



Weatherford®

Drilling Services

Proposal



devon

COOTER 16 STATE #1H

EDDY COUNTY, NM

WELL FILE: PLAN 2

FEBRUARY 2, 2010

Weatherford International, Ltd.

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devon

**COOTER 16 STATE #1H
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	0.53	0.00	0.00	0.00	0.00	0.00	0.00	
2	6977.04	0.00	0.53	6977.04	0.00	0.00	0.00	0.00	0.00	
3	7877.04	90.00	0.53	7550.00	572.93	5.29	10.00	0.53	572.96	
4	11954.88	90.00	0.53	7550.00	4650.59	42.95	0.00	0.00	4650.79	Pbhl #1

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#1H	0.00	0.00	408879.98	646719.12	32°07'25.069N	103°59'34.537W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl #1	7550.00	4650.59	42.95	413530.58	646762.07	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

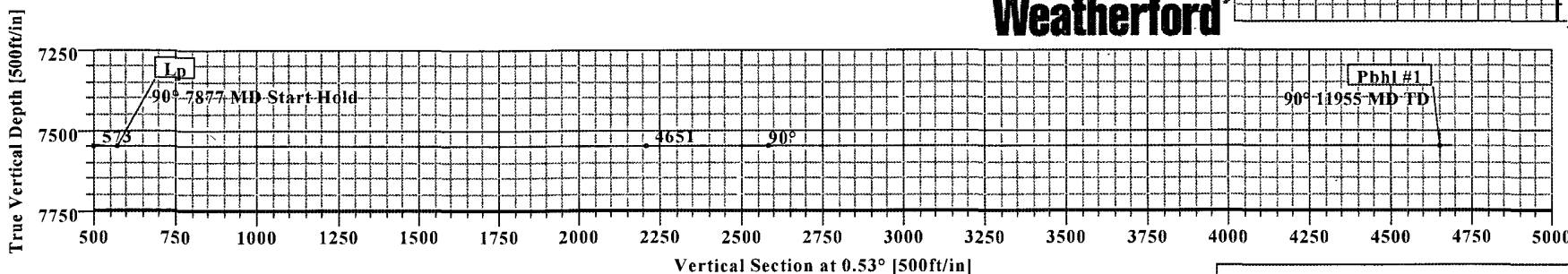
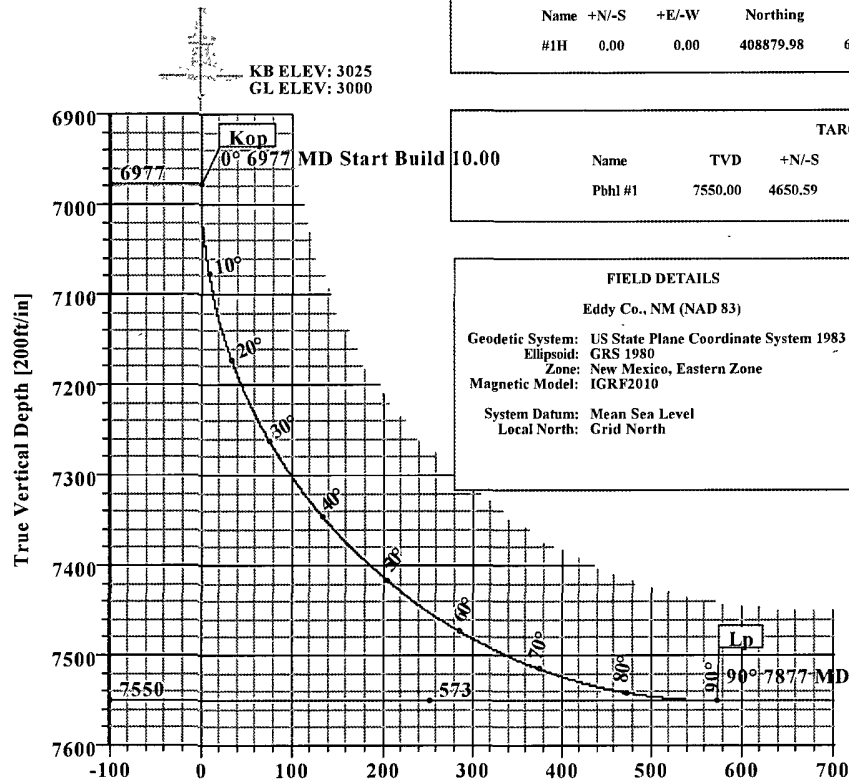
Cooter 16 State #1H
Site Centre Northing: 408879.98
Easting: 646719.12
Ground Level: 3000.00
Positional Uncertainty: 0.00
Convergence: 0.18



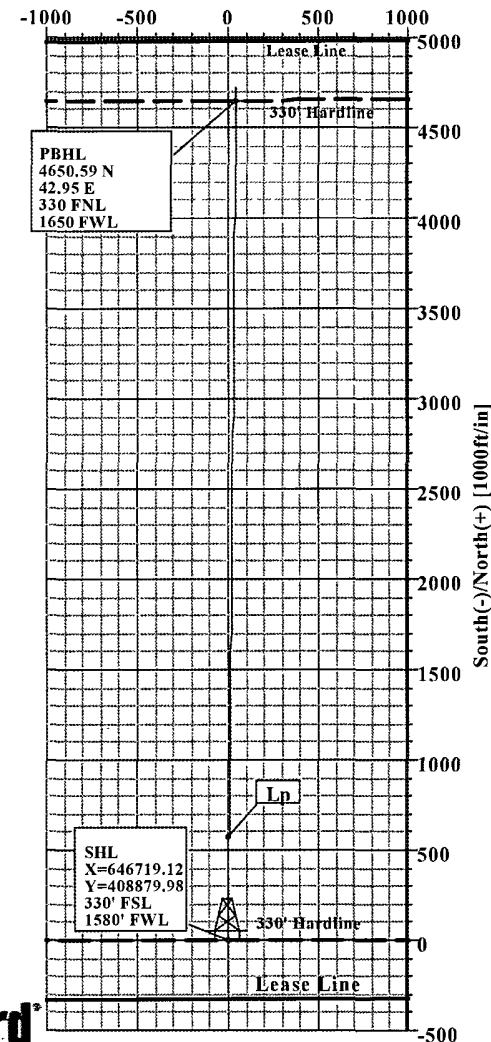
Azimuths to Grid North
True North: -0.18°
Magnetic North: 7.76°

Magnetic Field
Strength: 4867 InT
Dip Angle: 60.05°
Date: 1/27/2010
Model: IGRF2010

Total Correction to Grid North: 7.76°



West(-)/East(+) [1000ft/in]



Plan: Plan #2 (#1H/1)
Created By: Russell W Joyner
Date: 2/2/2010



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WFT Plan Report - Geographic

**Weatherford**

Company: Devon Energy Date: 2/2/2010 Time: 08:52:33 Page: 1
Field: Eddy Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: #1H, Grid North
Site: Cooter 16 State #1H Vertical (TVD) Reference: SITE 3025.0
Well: #1H Section (VS) Reference: Well (0.00N,0.00E,0.53Azi)
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
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

Site: Cooter 16 State #1H

Site Position: Northing: 408879.98 ft Latitude: 32 7 25 069 N
From: Map Easting: 646719.12 ft Longitude: 103 59 34.537 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 30000.00 ft Grid Convergence: 0.18 deg

Well: #1H Slot Name:
Well Position: +N/-S 0.00 ft Northing: 408879.98 ft Latitude: 32 7 25.069 N
+E/-W 0.00 ft Easting: 646719.12 ft Longitude: 103 59 34.537 W
Position Uncertainty: 0.00 ft

Wellpath: 1 Drilled From: Surface
Current Datum: SITE Height 3025.00 ft Tie-on Depth: 0.00 ft
Magnetic Data: 1/27/2010 Above System Datum: Mean Sea Level
Field Strength: 48671 nT Declination: 7.94 deg
Vertical Section: Depth From (TVD) +N/-S Mag Dip Angle: 60.05 deg
ft ft ft Direction
deg
0.00 0.00 0.00 0.53

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	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6977.04	0.00	0.53	6977.04	0.00	0.00	0.00	0.00	0.00	0.00	
7877.04	90.00	0.53	7550.00	572.93	5.29	10.00	10.00	0.00	0.53	
11954.88	90.00	0.53	7550.00	4650.59	42.95	0.00	0.00	0.00	0.00	Pbhl #1

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	0.53	6900.00	0.00	0.00	0.00	0.00	408879.98	646719.12	
6977.04	0.00	0.53	6977.04	0.00	0.00	0.00	0.00	408879.98	646719.12	Kop
7000.00	2.30	0.53	6999.99	0.46	0.00	0.46	10.00	408880.44	646719.12	
7100.00	12.30	0.53	7099.06	13.14	0.12	13.14	10.00	408893.12	646719.24	
7200.00	22.30	0.53	7194.42	42.83	0.40	42.84	10.00	408922.82	646719.51	
7300.00	32.30	0.53	7283.17	88.63	0.82	88.64	10.00	408968.61	646719.94	
7400.00	42.30	0.53	7362.62	149.15	1.38	149.15	10.00	409029.13	646720.50	
7500.00	52.30	0.53	7430.35	222.54	2.06	222.55	10.00	409102.52	646721.17	
7600.00	62.30	0.53	7484.32	306.57	2.83	306.59	10.00	409186.55	646721.95	
7700.00	72.30	0.53	7522.86	398.70	3.68	398.72	10.00	409278.68	646722.80	
7800.00	82.30	0.53	7544.83	496.13	4.58	496.15	10.00	409376.11	646723.70	
7877.04	90.00	0.53	7550.00	572.93	5.29	572.96	10.00	409452.92	646724.41	Lp
7900.00	90.00	0.53	7550.00	595.89	5.50	595.92	0.00	409475.87	646724.62	
8000.00	90.00	0.53	7550.00	695.89	6.43	695.92	0.00	409575.87	646725.55	
8100.00	90.00	0.53	7550.00	795.88	7.35	795.92	0.00	409675.86	646726.47	
8200.00	90.00	0.53	7550.00	895.88	8.27	895.92	0.00	409775.86	646727.39	



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WFT Plan Report - Geographic

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cooter 16 State #1H
Well: #1H
Wellpath: 1

Date: 2/2/2010
Co-ordinate(NE) Reference:
Vertical (TVD) Reference:
Section (VS) Reference:
Survey Calculation Method:

Time: 08:52:33
Well: #1H, Grid North
SITE 3025.0
Well (0.00N,0.00E,0.53Azi)
Minimum Curvature

Page: 2
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
8300.00	90.00	0.53	7550.00	995.87	9.20	995.92	0.00	409875.86	646728.32	
8400.00	90.00	0.53	7550.00	1095.87	10.12	1095.92	0.00	409975.85	646729.24	
8500.00	90.00	0.53	7550.00	1195.86	11.04	1195.92	0.00	410075.85	646730.16	
8600.00	90.00	0.53	7550.00	1295.86	11.97	1295.92	0.00	410175.84	646731.09	
8700.00	90.00	0.53	7550.00	1395.86	12.89	1395.92	0.00	410275.84	646732.01	
8800.00	90.00	0.53	7550.00	1495.85	13.81	1495.92	0.00	410375.83	646732.93	
8900.00	90.00	0.53	7550.00	1595.85	14.74	1595.92	0.00	410475.83	646733.86	
9000.00	90.00	0.53	7550.00	1695.84	15.66	1695.92	0.00	410575.83	646734.78	
9100.00	90.00	0.53	7550.00	1795.84	16.58	1795.92	0.00	410675.82	646735.70	
9200.00	90.00	0.53	7550.00	1895.83	17.51	1895.92	0.00	410775.82	646736.63	
9300.00	90.00	0.53	7550.00	1995.83	18.43	1995.92	0.00	410875.81	646737.55	
9400.00	90.00	0.53	7550.00	2095.83	19.36	2095.92	0.00	410975.81	646738.47	
9500.00	90.00	0.53	7550.00	2195.82	20.28	2195.92	0.00	411075.80	646739.40	
9600.00	90.00	0.53	7550.00	2295.82	21.20	2295.92	0.00	411175.80	646740.32	
9700.00	90.00	0.53	7550.00	2395.81	22.13	2395.92	0.00	411275.80	646741.24	
9800.00	90.00	0.53	7550.00	2495.81	23.05	2495.92	0.00	411375.79	646742.17	
9900.00	90.00	0.53	7550.00	2595.80	23.97	2595.92	0.00	411475.79	646743.09	
10000.00	90.00	0.53	7550.00	2695.80	24.90	2695.92	0.00	411575.78	646744.02	
10100.00	90.00	0.53	7550.00	2795.80	25.82	2795.92	0.00	411675.78	646744.94	
10200.00	90.00	0.53	7550.00	2895.79	26.74	2895.92	0.00	411775.77	646745.86	
10300.00	90.00	0.53	7550.00	2995.79	27.67	2995.92	0.00	411875.77	646746.79	
10400.00	90.00	0.53	7550.00	3095.78	28.59	3095.92	0.00	411975.77	646747.71	
10500.00	90.00	0.53	7550.00	3195.78	29.51	3195.92	0.00	412075.76	646748.63	
10600.00	90.00	0.53	7550.00	3295.78	30.44	3295.92	0.00	412175.76	646749.56	
10700.00	90.00	0.53	7550.00	3395.77	31.36	3395.92	0.00	412275.75	646750.48	
10800.00	90.00	0.53	7550.00	3495.77	32.28	3495.92	0.00	412375.75	646751.40	
10900.00	90.00	0.53	7550.00	3595.76	33.21	3595.92	0.00	412475.74	646752.33	
11000.00	90.00	0.53	7550.00	3695.76	34.13	3695.92	0.00	412575.74	646753.25	
11100.00	90.00	0.53	7550.00	3795.75	35.05	3795.92	0.00	412675.74	646754.17	
11200.00	90.00	0.53	7550.00	3895.75	35.98	3895.92	0.00	412775.73	646755.10	
11300.00	90.00	0.53	7550.00	3995.75	36.90	3995.92	0.00	412875.73	646756.02	
11400.00	90.00	0.53	7550.00	4095.74	37.82	4095.92	0.00	412975.72	646756.94	
11500.00	90.00	0.53	7550.00	4195.74	38.75	4195.92	0.00	413075.72	646757.87	
11600.00	90.00	0.53	7550.00	4295.73	39.67	4295.92	0.00	413175.71	646758.79	
11700.00	90.00	0.53	7550.00	4395.73	40.60	4395.92	0.00	413275.71	646759.71	
11800.00	90.00	0.53	7550.00	4495.72	41.52	4495.92	0.00	413375.71	646760.64	
11900.00	90.00	0.53	7550.00	4595.72	42.44	4595.92	0.00	413475.70	646761.56	
11954.88	90.00	0.53	7550.00	4650.59	42.95	4650.79	0.00	413530.58	646762.07	Pbhl #1

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 #1			7550.00	4650.59	42.95	413530.58	646762.07	32 8 11.090 N	103 59 33.867 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



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WFT Plan Report - Geographic



Weatherford

Company:	Devon Energy	Date:	2/2/2010	Time:	08:52:33	Page:	3
Field:	Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Well: #1H, Grid North				
Site:	Cooter 16 State #1H	Vertical (TVD) Reference:	SITE 3025.0				
Well:	#1H	Section (VS) Reference:	Well (0.00N,0.00E;0.53Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature	Db:	Sybase		

Annotation

MD ft	TVD ft	
6977.04	6977.04	Kop
7877.04	7550.00	Lp
11954.87	7550.00	Pbhl #1

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 #1H
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 408879.982 USFT	Latitude 32.1236325 DEG
East/West 646719.119 USFT	Longitude -103.9929228 DEG
Grid Convergence: .18°	
Total Correction: +7.76°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.12363° N	32° 7 min 25.077 sec
Longitude =	103.99292° W	103° 59 min 34.522 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 = 3356 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42169 nT
Spud Date =	Jan 27, 2010	Magnetic Vector H = 24295 nT

Signed: _____

Date: _____