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District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand 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

NMOCD ARTESIA

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 30-015-40506	² Pool Code 49622	³ Name Parlway	⁴ Location Bone Springs
⁵ Property Code	⁶ Property Name TURQUOISE PWU "27"		⁷ Well Number 2H
⁸ GRID No. 6137	⁹ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.		¹⁰ Elevation 3332.8

¹¹ Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	19 S	29 E		1980	NORTH	50	EAST	EDDY

¹² Bottom Hole Location If Different From Surface

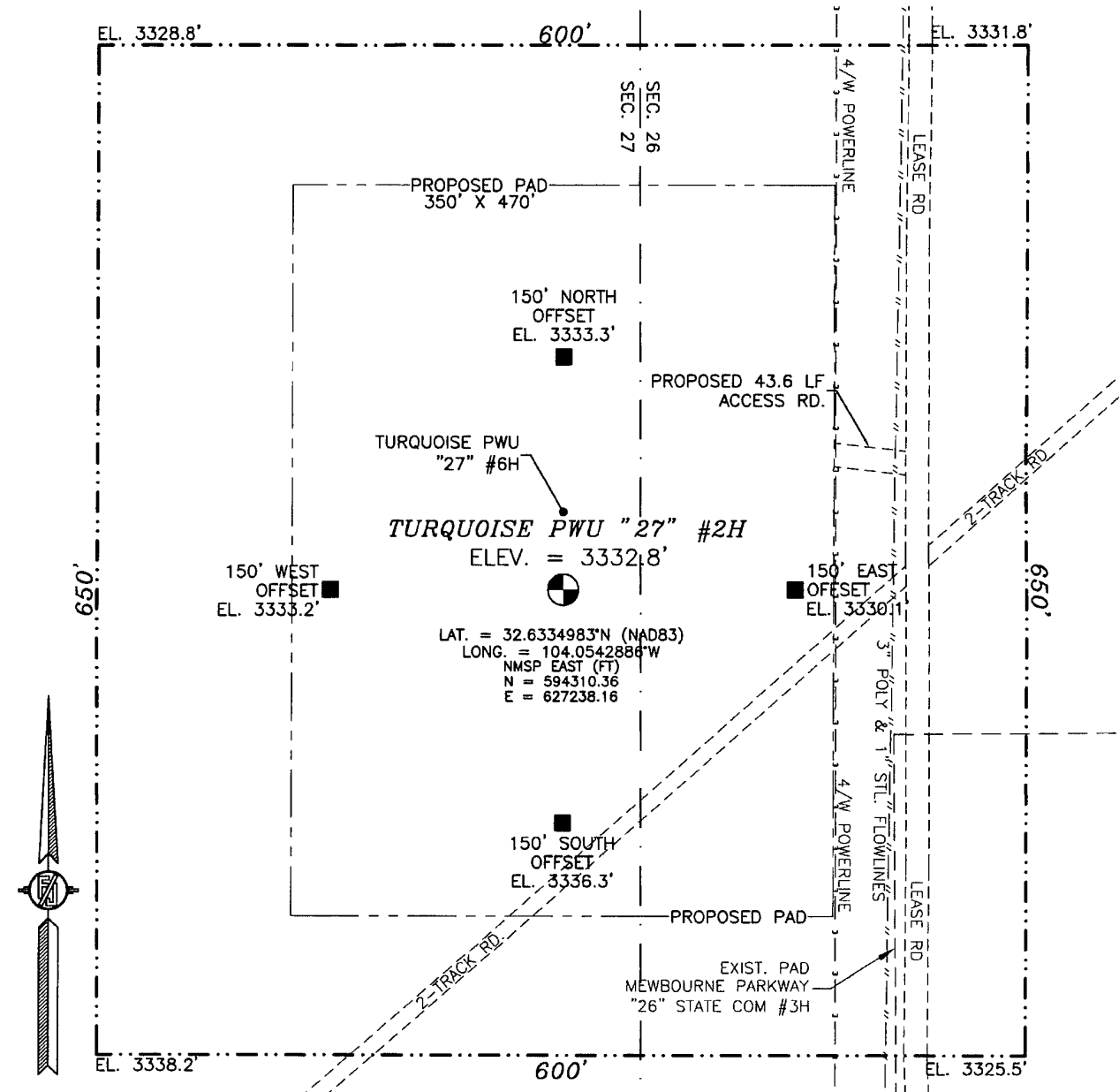
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	27	19 S	29 E		2310	NORTH	330	WEST	EDDY

¹³ Dedicated Acres	¹⁴ Joint or Infill	¹⁵ Consolidation Code	¹⁶ Order No.
160			

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.

N69°22'07"W 2632.22 FT NW CORNER SEC. 27 LAT. = 32.6390370°N LONG. = 104.0712463°W NMSP EAST (FT) N = 596312.05 E = 622012.94 W O CORNER SEC. 27 LAT. = 32.6317485°N LONG. = 104.0712904°W NMSP EAST (FT) N = 593660.44 E = 622005.89 SW CORNER SEC. 27 LAT. = 32.6241740°N LONG. = 104.0713099°W NMSP EAST (FT) N = 591013.90 E = 622006.42		S69°50'52"W 2635.86 FT N O CORNER SEC. 27 LAT. = 32.6389391°N LONG. = 104.0626959°W NMSP EAST (FT) N = 596283.05 E = 624645.01 NE CORNER SEC. 27 LAT. = 32.6389396°N LONG. = 104.0541330°W NMSP EAST (FT) N = 596290.05 E = 627290.86 E O CORNER SEC. 27 LAT. = 32.6341833°N LONG. = 104.0541238°W NMSP EAST (FT) N = 593650.20 E = 627290.61 SE CORNER SEC. 27 LAT. = 32.6244132°N LONG. = 104.0541300°W NMSP EAST (FT) N = 591005.28 E = 627295.67		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. Melanie Crawford 7/19/12 Signature Date Printed Name <i>Melanie Crawford</i> 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. MAY 1 2012 Date of Survey <i>FILIPINO F. JARAMILLO</i> Signature and Seal of Professional Surveyor Certificate Number: FILIPINO F. JARAMILLO, PLS 12797 REGISTERED LAND SURVEYOR NO 965	
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SECTION 27, 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 THE INTERSECTION OF CR 210 (OLD LOCO) AND CR 235 (CURRY COMB) GO SOUTHEAST ON CR 235 FOR APPROX. 2.6 MILES. GO SOUTH FOR APPROX. 0.4 OF A MILE. GO NORTHWEST APPROX. 0.7 OF A MILE. GO SOUTH APPROX. 0.2 OF A MILE. LOCATION IS APPROX. 200 FT SOUTH.

DEVON ENERGY PRODUCTION COMPANY, L.P.

TURQUOISE PWU "27" #2H

LOCATED 1980 FT. FROM THE NORTH LINE

AND 50 FT. FROM THE EAST LINE OF

SECTION 27, TOWNSHIP 19 SOUTH,

RANGE 29 EAST, N.M.P.M.

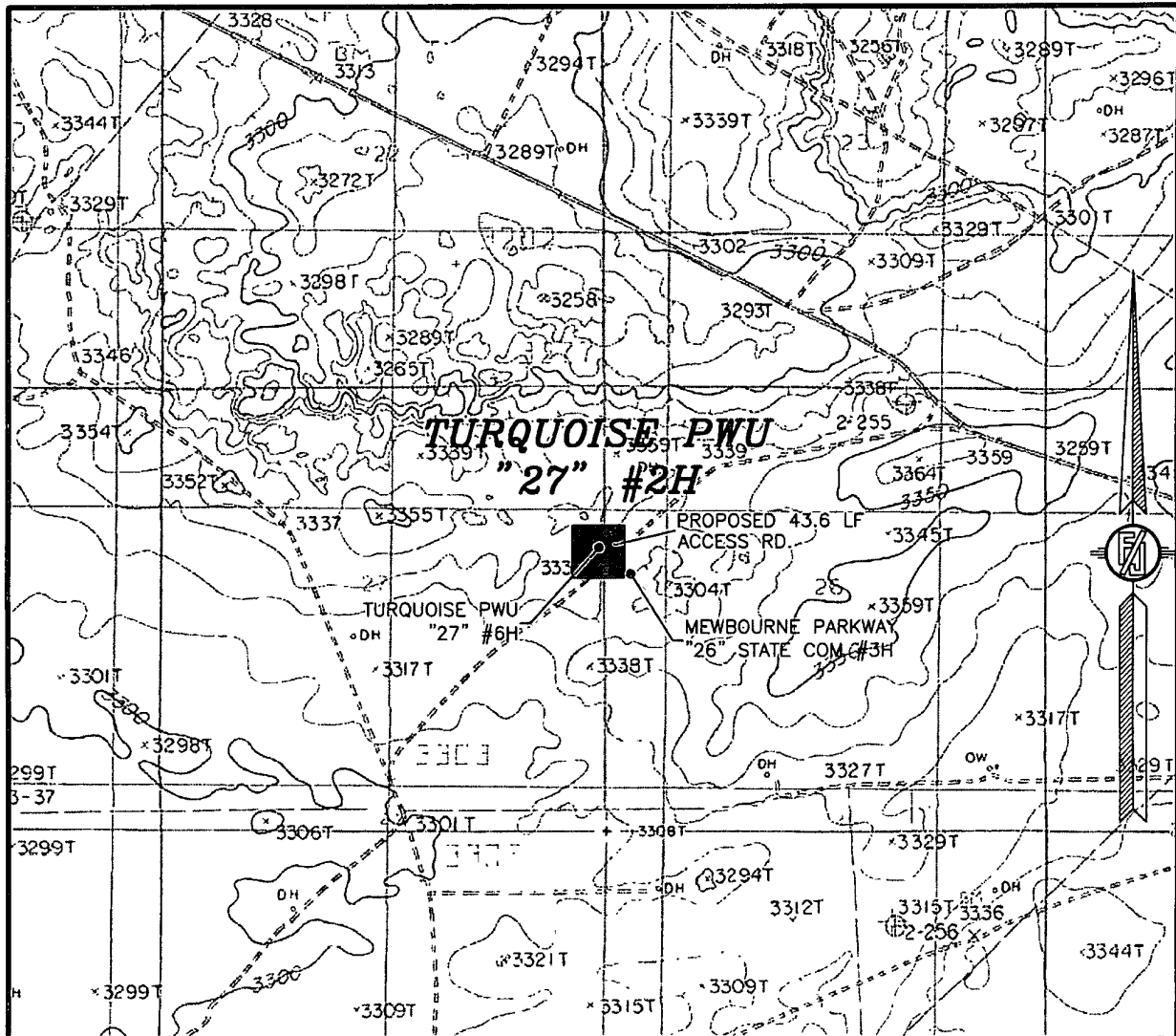
EDDY COUNTY, STATE OF NEW MEXICO

MAY 4, 2012

SURVEY NO. 965

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

SECTION 27, 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.

TURQUOISE PWU "27" #2H

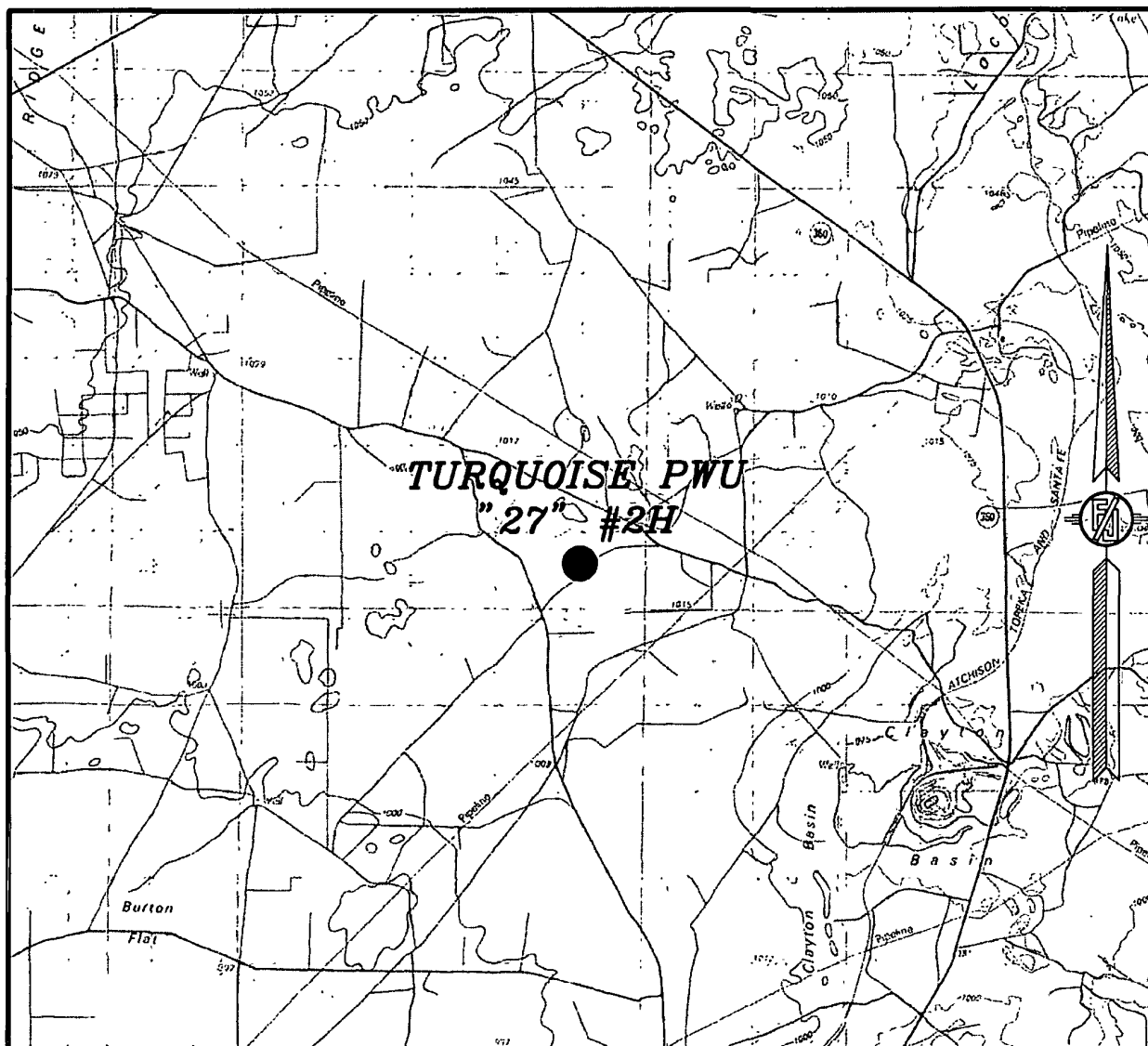
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 AND 50 FT. FROM THE EAST LINE OF
 SECTION 27, TOWNSHIP 19 SOUTH,
 RANGE 29 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

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SECTION 27, 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.

TURQUOISE PWU "27" #2H

LOCATED 1980 FT. FROM THE NORTH LINE
AND 50 FT. FROM THE EAST LINE OF
SECTION 27, TOWNSHIP 19 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MAY 4, 2012

SURVEY NO. 965

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

Devon Energy Corporation

HALLIBURTON | Sperry Drilling



Project: Eddy County, NM (NAD 83)
Site: Turquoise PWU 27
Well: Turquoise PWU 27 2H
Wellbore: Wellbore #1
Plan: Plan #1
Rig: Cactus 126

SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation: GL 3332.8' + 25'KB @ 3357.80ft (Cactus 126)
Northing **Easting** **Latitude** **Longitude**
 594310.36 627238.16 32° 38' 0.594 N 104° 3' 15.439 W

CASING DETAILS

TVD	MD	Name
300.00	300.00	Surface Csg
3400.00	3400.00	Intermediate Csg
8020.00	12839.24	Production Csg

SECTION DETAILS

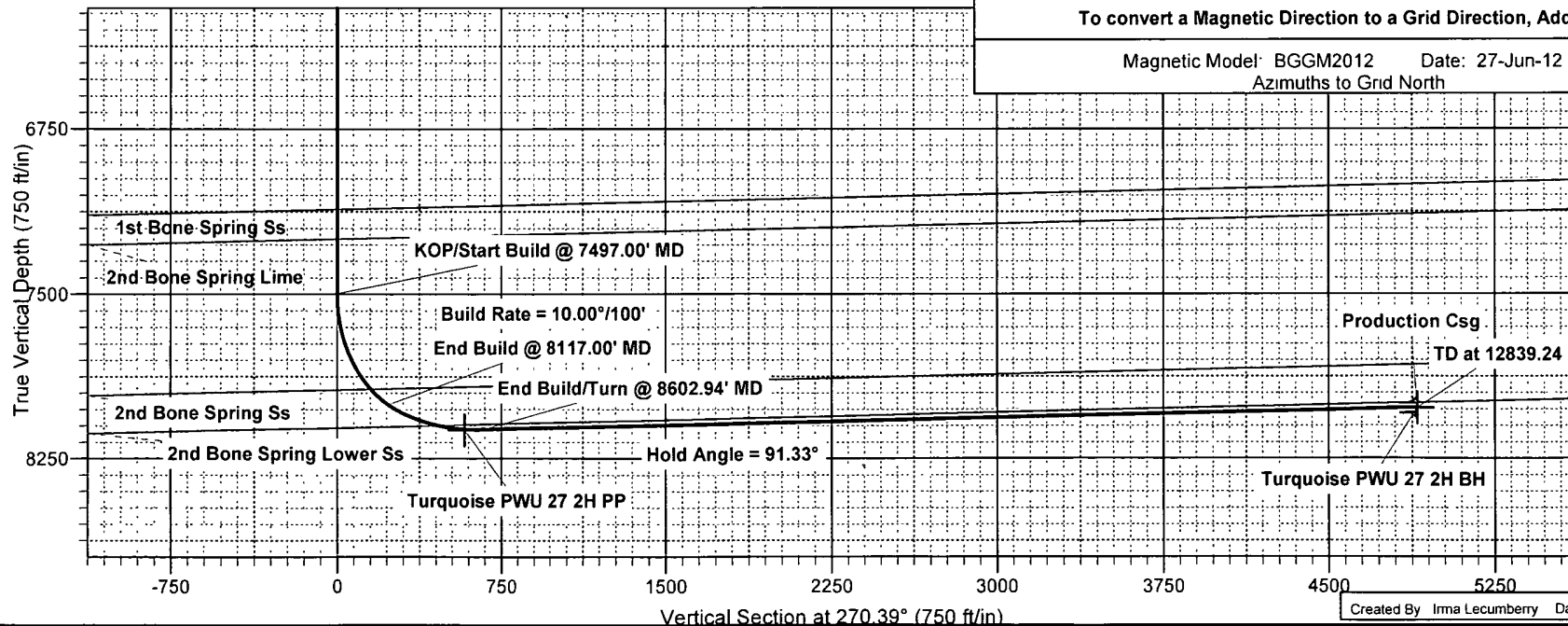
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7497.00	0.00	0.00	7497.00	0.00	0.00	0.00	0.00	0.00	KOP/Start Build @ 7497.00' MD
8117.00	62.00	230.00	8002.89	-195.39	-232.85	10.00	230.00	231.52	End Build @ 8117.00' MD
8602.94	91.33	270.39	8118.32	-340.42	-666.40	10.00	59.74	664.06	End Build/Turn @ 8602.94' MD
12839.24	91.33	270.39	8020.00	-311.38	-4901.46	0.00	0.00	4899.23	TD at 12839.24

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Turquoise PWU 27 2H BH	8020.00	-311.38	-4901.46	593998.98	622336.70	32° 37' 57.637 N	104° 4' 12.767 W
Turquoise PWU 27 2H PP	8120.00	-331.98	-583.77	593978.38	626654.39	32° 37' 57.324 N	104° 3' 22.276 W

To convert a Magnetic Direction to a Grid Direction, Add 7.66°

Magnetic Model: BGGM2012 Date: 27-Jun-12
 Azimuths to Grid North



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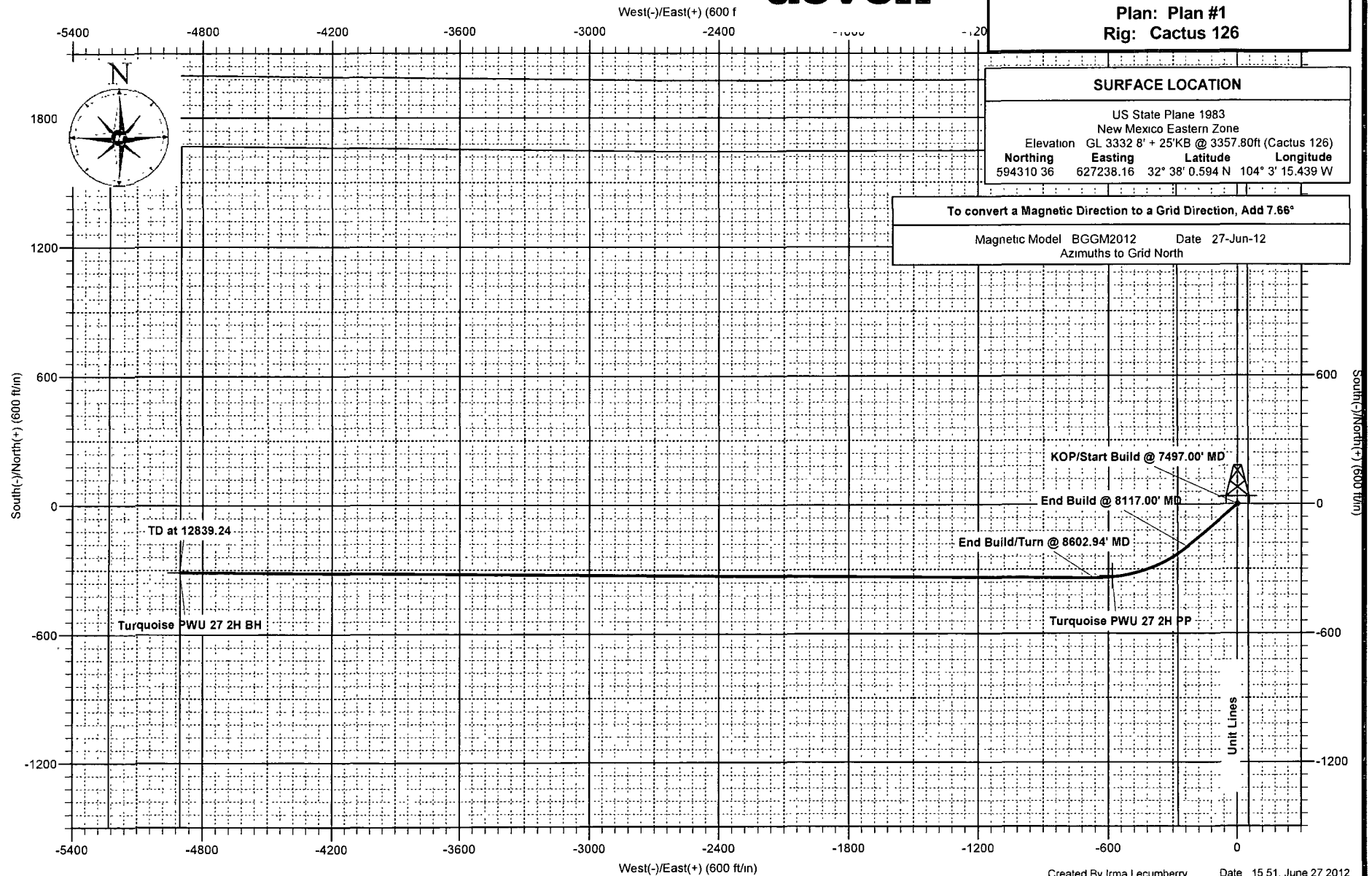
Project: Eddy County, NM (NAD 83)
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 Wellbore: Wellbore #1
 Plan: Plan #1
 Rig: Cactus 126

SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation GL 3332 8' + 25'KB @ 3357.80ft (Cactus 126)
 Northing 594310 36 Easting 627238.16 Latitude 32° 38' 0.594 N Longitude 104° 3' 15.439 W

To convert a Magnetic Direction to a Grid Direction, Add 7.66°

Magnetic Model BGGM2012 Date 27-Jun-12
 Azimuths to Grid North



Devon Energy Corporation

Eddy County, NM (NAD 83)

Turquoise PWU 27

Turquoise PWU 27 2H

Wellbore #1

Plan: Plan #1

Sperry Drilling Services Proposal Report

27 June, 2012

Well Coordinates 594,310 36 N, 627,238 16 E (32° 38' 00 59" N, 104° 03' 15 44" W)
Ground Level 3,332 80 ft

Local Coordinate Origin	Centered on Well Turquoise PWU 27 2H
Viewing Datum	GL 3332 8' + 25'KB @ 3357 80ft (Cactus 126)
TVDs to System	N
North Reference	Grid
Unit System	API - US Survey Feet

Version 2003 16 Build 431

HALLIBURTON

Plan Report for Turquoise PWU 27 2H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
25 00	0 00	0 00	25 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Rustler										
300 00	0 00	0 00	300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Surface Csg										
385 00	0 00	0 00	385 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Salt										
1,365 00	0 00	0 00	1,365 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Tensil Dolomite										
1,500 00	0 00	0 00	1,500 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Yates										
1,770 00	0 00	0 00	1,770 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Seven Rivers										
2,315 00	0 00	0 00	2,315 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Queen										
2,915 00	0 00	0 00	2,915 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
San Andres										
3,400 00	0 00	0 00	3,400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Intermediate Csg										
3,900 00	0 00	0 00	3,900 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Delaware										
5,170 00	0 00	0 00	5,170 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Lwr Brushy Canyon										
5,420 00	0 00	0 00	5,420 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
CutOff Dolomite										
5,495 00	0 00	0 00	5,495 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Bone Spring Lm										
7,115 00	0 00	0 00	7,115 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1st Bone Spring Ss										
7,250 00	0 00	0 00	7,250 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2nd Bone Spring Lime										
7,497 00	0 00	0 00	7,497 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP/Start Build @ 7497.00' MD - Build Rate = 10.00°/100'										
7,500 00	0 30	230 00	7,500 00	-0 01	-0 01	0 01	10 00	10 00	0 00	230 00
7,600 00	10 30	230 00	7,599 45	-5 93	-7 07	7 03	10 00	10 00	0 00	0 00
7,700 00	20 30	230 00	7,695 78	-22 87	-27 26	27 10	10 00	10 00	0 00	0 00
7,800 00	30 30	230 00	7,786 07	-50 31	-59 96	59 61	10 00	10 00	0 00	0 00
7,900 00	40 30	230 00	7,867 58	-87 41	-104 17	103 57	10 00	10 00	0 00	0 00
7,990 14	49 31	230 00	7,931 47	-128 20	-152 78	151 91	10 00	10 00	0 00	0 00
2nd Bone Spring Ss										
8,000 00	50 30	230 00	7,937 83	-133 04	-158 55	157 64	10 00	10 00	0 00	0 00
8,100 00	60 30	230 00	7,994 69	-185 82	-221 45	220 18	10 00	10 00	0 00	0 00
8,117 00	62 00	230 00	8,002 89	-195 39	-232 85	231 52	10 00	10 00	0 00	0 00
End Build @ 8117.00' MD										
8,200 00	66 40	237 82	8,039 05	-239 27	-293 22	291 58	10 00	5 30	9 42	59 74
8,300 00	72 18	246 55	8,074 46	-282 73	-375 88	373 94	10 00	5 78	8 73	56 33
8,396 73	78 12	254 46	8,099 28	-313 80	-463 93	461 78	10 00	6 14	8 17	53 23
2nd Bone Spring Lower Ss										
8,400 00	78 32	254 72	8,099 95	-314 65	-467 01	464 86	10 00	6 27	7 96	51 20
8,500 00	84 68	262 52	8,114 74	-334 09	-563 85	561 57	10 00	6 36	7 81	51 15
8,600 00	91 14	270 17	8,118 39	-340 43	-663 46	661 13	10 00	6 46	7 64	49 99
8,602 94	91 33	270 39	8,118 32	-340 42	-666 40	664 07	10 00	6 46	7 63	49 71
End Build/Turn @ 8602.94' MD - Hold Angle = 91.33°										
8,700 00	91 33	270 39	8,116 07	-339 75	-763 43	761 10	0 00	0 00	0 00	0 00
8,800 00	91 33	270 39	8,113 75	-339 07	-863 40	861 07	0 00	0 00	0 00	0 00
8,900 00	91 33	270 39	8,111 43	-338 38	-963 37	961 05	0 00	0 00	0 00	0 00

Plan Report for Turquoise PWU 27 2H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
9,000.00	91.33	270.39	8,109.11	-337.70	-1,063.34	1,061.02	0.00	0.00	0.00	0.00
9,100.00	91.33	270.39	8,106.79	-337.01	-1,163.31	1,160.99	0.00	0.00	0.00	0.00
9,200.00	91.33	270.39	8,104.47	-336.33	-1,263.28	1,260.96	0.00	0.00	0.00	0.00
9,300.00	91.33	270.39	8,102.14	-335.64	-1,363.25	1,360.94	0.00	0.00	0.00	0.00
9,400.00	91.33	270.39	8,099.82	-334.96	-1,463.22	1,460.91	0.00	0.00	0.00	0.00
9,500.00	91.33	270.39	8,097.50	-334.27	-1,563.20	1,560.88	0.00	0.00	0.00	0.00
9,600.00	91.33	270.39	8,095.18	-333.58	-1,663.17	1,660.86	0.00	0.00	0.00	0.00
9,700.00	91.33	270.39	8,092.86	-332.90	-1,763.14	1,760.83	0.00	0.00	0.00	0.00
9,800.00	91.33	270.39	8,090.54	-332.21	-1,863.11	1,860.80	0.00	0.00	0.00	0.00
9,900.00	91.33	270.39	8,088.22	-331.53	-1,963.08	1,960.78	0.00	0.00	0.00	0.00
10,000.00	91.33	270.39	8,085.90	-330.84	-2,063.05	2,060.75	0.00	0.00	0.00	0.00
10,100.00	91.33	270.39	8,083.58	-330.16	-2,163.02	2,160.72	0.00	0.00	0.00	0.00
10,200.00	91.33	270.39	8,081.26	-329.47	-2,262.99	2,260.70	0.00	0.00	0.00	0.00
10,300.00	91.33	270.39	8,078.94	-328.79	-2,362.96	2,360.67	0.00	0.00	0.00	0.00
10,400.00	91.33	270.39	8,076.61	-328.10	-2,462.93	2,460.64	0.00	0.00	0.00	0.00
10,500.00	91.33	270.39	8,074.29	-327.42	-2,562.90	2,560.61	0.00	0.00	0.00	0.00
10,600.00	91.33	270.39	8,071.97	-326.73	-2,662.87	2,660.59	0.00	0.00	0.00	0.00
10,700.00	91.33	270.39	8,069.65	-326.04	-2,762.84	2,760.56	0.00	0.00	0.00	0.00
10,800.00	91.33	270.39	8,067.33	-325.36	-2,862.81	2,860.53	0.00	0.00	0.00	0.00
10,900.00	91.33	270.39	8,065.01	-324.67	-2,962.79	2,960.51	0.00	0.00	0.00	0.00
11,000.00	91.33	270.39	8,062.69	-323.99	-3,062.76	3,060.48	0.00	0.00	0.00	0.00
11,100.00	91.33	270.39	8,060.37	-323.30	-3,162.73	3,160.45	0.00	0.00	0.00	0.00
11,200.00	91.33	270.39	8,058.05	-322.62	-3,262.70	3,260.43	0.00	0.00	0.00	0.00
11,300.00	91.33	270.39	8,055.73	-321.93	-3,362.67	3,360.40	0.00	0.00	0.00	0.00
11,400.00	91.33	270.39	8,053.40	-321.25	-3,462.64	3,460.37	0.00	0.00	0.00	0.00
11,500.00	91.33	270.39	8,051.08	-320.56	-3,562.61	3,560.34	0.00	0.00	0.00	0.00
11,600.00	91.33	270.39	8,048.76	-319.87	-3,662.58	3,660.32	0.00	0.00	0.00	0.00
11,700.00	91.33	270.39	8,046.44	-319.19	-3,762.55	3,760.29	0.00	0.00	0.00	0.00
11,800.00	91.33	270.39	8,044.12	-318.50	-3,862.52	3,860.26	0.00	0.00	0.00	0.00
11,900.00	91.33	270.39	8,041.80	-317.82	-3,962.49	3,960.24	0.00	0.00	0.00	0.00
12,000.00	91.33	270.39	8,039.48	-317.13	-4,062.46	4,060.21	0.00	0.00	0.00	0.00
12,100.00	91.33	270.39	8,037.16	-316.45	-4,162.43	4,160.18	0.00	0.00	0.00	0.00
12,200.00	91.33	270.39	8,034.84	-315.76	-4,262.40	4,260.16	0.00	0.00	0.00	0.00
12,300.00	91.33	270.39	8,032.52	-315.08	-4,362.38	4,360.13	0.00	0.00	0.00	0.00
12,400.00	91.33	270.39	8,030.19	-314.39	-4,462.35	4,460.10	0.00	0.00	0.00	0.00
12,500.00	91.33	270.39	8,027.87	-313.71	-4,562.32	4,560.08	0.00	0.00	0.00	0.00
12,600.00	91.33	270.39	8,025.55	-313.02	-4,662.29	4,660.05	0.00	0.00	0.00	0.00
12,700.00	91.33	270.39	8,023.23	-312.33	-4,762.26	4,760.02	0.00	0.00	0.00	0.00
12,800.00	91.33	270.39	8,020.91	-311.65	-4,862.23	4,859.99	0.00	0.00	0.00	0.00
12,839.24	91.33	270.39	8,020.00	-311.38	-4,901.46	4,899.22	0.00	0.00	0.00	0.00

TD at 12839.24 - Production Csg - Turquoise PWU 27 2H BH

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
7,497.00	7,497.00	0.00	0.00	KOP/Start Build @ 7497.00' MD
7,497.00	7,497.00	0.00	0.00	Build Rate = 10.00°/100'
8,117.00	8,002.89	-195.39	-232.85	End Build @ 8117.00' MD
8,602.94	8,118.32	-340.42	-666.40	End Build/Turn @ 8602.94' MD
8,602.94	8,118.32	-340.42	-666.40	Hold Angle = 91.33°
12,839.24	8,020.00	-311.38	-4,901.46	TD at 12839.24

Plan Report for Turquoise PWU 27 2H - Plan #1

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	270 39	Slot	0 00	0.00	0 00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0 00	12,839 24	Plan #1	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
300 00	300 00	Surface Csg	13-3/8	17-1/2
3,400 00	3,400 00	Intermediate Csg	9-5/8	12-1/4
12,839 24	8,020 00	Production Csg	5-1/2	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
25 00	25 00	Rustler		-1.33	270 39
385 00	385 00	Salt		-1 33	270 39
1,365 00	1,365 00	Tensil Dolomite		-1 33	270 39
1,500 00	1,500 00	Yates		-1 33	270 39
1,770 00	1,770 00	Seven Rivers		-1 33	270 39
2,315 00	2,315 00	Queen		-1.33	270 39
2,915 00	2,915 00	San Andres		-1 33	270 39
3,900 00	3,900 00	Delaware		-1 33	270 39
5,170 00	5,170 00	Lwr Brushy Canyon		-1 33	270 39
5,420.00	5,420 00	CutOff Dolomite		-1 33	270 39
5,495 00	5,495 00	Bone Spring Lm		-1.33	270 39
7,115 00	7,115 00	1st Bone Spring Ss		-1 33	270 39
7,250 00	7,250 00	2nd Bone Spring Lime		-1 33	270 39
7,990.14	7,935 00	2nd Bone Spring Ss		-1 33	270 39
8,396 73	8,110 00	2nd Bone Spring Lower Ss		-1 33	270 39

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Turquoise PWU 27 2H PP	8,120 00	-331 98	-583 77	Point
Turquoise PWU 27 2H BH	8,020 00	-311 38	-4,901 46	Point

North Reference Sheet for Turquoise PWU 27 - Turquoise PWU 27 2H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference

Vertical Depths are relative to GL 3332 8' + 25'KB @ 3357 80ft (Cactus 126) Northing and Easting are relative to Turquoise PWU 27 2H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104 33°, Longitude Origin 0° 0' 0 000 E°, Latitude Origin 0° 0' 0 000 N°

False Easting 541,337 50ft, False Northing 0 00ft, Scale Reduction 0 99991754

Grid Coordinates of Well 594,310 36 ft N, 627,238 16 ft E

Geographical Coordinates of Well 32° 38' 00 59" N, 104° 03' 15 44" W

Grid Convergence at Surface is 0 15°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,839 24ft

the Bottom Hole Displacement is 4,911 34ft in the Direction of 266 36° (Grid)

Magnetic Convergence at surface is -7 66° (27 June 2012, , BGGM2012)

