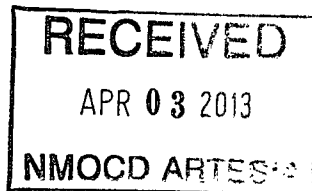


Apache Corporation
6120 S. Yale Ste 1500
Tulsa, OK 74136

NB Tween State #033
Eddy County, New Mexico

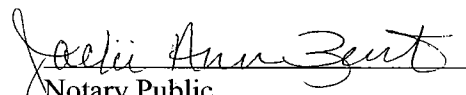
API #30-015-40151
580' FNL + 1650' FWL WL: C, 25-175-28E

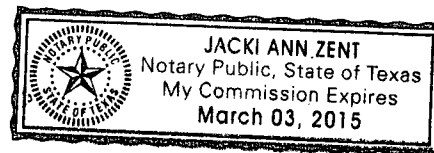
254	2.54	0.50	0.88	2.22	2.22
401	1.47	0.50	0.88	1.29	3.51
534	1.33	2.10	3.68	4.89	8.40
748	2.14	3.00	5.25	11.24	19.63
1004	2.56	2.50	4.38	11.20	30.83
1345	3.41	2.00	3.50	11.94	42.77
1602	2.57	2.40	4.20	10.79	53.56
1857	2.55	3.20	5.60	14.28	67.84
2156	2.99	2.50	4.38	13.08	80.92
2455	2.99	3.00	5.25	15.70	96.62
2668	2.13	2.90	5.08	10.81	107.43
2967	2.99	3.60	6.30	18.84	126.27
3223	2.56	3.60	6.30	16.13	142.39
3476	2.53	2.90	5.08	12.84	155.23
3907	4.31	2.30	4.03	17.35	172.58
4077	1.70	2.60	4.55	7.74	180.32
4248	1.71	2.60	4.55	7.78	188.10
4505	2.57	2.90	5.08	13.04	201.14
4675	1.70	2.80	4.90	8.33	209.47
4932	2.57	2.80	4.90	12.59	222.06
5145	2.13	2.00	3.50	7.46	229.52
5359	2.14	2.30	4.03	8.61	238.13
5615	2.56	3.30	5.78	14.78	252.92

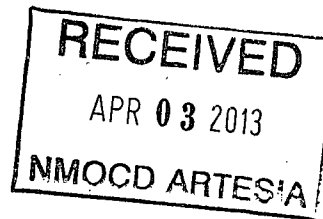
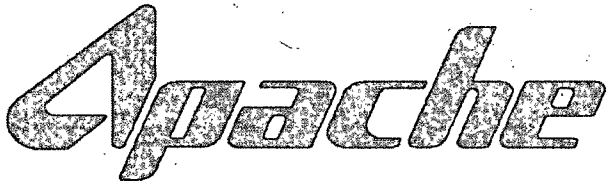



Archie Brown - General Manager

The attached instrument was acknowledged before me on the 31st day of December, 2012
by Archie Brown - General Manager, CapStar Drilling, Inc.


Notary Public





Apache Corporation

Eddy County, New Mexico

Sec 25, T17S, R28E

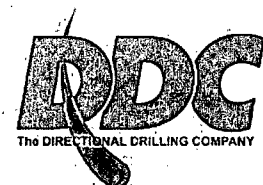
NB Tween State #33

Wellbore #1

Survey: MWD

DDC Survey Report

12 December, 2012





DDC
Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well NB Tween State #33
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3700.0usft (Capstar #118)
Site:	Sec 25, T17S, R28E	MD Reference:	WELL @ 3700.0usft (Capstar #118)
Well:	NB Tween State #33	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1-Single-User.Db

Project:	Eddy County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Sec 25, T17S, R28E		
Site Position:		Northing:	659,248.58 usft
From:	Map	Easting:	561,676.69 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 48' 43.926 N
		Longitude:	104° 7' 57.300 W
		Grid Convergence:	0.11 °

Well:	NB Tween State #33		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 48' 43.926 N
		Longitude:	104° 7' 57.300 W
		Ground Level:	3,689.0 usft

Wellbore:	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/19/2012	7.71	60.60	48,763

Design:	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.91

Survey Program	Date: 12/12/2012			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
446.0	5,706.0	MWD (Wellbore #1)	MWD default	MWD - Standard

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
TIE IN @ 300' MD / 300' TVD										
300.0	0.48	150.35	300.0	-2.4	0.5	-2.4	0.00	0.00	0.00	
446.0	0.70	135.30	446.0	-3.5	1.5	-3.5	0.18	0.15	-10.31	
577.0	3.20	22.10	576.9	-0.7	3.4	-0.7	2.70	1.91	-86.41	
662.0	3.20	22.10	661.8	3.7	5.2	3.7	0.00	0.00	0.00	
748.0	3.00	14.50	747.7	8.1	6.7	8.1	0.53	-0.23	-8.84	
833.0	2.90	5.90	832.5	12.4	7.4	12.4	0.53	-0.12	-10.12	
919.0	2.60	0.20	918.4	16.5	7.7	16.5	0.47	-0.35	-6.63	
1,004.0	2.50	0.10	1,003.4	20.3	7.7	20.3	0.12	-0.12	-0.12	
1,089.0	2.10	352.30	1,088.3	23.7	7.5	23.7	0.60	-0.47	-9.18	
1,175.0	3.20	357.50	1,174.2	27.6	7.1	27.6	1.31	1.28	6.05	



DDC Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well NB Tween State #33
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3700.0usft (Capstar #118)
Site:	Sec 25, T17S, R28E	MD Reference:	WELL @ 3700.0usft (Capstar #118)
Well:	NB Tween State #33	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,260.0	3.00	351.20	1,259.1	32.2	6.7	32.2	0.46	-0.24	-7.41
1,345.0	2.80	348.20	1,344.0	36.4	5.9	36.4	0.30	-0.24	-3.53
1,431.0	2.90	12.30	1,429.9	40.6	6.0	40.6	1.39	0.12	28.02
1,516.0	2.60	5.50	1,514.8	44.6	6.6	44.6	0.52	-0.35	-8.00
1,602.0	2.40	359.80	1,600.7	48.4	6.8	48.4	0.37	-0.23	-6.63
1,687.0	2.40	359.30	1,685.6	51.9	6.8	51.9	0.02	0.00	-0.59
1,772.0	3.40	357.40	1,770.5	56.2	6.6	56.2	1.18	1.18	-2.24
1,857.0	3.20	356.50	1,855.4	61.1	6.4	61.1	0.24	-0.24	-1.06
1,942.0	2.90	0.10	1,940.2	65.6	6.2	65.6	0.42	-0.35	4.24
2,028.0	2.80	358.40	2,026.1	69.9	6.2	69.9	0.15	-0.12	-1.98
2,113.0	2.50	358.10	2,111.0	73.8	6.1	73.8	0.35	-0.35	-0.35
2,199.0	2.70	356.60	2,197.0	77.7	5.9	77.7	0.25	0.23	-1.74
2,284.0	2.70	351.40	2,281.9	81.7	5.5	81.7	0.29	0.00	-6.12
2,369.0	2.90	351.40	2,366.8	85.8	4.8	85.8	0.24	0.24	0.00
2,455.0	2.70	349.30	2,452.7	90.0	4.1	90.0	0.26	-0.23	-2.44
2,540.0	2.90	351.10	2,537.6	94.0	3.4	94.0	0.26	0.24	2.12
2,626.0	2.60	353.00	2,623.5	98.1	2.9	98.1	0.36	-0.35	2.21
2,711.0	2.70	354.10	2,708.4	102.0	2.4	102.0	0.13	0.12	1.29
2,796.0	2.70	353.80	2,793.3	106.0	2.0	106.0	0.02	0.00	-0.35
2,882.0	2.50	359.30	2,879.2	109.9	1.8	109.9	0.37	-0.23	6.40
2,967.0	3.60	355.50	2,964.1	114.4	1.5	114.4	1.32	1.29	-4.47
3,052.0	3.80	356.60	3,048.9	119.9	1.1	119.9	0.25	0.24	1.29
3,138.0	3.70	349.30	3,134.7	125.5	0.5	125.5	0.57	-0.12	-8.49
3,223.0	3.60	352.80	3,219.5	130.8	-0.4	130.8	0.29	-0.12	4.12
3,309.0	3.20	350.20	3,305.4	135.9	-1.1	135.9	0.50	-0.47	-3.02
3,394.0	3.40	348.60	3,390.2	140.7	-2.0	140.7	0.26	0.24	-1.88
3,479.0	2.90	352.70	3,475.1	145.3	-2.8	145.3	0.64	-0.59	4.82
3,565.0	3.00	352.60	3,561.0	149.7	-3.4	149.7	0.12	0.12	-0.12
3,650.0	2.50	5.90	3,645.9	153.7	-3.5	153.7	0.95	-0.59	15.65
3,736.0	2.50	7.90	3,731.8	157.4	-3.0	157.4	0.10	0.00	2.33
3,821.0	2.50	11.00	3,816.7	161.1	-2.4	161.1	0.16	0.00	3.65
3,907.0	2.30	8.90	3,902.7	164.6	-1.8	164.6	0.25	-0.23	-2.44
3,992.0	2.50	10.70	3,987.6	168.1	-1.2	168.1	0.25	0.24	2.12
4,077.0	2.60	12.00	4,072.5	171.8	-0.4	171.8	0.14	0.12	1.53
4,163.0	2.70	16.80	4,158.4	175.7	0.6	175.7	0.28	0.12	5.58
4,248.0	2.60	13.40	4,243.3	179.5	1.6	179.5	0.22	-0.12	-4.00
4,334.0	2.50	13.20	4,329.2	183.2	2.5	183.2	0.12	-0.12	-0.23
4,419.0	2.50	12.50	4,414.1	186.8	3.3	186.8	0.04	0.00	-0.82
4,505.0	2.90	359.40	4,500.1	190.8	3.7	190.8	0.85	0.47	-15.23
4,590.0	3.00	0.50	4,584.9	195.2	3.7	195.2	0.14	0.12	1.29
4,675.0	2.80	357.60	4,669.8	199.5	3.6	199.5	0.29	-0.24	-3.41
4,761.0	2.90	357.80	4,755.7	203.8	3.4	203.8	0.12	0.12	0.23
4,846.0	2.90	354.60	4,840.6	208.1	3.1	208.1	0.19	0.00	-3.76



DDC
Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well NB Tween State #33
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3700.0usft (Capstar #118)
Site:	Sec.25, T17S, R28E	MD Reference:	WELL @ 3700.0usft (Capstar #118)
Well:	NB Tween State #33	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,932.0	2.80	355.70	4,926.5	212.3	2.8	212.3	0.13	-0.12	1.28	
5,017.0	2.60	354.30	5,011.4	216.3	2.4	216.3	0.25	-0.24	-1.65	
5,102.0	2.00	353.30	5,096.3	219.7	2.1	219.7	0.71	-0.71	-1.18	
5,188.0	2.20	354.00	5,182.3	222.8	1.7	222.8	0.23	0.23	0.81	
5,273.0	2.40	346.40	5,267.2	226.2	1.1	226.2	0.43	0.24	-8.94	
5,359.0	2.30	347.10	5,353.1	229.6	0.3	229.6	0.12	-0.12	0.81	
5,444.0	3.10	349.10	5,438.1	233.5	-0.5	233.5	0.95	0.94	2.35	
5,529.0	3.20	348.20	5,522.9	238.1	-1.4	238.1	0.13	0.12	-1.06	
5,615.0	3.30	350.80	5,608.8	242.9	-2.3	242.9	0.21	0.12	3.02	
LAST MWD SURVEY @ 5656' MD / 5650' TVD										
5,656.0	3.40	350.80	5,649.7	245.3	-2.7	245.3	0.24	0.24	0.00	
TD @ 5706' MD / 5700' TVD										
5,706.0	3.40	350.80	5,699.6	248.2	-3.2	248.2	0.00	0.00	0.00	

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
300.0	300.0	-2.4	0.5	TIE IN @ 300' MD / 300' TVD
5,656.0	5,649.7	245.3	-2.7	LAST MWD SURVEY @ 5656' MD / 5650' TVD
5,706.0	5,699.6	248.2	-3.2	TD @ 5706' MD / 5700' TVD

Checked By: _____ Approved By: _____ Date: _____



Apache Corporation

Eddy County, New Mexico

Sec 25, T17S, R28E

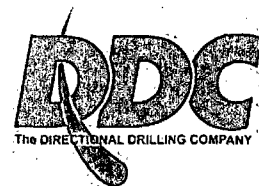
NB Tween State #33

Wellbore #1

Survey: MWD

Survey Report - Geographic

12 December, 2012





DDC Survey Report - Geographic



Company:	Apache Corporation	Local Co-ordinate Reference:	Well NB Tween State #33
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3700.0usft (Capstar #118)
Site:	Sec 25, T17S, R28E	MD Reference:	WELL @ 3700.0usft (Capstar #118)
Well:	NB Tween State #33	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project:	Eddy County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Sec 25, T17S, R28E		
Site Position:		Northing:	659,248.58 usft
From:	Map	Easting:	561,676.69 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 48' 43.926 N
		Longitude:	104° 7' 57.300 W
		Grid Convergence:	0.11 °

Well:	NB Tween State #33		
Well Position	+N/-S	0.0 usft	Northing: 659,248.58 usft
	+E/-W	0.0 usft	Easting: 561,676.69 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 48' 43.926 N
		Longitude:	104° 7' 57.300 W
		Ground Level:	3,689.0 usft

Wellbore:	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	11/19/2012	7.71	60.60	48,763

Design:	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	359.91

Survey Program	Date	12/12/2012		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
446.0	5,706.0	MWD (Wellbore #1)	MWD default	MWD - Standard

Survey:										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map	Latitude	Longitude	
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting			
(usft)			(usft)			(usft)	(usft)			
300.0	0.48	150.35	300.0	-2.4	0.5	659,246.21	561,677.22	32° 48' 43.903 N	104° 7' 57.294 W	
TIE IN @ 300' MD / 300' TVD										
446.0	0.70	135.30	446.0	-3.5	1.5	659,245.05	561,678.15	32° 48' 43.891 N	104° 7' 57.283 W	
577.0	3.20	22.10	576.9	-0.7	3.4	659,247.87	561,680.09	32° 48' 43.919 N	104° 7' 57.260 W	
662.0	3.20	22.10	661.8	3.7	5.2	659,252.27	561,681.88	32° 48' 43.962 N	104° 7' 57.239 W	
748.0	3.00	14.50	747.7	8.1	6.7	659,256.67	561,683.34	32° 48' 44.006 N	104° 7' 57.222 W	
833.0	2.90	5.90	832.5	12.4	7.4	659,260.96	561,684.12	32° 48' 44.048 N	104° 7' 57.213 W	
919.0	2.60	0.20	918.4	16.5	7.7	659,265.07	561,684.35	32° 48' 44.089 N	104° 7' 57.210 W	
1,004.0	2.50	0.10	1,003.4	20.3	7.7	659,268.86	561,684.36	32° 48' 44.127 N	104° 7' 57.210 W	
1,089.0	2.10	352.30	1,088.3	23.7	7.5	659,272.25	561,684.16	32° 48' 44.160 N	104° 7' 57.212 W	
1,175.0	3.20	357.50	1,174.2	27.6	7.1	659,276.21	561,683.84	32° 48' 44.199 N	104° 7' 57.216 W	
1,260.0	3.00	351.20	1,259.1	32.2	6.7	659,280.78	561,683.40	32° 48' 44.245 N	104° 7' 57.221 W	

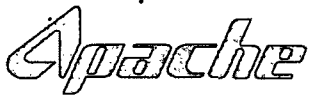


DDC Survey Report - Geographic



Company:	Apache Corporation	Local Co-ordinate Reference:	Well NB Tween State #33
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3700.0usft (Capstar #118)
Site:	Sec 25, T17S, R28E	MD Reference:	WELL @ 3700.0usft (Capstar #118)
Well:	NB Tween State #33	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,345.0	2.80	348.20	1,344.0	36.4	5.9	659,285.01	561,682.63	32° 48' 44.286 N	104° 7' 57.230 W
1,431.0	2.90	12.30	1,429.9	40.6	6.0	659,289.19	561,682.67	32° 48' 44.328 N	104° 7' 57.229 W
1,516.0	2.60	5.50	1,514.8	44.6	6.6	659,293.21	561,683.31	32° 48' 44.368 N	104° 7' 57.222 W
1,602.0	2.40	359.80	1,600.7	48.4	6.8	659,296.96	561,683.49	32° 48' 44.405 N	104° 7' 57.219 W
1,687.0	2.40	359.30	1,685.6	51.9	6.8	659,300.52	561,683.46	32° 48' 44.440 N	104° 7' 57.220 W
1,772.0	3.40	357.40	1,770.5	56.2	6.6	659,304.81	561,683.32	32° 48' 44.482 N	104° 7' 57.221 W
1,857.0	3.20	356.50	1,855.4	61.1	6.4	659,309.70	561,683.07	32° 48' 44.531 N	104° 7' 57.224 W
1,942.0	2.90	0.10	1,940.2	65.6	6.2	659,314.22	561,682.92	32° 48' 44.575 N	104° 7' 57.226 W
2,028.0	2.80	358.40	2,026.1	69.9	6.2	659,318.49	561,682.87	32° 48' 44.618 N	104° 7' 57.226 W
2,113.0	2.50	358.10	2,111.0	73.8	6.1	659,322.42	561,682.75	32° 48' 44.657 N	104° 7' 57.227 W
2,199.0	2.70	356.60	2,197.0	77.7	5.9	659,326.32	561,682.57	32° 48' 44.695 N	104° 7' 57.229 W
2,284.0	2.70	351.40	2,281.9	81.7	5.5	659,330.30	561,682.15	32° 48' 44.735 N	104° 7' 57.234 W
2,369.0	2.90	351.40	2,366.8	85.8	4.8	659,334.40	561,681.53	32° 48' 44.775 N	104° 7' 57.241 W
2,455.0	2.70	349.30	2,452.7	90.0	4.1	659,338.54	561,680.83	32° 48' 44.816 N	104° 7' 57.250 W
2,540.0	2.90	351.10	2,537.6	94.0	3.4	659,342.63	561,680.12	32° 48' 44.857 N	104° 7' 57.258 W
2,626.0	2.60	353.00	2,623.5	98.1	2.9	659,346.72	561,679.55	32° 48' 44.897 N	104° 7' 57.264 W
2,711.0	2.70	354.10	2,708.4	102.0	2.4	659,350.62	561,679.11	32° 48' 44.936 N	104° 7' 57.269 W
2,796.0	2.70	353.80	2,793.3	106.0	2.0	659,354.61	561,678.69	32° 48' 44.975 N	104° 7' 57.274 W
2,882.0	2.50	359.30	2,879.2	109.9	1.8	659,358.49	561,678.44	32° 48' 45.014 N	104° 7' 57.277 W
2,967.0	3.60	355.50	2,964.1	114.4	1.5	659,363.01	561,678.21	32° 48' 45.058 N	104° 7' 57.280 W
3,052.0	3.80	356.60	3,048.9	119.9	1.1	659,368.48	561,677.84	32° 48' 45.112 N	104° 7' 57.284 W
3,138.0	3.70	349.30	3,134.7	125.5	0.5	659,374.05	561,677.15	32° 48' 45.168 N	104° 7' 57.292 W
3,223.0	3.60	352.80	3,219.5	130.8	-0.4	659,379.40	561,676.31	32° 48' 45.221 N	104° 7' 57.302 W
3,309.0	3.20	350.20	3,305.4	135.9	-1.1	659,384.44	561,675.56	32° 48' 45.270 N	104° 7' 57.310 W
3,394.0	3.40	348.60	3,390.2	140.7	-2.0	659,389.25	561,674.66	32° 48' 45.318 N	104° 7' 57.321 W
3,479.0	2.90	352.70	3,475.1	145.3	-2.8	659,393.85	561,673.89	32° 48' 45.364 N	104° 7' 57.330 W
3,565.0	3.00	352.60	3,561.0	149.7	-3.4	659,398.24	561,673.32	32° 48' 45.407 N	104° 7' 57.336 W
3,650.0	2.50	5.90	3,645.9	153.7	-3.5	659,402.29	561,673.23	32° 48' 45.447 N	104° 7' 57.337 W
3,736.0	2.50	7.90	3,731.8	157.4	-3.0	659,406.01	561,673.68	32° 48' 45.484 N	104° 7' 57.332 W
3,821.0	2.50	11.00	3,816.7	161.1	-2.4	659,409.67	561,674.28	32° 48' 45.520 N	104° 7' 57.325 W
3,907.0	2.30	8.90	3,902.7	164.6	-1.8	659,413.22	561,674.91	32° 48' 45.555 N	104° 7' 57.317 W
3,992.0	2.50	10.70	3,987.6	168.1	-1.2	659,416.72	561,675.52	32° 48' 45.590 N	104° 7' 57.310 W
4,077.0	2.60	12.00	4,072.5	171.8	-0.4	659,420.43	561,676.26	32° 48' 45.627 N	104° 7' 57.301 W
4,163.0	2.70	16.80	4,158.4	175.7	0.6	659,424.28	561,677.25	32° 48' 45.665 N	104° 7' 57.290 W
4,248.0	2.60	13.40	4,243.3	179.5	1.6	659,428.07	561,678.28	32° 48' 45.702 N	104° 7' 57.277 W
4,334.0	2.50	13.20	4,329.2	183.2	2.5	659,431.79	561,679.16	32° 48' 45.739 N	104° 7' 57.267 W
4,419.0	2.50	12.50	4,414.1	186.8	3.3	659,435.41	561,679.98	32° 48' 45.775 N	104° 7' 57.257 W
4,505.0	2.90	359.40	4,500.1	190.8	3.7	659,439.41	561,680.37	32° 48' 45.814 N	104° 7' 57.253 W
4,590.0	3.00	0.50	4,584.9	195.2	3.7	659,443.79	561,680.36	32° 48' 45.858 N	104° 7' 57.253 W
4,675.0	2.80	357.60	4,669.8	199.5	3.6	659,448.09	561,680.30	32° 48' 45.900 N	104° 7' 57.253 W
4,761.0	2.90	357.80	4,755.7	203.8	3.4	659,452.36	561,680.13	32° 48' 45.942 N	104° 7' 57.255 W
4,846.0	2.90	354.60	4,840.6	208.1	3.1	659,456.65	561,679.84	32° 48' 45.985 N	104° 7' 57.259 W
4,932.0	2.80	355.70	4,926.5	212.3	2.8	659,460.91	561,679.48	32° 48' 46.027 N	104° 7' 57.263 W
5,017.0	2.60	354.30	5,011.4	216.3	2.4	659,464.90	561,679.13	32° 48' 46.067 N	104° 7' 57.267 W
5,102.0	2.00	353.30	5,096.3	219.7	2.1	659,468.29	561,678.77	32° 48' 46.100 N	104° 7' 57.271 W
5,188.0	2.20	354.00	5,182.3	222.8	1.7	659,471.42	561,678.42	32° 48' 46.131 N	104° 7' 57.275 W
5,273.0	2.40	346.40	5,267.2	226.2	1.1	659,474.77	561,677.83	32° 48' 46.164 N	104° 7' 57.282 W
5,359.0	2.30	347.10	5,353.1	229.6	0.3	659,478.21	561,677.02	32° 48' 46.198 N	104° 7' 57.291 W
5,444.0	3.10	349.10	5,438.1	233.5	-0.5	659,482.13	561,676.21	32° 48' 46.237 N	104° 7' 57.301 W
5,529.0	3.20	348.20	5,522.9	238.1	-1.4	659,486.71	561,675.29	32° 48' 46.282 N	104° 7' 57.311 W
5,615.0	3.30	350.80	5,608.8	242.9	-2.3	659,491.50	561,674.40	32° 48' 46.330 N	104° 7' 57.322 W
5,656.0	3.40	350.80	5,649.7	245.3	-2.7	659,493.86	561,674.02	32° 48' 46.353 N	104° 7' 57.326 W
LAST MWD SURVEY @ 5656' MD / 5650' TVD									
5,706.0	3.40	350.80	5,699.6	248.2	-3.2	659,496.79	561,673.54	32° 48' 46.382 N	104° 7' 57.331 W
TD @ 5706' MD / 5700' TVD									



DDC
Survey Report - Geographic



Company:	Apache Corporation	Local Co-ordinate Reference:	Well NB Tween State #33
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3700.0usft (Capstar #118)
Site:	Sec 25, T17S, R28E	MD Reference:	WELL @ 3700.0usft (Capstar #118)
Well:	NB Tween State #33	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
300.0	300.0	-2.4	0.5	TIE IN @ 300' MD / 300' TVD
5,656.0	5,649.7	245.3	-2.7	LAST MWD SURVEY @ 5656' MD / 5650' TVD
5,706.0	5,699.6	248.2	-3.2	TD @ 5706' MD / 5700' TVD

Checked By: _____ Approved By: _____ Date: _____

Company Name: Apache Corporation
NB Tween State #33
Eddy County, New Mexico
Rig: Capstar #118
Created By: Dina Chance
Date: 12/12/2012

NB Tween State #33
Eddy County, New Mexico
Q120884 & WT-12923
Design #1

PROJECT DETAILS: Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: NB Tween State #33

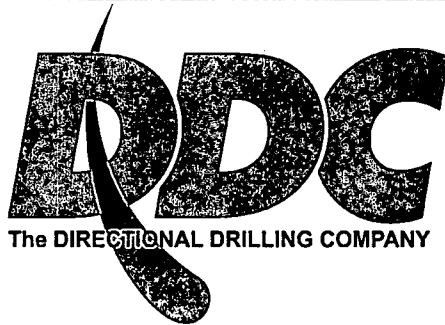
	Ground Level:	3689.0		
+N/-S	+E/-W	Northing	Easting	Latitude
0.0	0.0	659248.58	561676.59	32° 48' 43.926 N
				104° 7' 57.300 W



Azimuths to Grid North

Magnetic North: 7.61°

Magnetic Field
Strength: 48762.9snT
Dip Angle: 60.60°
Date: 11/19/2012
Model: IGRF2010



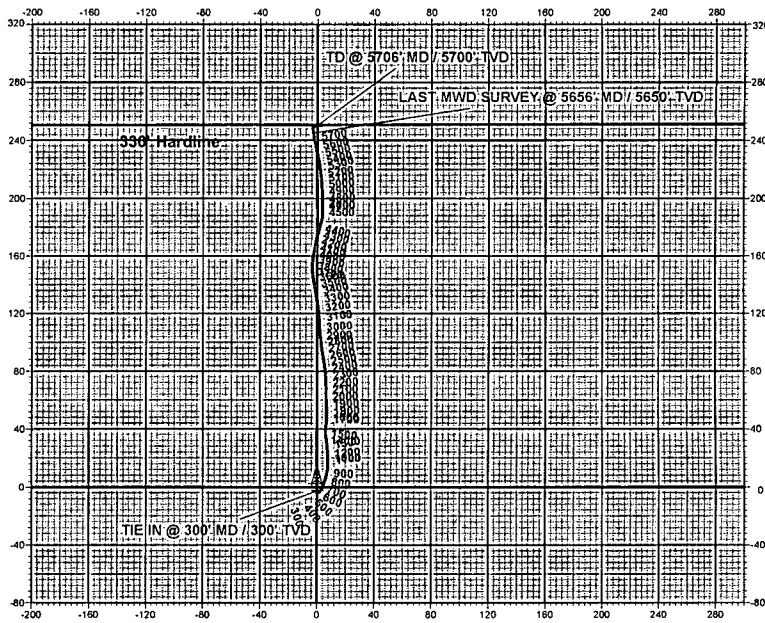
Apache

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
TIE IN @ 300' MD / 300' TVD	300.0	-2.4	0.5	659246.21	561677.22	32° 48' 43.903 N	104° 7' 57.294 W
- plan misses target center by 2.4usft at 300.0usft MD (300.0 TVD, 0.0 N, 0.0 E)							
PBHL NB Tween State #33	5700.0	250.0	-0.4	659496.59	561676.31	32° 48' 46.400 N	104° 7' 57.299 W
- plan hits target center							

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
5656.0	3.40	350.80	5649.7	245.3	-2.7	245.3	255.0	LAST MWD SURVEY @ 5656' MD / 5650' TVD
5706.0	3.40	350.80	5699.6	248.2	-3.2	248.2	257.9	TD @ 5706' MD / 5700' TVD



Vertical Section at 359.91° (200 usft/in)