

Amtex Energy, Inc

Lea County, New Mexico

Sec 30, T21S, R33E

Dagger State Com #504H

Wellbore #1

Design: Wellbore #1

QES Survey Report

29 March, 2017



Survey Report



Company:	Amtex Energy, Inc	Local Co-ordinate Reference:	Well Dagger State Com #504H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3809.8usft (United #40)
Site:	Sec 30, T21S, R33E	MD Reference:	Well @ 3809.8usft (United #40)
Well:	Dagger State Com #504H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

Project	Lea 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 30, T21S, R33E		
Site Position:		Northing:	528,781.77 usft
From:	Lat/Long	Easting:	722,057.48 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 27' 6.033 N
		Longitude:	103° 36' 48.469 W
		Grid Convergence:	0.39 °

Well		Dagger State Com #504H				
Well Position	+N/-S	0.0 usft	Northing:	528,133.50 usft	Latitude:	32° 26' 59.432 N
	+E/-W	0.0 usft	Easting:	724,840.22 usft	Longitude:	103° 36' 16.046 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,783.8 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/2/2016	7.11	60.28	48,182

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	359.53	

Survey Program		Date	3/29/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	2,202.0	Gyros (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro	
2,278.0	10,500.0	MWD Surveys (Wellbore #1)	MWD default	MWD - Standard	
10,527.0	18,458.0	MWD Surveys 2 (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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.57	133.50	100.0	-0.3	0.4	-0.3	0.57	0.57	0.00	
200.0	0.60	138.11	200.0	-1.1	1.1	-1.1	0.06	0.03	4.61	
300.0	0.60	146.42	300.0	-1.9	1.7	-1.9	0.09	0.00	8.31	
400.0	0.51	173.90	400.0	-2.8	2.0	-2.8	0.28	-0.09	27.48	
500.0	0.50	187.75	500.0	-3.7	2.0	-3.7	0.12	-0.01	13.85	
600.0	0.48	200.73	600.0	-4.5	1.8	-4.5	0.11	-0.02	12.98	
700.0	0.50	197.17	700.0	-5.3	1.6	-5.3	0.04	0.02	-3.56	
800.0	0.44	191.80	800.0	-6.1	1.3	-6.1	0.07	-0.06	-5.37	

Survey Report



Company:	Amtext Energy, Inc	Local Co-ordinate Reference:	Well Dagger State Com #504H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3809.8usft (United #40)
Site:	Sec 30, T21S, R33E	MD Reference:	Well @ 3809.8usft (United #40)
Well:	Dagger State Com #504H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
900.0	0.46	192.16	900.0	-6.8	1.2	-6.9	0.02	0.02	0.36
1,000.0	0.52	205.27	1,000.0	-7.7	0.9	-7.7	0.13	0.06	13.11
1,100.0	0.61	221.46	1,100.0	-8.5	0.4	-8.5	0.18	0.09	16.19
1,200.0	0.69	237.95	1,200.0	-9.2	-0.5	-9.2	0.20	0.08	16.49
1,300.0	0.74	250.13	1,299.9	-9.7	-1.6	-9.7	0.16	0.05	12.18
1,400.0	0.73	246.81	1,399.9	-10.2	-2.8	-10.2	0.04	-0.01	-3.32
1,500.0	0.70	243.44	1,499.9	-10.7	-3.9	-10.7	0.05	-0.03	-3.37
1,600.0	0.59	238.90	1,599.9	-11.3	-4.9	-11.2	0.12	-0.11	-4.54
1,700.0	0.52	206.53	1,699.9	-11.9	-5.6	-11.9	0.32	-0.07	-32.37
1,800.0	0.72	145.54	1,799.9	-12.8	-5.4	-12.8	0.65	0.20	-60.99
1,900.0	0.34	115.87	1,899.9	-13.5	-4.8	-13.5	0.46	-0.38	-29.67
2,000.0	0.49	75.89	1,999.9	-13.5	-4.1	-13.5	0.32	0.15	-39.98
2,100.0	0.49	22.43	2,099.9	-13.0	-3.5	-13.0	0.44	0.00	-53.46
2,200.0	0.21	321.38	2,199.9	-12.5	-3.5	-12.5	0.43	-0.28	-61.05
Tie into gyros @ 2202.0' MD/2201.9' TVD									
2,202.0	0.21	317.76	2,201.9	-12.5	-3.5	-12.4	0.66	0.00	-181.00
2,278.0	0.20	317.30	2,277.9	-12.3	-3.7	-12.2	0.01	-0.01	-0.61
2,375.0	0.20	332.60	2,374.9	-12.0	-3.9	-12.0	0.05	0.00	15.77
2,471.0	0.30	19.40	2,470.9	-11.6	-3.9	-11.6	0.23	0.10	48.75
2,568.0	0.30	26.50	2,567.9	-11.1	-3.7	-11.1	0.04	0.00	7.32
2,662.0	0.50	40.10	2,661.9	-10.6	-3.3	-10.6	0.23	0.21	14.47
2,757.0	0.80	41.80	2,756.9	-9.8	-2.6	-9.8	0.32	0.32	1.79
2,852.0	1.20	48.00	2,851.9	-8.6	-1.4	-8.6	0.44	0.42	6.53
2,949.0	1.60	51.90	2,948.8	-7.1	0.4	-7.1	0.42	0.41	4.02
3,044.0	0.80	70.70	3,043.8	-6.1	2.1	-6.1	0.93	-0.84	19.79
3,140.0	1.20	60.50	3,139.8	-5.4	3.6	-5.4	0.45	0.42	-10.63
3,234.0	0.80	54.50	3,233.8	-4.5	5.0	-4.5	0.44	-0.43	-6.38
3,331.0	1.20	47.80	3,330.8	-3.4	6.3	-3.5	0.43	0.41	-6.91
3,426.0	1.60	46.40	3,425.8	-1.8	8.0	-1.9	0.42	0.42	-1.47
3,521.0	0.40	350.20	3,520.7	-0.6	8.9	-0.7	1.49	-1.26	-59.16
3,617.0	0.40	357.40	3,616.7	0.1	8.8	0.0	0.05	0.00	7.50
3,714.0	0.40	358.10	3,713.7	0.7	8.8	0.7	0.01	0.00	0.72
3,810.0	0.40	4.90	3,809.7	1.4	8.8	1.3	0.05	0.00	7.08
3,906.0	0.50	355.40	3,905.7	2.2	8.8	2.1	0.13	0.10	-9.90
4,002.0	0.70	0.70	4,001.7	3.2	8.8	3.1	0.22	0.21	5.52
4,098.0	0.50	355.60	4,097.7	4.2	8.7	4.1	0.22	-0.21	-5.31
4,195.0	0.40	359.70	4,194.7	4.9	8.7	4.9	0.11	-0.10	4.23
4,291.0	0.40	2.30	4,290.7	5.6	8.7	5.5	0.02	0.00	2.71
4,387.0	0.30	24.10	4,386.7	6.2	8.8	6.1	0.17	-0.10	22.71
4,483.0	0.20	19.70	4,482.7	6.5	9.0	6.5	0.11	-0.10	-4.58
4,578.0	0.30	343.10	4,577.7	6.9	9.0	6.9	0.19	0.11	-38.53
4,675.0	0.30	341.90	4,674.7	7.4	8.8	7.3	0.01	0.00	-1.24
4,772.0	0.30	340.30	4,771.7	7.9	8.7	7.8	0.01	0.00	-1.65

Survey Report



Company:	Amtex Energy, Inc	Local Co-ordinate Reference:	Well Dagger State Com #504H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3809.8usft (United #40)
Site:	Sec 30, T21S, R33E	MD Reference:	Well @ 3809.8usft (United #40)
Well:	Dagger State Com #504H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
4,868.0	0.20	15.50	4,867.7	8.3	8.6	8.2	0.19	-0.10	36.67
4,964.0	0.20	20.80	4,963.7	8.6	8.7	8.5	0.02	0.00	5.52
5,060.0	0.20	38.30	5,059.7	8.9	8.9	8.8	0.06	0.00	18.23
5,157.0	0.20	53.30	5,156.7	9.1	9.1	9.1	0.05	0.00	15.46
5,253.0	0.30	57.00	5,252.7	9.4	9.5	9.3	0.11	0.10	3.85
5,349.0	0.30	11.60	5,348.7	9.8	9.7	9.7	0.24	0.00	-47.29
5,446.0	0.40	8.10	5,445.7	10.3	9.8	10.3	0.11	0.10	-3.61
5,542.0	0.50	357.40	5,541.7	11.1	9.9	11.0	0.14	0.10	-11.15
5,639.0	0.50	348.10	5,638.7	11.9	9.8	11.9	0.08	0.00	-9.59
5,735.0	0.40	4.60	5,734.7	12.7	9.7	12.6	0.17	-0.10	17.19
5,832.0	0.30	31.30	5,831.7	13.2	9.9	13.1	0.19	-0.10	27.53
5,928.0	0.30	34.50	5,927.7	13.7	10.1	13.6	0.02	0.00	3.33
6,025.0	0.30	22.90	6,024.7	14.1	10.4	14.0	0.06	0.00	-11.96
6,121.0	0.40	29.40	6,120.7	14.6	10.6	14.5	0.11	0.10	6.77
6,218.0	0.40	45.90	6,217.7	15.1	11.0	15.1	0.12	0.00	17.01
6,315.0	0.40	46.40	6,314.7	15.6	11.5	15.5	0.00	0.00	0.52
6,410.0	0.40	34.50	6,409.7	16.1	12.0	16.0	0.09	0.00	-12.53
6,507.0	0.40	29.50	6,506.7	16.7	12.3	16.6	0.04	0.00	-5.15
6,602.0	0.50	19.70	6,601.7	17.4	12.6	17.3	0.13	0.11	-10.32
6,697.0	0.50	21.10	6,696.7	18.2	12.9	18.0	0.01	0.00	1.47
6,793.0	0.50	22.00	6,792.7	18.9	13.2	18.8	0.01	0.00	0.94
6,888.0	0.50	18.50	6,887.7	19.7	13.5	19.6	0.03	0.00	-3.68
6,984.0	0.50	12.80	6,983.7	20.5	13.7	20.4	0.05	0.00	-5.94
7,081.0	0.30	11.80	7,080.7	21.2	13.9	21.1	0.21	-0.21	-1.03
7,177.0	0.30	14.60	7,176.7	21.7	14.0	21.5	0.02	0.00	2.92
7,273.0	0.30	41.50	7,272.6	22.1	14.2	22.0	0.15	0.00	28.02
7,369.0	0.40	46.90	7,368.6	22.5	14.6	22.4	0.11	0.10	5.63
7,464.0	0.40	45.90	7,463.6	23.0	15.1	22.8	0.01	0.00	-1.05
7,558.0	0.40	45.50	7,557.6	23.4	15.6	23.3	0.00	0.00	-0.43
7,654.0	0.30	58.90	7,653.6	23.8	16.0	23.7	0.13	-0.10	13.96
7,748.0	0.50	54.50	7,747.6	24.2	16.6	24.0	0.22	0.21	-4.68
7,843.0	0.40	55.00	7,842.6	24.6	17.2	24.4	0.11	-0.11	0.53
7,938.0	0.30	42.20	7,937.6	25.0	17.6	24.8	0.13	-0.11	-13.47
8,034.0	0.30	56.40	8,033.6	25.3	18.0	25.1	0.08	0.00	14.79
8,129.0	0.20	50.50	8,128.6	25.5	18.3	25.4	0.11	-0.11	-6.21
8,224.0	0.10	70.70	8,223.6	25.7	18.6	25.5	0.12	-0.11	21.26
8,320.0	0.10	91.90	8,319.6	25.7	18.7	25.5	0.04	0.00	22.08
8,414.0	0.20	89.50	8,413.6	25.7	19.0	25.5	0.11	0.11	-2.55
8,509.0	0.10	63.10	8,508.6	25.7	19.2	25.6	0.13	-0.11	-27.79
8,604.0	0.20	342.40	8,603.6	25.9	19.2	25.8	0.22	0.11	-84.95
8,699.0	0.30	13.40	8,698.6	26.3	19.2	26.2	0.17	0.11	32.63
8,793.0	0.20	8.30	8,792.6	26.7	19.3	26.6	0.11	-0.11	-5.43
8,888.0	0.10	127.80	8,887.6	26.8	19.4	26.7	0.28	-0.11	125.79
8,983.0	0.10	56.40	8,982.6	26.8	19.5	26.7	0.12	0.00	-75.16

Survey Report



Company:	Amtex Energy, Inc	Local Co-ordinate Reference:	Well Dagger State Com #504H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3809.8usft (United #40)
Site:	Sec 30, T21S, R33E	MD Reference:	Well @ 3809.8usft (United #40)
Well:	Dagger State Com #504H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
9,076.0	0.00	62.40	9,075.6	26.9	19.6	26.7	0.11	-0.11	0.00
9,171.0	0.20	312.20	9,170.6	27.0	19.5	26.8	0.21	0.21	0.00
9,267.0	0.30	307.50	9,266.6	27.3	19.2	27.1	0.11	0.10	-4.90
9,362.0	0.20	338.70	9,361.6	27.6	18.9	27.4	0.17	-0.11	32.84
9,458.0	0.30	60.50	9,457.6	27.8	19.1	27.7	0.35	0.10	85.21
9,553.0	0.30	52.60	9,552.6	28.1	19.5	28.0	0.04	0.00	-8.32
9,648.0	0.30	62.40	9,647.6	28.4	19.9	28.2	0.05	0.00	10.32
9,744.0	0.40	81.40	9,743.6	28.5	20.4	28.4	0.16	0.10	19.79
9,839.0	0.10	67.00	9,838.6	28.6	20.8	28.5	0.32	-0.32	-15.16
9,934.0	0.20	215.90	9,933.6	28.5	20.8	28.4	0.31	0.11	156.74
10,029.0	0.10	261.80	10,028.6	28.4	20.6	28.2	0.16	-0.11	48.32
10,124.0	0.30	272.10	10,123.6	28.4	20.3	28.2	0.21	0.21	10.84
10,219.0	0.30	229.80	10,218.6	28.2	19.9	28.1	0.23	0.00	-44.53
10,314.0	2.40	336.30	10,313.6	29.9	18.9	29.7	2.63	2.21	112.11
10,408.0	6.70	353.10	10,407.3	37.1	17.4	37.0	4.74	4.57	17.87
10,453.0	8.30	357.20	10,451.9	43.0	17.0	42.8	3.75	3.56	9.11
10,500.0	8.30	357.20	10,498.4	49.8	16.6	49.6	0.00	0.00	0.00
10,527.0	10.80	357.20	10,525.0	54.2	16.4	54.1	9.26	9.26	0.00
10,626.0	27.30	355.30	10,618.3	86.4	14.1	86.2	16.68	16.67	-1.92
10,657.0	28.30	354.00	10,645.7	100.7	12.7	100.6	3.77	3.23	-4.19
10,689.0	29.20	354.60	10,673.8	116.1	11.2	116.0	2.95	2.81	1.88
10,721.0	32.00	355.10	10,701.3	132.3	9.7	132.2	8.79	8.75	1.56
10,753.0	36.00	355.40	10,727.8	150.1	8.3	150.0	12.51	12.50	0.94
10,785.0	39.40	354.20	10,753.1	169.6	6.5	169.5	10.87	10.63	-3.75
10,817.0	42.10	354.40	10,777.4	190.4	4.4	190.3	8.45	8.44	0.63
10,848.0	45.00	356.00	10,799.8	211.7	2.6	211.6	10.01	9.35	5.16
10,880.0	48.30	357.20	10,821.8	234.9	1.3	234.9	10.67	10.31	3.75
10,912.0	51.90	359.10	10,842.3	259.4	0.5	259.4	12.14	11.25	5.94
10,944.0	54.80	359.10	10,861.4	285.1	0.1	285.1	9.06	9.06	0.00
Crossed 330' Hardline @ 10961' MD / 10871' TVD									
10,961.0	56.18	358.83	10,871.1	299.1	-0.2	299.1	8.23	8.12	-1.58
10,976.0	57.40	358.60	10,879.3	311.6	-0.5	311.6	8.23	8.13	-1.54
11,008.0	60.90	358.80	10,895.7	339.1	-1.1	339.1	10.95	10.94	0.63
11,040.0	63.80	358.80	10,910.5	367.4	-1.7	367.4	9.06	9.06	0.00
11,071.0	66.10	359.00	10,923.7	395.5	-2.2	395.5	7.44	7.42	0.65
11,103.0	67.80	358.40	10,936.2	424.9	-2.9	425.0	5.59	5.31	-1.88
11,135.0	69.10	358.60	10,947.9	454.7	-3.7	454.7	4.10	4.06	0.63
11,166.0	71.40	359.10	10,958.4	483.9	-4.2	483.9	7.57	7.42	1.61
11,197.0	72.80	359.00	10,967.9	513.4	-4.7	513.4	4.53	4.52	-0.32
11,229.0	74.20	358.40	10,977.0	544.0	-5.4	544.1	4.73	4.38	-1.88
11,261.0	77.50	358.30	10,984.8	575.0	-6.3	575.1	10.32	10.31	-0.31
11,292.0	79.00	358.10	10,991.2	605.4	-7.3	605.4	4.88	4.84	-0.65
11,324.0	81.60	358.40	10,996.6	636.9	-8.2	637.0	8.18	8.13	0.94

Survey Report



Company:	Amtex Energy, Inc	Local Co-ordinate Reference:	Well Dagger State Corn #504H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3809.8usft (United #40)
Site:	Sec 30, T21S, R33E	MD Reference:	Well @ 3809.8usft (United #40)
Well:	Dagger State Corn #504H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
11,356.0	84.50	359.10	11,000.4	668.7	-8.9	668.7	9.32	9.06	2.19
11,387.0	86.50	359.30	11,002.9	699.6	-9.4	699.6	6.48	6.45	0.65
11,412.0	87.80	359.30	11,004.1	724.5	-9.7	724.6	5.20	5.20	0.00
11,482.0	89.50	359.30	11,005.7	794.5	-10.5	794.6	2.43	2.43	0.00
11,578.0	91.60	359.70	11,004.8	890.5	-11.4	890.5	2.23	2.19	0.42
11,609.0	92.60	0.20	11,003.7	921.5	-11.4	921.5	3.61	3.23	1.61
11,641.0	91.30	0.00	11,002.6	953.4	-11.3	953.5	4.11	-4.06	-0.63
11,672.0	89.40	0.00	11,002.4	984.4	-11.3	984.5	6.13	-6.13	0.00
11,704.0	89.80	359.80	11,002.6	1,016.4	-11.4	1,016.5	1.40	1.25	-0.63
11,736.0	90.40	359.80	11,002.6	1,048.4	-11.5	1,048.5	1.88	1.88	0.00
11,768.0	90.40	359.30	11,002.4	1,080.4	-11.8	1,080.5	1.56	0.00	-1.56
11,800.0	90.60	359.30	11,002.1	1,112.4	-12.1	1,112.5	0.63	0.63	0.00
11,830.0	91.40	359.00	11,001.6	1,142.4	-12.6	1,142.5	2.85	2.67	-1.00
11,862.0	91.10	358.40	11,000.9	1,174.4	-13.3	1,174.5	2.10	-0.94	-1.88
11,894.0	90.40	358.40	11,000.4	1,206.4	-14.2	1,206.5	2.19	-2.19	0.00
11,926.0	89.90	358.80	11,000.4	1,238.4	-15.0	1,238.5	2.00	-1.56	1.25
11,959.0	89.90	359.10	11,000.4	1,271.4	-15.6	1,271.5	0.91	0.00	0.91
11,991.0	90.80	359.30	11,000.2	1,303.4	-16.0	1,303.5	2.88	2.81	0.63
12,023.0	91.50	359.10	10,999.6	1,335.4	-16.5	1,335.5	2.27	2.19	-0.63
12,054.0	90.80	359.50	10,999.0	1,366.4	-16.9	1,366.5	2.60	-2.26	1.29
12,150.0	91.20	0.50	10,997.3	1,462.3	-16.9	1,462.4	1.12	0.42	1.04
12,245.0	90.60	359.70	10,995.8	1,557.3	-16.7	1,557.4	1.05	-0.63	-0.84
12,340.0	90.00	359.80	10,995.3	1,652.3	-17.1	1,652.4	0.64	-0.63	0.11
12,435.0	89.30	359.00	10,995.9	1,747.3	-18.1	1,747.4	1.12	-0.74	-0.84
12,530.0	89.90	358.60	10,996.5	1,842.3	-20.1	1,842.4	0.76	0.63	-0.42
12,626.0	91.10	358.60	10,995.7	1,938.3	-22.4	1,938.4	1.25	1.25	0.00
12,658.0	91.90	358.60	10,994.9	1,970.2	-23.2	1,970.4	2.50	2.50	0.00
12,688.0	91.80	359.80	10,993.9	2,000.2	-23.6	2,000.3	4.01	-0.33	4.00
12,719.0	92.20	1.60	10,992.8	2,031.2	-23.3	2,031.3	5.94	1.29	5.81
12,814.0	91.50	1.10	10,989.7	2,126.1	-21.0	2,126.2	0.91	-0.74	-0.53
12,909.0	91.90	0.00	10,986.9	2,221.1	-20.1	2,221.2	1.23	0.42	-1.16
12,972.0	91.90	0.20	10,984.8	2,284.0	-20.0	2,284.1	0.32	0.00	0.32
13,004.0	91.60	0.40	10,983.9	2,316.0	-19.8	2,316.1	1.13	-0.94	0.63
13,098.0	89.40	0.50	10,983.0	2,410.0	-19.1	2,410.1	2.34	-2.34	0.11
13,192.0	89.10	359.80	10,984.3	2,504.0	-18.9	2,504.1	0.81	-0.32	-0.74
13,287.0	91.30	359.70	10,983.9	2,599.0	-19.3	2,599.1	2.32	2.32	-0.11
13,351.0	90.00	0.90	10,983.2	2,663.0	-18.9	2,663.1	2.76	-2.03	1.88
13,448.0	88.60	0.40	10,984.4	2,760.0	-17.8	2,760.0	1.53	-1.44	-0.52
13,511.0	89.10	0.90	10,985.7	2,823.0	-17.1	2,823.0	1.12	0.79	0.79
13,543.0	89.70	1.10	10,986.0	2,854.9	-16.6	2,855.0	1.98	1.88	0.63
13,574.0	90.70	1.20	10,985.9	2,885.9	-15.9	2,886.0	3.24	3.23	0.32
13,607.0	91.30	1.60	10,985.3	2,918.9	-15.1	2,919.0	2.19	1.82	1.21
13,639.0	91.30	2.10	10,984.6	2,950.9	-14.1	2,950.9	1.56	0.00	1.56

Survey Report



Company:	Amtext Energy, Inc	Local Co-ordinate Reference:	Well Dagger State Com #504H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3809.8usft (United #40)
Site:	Sec 30, T21S, R33E	MD Reference:	Well @ 3809.8usft (United #40)
Well:	Dagger State Com #504H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
13,671.0	90.80	2.10	10,984.0	2,982.9	-12.9	2,982.9	1.56	-1.56	0.00
13,703.0	90.80	2.70	10,983.5	3,014.8	-11.6	3,014.8	1.87	0.00	1.88
13,735.0	90.80	2.80	10,983.1	3,046.8	-10.1	3,046.8	0.31	0.00	0.31
13,768.0	90.70	2.80	10,982.7	3,079.8	-8.4	3,079.7	0.30	-0.30	0.00
13,791.0	90.40	2.80	10,982.4	3,102.7	-7.3	3,102.7	1.30	-1.30	0.00
13,822.0	90.00	3.20	10,982.3	3,133.7	-5.7	3,133.6	1.82	-1.29	1.29
13,885.0	90.80	3.00	10,981.9	3,196.6	-2.3	3,196.5	1.31	1.27	-0.32
13,981.0	92.90	3.00	10,978.8	3,292.4	2.7	3,292.3	2.19	2.19	0.00
14,076.0	91.70	1.40	10,975.0	3,387.3	6.4	3,387.1	2.10	-1.26	-1.68
14,171.0	91.50	1.80	10,972.3	3,482.2	9.0	3,482.0	0.47	-0.21	0.42
14,267.0	92.30	1.20	10,969.2	3,578.1	11.5	3,577.9	1.04	0.83	-0.63
14,362.0	92.50	0.90	10,965.2	3,673.0	13.3	3,672.8	0.38	0.21	-0.32
14,458.0	91.70	0.70	10,961.7	3,768.9	14.6	3,768.7	0.86	-0.83	-0.21
14,554.0	91.00	359.70	10,959.4	3,864.9	15.0	3,864.6	1.27	-0.73	-1.04
14,649.0	92.10	359.80	10,956.8	3,959.9	14.5	3,959.6	1.16	1.16	0.11
14,745.0	91.70	0.50	10,953.6	4,055.8	14.8	4,055.5	0.84	-0.42	0.73
14,841.0	92.00	359.80	10,950.5	4,151.7	15.0	4,151.5	0.79	0.31	-0.73
14,936.0	91.60	0.50	10,947.6	4,246.7	15.3	4,246.4	0.85	-0.42	0.74
15,030.0	91.50	0.50	10,945.0	4,340.7	16.1	4,340.4	0.11	-0.11	0.00
15,125.0	90.70	1.80	10,943.2	4,435.6	18.0	4,435.3	1.61	-0.84	1.37
15,219.0	90.90	0.40	10,941.9	4,529.6	19.8	4,529.3	1.50	0.21	-1.49
15,315.0	91.70	359.30	10,939.7	4,625.6	19.6	4,625.3	1.42	0.83	-1.15
15,409.0	91.40	0.40	10,937.2	4,719.5	19.3	4,719.2	1.21	-0.32	1.17
15,505.0	92.10	1.80	10,934.2	4,815.5	21.2	4,815.1	1.63	0.73	1.46
15,599.0	91.40	1.80	10,931.4	4,909.4	24.1	4,909.0	0.74	-0.74	0.00
15,694.0	90.90	359.80	10,929.5	5,004.3	25.4	5,004.0	2.17	-0.53	-2.11
15,790.0	91.50	0.70	10,927.4	5,100.3	25.9	5,099.9	1.13	0.63	0.94
15,886.0	91.70	0.90	10,924.8	5,196.3	27.2	5,195.9	0.29	0.21	0.21
15,982.0	91.40	359.80	10,922.2	5,292.2	27.8	5,291.8	1.19	-0.31	-1.15
16,077.0	91.70	0.00	10,919.6	5,387.2	27.6	5,386.8	0.38	0.32	0.21
16,173.0	89.00	359.80	10,919.0	5,483.2	27.5	5,482.8	2.82	-2.81	-0.21
16,268.0	89.30	1.10	10,920.4	5,578.2	28.2	5,577.8	1.40	0.32	1.37
16,363.0	90.30	2.70	10,920.7	5,673.1	31.4	5,672.7	1.99	1.05	1.68
16,458.0	90.90	0.70	10,919.8	5,768.1	34.2	5,767.6	2.20	0.63	-2.11
16,554.0	91.10	359.50	10,918.1	5,864.0	34.3	5,863.6	1.27	0.21	-1.25
16,650.0	90.20	358.40	10,917.0	5,960.0	32.6	5,959.6	1.48	-0.94	-1.15
16,746.0	90.90	359.30	10,916.1	6,056.0	30.7	6,055.5	1.19	0.73	0.94
16,841.0	90.30	358.30	10,915.1	6,151.0	28.7	6,150.5	1.23	-0.63	-1.05
16,936.0	89.00	357.90	10,915.7	6,245.9	25.5	6,245.5	1.43	-1.37	-0.42
17,030.0	89.50	359.10	10,916.9	6,339.9	23.1	6,339.5	1.38	0.53	1.28
17,125.0	88.50	359.80	10,918.5	6,434.8	22.1	6,434.5	1.28	-1.05	0.74
17,219.0	88.60	0.50	10,920.9	6,528.8	22.4	6,528.4	0.75	0.11	0.74
Crossed into Lot "A" Section 19 @ 17260.5' MD / 10922' TVD									
17,260.5	88.82	0.98	10,921.9	6,570.3	22.9	6,569.9	1.27	0.53	1.16

Survey Report



Company:	Amtex Energy, Inc	Local Co-ordinate Reference:	Well Dagger State Com #504H
Project:	Lea County, New Mexico	TVD Reference:	Well @ 3809.8usft (United #40)
Site:	Sec 30, T21S, R33E	MD Reference:	Well @ 3809.8usft (United #40)
Well:	Dagger State Com #504H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
17,314.0	89.10	1.60	10,922.8	6,623.8	24.1	6,623.4	1.27	0.53	1.16
17,409.0	88.50	1.80	10,924.8	6,718.7	26.9	6,718.3	0.67	-0.63	0.21
17,505.0	87.90	1.90	10,927.8	6,814.6	30.0	6,814.1	0.63	-0.63	0.10
17,601.0	89.30	2.30	10,930.2	6,910.5	33.6	6,910.0	1.52	1.46	0.42
17,697.0	89.80	3.30	10,930.9	7,006.4	38.2	7,005.9	1.16	0.52	1.04
17,793.0	90.80	4.60	10,930.4	7,102.2	44.9	7,101.6	1.71	1.04	1.35
17,887.0	90.80	3.20	10,929.1	7,195.9	51.3	7,195.3	1.49	0.00	-1.49
17,982.0	91.10	3.00	10,927.5	7,290.8	56.4	7,290.1	0.38	0.32	-0.21
18,077.0	90.40	3.30	10,926.3	7,385.6	61.6	7,384.9	0.80	-0.74	0.32
18,172.0	90.40	3.70	10,925.6	7,480.5	67.4	7,479.7	0.42	0.00	0.42
Crossed 330' Hardline @ 18252.5' MD / 10925' TVD									
18,252.5	90.57	4.71	10,925.0	7,560.7	73.3	7,559.9	1.27	0.21	1.25
18,268.0	90.60	4.90	10,924.8	7,576.2	74.6	7,575.3	1.27	0.21	1.25
18,363.0	91.00	6.50	10,923.5	7,670.7	84.0	7,669.8	1.74	0.42	1.68
18,457.0	91.40	7.70	10,921.5	7,764.0	95.7	7,762.9	1.35	0.43	1.28
BHL - FNL: 125.9' FEL: 401.1' - TD @ 18458' MD / 10921.5' TVD									
18,458.0	91.40	7.72	10,921.5	7,764.9	95.8	7,763.9	2.00	0.00	2.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
2,202.0	2,201.9	-12.5	-3.5	Tie into gyros @ 2202.0' MD/2201.9' TVD
10,961.0	10,871.1	299.1	-0.2	Crossed 330' Hardline @ 10961' MD / 10871' TVD
17,260.5	10,921.9	6,570.3	22.9	Crossed into Lot "A" Section 19 @ 17260.5' MD / 10922' TVD
18,252.5	10,925.0	7,560.7	73.3	Crossed 330' Hardline @ 18252.5' MD / 10925' TVD
18,458.0	10,921.5	7,764.9	95.8	BHL - FNL: 125.9' FEL: 401.1'
18,458.0	10,921.5	7,764.9	95.8	TD @ 18458' MD / 10921.5' TVD

Checked By: _____ Approved By: _____ Date: _____

Customer Amtex Ene Creation Date 7/30/2016
 Project Lea County Profile Type
 Field Lea County Your Ref
 Structure Sec 30, T21 Job Numbe
 Wellhead Dagger Sta Kelly Bushi 3809.8
 Profile Wellbore # Print Date #####

MD (ft)	Incl. Deg.	Azim. Deg.	Sub-Sea (ft)	TVD (ft)	Local N Coc (ft)	Local E Coc (ft)	Global N Cc (ft)	Global E Cc (ft)	Dogleg (°/100ft)	Vertical Sec (ft)
0	0	0	-3809.8	0	0	0	528133.5	724840.2	0	0
100	0.57	133.5	-3709.8	99.998	-0.342	0.361	528133.2	724840.6	0.57	-0.35
200	0.6	138.11	-3609.81	199.993	-1.075	1.071	528132.4	724841.3	0.056	-1.08
300	0.6	146.42	-3509.81	299.988	-1.901	1.71	528131.6	724841.9	0.087	-1.91
400	0.51	173.9	-3409.82	399.983	-2.779	2.047	528130.7	724842.3	0.278	-2.8
500	0.5	187.75	-3309.82	499.979	-3.654	2.036	528129.8	724842.3	0.122	-3.67
600	0.48	200.73	-3209.82	599.976	-4.478	1.829	528129	724842	0.113	-4.49
700	0.5	197.17	-3109.83	699.972	-5.287	1.552	528128.2	724841.8	0.036	-5.3
800	0.44	191.8	-3009.83	799.969	-6.08	1.344	528127.4	724841.6	0.074	-6.09
900	0.46	192.16	-2909.83	899.966	-6.848	1.181	528126.7	724841.4	0.02	-6.86
1000	0.52	205.27	-2809.84	999.962	-7.651	0.903	528125.8	724841.1	0.127	-7.66
1100	0.61	221.46	-2709.84	1099.957	-8.46	0.357	528125	724840.6	0.182	-8.46
1200	0.69	237.95	-2609.85	1199.951	-9.178	-0.506	528124.3	724839.7	0.203	-9.17
1300	0.74	250.13	-2509.86	1299.943	-9.717	-1.624	528123.8	724838.6	0.16	-9.7
1400	0.73	246.81	-2409.87	1399.935	-10.188	-2.817	528123.3	724837.4	0.044	-10.16
1500	0.7	243.44	-2309.87	1499.927	-10.712	-3.949	528122.8	724836.3	0.052	-10.68
1600	0.59	238.9	-2209.88	1599.921	-11.251	-4.936	528122.2	724835.3	0.121	-11.21
1700	0.52	206.53	-2109.88	1699.916	-11.923	-5.579	528121.6	724834.6	0.317	-11.88
1800	0.72	145.54	-2009.89	1799.911	-12.847	-5.426	528120.7	724834.8	0.652	-12.8
1900	0.34	115.87	-1909.89	1899.907	-13.494	-4.804	528120	724835.4	0.457	-13.45
2000	0.49	75.89	-1809.9	1999.905	-13.52	-4.122	528120	724836.1	0.317	-13.49
2100	0.49	22.43	-1709.9	2099.901	-13.02	-3.544	528120.5	724836.7	0.441	-12.99
2200	0.21	321.38	-1609.9	2199.9	-12.482	-3.496	528121	724836.7	0.43	-12.45
2202	0.21	317.76	-1607.9	2201.9	-12.476	-3.5	528121	724836.7	0.663	-12.45
2278	0.2	317.3	-1531.9	2277.899	-12.275	-3.684	528121.2	724836.5	0.013	-12.24
2375	0.2	332.6	-1434.9	2374.899	-12.001	-3.877	528121.5	724836.3	0.055	-11.97
2471	0.3	19.4	-1338.9	2470.898	-11.615	-3.87	528121.9	724836.4	0.228	-11.58
2568	0.3	26.5	-1241.9	2567.896	-11.148	-3.673	528122.4	724836.5	0.038	-11.12
2662	0.5	40.1	-1147.91	2661.894	-10.614	-3.299	528122.9	724836.9	0.234	-10.59
2757	0.8	41.8	-1052.91	2756.888	-9.803	-2.59	528123.7	724837.6	0.316	-9.78
2852	1.2	48	-957.927	2851.873	-8.643	-1.408	528124.9	724838.8	0.436	-8.63
2949	1.6	51.9	-860.956	2948.844	-7.127	0.412	528126.4	724840.6	0.424	-7.13
3044	0.8	70.7	-765.977	3043.823	-6.09	2.082	528127.4	724842.3	0.928	-6.11
3140	1.2	60.5	-669.992	3139.808	-5.373	3.589	528128.1	724843.8	0.454	-5.4
3234	0.8	54.5	-576.006	3233.794	-4.508	4.98	528129	724845.2	0.439	-4.55
3331	1.2	47.8	-479.021	3330.779	-3.432	6.284	528130.1	724846.5	0.429	-3.48
3426	1.6	46.4	-384.05	3425.75	-1.849	7.981	528131.7	724848.2	0.423	-1.91

3521	0.4	350.2	-289.065	3520.735	-0.608	8.885	528132.9	724849.1	1.492	-0.68
3617	0.4	357.4	-193.067	3616.733	0.057	8.813	528133.6	724849	0.052	-0.02
3714	0.4	358.1	-96.069	3713.731	0.734	8.787	528134.2	724849	0.005	0.66
3810	0.4	4.9	-0.072	3809.728	1.403	8.804	528134.9	724849	0.049	1.33
3906	0.5	355.4	95.925	3905.725	2.154	8.799	528135.7	724849	0.13	2.08
4002	0.7	0.7	191.92	4001.72	3.158	8.773	528136.7	724849	0.216	3.09
4098	0.5	355.6	287.915	4097.715	4.162	8.748	528137.7	724849	0.215	4.09
4195	0.4	359.7	384.912	4194.712	4.923	8.713	528138.4	724848.9	0.108	4.85
4291	0.4	2.3	480.909	4290.709	5.592	8.725	528139.1	724848.9	0.019	5.52
4387	0.3	24.1	576.908	4386.708	6.157	8.841	528139.7	724849.1	0.172	6.08
4483	0.2	19.7	672.907	4482.707	6.544	9	528140	724849.2	0.106	6.47
4578	0.3	343.1	767.906	4577.706	6.938	8.984	528140.4	724849.2	0.193	6.86
4675	0.3	341.9	864.905	4674.705	7.422	8.831	528140.9	724849.1	0.006	7.35
4772	0.3	340.3	961.903	4771.703	7.903	8.667	528141.4	724848.9	0.009	7.83
4868	0.2	15.5	1057.902	4867.702	8.301	8.627	528141.8	724848.8	0.186	8.23
4964	0.2	20.8	1153.902	4963.702	8.619	8.731	528142.1	724849	0.019	8.55
5060	0.2	38.3	1249.901	5059.701	8.907	8.894	528142.4	724849.1	0.063	8.83
5157	0.2	53.3	1346.901	5156.701	9.141	9.135	528142.6	724849.4	0.054	9.07
5253	0.3	57	1442.9	5252.7	9.378	9.48	528142.9	724849.7	0.105	9.3
5349	0.3	11.6	1538.898	5348.698	9.761	9.741	528143.3	724850	0.241	9.68
5446	0.4	8.1	1635.897	5445.697	10.345	9.84	528143.8	724850.1	0.105	10.26
5542	0.5	357.4	1731.894	5541.694	11.095	9.868	528144.6	724850.1	0.136	11.01
5639	0.5	348.1	1828.89	5638.69	11.932	9.762	528145.4	724850	0.084	11.85
5735	0.4	4.6	1924.887	5734.687	12.676	9.702	528146.2	724849.9	0.169	12.6
5832	0.3	31.3	2021.885	5831.685	13.231	9.862	528146.7	724850.1	0.194	13.15
5928	0.3	34.5	2117.884	5927.684	13.653	10.134	528147.2	724850.4	0.017	13.57
6025	0.3	22.9	2214.883	6024.683	14.096	10.377	528147.6	724850.6	0.063	14.01
6121	0.4	29.4	2310.881	6120.681	14.619	10.639	528148.1	724850.9	0.112	14.53
6218	0.4	45.9	2407.879	6217.679	15.15	11.049	528148.7	724851.3	0.118	15.06
6315	0.4	46.4	2504.876	6314.676	15.619	11.537	528149.1	724851.8	0.004	15.52
6410	0.4	34.5	2599.874	6409.674	16.121	11.965	528149.6	724852.2	0.087	16.02
6507	0.4	29.5	2696.872	6506.672	16.695	12.324	528150.2	724852.5	0.036	16.59
6602	0.5	19.7	2791.869	6601.669	17.374	12.627	528150.9	724852.8	0.132	17.27
6697	0.5	21.1	2886.865	6696.665	18.151	12.916	528151.7	724853.1	0.013	18.04
6793	0.5	22	2982.861	6792.661	18.93	13.223	528152.4	724853.4	0.008	18.82
6888	0.5	18.5	3077.858	6887.658	19.707	13.51	528153.2	724853.7	0.032	19.6
6984	0.5	12.8	3173.854	6983.654	20.513	13.736	528154	724854	0.052	20.4
7081	0.3	11.8	3270.852	7080.652	21.174	13.881	528154.7	724854.1	0.206	21.06
7177	0.3	14.6	3366.85	7176.65	21.663	13.996	528155.2	724854.2	0.015	21.55
7273	0.3	41.5	3462.849	7272.649	22.095	14.226	528155.6	724854.4	0.145	21.98
7369	0.4	46.9	3558.847	7368.647	22.512	14.637	528156	724854.9	0.11	22.39
7464	0.4	45.9	3653.845	7463.645	22.969	15.118	528156.5	724855.3	0.007	22.84
7558	0.4	45.5	3747.843	7557.643	23.428	15.587	528156.9	724855.8	0.003	23.3
7654	0.3	58.9	3843.841	7653.641	23.792	16.041	528157.3	724856.3	0.134	23.66
7748	0.5	54.5	3937.839	7747.639	24.158	16.586	528157.7	724856.8	0.215	24.02
7843	0.4	55	4032.836	7842.636	24.589	17.195	528158.1	724857.4	0.105	24.45
7938	0.3	42.2	4127.834	7937.634	24.963	17.634	528158.5	724857.9	0.133	24.82

8034	0.3	56.4	4223.833	8033.633	25.288	18.012	528158.8	724858.2	0.077	25.14
8129	0.2	50.5	4318.832	8128.632	25.531	18.347	528159	724858.6	0.109	25.38
8224	0.1	70.7	4413.831	8223.631	25.664	18.553	528159.2	724858.8	0.118	25.51
8320	0.1	91.9	4509.831	8319.631	25.689	18.716	528159.2	724858.9	0.038	25.53
8414	0.2	89.5	4603.831	8413.631	25.688	18.962	528159.2	724859.2	0.107	25.53
8509	0.1	63.1	4698.83	8508.63	25.727	19.202	528159.2	724859.4	0.125	25.57
8604	0.2	342.4	4793.83	8603.63	25.922	19.226	528159.4	724859.4	0.22	25.76
8699	0.3	13.4	4888.829	8698.629	26.322	19.233	528159.8	724859.5	0.173	26.16
8793	0.2	8.3	4982.828	8792.628	26.724	19.314	528160.2	724859.5	0.109	26.56
8888	0.1	127.8	5077.828	8887.628	26.837	19.403	528160.3	724859.6	0.278	26.68
8983	0.1	56.4	5172.828	8982.628	26.832	19.538	528160.3	724859.8	0.123	26.67
9076	0	62.4	5265.828	9075.628	26.877	19.606	528160.4	724859.8	0.108	26.72
9171	0.2	312.2	5360.828	9170.628	26.989	19.483	528160.5	724859.7	0.211	26.83
9267	0.3	307.5	5456.827	9266.627	27.254	19.159	528160.8	724859.4	0.106	27.1
9362	0.2	338.7	5551.826	9361.626	27.56	18.902	528161.1	724859.1	0.174	27.4
9458	0.3	60.5	5647.825	9457.625	27.84	19.06	528161.3	724859.3	0.35	27.68
9553	0.3	52.6	5742.824	9552.624	28.113	19.474	528161.6	724859.7	0.044	27.95
9648	0.3	62.4	5837.823	9647.623	28.38	19.892	528161.9	724860.1	0.054	28.22
9744	0.4	81.4	5933.821	9743.621	28.546	20.446	528162	724860.7	0.158	28.38
9839	0.1	67	6028.82	9838.62	28.628	20.85	528162.1	724861.1	0.32	28.46
9934	0.2	215.9	6123.82	9933.62	28.526	20.829	528162	724861	0.306	28.35
10029	0.1	261.8	6218.82	10028.62	28.38	20.65	528161.9	724860.9	0.157	28.21
10124	0.3	272.1	6313.819	10123.62	28.378	20.319	528161.9	724860.5	0.213	28.21
10219	0.3	229.8	6408.818	10218.62	28.226	19.881	528161.7	724860.1	0.228	28.06
10314	2.4	336.3	6503.791	10313.59	29.887	18.891	528163.4	724859.1	2.633	29.73
10408	6.7	353.1	6597.476	10407.28	37.137	17.44	528170.6	724857.7	4.741	36.99
10453	8.3	357.2	6642.089	10451.89	42.987	16.966	528176.5	724857.2	3.747	42.85
10500	8.3	357.2	6688.597	10498.4	49.764	16.635	528183.3	724856.9	0	49.63
10527	10.8	357.2	6715.221	10525.02	54.238	16.416	528187.7	724856.6	9.259	54.1
10626	27.3	355.3	6808.477	10618.28	86.352	14.086	528219.9	724854.3	16.676	86.23
10657	28.3	354	6835.899	10645.7	100.745	12.736	528234.2	724853	3.772	100.64
10689	29.2	354.6	6863.954	10673.75	116.061	11.208	528249.6	724851.4	2.954	115.96
10721	32	355.1	6891.495	10701.3	132.283	9.749	528265.8	724850	8.786	132.2
10753	36	355.4	6918.019	10727.82	150.112	8.27	528283.6	724848.5	12.511	150.04
10785	39.4	354.2	6943.334	10753.13	169.596	6.489	528303.1	724846.7	10.869	169.54
10817	42.1	354.4	6967.574	10777.37	190.379	4.416	528323.9	724844.6	8.447	190.34
10848	45	356	6990.04	10799.84	211.66	2.637	528345.2	724842.9	10.007	211.63
10880	48.3	357.2	7012.004	10821.8	234.885	1.263	528368.4	724841.5	10.667	234.87
10912	51.9	359.1	7032.528	10842.33	259.415	0.482	528392.9	724840.7	12.136	259.4
10944	54.8	359.1	7051.628	10861.43	285.083	0.079	528418.6	724840.3	9.062	285.07
10976	57.4	358.6	7069.474	10879.27	311.636	-0.456	528445.1	724839.8	8.228	311.63
11008	60.9	358.8	7085.881	10895.68	339.097	-1.079	528472.6	724839.1	10.951	339.09
11040	63.8	358.8	7100.73	10910.53	367.433	-1.672	528500.9	724838.5	9.062	367.43
11071	66.1	359	7113.855	10923.66	395.51	-2.211	528529	724838	7.442	395.51
11103	67.8	358.4	7126.383	10936.18	424.946	-2.88	528558.4	724837.3	5.586	424.96
11135	69.1	358.6	7138.137	10947.94	454.699	-3.659	528588.2	724836.6	4.104	454.71
11166	71.4	359.1	7148.612	10958.41	483.867	-4.243	528617.4	724836	7.573	483.89

11197	72.8	359	7158.14	10967.94	513.362	-4.732	528646.9	724835.5	4.527	513.38
11229	74.2	358.4	7167.228	10977.03	544.035	-5.429	528677.5	724834.8	4.73	544.06
11261	77.5	358.3	7175.05	10984.85	575.047	-6.323	528708.5	724833.9	10.317	575.08
11292	79	358.1	7181.363	10991.16	605.382	-7.276	528738.9	724832.9	4.88	605.42
11324	81.6	358.4	7186.754	10996.55	636.907	-8.239	528770.4	724832	8.177	636.95
11356	84.5	359.1	7190.626	11000.43	668.661	-8.931	528802.2	724831.3	9.319	668.71
11387	86.5	359.3	7193.058	11002.86	699.56	-9.363	528833.1	724830.9	6.484	699.61
11412	87.8	359.3	7194.301	11004.1	724.527	-9.668	528858	724830.6	5.2	724.58
11482	89.5	359.3	7195.95	11005.75	794.5	-10.523	528928	724829.7	2.429	794.56
11578	91.6	359.7	7195.028	11004.83	890.486	-11.36	529024	724828.9	2.227	890.55
11609	92.6	0.2	7193.892	11003.69	921.465	-11.387	529055	724828.8	3.606	921.53
11641	91.3	0	7192.803	11002.6	953.446	-11.332	529086.9	724828.9	4.11	953.51
11672	89.4	0	7192.614	11002.41	984.444	-11.332	529117.9	724828.9	6.129	984.5
11704	89.8	359.8	7192.838	11002.64	1016.443	-11.387	529149.9	724828.8	1.398	1016.5
11736	90.4	359.8	7192.782	11002.58	1048.442	-11.499	529181.9	724828.7	1.875	1048.5
11768	90.4	359.3	7192.558	11002.36	1080.44	-11.75	529213.9	724828.5	1.562	1080.5
11800	90.6	359.3	7192.279	11002.08	1112.437	-12.141	529245.9	724828.1	0.625	1112.5
11830	91.4	359	7191.755	11001.56	1142.429	-12.586	529275.9	724827.6	2.848	1142.49
11862	91.1	358.4	7191.057	11000.86	1174.413	-13.312	529307.9	724826.9	2.096	1174.48
11894	90.4	358.4	7190.638	11000.44	1206.397	-14.206	529339.9	724826	2.187	1206.47
11926	89.9	358.8	7190.555	11000.36	1238.387	-14.987	529371.9	724825.2	2.001	1238.47
11959	89.9	359.1	7190.612	11000.41	1271.382	-15.592	529404.9	724824.6	0.909	1271.47
11991	90.8	359.3	7190.417	11000.22	1303.378	-16.039	529436.9	724824.2	2.881	1303.47
12023	91.5	359.1	7189.775	10999.58	1335.368	-16.486	529468.9	724823.7	2.275	1335.46
12054	90.8	359.5	7189.152	10998.95	1366.359	-16.864	529499.9	724823.4	2.601	1366.45
12150	91.2	0.5	7187.477	10997.28	1462.343	-16.864	529595.8	724823.4	1.122	1462.43
12245	90.6	359.7	7185.985	10995.79	1557.33	-16.698	529690.8	724823.5	1.053	1557.41
12340	90	359.8	7185.487	10995.29	1652.327	-17.113	529785.8	724823.1	0.64	1652.41
12435	89.3	359	7186.068	10995.87	1747.319	-18.108	529880.8	724822.1	1.119	1747.41
12530	89.9	358.6	7186.731	10996.53	1842.295	-20.097	529975.8	724820.1	0.759	1842.4
12626	91.1	358.6	7185.893	10995.69	1938.261	-22.443	530071.8	724817.8	1.25	1938.38
12658	91.9	358.6	7185.055	10994.86	1970.24	-23.224	530103.7	724817	2.5	1970.36
12688	91.8	359.8	7184.087	10993.89	2000.221	-23.643	530133.7	724816.6	4.012	2000.35
12719	92.2	1.6	7183.005	10992.81	2031.199	-23.264	530164.7	724817	5.945	2031.32
12814	91.5	1.1	7179.938	10989.74	2126.122	-21.027	530259.6	724819.2	0.905	2126.22
12909	91.9	0	7177.12	10986.92	2221.074	-20.116	530354.6	724820.1	1.232	2221.16
12972	91.9	0.2	7175.031	10984.83	2284.039	-20.006	530417.5	724820.2	0.317	2284.13
13004	91.6	0.4	7174.054	10983.85	2316.024	-19.838	530449.5	724820.4	1.127	2316.11
13098	89.4	0.5	7173.233	10983.03	2410.012	-19.1	530543.5	724821.1	2.343	2410.09
13192	89.1	359.8	7174.464	10984.26	2504.003	-18.854	530637.5	724821.4	0.81	2504.07
13287	91.3	359.7	7174.132	10983.93	2598.995	-19.269	530732.5	724821	2.318	2599.07
13351	90	0.9	7173.406	10983.21	2662.988	-18.933	530796.5	724821.3	2.764	2663.05
13448	88.6	0.4	7174.591	10984.39	2759.972	-17.833	530893.5	724822.4	1.533	2760.02
13511	89.1	0.9	7175.856	10985.66	2822.954	-17.119	530956.5	724823.1	1.122	2823
13543	89.7	1.1	7176.191	10985.99	2854.948	-16.56	530988.4	724823.7	1.976	2854.99
13574	90.7	1.2	7176.083	10985.88	2885.941	-15.938	531019.4	724824.3	3.242	2885.97
13607	91.3	1.6	7175.507	10985.31	2918.926	-15.132	531052.4	724825.1	2.185	2918.95

13639	91.3	2.1	7174.781	10984.58	2950.901	-14.099	531084.4	724826.1	1.562	2950.92
13671	90.8	2.1	7174.194	10983.99	2982.874	-12.927	531116.4	724827.3	1.562	2982.88
13703	90.8	2.7	7173.747	10983.55	3014.842	-11.587	531148.3	724828.6	1.875	3014.84
13735	90.8	2.8	7173.301	10983.1	3046.802	-10.052	531180.3	724830.2	0.312	3046.78
13768	90.7	2.8	7172.869	10982.67	3079.76	-8.44	531213.3	724831.8	0.303	3079.73
13791	90.4	2.8	7172.648	10982.45	3102.732	-7.316	531236.2	724832.9	1.304	3102.69
13822	90	3.2	7172.54	10982.34	3133.689	-5.694	531267.2	724834.5	1.825	3133.63
13885	90.8	3	7172.1	10981.9	3196.595	-2.287	531330.1	724837.9	1.309	3196.51
13981	92.9	3	7169.001	10978.8	3292.408	2.734	531425.9	724843	2.187	3292.27
14076	91.7	1.4	7165.188	10974.99	3387.256	6.378	531520.8	724846.6	2.104	3387.09
14171	91.5	1.8	7162.536	10972.34	3482.182	9.029	531615.7	724849.2	0.471	3481.99
14267	92.3	1.2	7159.353	10969.15	3578.095	11.541	531711.6	724851.8	1.041	3577.88
14362	92.5	0.9	7155.375	10965.18	3672.996	13.28	531806.5	724853.5	0.379	3672.76
14458	91.7	0.7	7151.857	10961.66	3768.921	14.62	531902.4	724854.8	0.859	3768.67
14554	91	359.7	7149.595	10959.4	3864.892	14.954	531998.4	724855.2	1.271	3864.64
14649	92.1	359.8	7147.025	10956.83	3959.855	14.54	532093.4	724854.8	1.163	3959.6
14745	91.7	0.5	7143.842	10953.64	4055.801	14.791	532189.3	724855	0.839	4055.54
14841	92	359.8	7140.743	10950.54	4151.75	15.043	532285.3	724855.3	0.793	4151.49
14936	91.6	0.5	7137.759	10947.56	4246.702	15.291	532380.2	724855.5	0.848	4246.43
15030	91.5	0.5	7135.217	10945.02	4340.664	16.111	532474.2	724856.3	0.106	4340.39
15125	90.7	1.8	7133.393	10943.19	4435.625	18.018	532569.1	724858.2	1.607	4435.33
15219	90.9	0.4	7132.08	10941.88	4529.596	19.822	532663.1	724860	1.504	4529.28
15315	91.7	359.3	7129.902	10939.7	4625.568	19.571	532759.1	724859.8	1.417	4625.25
15409	91.4	0.4	7127.359	10937.16	4719.532	19.325	532853	724859.5	1.213	4719.21
15505	92.1	1.8	7124.428	10934.23	4815.467	21.167	532949	724861.4	1.63	4815.13
15599	91.4	1.8	7121.557	10931.36	4909.376	24.118	533042.9	724864.3	0.745	4909.01
15694	90.9	359.8	7119.65	10929.45	5004.342	25.444	533137.8	724865.7	2.17	5003.97
15790	91.5	0.7	7117.64	10927.44	5100.319	25.863	533233.8	724866.1	1.127	5099.94
15886	91.7	0.9	7114.959	10924.76	5196.272	27.202	533329.8	724867.4	0.295	5195.87
15982	91.4	359.8	7112.362	10922.16	5292.234	27.789	533425.7	724868	1.187	5291.83
16077	91.7	0	7109.793	10919.59	5387.199	27.623	533520.7	724867.8	0.379	5386.79
16173	89	359.8	7109.206	10919.01	5483.188	27.455	533616.7	724867.7	2.82	5482.78
16268	89.3	1.1	7110.616	10920.42	5578.172	28.201	533711.7	724868.4	1.404	5577.75
16363	90.3	2.7	7110.947	10920.75	5673.115	31.351	533806.6	724871.6	1.986	5672.67
16458	90.9	0.7	7109.952	10919.75	5768.063	34.169	533901.6	724874.4	2.198	5767.59
16554	91.1	359.5	7108.277	10918.08	5864.046	34.337	533997.5	724874.6	1.267	5863.57
16650	90.2	358.4	7107.188	10916.99	5960.021	32.577	534093.5	724872.8	1.48	5959.55
16746	90.9	359.3	7106.266	10916.07	6055.996	30.651	534189.5	724870.9	1.188	6055.54
16841	90.3	358.3	7105.272	10915.07	6150.968	28.661	534284.5	724868.9	1.228	6150.53
16936	89	357.9	7105.852	10915.65	6245.912	25.512	534379.4	724865.7	1.432	6245.49
17030	89.5	359.1	7107.082	10916.88	6339.87	23.051	534473.4	724863.3	1.383	6339.47
17125	88.5	359.8	7108.74	10918.54	6434.849	22.14	534568.3	724862.4	1.285	6434.45
17219	88.6	0.5	7111.119	10920.92	6528.818	22.386	534662.3	724862.6	0.752	6528.41
17314	89.1	1.6	7113.026	10922.83	6623.781	24.126	534757.3	724864.3	1.272	6623.36
17409	88.5	1.8	7115.015	10924.82	6718.718	26.944	534852.2	724867.2	0.666	6718.27
17505	87.9	1.9	7118.031	10927.83	6814.62	30.041	534948.1	724870.3	0.634	6814.14
17601	89.3	2.3	7120.376	10930.18	6910.525	33.558	535044	724873.8	1.517	6910.02

17697	89.8	3.3	7121.13	10930.93	7006.406	38.248	535139.9	724878.5	1.165	7005.86
17793	90.8	4.6	7120.627	10930.43	7102.173	44.86	535235.7	724885.1	1.708	7101.57
17887	90.8	3.2	7119.315	10929.12	7195.944	51.253	535329.4	724891.5	1.489	7195.28
17982	91.1	3	7117.74	10927.54	7290.792	56.39	535424.3	724896.6	0.38	7290.08
18077	90.4	3.3	7116.496	10926.3	7385.639	61.609	535519.1	724901.8	0.802	7384.89
18172	90.4	3.7	7115.833	10925.63	7480.46	67.409	535614	724907.6	0.421	7479.65
18268	90.6	4.9	7114.995	10924.8	7576.184	74.606	535709.7	724914.8	1.267	7575.32
18363	91	6.5	7113.669	10923.47	7670.702	84.041	535804.2	724924.3	1.736	7669.75
18457	91.4	7.7	7111.7	10921.5	7763.959	95.656	535897.5	724935.9	1.345	7762.91
18458	91.4	7.72	7111.676	10921.48	7764.949	95.79	535898.4	724936	1.999	7763.9