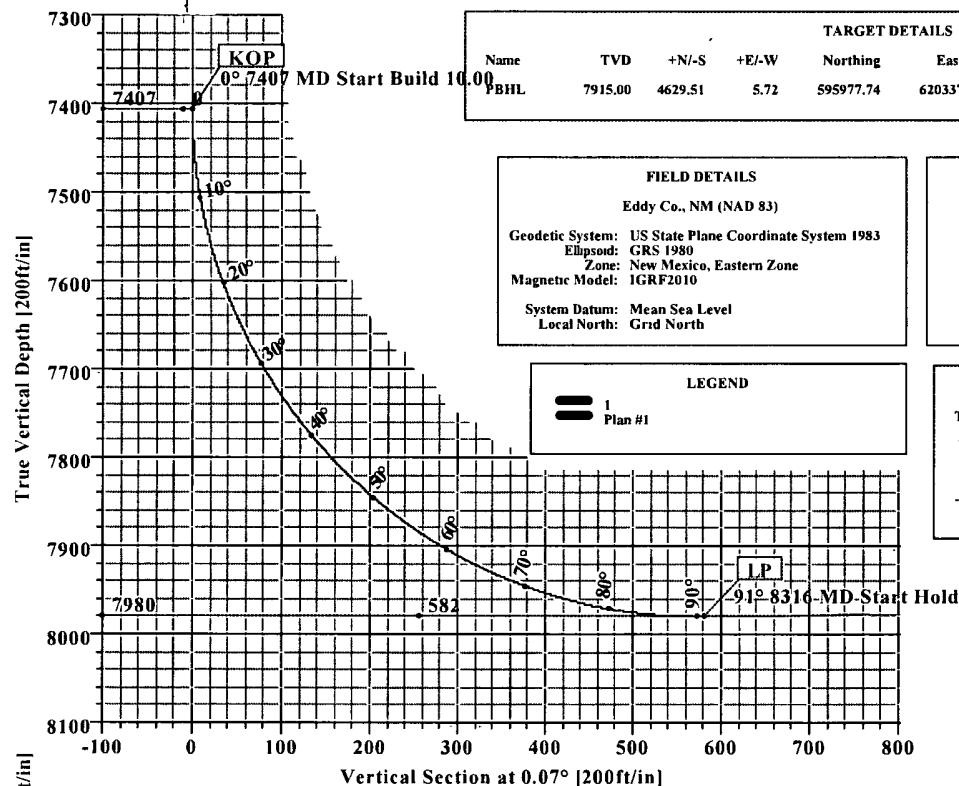
+1.432.561.8895 Fax

[www.weatherford.com](http://www.weatherford.com)



Coral PWU 28 3H  
Eddy Co., New Mexico

KB ELEV: 3320  
GL ELEV: 3301



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	
2	7407.12	0.00	0.07	7407.12	0.00	0.00	0.00	0.00	0.00	
3	8316.32	90.92	0.07	7980.00	582.16	0.72	10.00	0.07	582.16	
4	12364.20	90.92	0.07	7915.00	4629.51	5.72	0.00	0.00	4629.51	PBHL

WELL DETAILS							
Name+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
3H 0.00	0.00	591348.23	620331.73	32°37'31.443N	104°04'36.303W	N/A	

TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7915.00	4629.51	5.72	595977.74	620337.45	32°38'17.254N	104°04'36.106W	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**  
Coral PWU 28 3H

Site Centre Northing: 591348.23  
Easting: 620331.73

Ground Level: 3301.00  
Positional Uncertainty: 0.00  
Convergence: 0.14

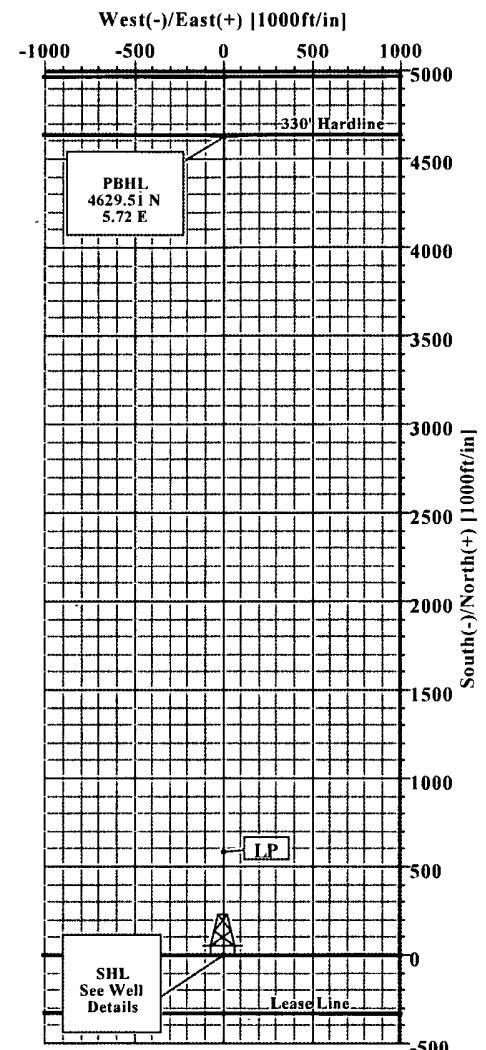
**LEGEND**

1 Plan #1

**Azimuths to Grid North**  
True North: -0.14°  
Magnetic North: 7.57°

**Magnetic Field**  
Strength: 48711 nT  
Dip Angle: 60.44°  
Date: 8/15/2012  
Model: IGRF2010

Total Correction to Grid North: 7.57°





# Weatherford International Ltd.

## WFT Plan Report - X & Y's



Company: Devon Energy	Date: 4/16/2012	Time: 13.48 50	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: 3H, Grid North		
Site: Corral PWU 28 3H	Vertical (TVD) Reference: SITE 3320 0		
Well: 3H	Section (VS) Reference: Well (0.00N,0.00E,0.07Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 3/1/2012
Principal: Yes	Version: 1
	Tied-to: From Surface

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: Corral PWU 28 3H

Site Position:	Northing: 591348.23 ft	Latitude: 32 37 31.443 N
From: Map	Easting: 620331.73 ft	Longitude: 104 4 36.303 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3301.00 ft		Grid Convergence: 0.14 deg

Well: 3H	Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 591348.23 ft	Latitude: 32 37 31.443 N
+E/-W 0.00 ft	Easting: 620331.73 ft	Longitude: 104 4 36.303 W
Position Uncertainty: 0.00 ft		

Wellpath: 1	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0.00 ft		
Magnetic Data: 8/15/2012	Above System Datum: Mean Sea Level		
Field Strength: 48711 nT	Declination: 7.71 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.44 deg		
ft	+N/-S ft	+E/-W ft	Direction deg
0.00	0.00	0.00	0.07

### 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	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7407.12	0.00	0.07	7407.12	0.00	0.00	0.00	0.00	0.00	0.00	
8316.32	90.92	0.07	7980.00	582.16	0.72	10.00	10.00	0.00	0.07	
12364.20	90.92	0.07	7915.00	4629.51	5.72	0.00	0.00	0.00	0.00	PBHL

### 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
7400.00	0.00	0.07	7400.00	0.00	0.00	0.00	0.00	591348.23	620331.73	
7407.12	0.00	0.07	7407.12	0.00	0.00	0.00	0.00	591348.23	620331.73	KOP
7500.00	9.29	0.07	7499.59	7.51	0.01	7.51	10.00	591355.74	620331.74	
7600.00	19.29	0.07	7596.38	32.16	0.04	32.16	10.00	591380.39	620331.77	
7700.00	29.29	0.07	7687.41	73.24	0.09	73.24	10.00	591421.47	620331.82	
7800.00	39.29	0.07	7769.93	129.50	0.16	129.50	10.00	591477.73	620331.89	
7900.00	49.29	0.07	7841.42	199.24	0.25	199.24	10.00	591547.47	620331.98	
8000.00	59.29	0.07	7899.72	280.33	0.35	280.34	10.00	591628.56	620332.08	
8100.00	69.29	0.07	7943.05	370.32	0.46	370.32	10.00	591718.55	620332.19	
8200.00	79.29	0.07	7970.09	466.46	0.58	466.46	10.00	591814.69	620332.31	
8300.00	89.29	0.07	7980.03	565.84	0.70	565.84	10.00	591914.07	620332.43	
8316.32	90.92	0.07	7980.00	582.16	0.72	582.16	10.00	591930.39	620332.45	LP
8400.00	90.92	0.07	7978.66	665.83	0.82	665.83	0.00	592014.06	620332.55	
8500.00	90.92	0.07	7977.05	765.81	0.95	765.81	0.00	592114.04	620332.68	
8600.00	90.92	0.07	7975.45	865.80	1.07	865.80	0.00	592214.03	620332.80	
8700.00	90.92	0.07	7973.84	965.79	1.19	965.79	0.00	592314.02	620332.92	
8800.00	90.92	0.07	7972.24	1065.77	1.32	1065.78	0.00	592414.00	620333.05	





# Weatherford International Ltd.

## WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy  
Field: Eddy Co, NM (NAD 83)  
Site: Corral PWU 28 3H  
Well: 3H  
Wellpath: 1

Date: 4/16/2012 Time: 13:48:50 Page: 2  
Co-ordinate(NE) Reference: Well: 3H, Grid North  
Vertical (TVD) Reference: SITE 3320 0  
Section (VS) Reference: Well (0.00N,0.00E,0.07Az)  
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	90.92	0.07	7970.63	1165.76	1.44	1165.76	0.00	592513.99	620333.17	
9000.00	90.92	0.07	7969.02	1265.75	1.56	1265.75	0.00	592613.98	620333.29	
9100.00	90.92	0.07	7967.42	1365.74	1.69	1365.74	0.00	592713.97	620333.42	
9200.00	90.92	0.07	7965.81	1465.72	1.81	1465.72	0.00	592813.95	620333.54	
9300.00	90.92	0.07	7964.21	1565.71	1.93	1565.71	0.00	592913.94	620333.66	
9400.00	90.92	0.07	7962.60	1665.70	2.06	1665.70	0.00	593013.93	620333.79	
9500.00	90.92	0.07	7961.00	1765.68	2.18	1765.68	0.00	593113.91	620333.91	
9600.00	90.92	0.07	7959.39	1865.67	2.31	1865.67	0.00	593213.90	620334.04	
9700.00	90.92	0.07	7957.78	1965.66	2.43	1965.66	0.00	593313.89	620334.16	
9800.00	90.92	0.07	7956.18	2065.64	2.55	2065.65	0.00	593413.87	620334.28	
9900.00	90.92	0.07	7954.57	2165.63	2.68	2165.63	0.00	593513.86	620334.41	
10000.00	90.92	0.07	7952.97	2265.62	2.80	2265.62	0.00	593613.85	620334.53	
10100.00	90.92	0.07	7951.36	2365.61	2.92	2365.61	0.00	593713.84	620334.65	
10200.00	90.92	0.07	7949.75	2465.59	3.05	2465.59	0.00	593813.82	620334.78	
10300.00	90.92	0.07	7948.15	2565.58	3.17	2565.58	0.00	593913.81	620334.90	
10400.00	90.92	0.07	7946.54	2665.57	3.29	2665.57	0.00	594013.80	620335.02	
10500.00	90.92	0.07	7944.94	2765.55	3.42	2765.56	0.00	594113.78	620335.15	
10600.00	90.92	0.07	7943.33	2865.54	3.54	2865.54	0.00	594213.77	620335.27	
10700.00	90.92	0.07	7941.72	2965.53	3.66	2965.53	0.00	594313.76	620335.39	
10800.00	90.92	0.07	7940.12	3065.51	3.79	3065.52	0.00	594413.74	620335.52	
10900.00	90.92	0.07	7938.51	3165.50	3.91	3165.50	0.00	594513.73	620335.64	
11000.00	90.92	0.07	7936.91	3265.49	4.03	3265.49	0.00	594613.72	620335.76	
11100.00	90.92	0.07	7935.30	3365.48	4.16	3365.48	0.00	594713.71	620335.89	
11200.00	90.92	0.07	7933.70	3465.46	4.28	3465.47	0.00	594813.69	620336.01	
11300.00	90.92	0.07	7932.09	3565.45	4.41	3565.45	0.00	594913.68	620336.14	
11400.00	90.92	0.07	7930.48	3665.44	4.53	3665.44	0.00	595013.67	620336.26	
11500.00	90.92	0.07	7928.88	3765.42	4.65	3765.43	0.00	595113.65	620336.38	
11600.00	90.92	0.07	7927.27	3865.41	4.78	3865.41	0.00	595213.64	620336.51	
11700.00	90.92	0.07	7925.67	3965.40	4.90	3965.40	0.00	595313.63	620336.63	
11800.00	90.92	0.07	7924.06	4065.39	5.02	4065.39	0.00	595413.62	620336.75	
11900.00	90.92	0.07	7922.45	4165.37	5.15	4165.38	0.00	595513.60	620336.88	
12000.00	90.92	0.07	7920.85	4265.36	5.27	4265.36	0.00	595613.59	620337.00	
12100.00	90.92	0.07	7919.24	4365.35	5.39	4365.35	0.00	595713.58	620337.12	
12200.00	90.92	0.07	7917.64	4465.33	5.52	4465.34	0.00	595813.56	620337.25	
12300.00	90.92	0.07	7916.03	4565.32	5.64	4565.32	0.00	595913.55	620337.37	
12364.20	90.92	0.07	7915.00	4629.51	5.72	4629.51	0.00	595977.74	620337.45	PBHL

### 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			7915.00	4629.51	5.72	595977.74	620337.45	32	38	17.254	N	104	4	36.106	W

### Casing Points

MD	TVD	Diameter	Hole Size	Name



**Weatherford International Ltd.**  
**WFT Plan Report - X & Y's**



Company: Devon Energy  
Field: Eddy Co , NM (NAD 83)  
Site: Corral PWU 28 3H  
Well: 3H  
Wellpath: 1

Date: 4/16/2012 Time: 13 48:50 Page: 3  
Co-ordinate(NE) Reference: Well: 3H, Grid North  
Vertical (TVD) Reference: SITE 3320.0  
Section (VS) Reference: Well (0 00N,0.00E,0 07Azi)  
Survey Calculation Method: Minimum Curvature Db: Sybase

**Annotation**

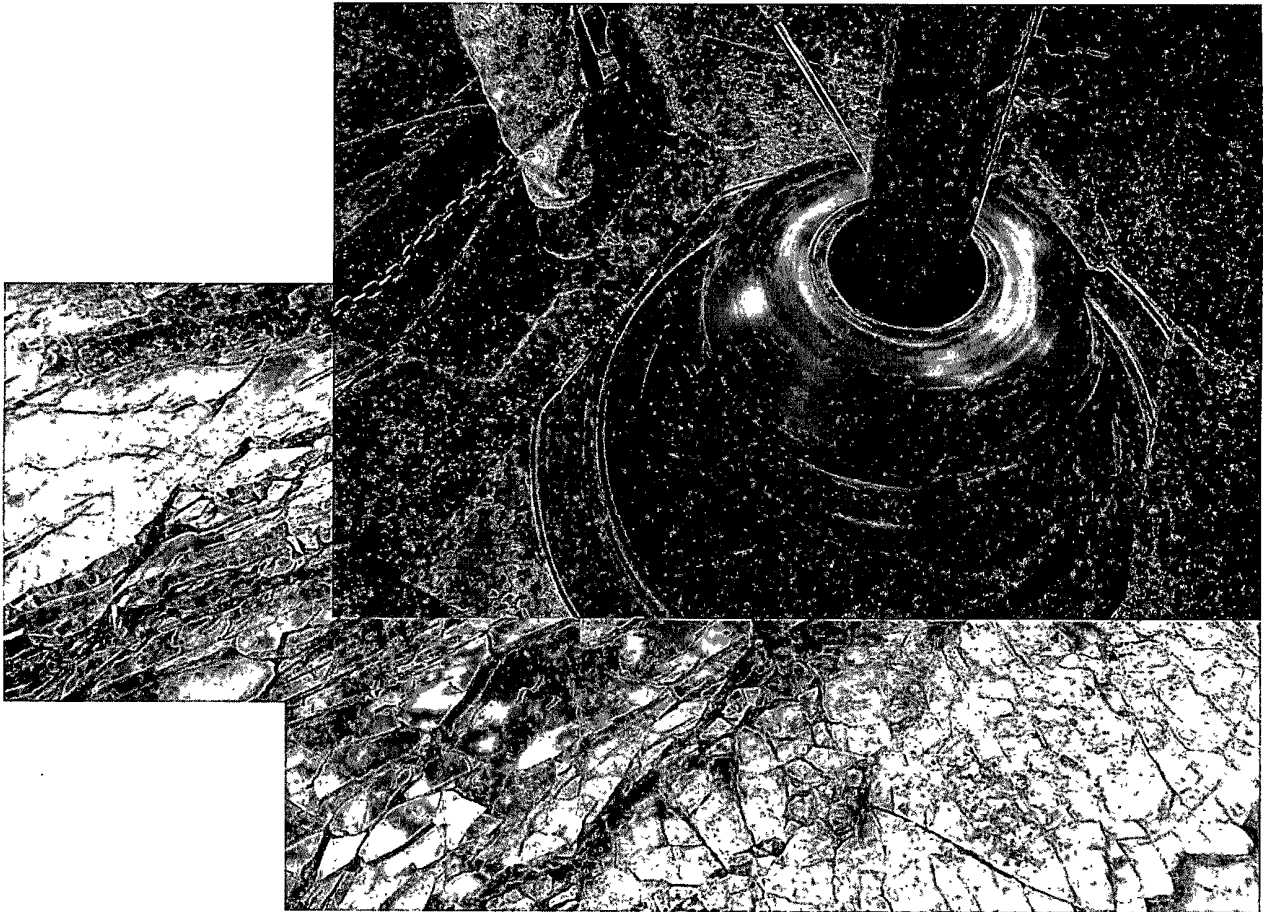
MD ft	TVD ft	
7407.12	7407.12	KOP
8316.32	7980.00	LP
12364.20	0 00	PBHL

**Formations**

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Commitment Runs Deep



Design Plan  
Operation and Maintenance Plan  
Closure Plan

SENM - Closed Loop Systems  
June 2010

## **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.

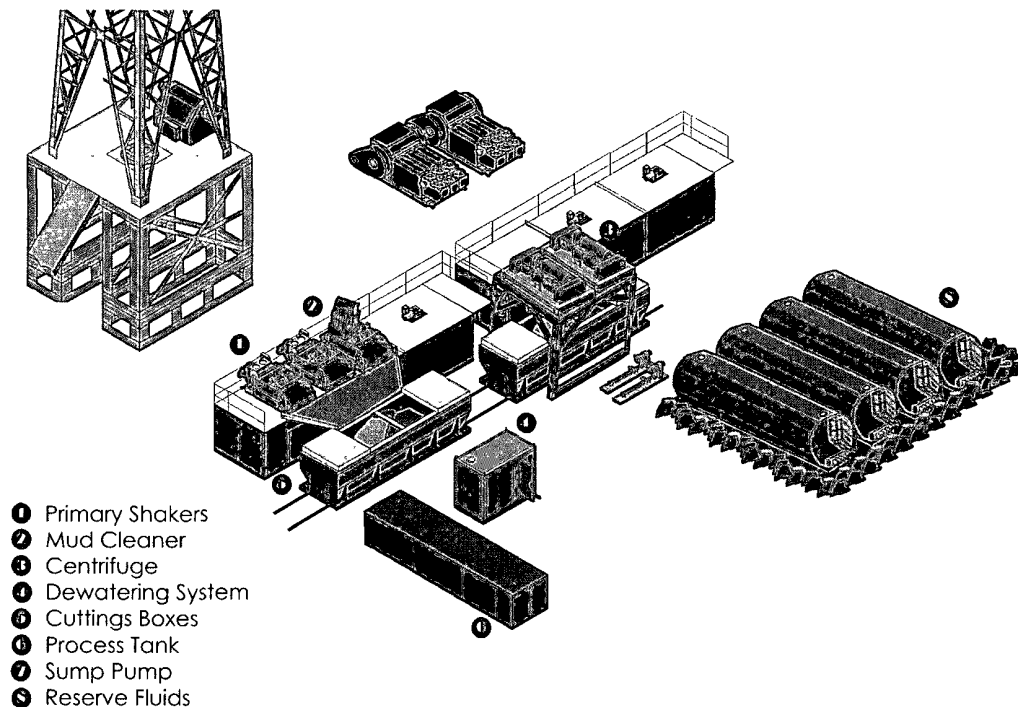
## **II. Operations and Maintenance Plan**

*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.



## Closed Loop Schematic



**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 340' X 340' 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.