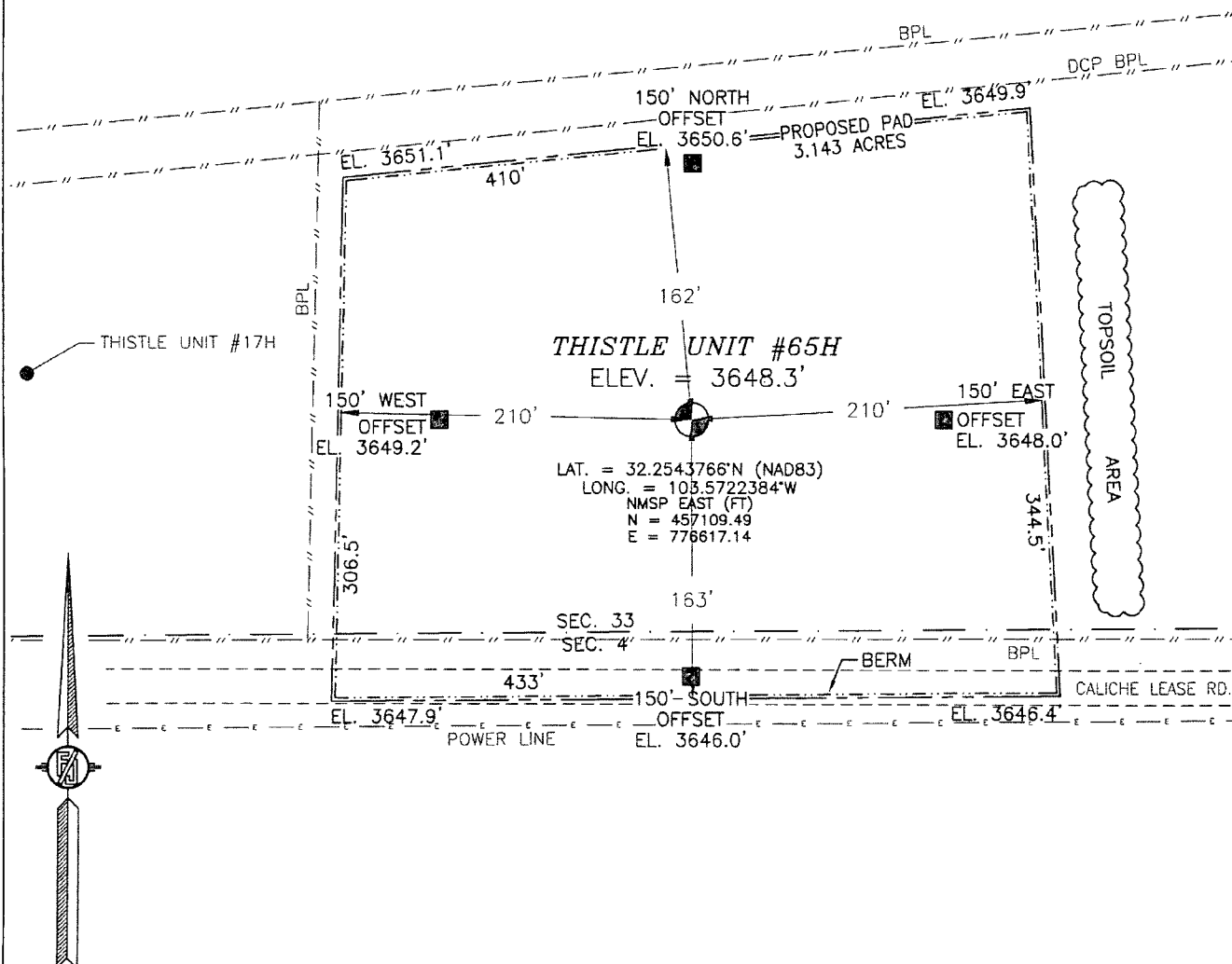


JUL 31 2013

SECTION 33, TOWNSHIP 23 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM HIGHWAY 128 (JAL HIGHWAY) AND BRININSTOOL ROAD GO NORTH ON BRININSTOOL ROAD 3.1 MILES JUST ABOUT 100' PAST A CATTLE GUARD, TURN LEFT ON CALICHE LEASE ROAD, GO WEST 450'± TO SOUTHEAST CORNER OF PROPOSED PAD.

DEVON ENERGY PRODUCTION COMPANY, L.P.

THISTLE UNIT #65H

LOCATED 124 FT. FROM THE SOUTH LINE
AND 1058 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JULY 19, 2013

SURVEY NO. 1531D

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

Topographic map showing the Thistle Unit #65H area. The map includes a grid with section numbers 2, 33, 34, 3, and 4. A road runs vertically through the center. A square symbol marks a well location. Contour lines are shown with elevations of 3650, 3660, 3665, 3670, and 3675. A north arrow is in the top right corner. The text "THISTLE UNIT #65H" is printed across the center.

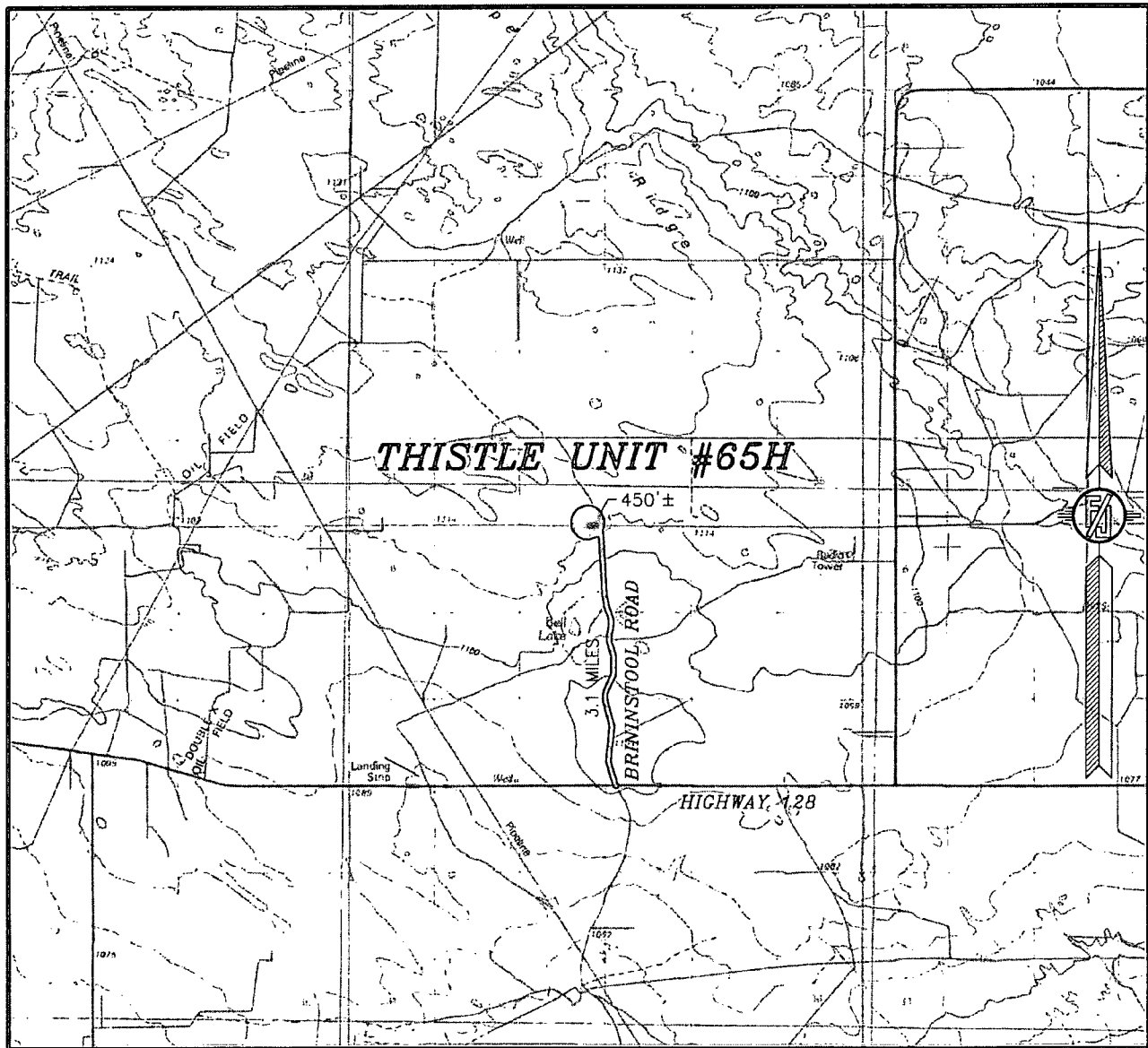
NOT TO SCALE

LOCATED 124 FT. FROM THE " SOUTH LINE
AND 1058 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

SURVEY NO. 1531D

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

SECTION 33, TOWNSHIP 23 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

THISTLE UNIT #65H

LOCATED 124 FT. FROM THE SOUTH LINE
AND 1058 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

DIRECTIONS TO LOCATION

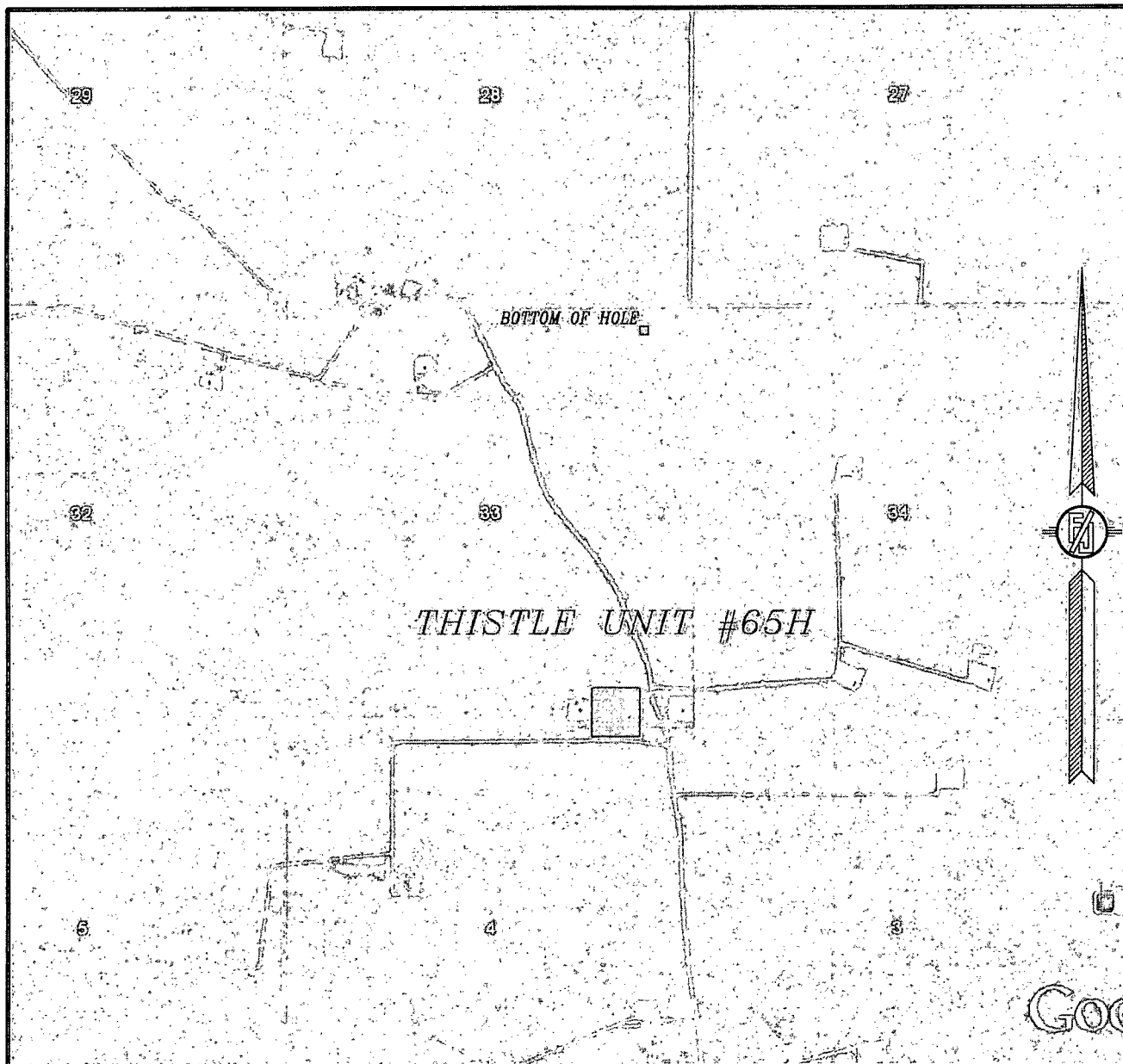
FROM THE INTERSECTION OF NM HIGHWAY 128 (JAL HIGHWAY) AND
BRININSTOOL ROAD GO NORTH ON BRININSTOOL ROAD 3.1 MILES JUST
ABOUT 100' PAST A CATTLE GUARD, TURN LEFT ON CALICHE LEASE
ROAD, GO WEST 450'± TO SOUTHEAST CORNER OF PROPOSED PAD.

JULY 19, 2013

SURVEY NO. 1531D

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

SECTION 33, TOWNSHIP 23 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2012

DEVON ENERGY PRODUCTION COMPANY, L.P.

THISTLE UNIT #65H

LOCATED 124 FT. FROM THE SOUTH LINE
AND 1058 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JULY 19, 2013

SURVEY NO. 1531D

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



Weatherford[®]

Drilling Services

Proposal



devon

THISTLE UNIT 65H

LEA COUNTY, NM

WELL FILE: **PLAN 1**

JULY 29, 2013

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com



Thistle Unit 65H
Lea County, New Mexico

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	4.27	0.00	0.00	0.00	0.00	0.00	0.00	
2	10716.05	0.00	4.27	10716.05	0.00	0.00	0.00	0.00	0.00	
3	11617.92	90.19	4.27	11289.00	573.24	42.78	10.00	4.27	574.83	
4	15894.62	90.19	4.27	11275.00	4838.05	361.09	0.00	0.00	4851.51	PBHL

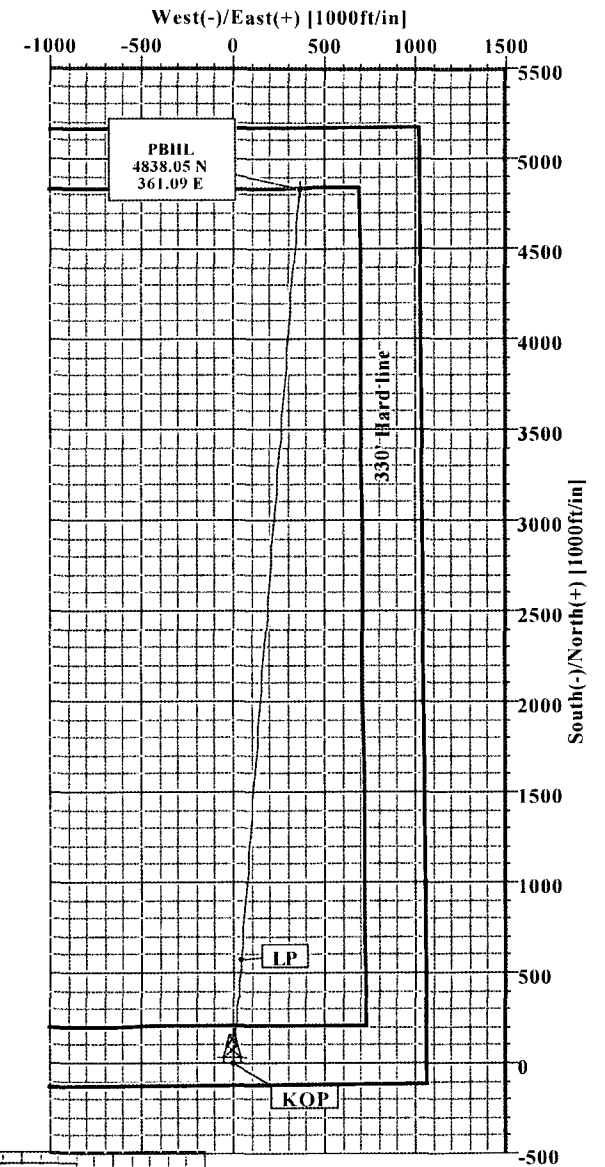
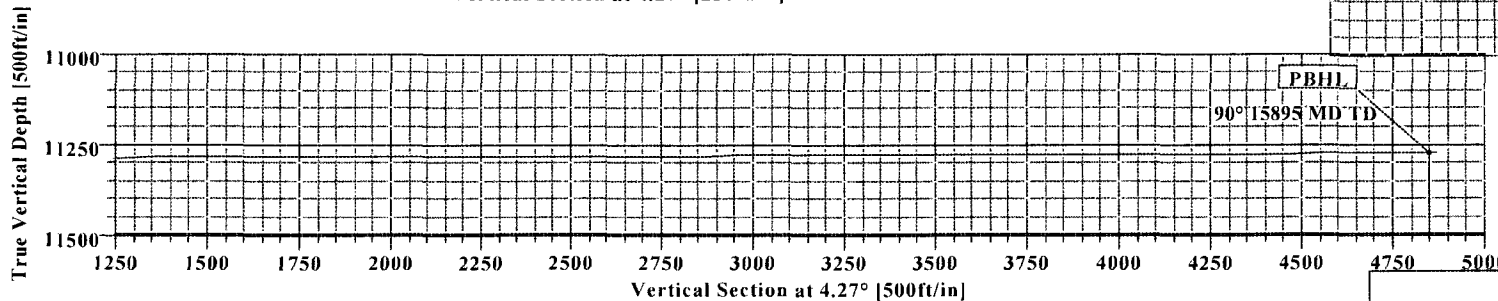
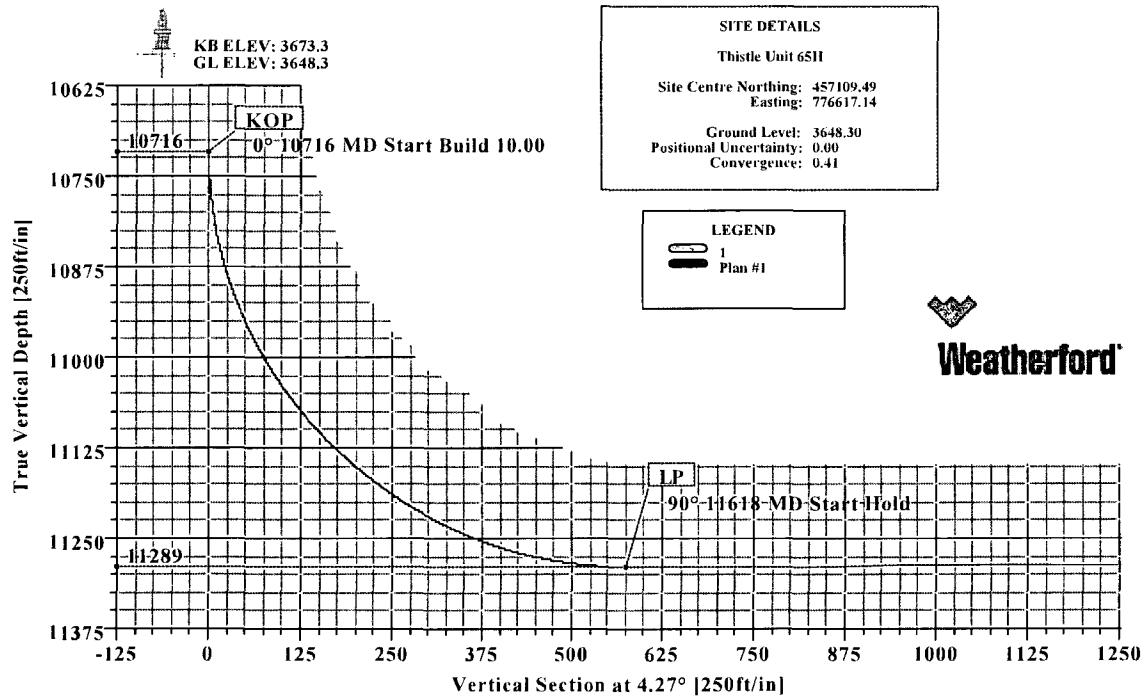
WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Thistle Unit 65H	0.00	0.00	457109.49	776617.14	32°15'15.747N	103°34'20.077W

Slot
N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	11275.00	4838.05	361.09	461947.54	776978.23	Point

SITE DETAILS	
Thistle Unit 65H	
Site Centre Northing:	457109.49
Easting:	776617.14
Ground Level:	3648.30
Positional Uncertainty:	0.00
Convergence:	0.41

LEGEND	
	1
	Plan #1





Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy Date: 7/29/2013 Time: 12:42:10 Page: 1
Field: Lea County, New Mexico (NAD 83) Co-ordinate(NE) Reference: Well: Thistle Unit 65H, Grid North
Site: Thistle Unit 65H Vertical (TVD) Reference: SITE 3673.3
Well: Thistle Unit 65H Section (VS) Reference: Well (0.00N,0.00E,4.27Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #1 Date Composed: 7/29/2013
Principal: Yes Version: 1
Tied-to: From Surface

Site: Thistle Unit 65H

Site Position: Northing: 457109.49 ft Latitude: 32 15 15.747 N
From: Map Easting: 776617.14 ft Longitude: 103 34 20.077 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3648.30 ft Grid Convergence: 0.41 deg

Well: Thistle Unit 65H

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 457109.49 ft Latitude: 32 15 15.747 N
+E/-W 0.00 ft Easting: 776617.14 ft Longitude: 103 34 20.077 W
Position Uncertainty: 0.00 ft

Wellpath: 1

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 7.32 deg
Mag Dip Angle: 60.16 deg
+E/-W Direction
ft deg

Current Datum: SITE Height 3673.30 ft
Magnetic Data: 9/1/2013
Field Strength: 48438 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft

11275.00

0.00

0.00

4.27

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	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10716.05	0.00	4.27	10716.05	0.00	0.00	0.00	0.00	0.00	0.00	
11617.92	90.19	4.27	11289.00	573.24	42.78	10.00	10.00	0.00	4.27	
15894.62	90.19	4.27	11275.00	4838.05	361.09	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
10700.00	0.00	4.27	10700.00	0.00	0.00	0.00	0.00	457109.49	776617.14	KOP
10716.05	0.00	4.27	10716.05	0.00	0.00	0.00	0.00	457109.49	776617.14	
10750.00	3.40	4.27	10749.98	1.00	0.07	1.01	10.00	457110.49	776617.21	
10800.00	8.40	4.27	10799.70	6.12	0.46	6.14	10.00	457115.61	776617.60	
10850.00	13.40	4.27	10848.78	15.54	1.16	15.59	10.00	457125.03	776618.30	
10900.00	18.40	4.27	10896.86	29.20	2.18	29.28	10.00	457138.69	776619.32	
10950.00	23.40	4.27	10943.55	46.97	3.51	47.10	10.00	457156.46	776620.65	
11000.00	28.40	4.27	10988.52	68.74	5.13	68.93	10.00	457178.23	776622.27	
11050.00	33.40	4.27	11031.41	94.34	7.04	94.60	10.00	457203.83	776624.18	
11100.00	38.40	4.27	11071.90	123.56	9.22	123.90	10.00	457233.05	776626.36	
11150.00	43.40	4.27	11109.69	156.19	11.66	156.63	10.00	457265.68	776628.80	
11200.00	48.40	4.27	11144.47	191.99	14.33	192.52	10.00	457301.48	776631.47	
11250.00	53.40	4.27	11176.00	230.67	17.22	231.31	10.00	457340.16	776634.36	
11300.00	58.40	4.27	11204.03	271.94	20.30	272.70	10.00	457381.43	776637.44	
11350.00	63.40	4.27	11228.34	315.49	23.55	316.37	10.00	457424.98	776640.69	
11400.00	68.40	4.27	11248.75	360.99	26.94	361.99	10.00	457470.48	776644.08	LP
11450.00	73.40	4.27	11265.11	408.09	30.46	409.22	10.00	457517.58	776647.60	
11500.00	78.40	4.27	11277.29	456.43	34.07	457.70	10.00	457565.92	776651.21	
11550.00	83.40	4.27	11285.20	505.65	37.74	507.06	10.00	457615.14	776654.88	
11600.00	88.40	4.27	11288.78	555.37	41.45	556.91	10.00	457664.86	776658.59	
11617.92	90.19	4.27	11289.00	573.24	42.78	574.83	10.00	457682.73	776659.92	
11700.00	90.19	4.27	11288.73	655.09	48.89	656.91	0.00	457764.58	776666.03	
11800.00	90.19	4.27	11288.41	754.81	56.34	756.91	0.00	457864.30	776673.48	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit 65H
Well: Thistle Unit 65H
Wellpath: 1

Date: 7/29/2013 Time: 12:42:10 Page: 2
Co-ordinate(NE) Reference: Well: Thistle Unit 65H, Grid North
Vertical (TVD) Reference: SITE 3673.3
Section (VS) Reference: Well (0.00N,0.00E,4.27Azi)
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
11900.00	90.19	4.27	11288.08	854.53	63.78	856.91	0.00	457964.02	776680.92	
12000.00	90.19	4.27	11287.75	954.25	71.22	956.91	0.00	458063.74	776688.36	
12100.00	90.19	4.27	11287.42	1053.98	78.66	1056.91	0.00	458163.47	776695.80	
12200.00	90.19	4.27	11287.10	1153.70	86.11	1156.91	0.00	458263.19	776703.25	
12300.00	90.19	4.27	11286.77	1253.42	93.55	1256.91	0.00	458362.91	776710.69	
12400.00	90.19	4.27	11286.44	1353.14	100.99	1356.91	0.00	458462.63	776718.13	
12500.00	90.19	4.27	11286.11	1452.86	108.44	1456.90	0.00	458562.35	776725.58	
12600.00	90.19	4.27	11285.79	1552.59	115.88	1556.90	0.00	458662.08	776733.02	
12700.00	90.19	4.27	11285.46	1652.31	123.32	1656.90	0.00	458761.80	776740.46	
12800.00	90.19	4.27	11285.13	1752.03	130.76	1756.90	0.00	458861.52	776747.90	
12900.00	90.19	4.27	11284.81	1851.75	138.21	1856.90	0.00	458961.24	776755.35	
13000.00	90.19	4.27	11284.48	1951.47	145.65	1956.90	0.00	459060.96	776762.79	
13100.00	90.19	4.27	11284.15	2051.20	153.09	2056.90	0.00	459160.69	776770.23	
13200.00	90.19	4.27	11283.82	2150.92	160.53	2156.90	0.00	459260.41	776777.67	
13300.00	90.19	4.27	11283.50	2250.64	167.98	2256.90	0.00	459360.13	776785.12	
13400.00	90.19	4.27	11283.17	2350.36	175.42	2356.90	0.00	459459.85	776792.56	
13500.00	90.19	4.27	11282.84	2450.09	182.86	2456.90	0.00	459559.58	776800.00	
13600.00	90.19	4.27	11282.51	2549.81	190.31	2556.90	0.00	459659.30	776807.45	
13700.00	90.19	4.27	11282.19	2649.53	197.75	2656.90	0.00	459759.02	776814.89	
13800.00	90.19	4.27	11281.86	2749.25	205.19	2756.90	0.00	459858.74	776822.33	
13900.00	90.19	4.27	11281.53	2848.97	212.63	2856.90	0.00	459958.46	776829.77	
14000.00	90.19	4.27	11281.20	2948.70	220.08	2956.90	0.00	460058.19	776837.22	
14100.00	90.19	4.27	11280.88	3048.42	227.52	3056.90	0.00	460157.91	776844.66	
14200.00	90.19	4.27	11280.55	3148.14	234.96	3156.90	0.00	460257.63	776852.10	
14300.00	90.19	4.27	11280.22	3247.86	242.41	3256.90	0.00	460357.35	776859.55	
14400.00	90.19	4.27	11279.89	3347.58	249.85	3356.89	0.00	460457.07	776866.99	
14500.00	90.19	4.27	11279.57	3447.31	257.29	3456.89	0.00	460556.80	776874.43	
14600.00	90.19	4.27	11279.24	3547.03	264.73	3556.89	0.00	460656.52	776881.87	
14700.00	90.19	4.27	11278.91	3646.75	272.18	3656.89	0.00	460756.24	776889.32	
14800.00	90.19	4.27	11278.58	3746.47	279.62	3756.89	0.00	460855.96	776896.76	
14900.00	90.19	4.27	11278.26	3846.19	287.06	3856.89	0.00	460955.68	776904.20	
15000.00	90.19	4.27	11277.93	3945.92	294.51	3956.89	0.00	461055.41	776911.65	
15100.00	90.19	4.27	11277.60	4045.64	301.95	4056.89	0.00	461155.13	776919.09	
15200.00	90.19	4.27	11277.27	4145.36	309.39	4156.89	0.00	461254.85	776926.53	
15300.00	90.19	4.27	11276.95	4245.08	316.83	4256.89	0.00	461354.57	776933.97	
15400.00	90.19	4.27	11276.62	4344.80	324.28	4356.89	0.00	461454.29	776941.42	
15500.00	90.19	4.27	11276.29	4444.53	331.72	4456.89	0.00	461554.02	776948.86	
15600.00	90.19	4.27	11275.96	4544.25	339.16	4556.89	0.00	461653.74	776956.30	
15700.00	90.19	4.27	11275.64	4643.97	346.60	4656.89	0.00	461753.46	776963.74	
15800.00	90.19	4.27	11275.31	4743.69	354.05	4756.89	0.00	461853.18	776971.19	
15894.62	90.19	4.27	11275.00	4838.05	361.09	4851.51	0.00	461947.54	776978.23	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			11275.00	4838.05	361.09	461947.54	776978.23	32	16	3.595 N	103	34	15.472 W



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company:	Devon Energy	Date:	7/29/2013	Time:	12:42:10	Page:	3
Field:	Lea County, New Mexico (NAD 83)	Co-ordinate(NE) Reference:	Well: Thistle Unit 65H, Grid North				
Site:	Thistle Unit 65H	Vertical (TVD) Reference:	SITE 3673.3				
Well:	Thistle Unit 65H	Section (VS) Reference:	Well (0.00N,0.00E,4.27Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature				Db: Sybase

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
10716.05	10716.05	KOP
11617.92	11289.00	LP
15894.61	11275.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Field: Lea County, New Mexico (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

**Weatherford®****Weatherford Drilling Services**

GeoDec v5.03

Report Date: July 29, 2013
Job Number: _____
Customer: Devon Energy
Well Name: Thistle Unit 65H
API Number: _____
Rig Name: _____
Location: Lea County, NM
Block: _____
Engineer: Patrick Rudolph

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 457109.490 USFT	Latitude 32 15 15.7558937 DMS
East/West 776617.140 USFT	Longitude -103 34 20.0583945 DMS
Grid Convergence: .41°	
Total Correction: +6.98°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.25438° N	32° 15 min 15.756 sec
Longitude =	103.57224° W	103° 34 min 20.058 sec

Magnetic Declination =	7.39°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6672
Local Field Strength =	48389 nT	Magnetic Vector X = 23894 nT
Magnetic Dip =	60.14°	Magnetic Vector Y = 3097 nT
Magnetic Model =	bggm2013	Magnetic Vector Z = 41965 nT
Spud Date =	Jan 01, 2014	Magnetic Vector H = 24094 nT

Signed: _____

Date: _____

DEVONTHISTLE UNIT 65H P1 SVY.TXT

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

Company: Devon Energy
Time: 12:43:13 Page: 1
Field: Lea County, New Mexico (NAD 83)
Reference: Well: Thistle Unit 65H, Grid North
Site: Thistle Unit 65H
Reference: SITE 3673.3
Well: Thistle Unit 65H
Reference: Well (0.00N,0.00E,4.27Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

Date: 7/29/2013
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Plan: Plan #1
7/29/2013

Date Composed:

1
Principal: Yes
From Surface

Version:

Tied-to:

Site: Thistle Unit 65H

Site Position:
32 15 15.747 N
From: Map
103 34 20.077 W
Position Uncertainty: 0.00 ft
Grid
Ground Level: 3648.30 ft
0.41 deg

Northing: 457109.49 ft

Latitude:

Easting: 776617.14 ft

Longitude:

North Reference:

Grid Convergence:

Well: Thistle Unit 65H

Slot Name:

Well Position: +N/-S 0.00 ft
32 15 15.747 N
+E/-W 0.00 ft
103 34 20.077 W
Position Uncertainty: 0.00 ft

Northing: 457109.49 ft

Latitude:

Easting : 776617.14 ft

Longitude:

Wellpath: 1
Surface

Drilled From:

Tie-on Depth:

0.00 ft
Current Datum: SITE
Datum: Mean Sea Level
Magnetic Data: 9/1/2013
7.32 deg
Field Strength: 48438 nT
60.16 deg

Height 3673.30 ft

Above System

Declination:

Mag Dip Angle:

Vertical Section:Depth From (TVD)
Direction

+N/-S

+E/-W

ft

ft

ft

deg

11275.00

0.00

0.00

4.27

DEVONTHISTLE UNIT 65H P1 SVY.TXT

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	4.27	0.00	0.00	0.00	0.00	0.00
0.00	0.00						
10716.05	0.00	4.27	10716.05	0.00	0.00	0.00	0.00
0.00	0.00						
11617.92	90.19	4.27	11289.00	573.24	42.78	10.00	10.00
0.00	4.27						
15894.62	90.19	4.27	11275.00	4838.05	361.09	0.00	0.00
0.00	0.00	PBHL					
Survey							
MD	Incl	Azim	TVD	N/S	E/W	VS	DLS
MapN	MapE			Comment			
ft	deg	deg	ft	ft	ft	ft	deg/100ft
10700.00	0.00	4.27	10700.00	0.00	0.00	0.00	0.00
457109.49	776617.14						
10716.05	0.00	4.27	10716.05	0.00	0.00	0.00	0.00
457109.49	776617.14		KOP				
10750.00	3.40	4.27	10749.98	1.00	0.07	1.01	10.00
457110.49	776617.21						
10800.00	8.40	4.27	10799.70	6.12	0.46	6.14	10.00
457115.61	776617.60						
10850.00	13.40	4.27	10848.78	15.54	1.16	15.59	10.00
457125.03	776618.30						
10900.00	18.40	4.27	10896.86	29.20	2.18	29.28	10.00
457138.69	776619.32						
10950.00	23.40	4.27	10943.55	46.97	3.51	47.10	10.00
457156.46	776620.65						
11000.00	28.40	4.27	10988.52	68.74	5.13	68.93	10.00
457178.23	776622.27						
11050.00	33.40	4.27	11031.41	94.34	7.04	94.60	10.00
457203.83	776624.18						
11100.00	38.40	4.27	11071.90	123.56	9.22	123.90	10.00
457233.05	776626.36						
11150.00	43.40	4.27	11109.69	156.19	11.66	156.63	10.00
457265.68	776628.80						
11200.00	48.40	4.27	11144.47	191.99	14.33	192.52	10.00
457301.48	776631.47						
11250.00	53.40	4.27	11176.00	230.67	17.22	231.31	10.00
457340.16	776634.36						
11300.00	58.40	4.27	11204.03	271.94	20.30	272.70	10.00
457381.43	776637.44						
11350.00	63.40	4.27	11228.34	315.49	23.55	316.37	10.00
457424.98	776640.69						
11400.00	68.40	4.27	11248.75	360.99	26.94	361.99	10.00
457470.48	776644.08						
11450.00	73.40	4.27	11265.11	408.09	30.46	409.22	10.00
457517.58	776647.60						
11500.00	78.40	4.27	11277.29	456.43	34.07	457.70	10.00
457565.92	776651.21						
11550.00	83.40	4.27	11285.20	505.65	37.74	507.06	10.00
457615.14	776654.88						
11600.00	88.40	4.27	11288.78	555.37	41.45	556.91	10.00

DEVONTHISTLE UNIT 65H P1 SVY.TXT

457664.86	776658.59						
11617.92	90.19	4.27	11289.00	573.24	42.78	574.83	10.00
457682.73	776659.92	LP					
11700.00	90.19	4.27	11288.73	655.09	48.89	656.91	0.00
457764.58	776666.03						
11800.00	90.19	4.27	11288.41	754.81	56.34	756.91	0.00
457864.30	776673.48						
11900.00	90.19	4.27	11288.08	854.53	63.78	856.91	0.00
457964.02	776680.92						
12000.00	90.19	4.27	11287.75	954.25	71.22	956.91	0.00
458063.74	776688.36						
12100.00	90.19	4.27	11287.42	1053.98	78.66	1056.91	0.00
458163.47	776695.80						
12200.00	90.19	4.27	11287.10	1153.70	86.11	1156.91	0.00
458263.19	776703.25						
12300.00	90.19	4.27	11286.77	1253.42	93.55	1256.91	0.00
458362.91	776710.69						
12400.00	90.19	4.27	11286.44	1353.14	100.99	1356.91	0.00
458462.63	776718.13						
12500.00	90.19	4.27	11286.11	1452.86	108.44	1456.90	0.00
458562.35	776725.58						
12600.00	90.19	4.27	11285.79	1552.59	115.88	1556.90	0.00
458662.08	776733.02						
12700.00	90.19	4.27	11285.46	1652.31	123.32	1656.90	0.00
458761.80	776740.46						
12800.00	90.19	4.27	11285.13	1752.03	130.76	1756.90	0.00
458861.52	776747.90						
12900.00	90.19	4.27	11284.81	1851.75	138.21	1856.90	0.00
458961.24	776755.35						
13000.00	90.19	4.27	11284.48	1951.47	145.65	1956.90	0.00
459060.96	776762.79						
13100.00	90.19	4.27	11284.15	2051.20	153.09	2056.90	0.00
459160.69	776770.23						
13200.00	90.19	4.27	11283.82	2150.92	160.53	2156.90	0.00
459260.41	776777.67						
13300.00	90.19	4.27	11283.50	2250.64	167.98	2256.90	0.00
459360.13	776785.12						
13400.00	90.19	4.27	11283.17	2350.36	175.42	2356.90	0.00
459459.85	776792.56						
13500.00	90.19	4.27	11282.84	2450.09	182.86	2456.90	0.00
459559.58	776800.00						
13600.00	90.19	4.27	11282.51	2549.81	190.31	2556.90	0.00
459659.30	776807.45						
13700.00	90.19	4.27	11282.19	2649.53	197.75	2656.90	0.00
459759.02	776814.89						
13800.00	90.19	4.27	11281.86	2749.25	205.19	2756.90	0.00
459858.74	776822.33						
13900.00	90.19	4.27	11281.53	2848.97	212.63	2856.90	0.00
459958.46	776829.77						
14000.00	90.19	4.27	11281.20	2948.70	220.08	2956.90	0.00
460058.19	776837.22						
14100.00	90.19	4.27	11280.88	3048.42	227.52	3056.90	0.00
460157.91	776844.66						
14200.00	90.19	4.27	11280.55	3148.14	234.96	3156.90	0.00
460257.63	776852.10						
14300.00	90.19	4.27	11280.22	3247.86	242.41	3256.90	0.00
460357.35	776859.55						

DEVONTHISTLE UNIT 65H P1 SVY.TXT							
14400.00	90.19	4.27	11279.89	3347.58	249.85	3356.89	0.00
460457.07		776866.99					
14500.00	90.19	4.27	11279.57	3447.31	257.29	3456.89	0.00
460556.80		776874.43					
14600.00	90.19	4.27	11279.24	3547.03	264.73	3556.89	0.00
460656.52		776881.87					
14700.00	90.19	4.27	11278.91	3646.75	272.18	3656.89	0.00
460756.24		776889.32					
14800.00	90.19	4.27	11278.58	3746.47	279.62	3756.89	0.00
460855.96		776896.76					
14900.00	90.19	4.27	11278.26	3846.19	287.06	3856.89	0.00
460955.68		776904.20					
15000.00	90.19	4.27	11277.93	3945.92	294.51	3956.89	0.00
461055.41		776911.65					
15100.00	90.19	4.27	11277.60	4045.64	301.95	4056.89	0.00
461155.13		776919.09					
15200.00	90.19	4.27	11277.27	4145.36	309.39	4156.89	0.00
461254.85		776926.53					
15300.00	90.19	4.27	11276.95	4245.08	316.83	4256.89	0.00
461354.57		776933.97					
15400.00	90.19	4.27	11276.62	4344.80	324.28	4356.89	0.00
461454.29		776941.42					
15500.00	90.19	4.27	11276.29	4444.53	331.72	4456.89	0.00
461554.02		776948.86					
15600.00	90.19	4.27	11275.96	4544.25	339.16	4556.89	0.00
461653.74		776956.30					
15700.00	90.19	4.27	11275.64	4643.97	346.60	4656.89	0.00
461753.46		776963.74					
15800.00	90.19	4.27	11275.31	4743.69	354.05	4756.89	0.00
461853.18		776971.19					
15894.62	90.19	4.27	11275.00	4838.05	361.09	4851.51	0.00
461947.54		776978.23	PBHL				

Targets

Map							Map	
Name	Latitude			Longitude			+N/-S	+E/-W
Easting	Deg	Min	Description	Deg	Min	TVD	ft	ft
ft			Dip.	Dir.		ft		
PBHL						11275.00	4838.05	361.09
776978.23	32	16	3.595 N	103	34	15.472 W		461947.54

DEVONTHISTLE UNIT 65H P1 SVY.TXT

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

Company: Devon Energy
Time: 12:43:13 Page: 3
Field: Lea County, New Mexico (NAD 83)
Reference well: Thistle Unit 65H, Grid North
Site: Thistle Unit 65H
Reference: SITE 3673.3
Well: Thistle Unit 65H
Reference: well (0.00N,0.00E,4.27Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

Date: 7/29/2013
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Casing Points	MD	TVD	Diameter	Hole Size	Name
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Annotation

MD ft	TVD ft	
10716.05	10716.05	KOP
11617.92	11289.00	LP
15894.61	11275.00	PBHL

Formations	MD	TVD	Formations	Lithology
		Dip Angle	Dip Direction	

Field: Lea County, New Mexico (NAD 83)

Map System: US State Plane Coordinate System 1983
New Mexico, Eastern Zone
Geo Datum: GRS 1980
Well Centre
Sys Datum: Mean Sea Level
IGRF2010

Map Zone:
Coordinate System:
Geomagnetic Model:

DEVONTHISTLE UNIT 65H P1 SVY.TXT