

HOBBS OCD
 NM 87410
 575) 393-0720
 575) 393-0720
 JUL 31 2013
 NM 87410
 505) 334-6170
 RECEIVED
 NM 87410

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹⁰ Surface Location¹¹ Bottom Hole Location If Different From Surface

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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Map showing a 2640.00 FT by 2640.00 FT area, divided into four quadrants by dashed lines. The map includes various annotations and coordinates for different points.

Top-Left Quadrant (NW Corner Sec. 34):

- NW CORNER SEC. 34
- LAT. = 32.2685723°N
- LONG. = 103.5688255°W
- NMSP EAST (FT)
- N = 462281.34
- E = 777635.45

Top-Right Quadrant (NE Corner Sec. 34):

- NE CORNER SEC. 34
- LAT. = 32.2685456°N
- LONG. = 103.5517436°W
- NMSP EAST (FT)
- N = 462309.64
- E = 782915.41
- BOTTOM OF HOLE
- 660'
- 330'

Bottom-Left Quadrant (SW Corner Sec. 34):

- SW CORNER SEC. 34
- LAT. = 32.2540344°N
- LONG. = 103.5688168°W
- NMSP EAST (FT)
- N = 456992.49
- E = 777675.80

Bottom-Right Quadrant (SE Corner Sec. 34):

- SE CORNER SEC. 34
- LAT. = 32.2540100°N
- LONG. = 103.5517413°W
- NMSP EAST (FT)
- N = 457021.62
- E = 782954.62
- THISTLE UNIT #50H
- ELEV. = 3633.2'
- LAT. = 32.2545630°N (NAD83)
- LONG. = 103.5538760°W
- NMSP EAST (FT)
- N = 457218.02
- E = 782293.24
- SURFACE LOCATION
- 200'
- 660'

Annotations:

- DNF (Data Not Found) is noted in several locations.
- 660' and 330' distances are indicated near the top-right corner.
- 200' distance is indicated near the bottom-right corner.
- 660' distance is indicated near the bottom-right corner.
- 660' distance is indicated near the bottom-right corner.

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.

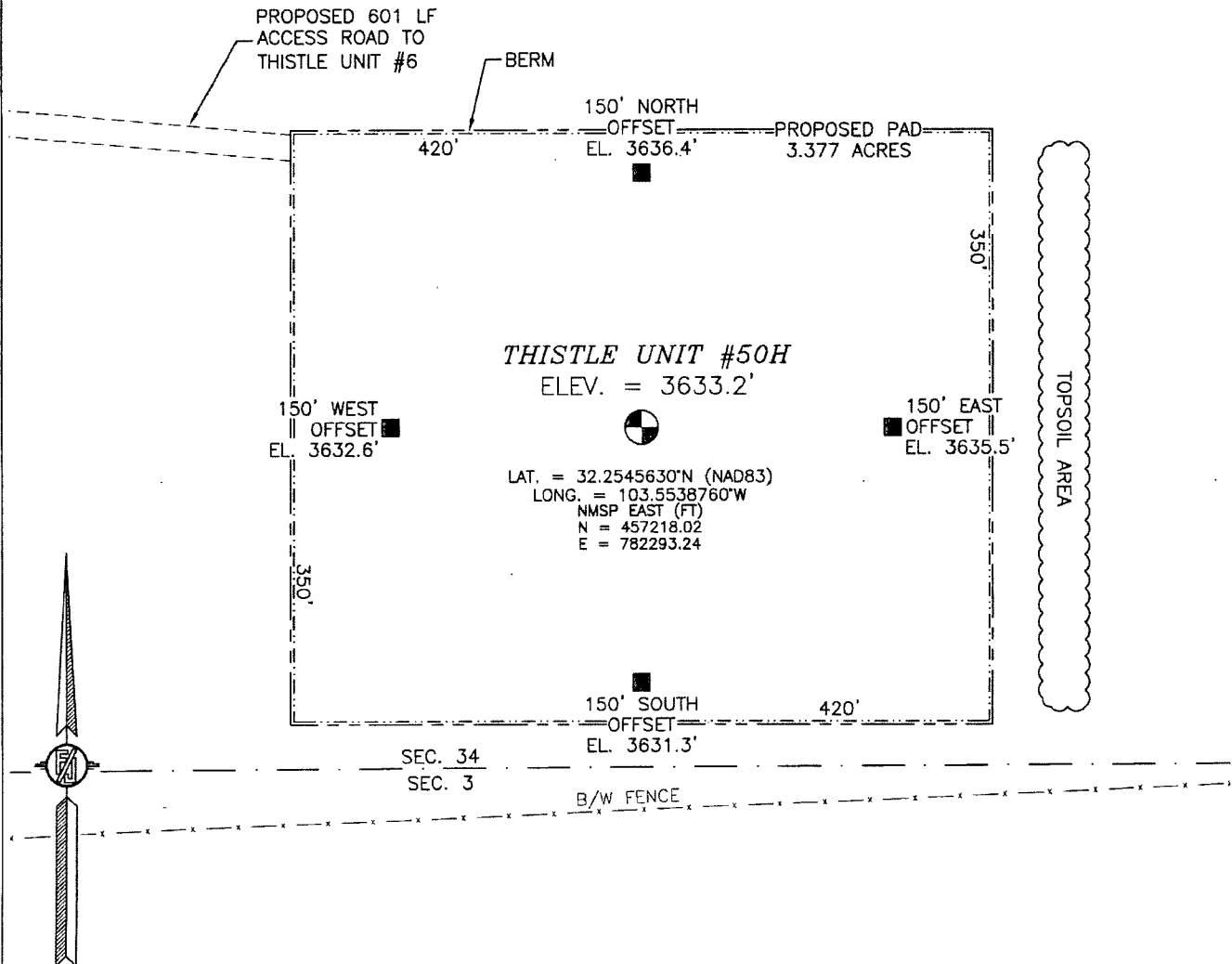
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Signature and Seal of Professional Surveyor
Certificate Number: FILMON F. JARAWIBO, PLS 12797
REGISTERED LAND SURVEYOR NO. 1885

OCT 17 2013

SECTION 34, 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 STATE HIGHWAY 128 AND CR J2 (BRININSTOOL) GO NORTHWEST ON CR J2 FOR APPROX. 3.2 MILES. GO EAST ON CALICHE LEASE ROAD FOR APPROX. 0.46 OF A MILE. CONTINUE NORTHEAST APPROX. 220 FT. CONTINUE EAST APPROX. 0.3 OF A MILE TO THISTLE UNIT #6 WELL. FROM SOUTHEAST CORNER PAD GO EAST APPROX. 600 FT. TO NORTHWEST PAD CORNER. LOCATION IS APPROX. 267 FT. SOUTHEAST.

DEVON ENERGY PRODUCTION COMPANY, L.P.
THISTLE UNIT #50H

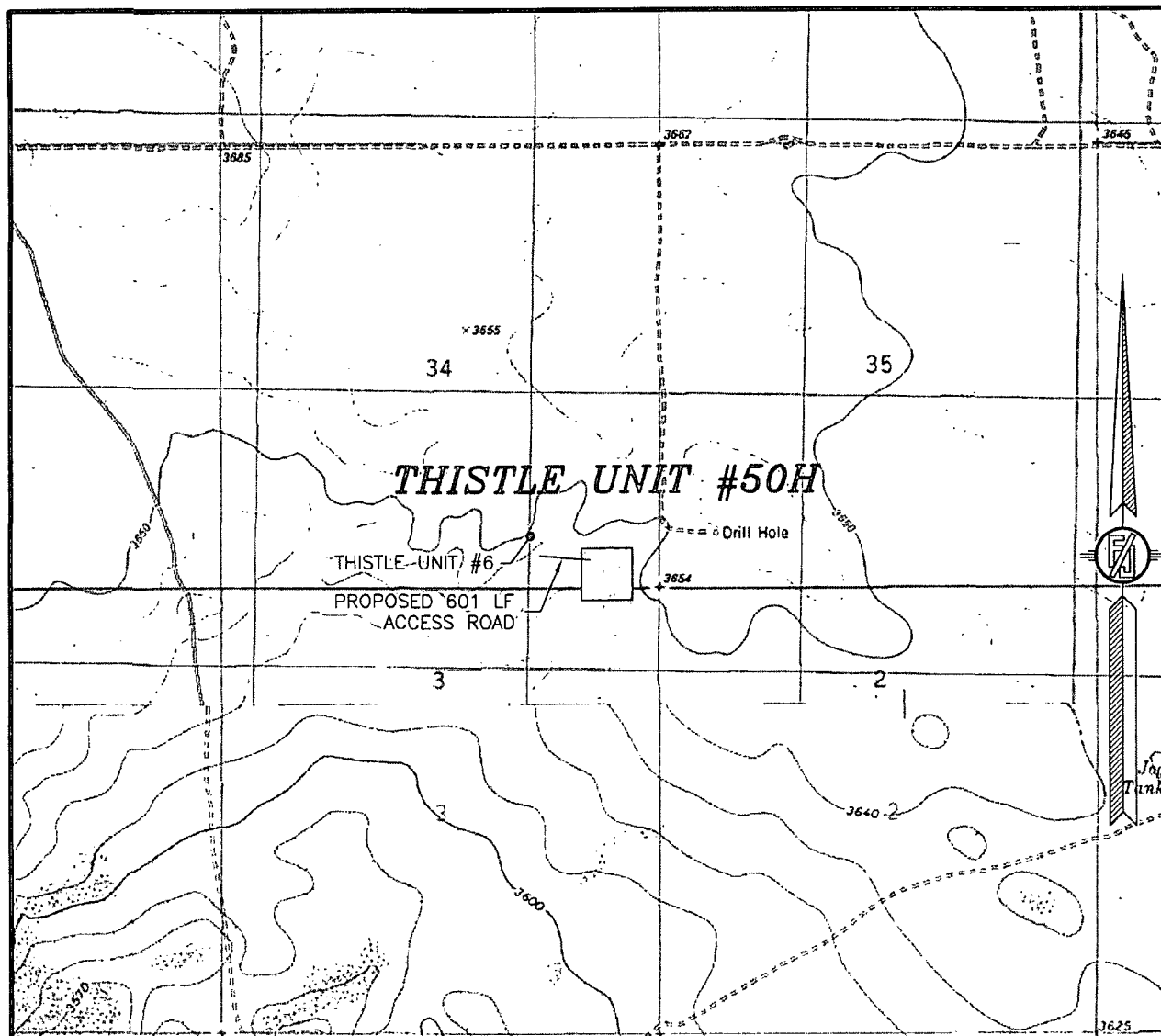
LOCATED 200 FT. FROM THE SOUTH LINE
AND 660 FT. FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MAY 23, 2013

SURVEY NO. 1885

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

SECTION 34, TOWNSHIP 23 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
TIP TOP WELLS

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

THISTLE UNIT #50H

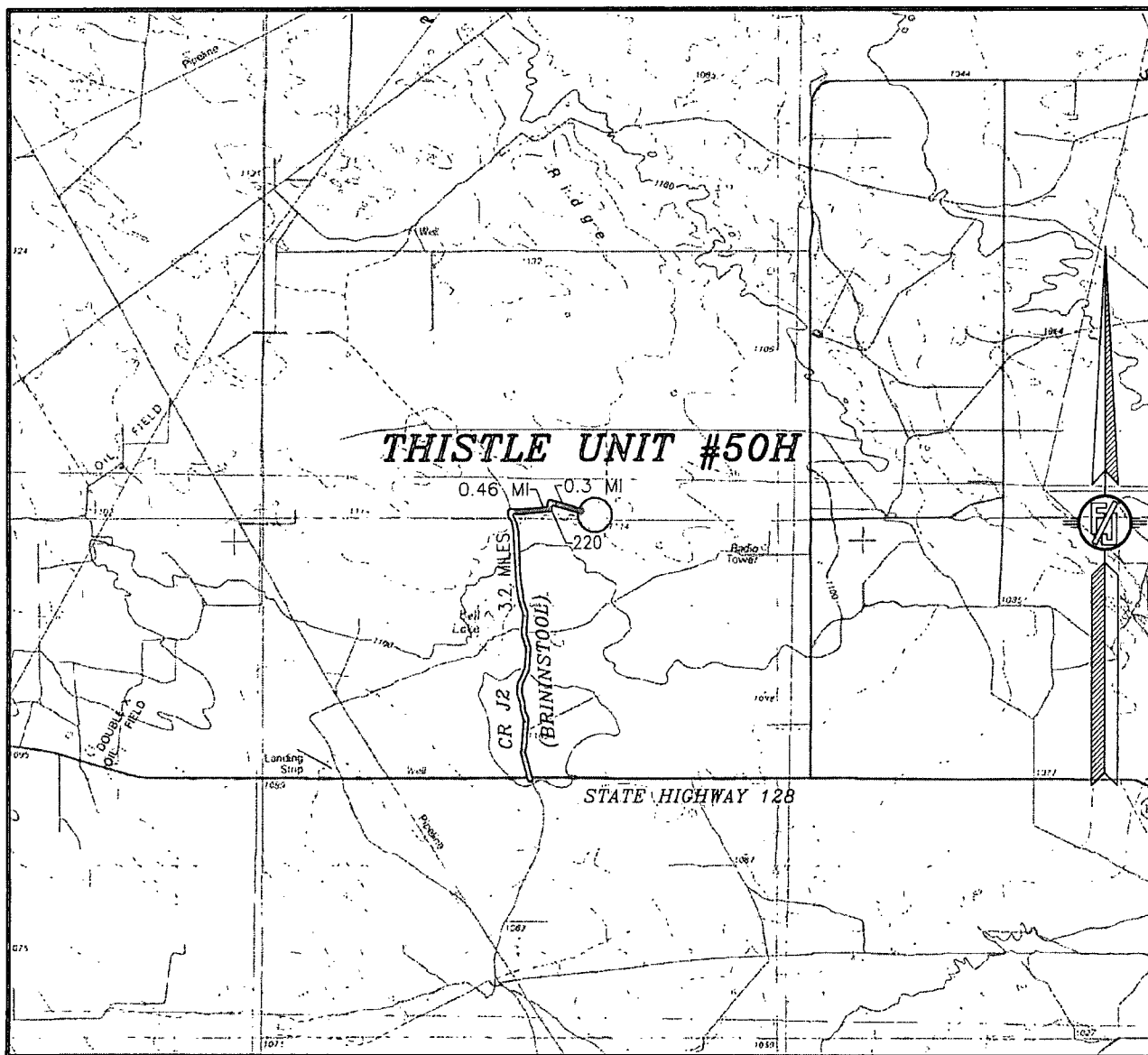
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SECTION 34, TOWNSHIP 23 SOUTH,
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LEA COUNTY, STATE OF NEW MEXICO

MAY 23, 2013

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

SECTION 34, 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 #50H

LOCATED 200 FT. FROM THE SOUTH LINE
AND 660 FT. FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MAY 23, 2013

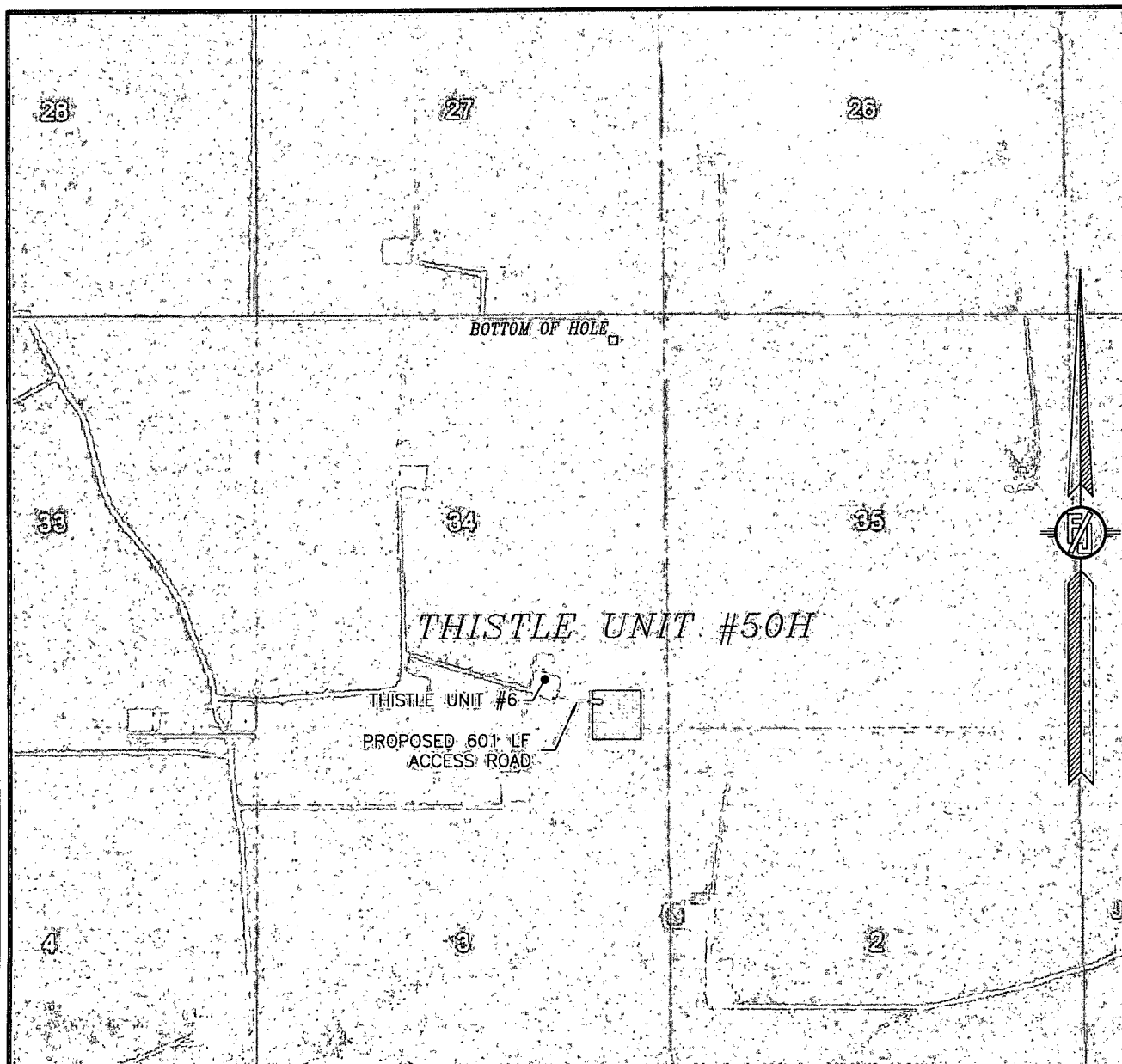
DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 AND CR J2 (BRINSTOOL) GO NORTHWEST ON CR J2 FOR APPROX. 3.2 MILES. GO EAST ON CALICHE LEASE ROAD FOR APPROX. 0.46 OF A MILE. CONTINUE NORTHEAST APPROX. 220 FT. CONTINUE EAST APPROX. 0.3 OF A MILE TO THISTLE UNIT #6 WELL. FROM SOUTHEAST CORNER PAD GO EAST APPROX. 600 FT. TO NORTHWEST PAD CORNER. LOCATION IS APPROX. 267 FT. SOUTHEAST.

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

SURVEY NO. 1885
CARLSBAD, NEW MEXICO

SECTION 34, 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 #50H

LOCATED 200 FT. FROM THE SOUTH LINE
AND 660 FT. FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MAY 23, 2013

SURVEY NO. 1885

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

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          #           #
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Job : 242
 Date: 7/30/2013
 Time: 8:19:13 AM



Weatherford®

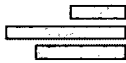
HOBBS OCD

JUL 31 2013

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Drilling Services

Proposal



devon

THISTLE UNIT 50H

LEA COUNTY, NM

WELL FILE: **PLAN 2**

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 50H
Lea County, New Mexico



KB ELEV: 3658
GL ELEV: 3633

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	359.58	0.00	0.00	0.00	0.00	0.00	0.00	
2	10650.08	0.00	359.58	10650.08	0.00	0.00	0.00	0.00	0.00	
3	11543.79	89.37	359.58	11223.00	566.66	-4.13	10.00	359.58	566.67	
4	15736.32	89.37	359.58	11269.00	4758.82	-34.68	0.00	0.00	4758.95	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Thistle Unit 50H	0.00	0.00	457218.02	782293.24	32°15'16.418N	103°33'13.972W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	11269.00	4758.82	-34.68	461976.84	782258.56	Point

SITE DETAILS

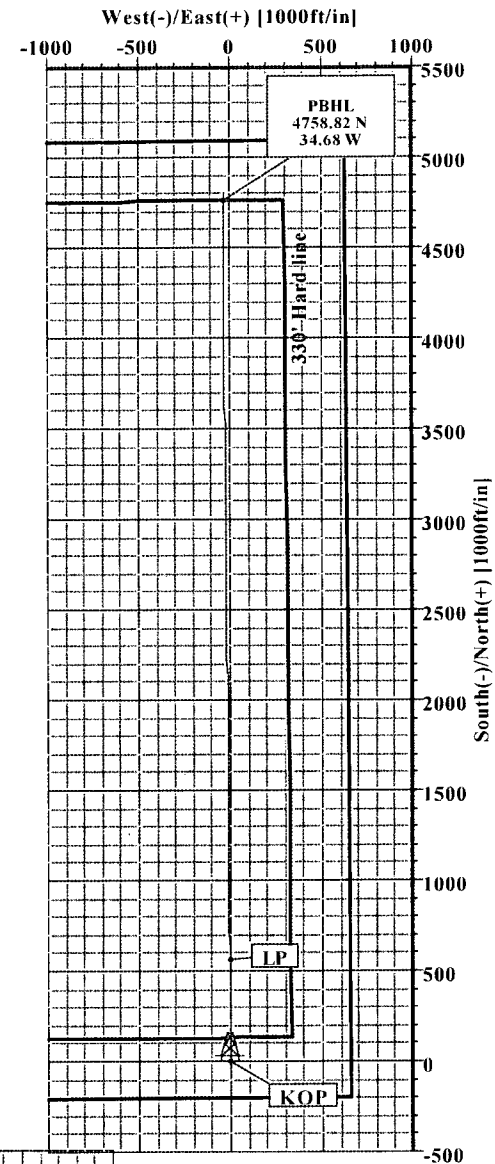
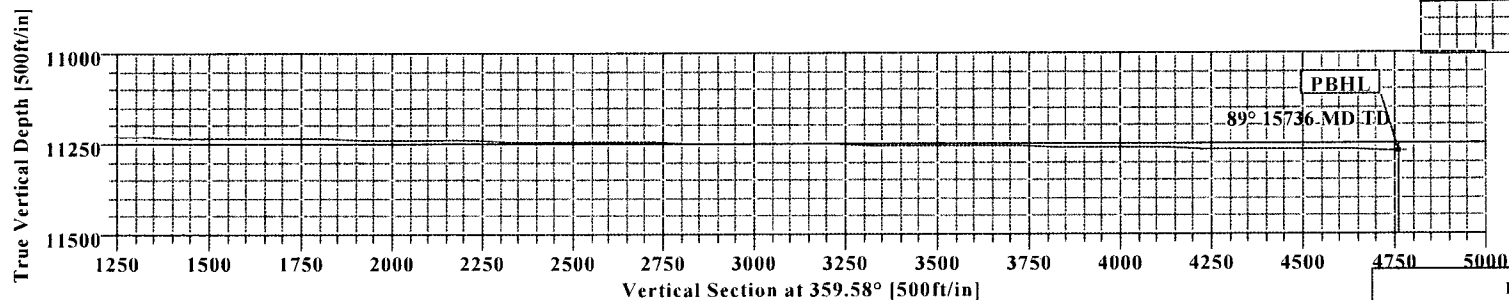
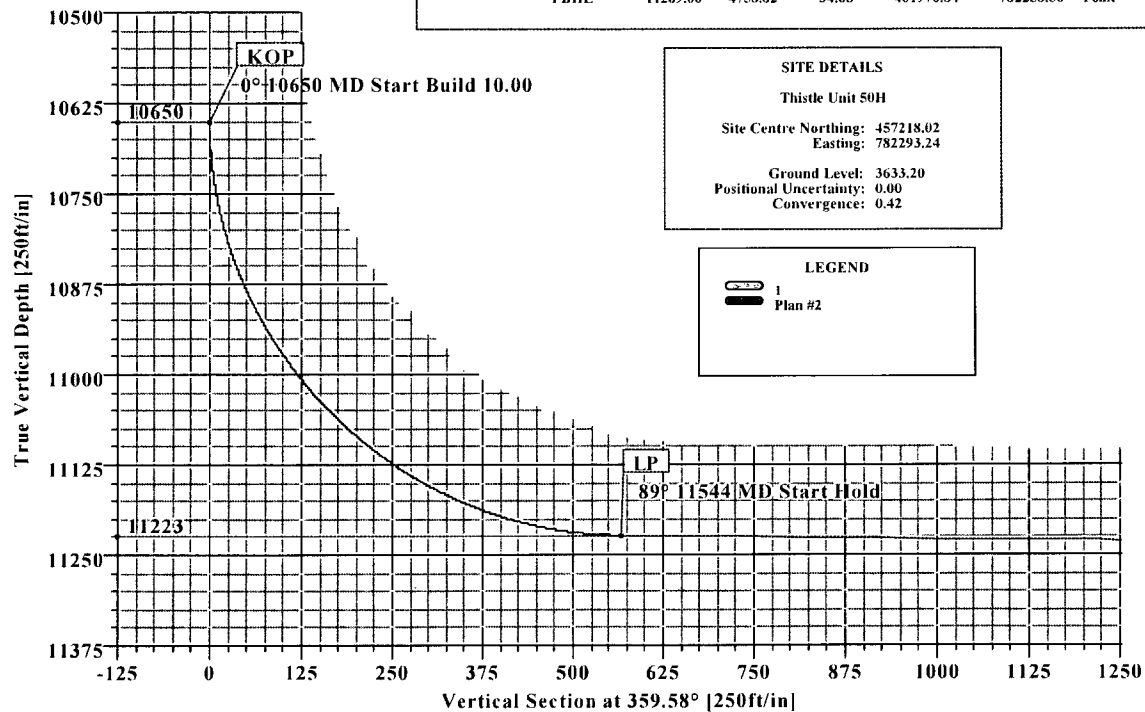
Thistle Unit 50H

Site Centre Northing: 457218.02
Easting: 782293.24

Ground Level: 3633.20
Positional Uncertainty: 0.00
Convergence: 0.42

LEGEND

1
Plan #2



Weatherford

Plan: Plan #2 (Thistle Unit 50H/1)

Created By: Patrick Rudolph

Date: 7/29/2013



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy		Date: 7/29/2013	Time: 13:48:33	Page: 1
Field: Lea County, New Mexico (NAD 83)		Co-ordinate(NE) Reference: Well: Thistle Unit 50H, Grid North		
Site: Thistle Unit 50H		Vertical (TVD) Reference: SITE 3658.2		
Well: Thistle Unit 50H		Section (VS) Reference: Well (0.00N,0.00E,359.58Azi)		
Wellpath: 1		Survey Calculation Method: Minimum Curvature Db: Sybase		

Plan: Plan #2	Date Composed: 7/29/2013
Principal: Yes	Version: 1
	Tied-to: From Surface

Site: Thistle Unit 50H	
Site Position:	Northing: 457218.02 ft Latitude: 32 15 16.418 N
From: Map	Easting: 782293.24 ft Longitude: 103 33 13.972 W
Position Uncertainty: 0.00 ft	North Reference: Grid
Ground Level: 3633.20 ft	Grid Convergence: 0.42 deg

Well: Thistle Unit 50H		Slot Name:	
Well Position:	+N/-S 0.00 ft Northing: 457218.02 ft Latitude: 32 15 16.418 N	+E/-W 0.00 ft Easting: 782293.24 ft Longitude: 103 33 13.972 W	
Position Uncertainty: 0.00 ft			

Wellpath: 1		Drilled From: Surface	
Current Datum: SITE	Height 3658.20 ft	Tie-on Depth: 0.00 ft	
Magnetic Data: 1/1/2014		Above System Datum: Mean Sea Level	
Field Strength: 48407 nT		Declination: 7.27 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 60.15 deg	
ft	ft	+E/-W	Direction
		ft	deg
0.00	0.00	0.00	359.58

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	359.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10650.08	0.00	359.58	10650.08	0.00	0.00	0.00	0.00	0.00	0.00	
11543.79	89.37	359.58	11223.00	566.66	-4.13	10.00	10.00	0.00	359.58	
15736.32	89.37	359.58	11269.00	4758.82	-34.68	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
10600.00	0.00	359.58	10600.00	0.00	0.00	0.00	0.00	457218.02	782293.24	
10650.08	0.00	359.58	10650.08	0.00	0.00	0.00	0.00	457218.02	782293.24	KOP
10700.00	4.99	359.58	10699.94	2.17	-0.02	2.17	10.00	457220.19	782293.22	
10750.00	9.99	359.58	10749.49	8.69	-0.06	8.69	10.00	457226.71	782293.18	
10800.00	14.99	359.58	10798.30	19.50	-0.14	19.50	10.00	457237.52	782293.10	
10850.00	19.99	359.58	10845.97	34.53	-0.25	34.53	10.00	457252.55	782292.99	
10900.00	24.99	359.58	10892.15	53.65	-0.39	53.65	10.00	457271.67	782292.85	
10950.00	29.99	359.58	10936.49	76.72	-0.56	76.72	10.00	457294.74	782292.68	
11000.00	34.99	359.58	10978.65	103.57	-0.75	103.57	10.00	457321.59	782292.49	
11050.00	39.99	359.58	11018.31	133.99	-0.98	134.00	10.00	457352.01	782292.26	
11100.00	44.99	359.58	11055.17	167.75	-1.22	167.76	10.00	457385.77	782292.02	
11150.00	49.99	359.58	11088.94	204.60	-1.49	204.61	10.00	457422.62	782291.75	
11200.00	54.99	359.58	11119.37	244.25	-1.78	244.26	10.00	457462.27	782291.46	
11250.00	59.99	359.58	11146.24	286.40	-2.09	286.41	10.00	457504.42	782291.15	
11300.00	64.99	359.58	11169.32	330.73	-2.41	330.74	10.00	457548.75	782290.83	
11350.00	69.99	359.58	11188.46	376.91	-2.75	376.92	10.00	457594.93	782290.49	
11400.00	74.99	359.58	11203.49	424.58	-3.09	424.59	10.00	457642.60	782290.15	
11450.00	79.99	359.58	11214.32	473.37	-3.45	473.39	10.00	457691.39	782289.79	
11500.00	84.99	359.58	11220.85	522.93	-3.81	522.94	10.00	457740.95	782289.43	
11543.79	89.37	359.58	11223.00	566.66	-4.13	566.67	10.00	457784.68	782289.11	LP
11600.00	89.37	359.58	11223.62	622.86	-4.54	622.87	0.00	457840.88	782288.70	
11700.00	89.37	359.58	11224.72	722.85	-5.27	722.87	0.00	457940.87	782287.97	
11800.00	89.37	359.58	11225.81	822.84	-6.00	822.86	0.00	458040.86	782287.24	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit 50H
Well: Thistle Unit 50H
Wellpath: 1

Date: 7/29/2013 Time: 13:48:33 Page: 2
Co-ordinate(NE) Reference: Well: Thistle Unit 50H, Grid North
Vertical (TVD) Reference: SITE 3658.2
Section (VS) Reference: Well (0.00N,0.00E,359.58Azi)
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	89.37	359.58	11226.91	922.83	-6.73	922.86	0.00	458140.85	782286.51	
12000.00	89.37	359.58	11228.01	1022.82	-7.45	1022.85	0.00	458240.84	782285.79	
12100.00	89.37	359.58	11229.11	1122.81	-8.18	1122.84	0.00	458340.83	782285.06	
12200.00	89.37	359.58	11230.20	1222.81	-8.91	1222.84	0.00	458440.83	782284.33	
12300.00	89.37	359.58	11231.30	1322.80	-9.64	1322.83	0.00	458540.82	782283.60	
12400.00	89.37	359.58	11232.40	1422.79	-10.37	1422.83	0.00	458640.81	782282.87	
12500.00	89.37	359.58	11233.49	1522.78	-11.10	1522.82	0.00	458740.80	782282.14	
12600.00	89.37	359.58	11234.59	1622.77	-11.83	1622.81	0.00	458840.79	782281.41	
12700.00	89.37	359.58	11235.69	1722.76	-12.55	1722.81	0.00	458940.78	782280.69	
12800.00	89.37	359.58	11236.79	1822.75	-13.28	1822.80	0.00	459040.77	782279.96	
12900.00	89.37	359.58	11237.88	1922.75	-14.01	1922.80	0.00	459140.77	782279.23	
13000.00	89.37	359.58	11238.98	2022.74	-14.74	2022.79	0.00	459240.76	782278.50	
13100.00	89.37	359.58	11240.08	2122.73	-15.47	2122.78	0.00	459340.75	782277.77	
13200.00	89.37	359.58	11241.17	2222.72	-16.20	2222.78	0.00	459440.74	782277.04	
13300.00	89.37	359.58	11242.27	2322.71	-16.93	2322.77	0.00	459540.73	782276.31	
13400.00	89.37	359.58	11243.37	2422.70	-17.66	2422.77	0.00	459640.72	782275.58	
13500.00	89.37	359.58	11244.47	2522.69	-18.38	2522.76	0.00	459740.71	782274.86	
13600.00	89.37	359.58	11245.56	2622.68	-19.11	2622.75	0.00	459840.70	782274.13	
13700.00	89.37	359.58	11246.66	2722.68	-19.84	2722.75	0.00	459940.70	782273.40	
13800.00	89.37	359.58	11247.76	2822.67	-20.57	2822.74	0.00	460040.69	782272.67	
13900.00	89.37	359.58	11248.85	2922.66	-21.30	2922.74	0.00	460140.68	782271.94	
14000.00	89.37	359.58	11249.95	3022.65	-22.03	3022.73	0.00	460240.67	782271.21	
14100.00	89.37	359.58	11251.05	3122.64	-22.76	3122.72	0.00	460340.66	782270.48	
14200.00	89.37	359.58	11252.14	3222.63	-23.49	3222.72	0.00	460440.65	782269.75	
14300.00	89.37	359.58	11253.24	3322.62	-24.21	3322.71	0.00	460540.64	782269.03	
14400.00	89.37	359.58	11254.34	3422.62	-24.94	3422.71	0.00	460640.64	782268.30	
14500.00	89.37	359.58	11255.44	3522.61	-25.67	3522.70	0.00	460740.63	782267.57	
14600.00	89.37	359.58	11256.53	3622.60	-26.40	3622.69	0.00	460840.62	782266.84	
14700.00	89.37	359.58	11257.63	3722.59	-27.13	3722.69	0.00	460940.61	782266.11	
14800.00	89.37	359.58	11258.73	3822.58	-27.86	3822.68	0.00	461040.60	782265.38	
14900.00	89.37	359.58	11259.82	3922.57	-28.59	3922.68	0.00	461140.59	782264.65	
15000.00	89.37	359.58	11260.92	4022.56	-29.31	4022.67	0.00	461240.58	782263.93	
15100.00	89.37	359.58	11262.02	4122.55	-30.04	4122.66	0.00	461340.57	782263.20	
15200.00	89.37	359.58	11263.12	4222.55	-30.77	4222.66	0.00	461440.57	782262.47	
15300.00	89.37	359.58	11264.21	4322.54	-31.50	4322.65	0.00	461540.56	782261.74	
15400.00	89.37	359.58	11265.31	4422.53	-32.23	4422.65	0.00	461640.55	782261.01	
15500.00	89.37	359.58	11266.41	4522.52	-32.96	4522.64	0.00	461740.54	782260.28	
15600.00	89.37	359.58	11267.50	4622.51	-33.69	4622.63	0.00	461840.53	782259.55	
15700.00	89.37	359.58	11268.60	4722.50	-34.42	4722.63	0.00	461940.52	782258.82	
15736.32	89.37	359.58	11269.00	4758.82	-34.68	4758.95	0.00	461976.84	782258.56	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			11269.00	4758.82	-34.68	461976.84	782258.56	32	16	3.509 N	103	33	13.973 W



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit 50H
Well: Thistle Unit 50H
Wellpath: 1

Date: 7/29/2013 Time: 13:48:33 Page: 3
Co-ordinate(NE) Reference: Well: Thistle Unit 50H, Grid North
Vertical (TVD) Reference: SITE 3658.2
Section (VS) Reference: Well (0.00N,0.00E,359.58Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
10650.08	10650.08	KOP
11543.79	11223.00	LP
15736.32	11269.00	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: June 26, 2013

Job Number: _____

Customer: Devon Energy

Well Name: Thistle Unit 50H

API Number: _____

Rig Name: _____

Location: Lea County, NM

Block: _____

Engineer: RWJ

US State Plane 1983

System: New Mexico Eastern Zone

Projection: Transverse Mercator/Gauss Kruger

Datum: North American Datum 1983

Ellipsoid: GRS 1980

North/South 457218.020 USFT

East/West 782293.240 USFT

Grid Convergence: .42°

Total Correction: +6.94°

Geodetic Latitude / Longitude

System: Latitude / Longitude

Projection: Geodetic Latitude and Longitude

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Latitude 32.2545630 DEG

Longitude -103.5538760 DEG

Geodetic Location WGS84

Elevation = 0.0 Meters

Latitude = 32.25456° N 32° 15 min 16.427 sec

Longitude = 103.55388° W 103° 33 min 13.954 sec

Magnetic Declination =

7.36°

[True North Offset]

Local Gravity =

.9988 g

Checksum =

6598

Local Field Strength =

48373 nT

Magnetic Vector X =

23888 nT

Magnetic Dip =

60.14°

Magnetic Vector Y =

3085 nT

Magnetic Model =

bggm2013

Magnetic Vector Z =

41950 nT

Spud Date =

Feb 28, 2014

Magnetic Vector H =

24087 nT

Signed: _____

Date: _____

DVN THISTLE UNIT 50H P2 SVY.TXT

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

Company: Devon Energy
Time: 13:49:31 Page: 1
Field: Lea County, New Mexico (NAD 83)
Reference: Well: Thistle Unit 50H, Grid North
Site: Thistle Unit 50H
Reference: SITE 3658.2
Well: Thistle Unit 50H
Reference: Well (0.00N,0.00E,359.58Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

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

Plan: Plan #2
7/29/2013

Date Composed:

1
Principal: Yes
From Surface

Version:

Tied-to:

Site: Thistle Unit 50H

Site Position:
32 15 16.418 N
From: Map
103 33 13.972 W
Position Uncertainty: 0.00 ft
Grid
Ground Level: 3633.20 ft
0.42 deg

Northing: 457218.02 ft

Latitude:

Easting: 782293.24 ft

Longitude:

North Reference:

Grid Convergence:

Well: Thistle Unit 50H

Slot Name:

Well Position: +N/-S 0.00 ft
32 15 16.418 N
+E/-W 0.00 ft
103 33 13.972 W
Position Uncertainty: 0.00 ft

Northing: 457218.02 ft

Latitude:

Easting : 782293.24 ft

Longitude:

Wellpath: 1
Surface

Drilled From:

Tie-on Depth:

0.00 ft
Current Datum: SITE
Datum: Mean Sea Level
Magnetic Data: 1/1/2014
7.27 deg
Field Strength: 48407 nT
60.15 deg

Height 3658.20 ft

Above System

Declination:

Mag Dip Angle:

Vertical Section:Depth From (TVD)
Direction

+N/-S

+E/-W

ft

ft

ft

deg

0.00

0.00

0.00

359.58

DVN THISTLE UNIT 50H P2 SVY.TXT

Plan Section Information							
Turn	MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft
	0.00	0.00	359.58	0.00	0.00	0.00	0.00
0.00	0.00	0.00					
10650.08	0.00	0.00	359.58	10650.08	0.00	0.00	0.00
0.00	0.00	0.00					
11543.79	89.37	359.58	11223.00	566.66	-4.13	10.00	10.00
0.00	359.58						
15736.32	89.37	359.58	11269.00	4758.82	-34.68	0.00	0.00
0.00	0.00	PBHL					
Survey							

MD MapN ft	Incl deg	Azim MapE deg	TVD ft	N/S Comment ft	E/W ft	VS ft	DLS deg/100ft
10600.00	0.00	359.58	10600.00	0.00	0.00	0.00	0.00
457218.02		782293.24					
10650.08	0.00	359.58	10650.08	0.00	0.00	0.00	0.00
457218.02		782293.24	KOP				
10700.00	4.99	359.58	10699.94	2.17	-0.02	2.17	10.00
457220.19		782293.22					
10750.00	9.99	359.58	10749.49	8.69	-0.06	8.69	10.00
457226.71		782293.18					
10800.00	14.99	359.58	10798.30	19.50	-0.14	19.50	10.00
457237.52		782293.10					
10850.00	19.99	359.58	10845.97	34.53	-0.25	34.53	10.00
457252.55		782292.99					
10900.00	24.99	359.58	10892.15	53.65	-0.39	53.65	10.00
457271.67		782292.85					
10950.00	29.99	359.58	10936.49	76.72	-0.56	76.72	10.00
457294.74		782292.68					
11000.00	34.99	359.58	10978.65	103.57	-0.75	103.57	10.00
457321.59		782292.49					
11050.00	39.99	359.58	11018.31	133.99	-0.98	134.00	10.00
457352.01		782292.26					
11100.00	44.99	359.58	11055.17	167.75	-1.22	167.76	10.00
457385.77		782292.02					
11150.00	49.99	359.58	11088.94	204.60	-1.49	204.61	10.00
457422.62		782291.75					
11200.00	54.99	359.58	11119.37	244.25	-1.78	244.26	10.00
457462.27		782291.46					
11250.00	59.99	359.58	11146.24	286.40	-2.09	286.41	10.00
457504.42		782291.15					
11300.00	64.99	359.58	11169.32	330.73	-2.41	330.74	10.00
457548.75		782290.83					
11350.00	69.99	359.58	11188.46	376.91	-2.75	376.92	10.00
457594.93		782290.49					
11400.00	74.99	359.58	11203.49	424.58	-3.09	424.59	10.00
457642.60		782290.15					
11450.00	79.99	359.58	11214.32	473.37	-3.45	473.39	10.00
457691.39		782289.79					
11500.00	84.99	359.58	11220.85	522.93	-3.81	522.94	10.00
457740.95		782289.43					
11543.79	89.37	359.58	11223.00	566.66	-4.13	566.67	10.00

DVN THISTLE UNIT 50H P2 SVY.TXT							
457784.68	782289.11	LP					
11600.00	89.37	359.58	11223.62	622.86	-4.54	622.87	0.00
457840.88	782288.70						
11700.00	89.37	359.58	11224.72	722.85	-5.27	722.87	0.00
457940.87	782287.97						
11800.00	89.37	359.58	11225.81	822.84	-6.00	822.86	0.00
458040.86	782287.24						
11900.00	89.37	359.58	11226.91	922.83	-6.73	922.86	0.00
458140.85	782286.51						
12000.00	89.37	359.58	11228.01	1022.82	-7.45	1022.85	0.00
458240.84	782285.79						
12100.00	89.37	359.58	11229.11	1122.81	-8.18	1122.84	0.00
458340.83	782285.06						
12200.00	89.37	359.58	11230.20	1222.81	-8.91	1222.84	0.00
458440.83	782284.33						
12300.00	89.37	359.58	11231.30	1322.80	-9.64	1322.83	0.00
458540.82	782283.60						
12400.00	89.37	359.58	11232.40	1422.79	-10.37	1422.83	0.00
458640.81	782282.87						
12500.00	89.37	359.58	11233.49	1522.78	-11.10	1522.82	0.00
458740.80	782282.14						
12600.00	89.37	359.58	11234.59	1622.77	-11.83	1622.81	0.00
458840.79	782281.41						
12700.00	89.37	359.58	11235.69	1722.76	-12.55	1722.81	0.00
458940.78	782280.69						
12800.00	89.37	359.58	11236.79	1822.75	-13.28	1822.80	0.00
459040.77	782279.96						
12900.00	89.37	359.58	11237.88	1922.75	-14.01	1922.80	0.00
459140.77	782279.23						
13000.00	89.37	359.58	11238.98	2022.74	-14.74	2022.79	0.00
459240.76	782278.50						
13100.00	89.37	359.58	11240.08	2122.73	-15.47	2122.78	0.00
459340.75	782277.77						
13200.00	89.37	359.58	11241.17	2222.72	-16.20	2222.78	0.00
459440.74	782277.04						
13300.00	89.37	359.58	11242.27	2322.71	-16.93	2322.77	0.00
459540.73	782276.31						
13400.00	89.37	359.58	11243.37	2422.70	-17.66	2422.77	0.00
459640.72	782275.58						
13500.00	89.37	359.58	11244.47	2522.69	-18.38	2522.76	0.00
459740.71	782274.86						
13600.00	89.37	359.58	11245.56	2622.68	-19.11	2622.75	0.00
459840.70	782274.13						
13700.00	89.37	359.58	11246.66	2722.68	-19.84	2722.75	0.00
459940.70	782273.40						
13800.00	89.37	359.58	11247.76	2822.67	-20.57	2822.74	0.00
460040.69	782272.67						
13900.00	89.37	359.58	11248.85	2922.66	-21.30	2922.74	0.00
460140.68	782271.94						
14000.00	89.37	359.58	11249.95	3022.65	-22.03	3022.73	0.00
460240.67	782271.21						
14100.00	89.37	359.58	11251.05	3122.64	-22.76	3122.72	0.00
460340.66	782270.48						
14200.00	89.37	359.58	11252.14	3222.63	-23.49	3222.72	0.00
460440.65	782269.75						
14300.00	89.37	359.58	11253.24	3322.62	-24.21	3322.71	0.00
460540.64	782269.03						

DVN THISTLE UNIT 50H P2 SVY.TXT							
14400.00	89.37	359.58	11254.34	3422.62	-24.94	3422.71	0.00
460640.64		782268.30					
14500.00	89.37	359.58	11255.44	3522.61	-25.67	3522.70	0.00
460740.63		782267.57					
14600.00	89.37	359.58	11256.53	3622.60	-26.40	3622.69	0.00
460840.62		782266.84					
14700.00	89.37	359.58	11257.63	3722.59	-27.13	3722.69	0.00
460940.61		782266.11					
14800.00	89.37	359.58	11258.73	3822.58	-27.86	3822.68	0.00
461040.60		782265.38					
14900.00	89.37	359.58	11259.82	3922.57	-28.59	3922.68	0.00
461140.59		782264.65					
15000.00	89.37	359.58	11260.92	4022.56	-29.31	4022.67	0.00
461240.58		782263.93					
15100.00	89.37	359.58	11262.02	4122.55	-30.04	4122.66	0.00
461340.57		782263.20					
15200.00	89.37	359.58	11263.12	4222.55	-30.77	4222.66	0.00
461440.57		782262.47					
15300.00	89.37	359.58	11264.21	4322.54	-31.50	4322.65	0.00
461540.56		782261.74					
15400.00	89.37	359.58	11265.31	4422.53	-32.23	4422.65	0.00
461640.55		782261.01					
15500.00	89.37	359.58	11266.41	4522.52	-32.96	4522.64	0.00
461740.54		782260.28					
15600.00	89.37	359.58	11267.50	4622.51	-33.69	4622.63	0.00
461840.53		782259.55					
15700.00	89.37	359.58	11268.60	4722.50	-34.42	4722.63	0.00
461940.52		782258.82					
15736.32	89.37	359.58	11269.00	4758.82	-34.68	4758.95	0.00
461976.84		782258.56	PBHL				

Targets

Map		<-----		Latitude		--<---		Longitude		---		Map	
Name	Description	TVD	+N/-S	+E/-W	North	East	North	East	North	East	North	East	North
Easting	Deg	Min	Sec	Dip.	Deg	Min	Sec	ft	ft	ft	ft	ft	ft
ft													

PBHL													
782258.56	32	16	3.509	N	103	33	13.973	W	4758.82	-34.68	461976.84		

Casing Points

MD	TVD	Diameter	Hole Size	Name
----	-----	----------	-----------	------

Company: Devon Energy
Time: 13:49:31 Page: 3
Field: Lea County, New Mexico (NAD 83)
Reference: well: Thistle Unit 50H, Grid North
Site: Thistle Unit 50H
Reference: SITE 3658.2
Well: Thistle Unit 50H
Reference: well (0.00N,0.00E,359.58Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

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

Annotation

MD ft	TVD ft	
10650.08	10650.08	KOP
11543.79	11223.00	LP
15736.32	11269.00	PBHL

Formations

MD	TVD	Formations
	Dip Angle	Dip Direction

Lithology

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:

DVN THISTLE UNIT 50H P2 SVY.TXT