

30-015-39169

EOG Resources

Eddy County, NM (Nad27)

Sand Tank 17 Fed Com

Sand Tank 17 Fed Com 4H

Wellbore #1

Survey: Phoenix MWD Surveys

EOG Resources

23 January, 2012



PHOENIX
TECHNOLOGY SERVICES

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Sand Tank 17 Fed Com 4H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3501 90usft (Original Well Elev + 19' KB)
Site:	Sand Tank 17 Fed Com	MD Reference:	WELL @ 3501 90usft (Original Well Elev + 19' KB)
Well:	Sand Tank 17 Fed Com 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	GCR DB v5000

Project	Eddy County, NM (Nad27)		
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	Sand Tank 17 Fed Com		
Site Position:		Northing:	635,014 40 usft
From:	Map	Easting:	604,776 50 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 44' 43 0283 N
		Longitude:	103° 59' 33 1962 W
		Grid Convergence:	0 18 °

Well	Sand Tank 17 Fed Com 4H		
Well Position	+N/-S	0.00 usft	Northing: 635,014 40 usft
	+E/-W	0.00 usft	Easting: 604,776 50 usft
Position Uncertainty	0 00 usft		Wellhead Elevation: usft
			Latitude: 32° 44' 43 0283 N
			Longitude: 103° 59' 33 1962 W
			Ground Level: 3,482 90 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	01/04/12	(°) 7 75
			Dip Angle (°) 60 58
			Field Strength (nT) 48,828

Design	Wellbore #1		
Audit Notes:			
Version:	1 0	Phase:	ACTUAL
		Tie On Depth:	0 00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0 00	0 00	0 00
			Direction (°) 88 70

Survey Program	Date	01/23/12		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100 00	3,370 00	Phoenix MWD Surveys (Wellbore #1)	MWD	MWD - Standard

Phoenix Technology Services
EOG Resources



Company: EOG Resources
Project: Eddy County, NM (Nad27)
Site: Sand Tank 17 Fed Com
Well: Sand Tank 17 Fed Com 4H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Sand Tank 17 Fed Com 4H
TVD Reference: WELL @ 3501 90usft (Original Well Elev. + 19' KB)
MD Reference: WELL @ 3501 90usft (Original Well Elev. + 19' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB v5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0 00	0 00	0 00	-3,501.90	0 00	0 00	0 00	0 00	0 00	635,014.40	604,776 50	
0.42	0 00	108 38	-3,501.48	0 42	0 00	0 00	0 00	0 00	635,014 40	604,776 50	
Belco Pet Co. Fed 17 Com #1											
100 00	0 18	108 38	-3,401 90	100 00	-0 05	0 15	0 15	0 18	635,014 35	604,776 65	
182.00	0 64	84 86	-3,319.90	182 00	-0 05	0 73	0.73	0 59	635,014.35	604,777 23	
Tie On From Gyro @ 182' MD											
328 00	0 40	314 50	-3,173 91	327.99	0 38	1 18	1 18	0 65	635,014 78	604,777 68	
First Phoenix MWD Survey											
514 00	0 40	311 30	-2,987 91	513 99	1 26	0 23	0.25	0 01	635,015 66	604,776 73	
881 00	0 50	314 40	-2,620 92	880 98	3 23	-1 88	-1 81	0 03	635,017 63	604,774 62	
1,062 00	0 80	24 30	-2,439 93	1,061 97	4 93	-1 93	-1 81	0 43	635,019 33	604,774 57	
1,299 00	1 80	55 10	-2,202 99	1,298 91	8 57	1.81	2 00	0 50	635,022 97	604,778 31	
1,427 00	0 60	0 40	-2,075 02	1,426 88	10 39	3 46	3 70	1 20	635,024 79	604,779 96	
1,614 00	1 00	317 60	-1,888 04	1,613 86	12.58	2 37	2.65	0 37	635,026.98	604,778 87	
1,805 00	1 50	316 80	-1,697 08	1,804 82	15 63	-0 47	-0 11	0 26	635,030.03	604,776 03	
1,997 00	0 30	298 00	-1,505 11	1,996 79	17.70	-2 63	-2.23	0 64	635,032 10	604,773 87	
2,188 00	0 30	334 40	-1,314 11	2,187 79	18 38	-3 29	-2 87	0 10	635,032 78	604,773 21	
2,378 00	1 00	294 10	-1,124.13	2,377 77	19 51	-5 02	-4 57	0 42	635,033 91	604,771 48	
2,570 00	0 60	297 10	-932 14	2,569 76	20 65	-7 44	-6 97	0 21	635,035 05	604,769 06	
2,761.00	1 00	293 70	-741 16	2,760 74	21 78	-9 86	-9 36	0 21	635,036 18	604,766 64	
2,951 00	1 10	296 80	-551 20	2,950 70	23 27	-13 00	-12 47	0.06	635,037 67	604,763 50	
3,142 00	0 20	160 40	-360 21	3,141 69	23 78	-14 53	-13 99	0 66	635,038 18	604,761 97	
3,315 00	0 30	206 60	-187 21	3,314 69	23 09	-14 63	-14 10	0 13	635,037 49	604,761 87	
Last Phoenix MWD Survey											
3,370 00	0 30	206 60	-132 21	3,369 69	22 83	-14 76	-14 24	0 00	635,037 23	604,761 74	
Projection To TD - BHL Sand Tank 17 Fed Com 4H - UP Sand Tank 17 Fed Com 4H.											

Phoenix Technology Services
EOG Resources



Company: EOG Resources
Project: Eddy County, NM (Nad27)
Site: Sand Tank 17 Fed Com
Well: Sand Tank 17 Fed Com 4H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Sand Tank 17 Fed Com 4H
TVD Reference: WELL @ 3501.90usft (Original Well Elev + 19' KB)
MD Reference: WELL @ 3501.90usft (Original Well Elev + 19' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB v5000

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
182.00	182.00	-0.05	0.73	Tie On From Gyro @ 182' MD
328.00	327.99	0.38	1.18	First Phoenix MWD Survey
3,315.00	3,314.69	23.09	-14.63	Last Phoenix MWD Survey
3,370.00	3,369.69	22.83	-14.76	Projection To TD

Checked By: _____ Approved By: _____ Date: _____



EOG Resources

Eddy County, NM (NAD27 NME)

Sand Tank "17" Federal Com #4H

Sand Tank "17" Federal Com #4H

OH

Design: Actual

Standard Survey Report

09 February, 2012



Company:	EOG Resources	Local Co-ordinate Reference:	Well Sand Tank "17" Federal Com #4H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RF @ 3500 90usft (Precision #523)
Site:	Sand Tank "17" Federal Com #4H	MD Reference:	RF @ 3500 90usft (Precision #523)
Well:	Sand Tank "17" Federal Com #4H	North Reference:	Grd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000 1 Single User Db

Project	Eddy County, NM (NAD27 NME), USA		
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 Sand Tank "17" Federal Com #4H					
Site Position:		Northing:	635,014.40 usft	Latitude:	32° 44' 43.028 N
From:	Map	Easting:	604,776.50 usft	Longitude:	103° 59' 33.196 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.18 °

Well:	Sand Tank "17" Federal Com #4H					
Well Position	+N-S	0.00 usft	Northing:	635,014.40 usft	Latitude:	32° 44' 43.028 N
	+E-W	0.00 usft	Easting:	604,776.50 usft	Longitude:	103° 59' 33.196 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,482.90 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	01/15/12	7 75	60 58	48,825

Design:	Actual			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	88.70

Survey Program		Date	02/09/12		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
3,419.00	12,501.00	MWD (OH)	MWD	MWD - Standard ISCWSA	

Measured Depth	Inclination	Azimuth	Vertical Depth	+N-S	+E-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
3,315.00	0.30	206.60	3,314.69	23.09	-14.63	-14.10	0.00	0.00	0.00
3,419.00	0.40	220.40	3,418.69	22.57	-14.99	-14.47	0.13	0.10	13.27
3,514.00	0.50	236.60	3,513.69	22.09	-15.55	-15.04	0.17	0.11	17.05
3,610.00	0.70	240.30	3,609.68	21.57	-16.41	-15.91	0.21	0.21	3.85
3,706.00	0.50	245.10	3,705.67	21.10	-17.30	-16.81	0.21	-0.21	5.00
3,801.00	0.40	238.70	3,800.67	20.75	-17.96	-17.48	0.12	-0.11	-6.74
3,897.00	0.70	218.30	3,896.67	20.12	-18.61	-18.15	0.37	0.31	-21.25
3,992.00	0.90	223.00	3,991.66	19.12	-19.47	-19.04	0.22	0.21	4.95
4,088.00	1.10	249.40	4,087.64	18.24	-20.85	-20.43	0.52	0.21	27.50
4,183.00	1.30	263.20	4,182.62	17.80	-22.77	-22.37	0.37	0.21	14.53



SDI
Survey Report



Company: EOG Resources
Project: Eddy County, NM (NAD27 NME)
Site: Sand Tank "17" Federal Com #4H
Well: Sand Tank "17" Federal Com #4H
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Well Sand Tank "17" Federal Com #4H
TVD Reference: RF @ 3500 90usft (Precision #523)
MD Reference: RF @ 3500 90usft (Precision #523)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
4,279.00	0.40	313.50	4,278.61	17.90	-24.10	-23.69	1.13	-0.94	52.40
4,375.00	0.40	310.40	4,374.61	18.34	-24.60	-24.18	0.02	0.00	-3.23
4,470.00	0.40	293.80	4,469.61	18.69	-25.15	-24.72	0.12	0.00	-17.47
4,565.00	0.40	280.90	4,564.61	18.89	-25.78	-25.35	0.09	0.00	-13.58
4,661.00	0.90	137.20	4,660.60	18.40	-25.60	-25.18	1.30	0.52	-149.69
4,756.00	0.70	135.30	4,755.59	17.44	-24.68	-24.28	0.21	-0.21	-2.00
4,851.00	0.50	144.20	4,850.59	16.69	-24.03	-23.65	0.23	-0.21	9.37
4,947.00	0.50	153.50	4,946.58	15.98	-23.60	-23.23	0.08	0.00	9.69
5,042.00	0.30	168.00	5,041.58	15.36	-23.36	-23.01	0.23	-0.21	15.26
5,138.00	0.20	311.90	5,137.58	15.23	-23.44	-23.09	0.50	-0.10	149.90
5,233.00	0.09	318.00	5,232.58	15.39	-23.61	-23.26	0.12	-0.12	6.42
5,329.00	0.20	331.50	5,328.58	15.60	-23.74	-23.38	0.12	0.11	14.06
5,424.00	0.30	178.00	5,423.58	15.50	-23.81	-23.45	0.51	0.11	-161.58
5,519.00	0.40	201.80	5,518.58	14.94	-23.93	-23.58	0.18	0.11	25.05
5,615.00	0.30	157.30	5,614.58	14.40	-23.95	-23.62	0.29	-0.10	-46.35
5,711.00	1.20	133.40	5,710.57	13.47	-23.13	-22.81	0.97	0.94	-24.90
5,806.00	1.20	134.80	5,805.55	12.09	-21.70	-21.42	0.03	0.00	1.47
5,901.00	1.60	133.20	5,900.52	10.48	-20.02	-19.78	0.42	0.42	-1.68
5,997.00	1.50	131.90	5,996.48	8.72	-18.11	-17.91	0.11	-0.10	-1.35
6,093.00	1.40	136.70	6,092.45	7.03	-16.37	-16.21	0.16	-0.10	5.00
6,188.00	1.20	129.00	6,187.43	5.56	-14.80	-14.67	0.28	-0.21	-8.11
6,284.00	1.20	137.60	6,283.41	4.19	-13.34	-13.25	0.19	0.00	8.96
6,379.00	1.30	136.70	6,378.38	2.67	-11.93	-11.87	0.11	0.11	-0.95
6,475.00	2.20	136.80	6,474.34	0.53	-9.93	-9.91	0.94	0.94	0.10
6,570.00	1.20	119.50	6,569.30	-1.29	-7.81	-7.84	1.17	-1.05	-18.21
6,665.00	0.62	98.97	6,664.28	-1.86	-6.44	-6.48	0.69	-0.61	-21.61
6,761.00	0.62	359.20	6,760.28	-1.42	-5.93	-5.96	0.99	0.00	-103.93
6,856.00	0.62	31.70	6,855.28	-0.47	-5.67	-5.68	0.37	0.00	34.21
6,952.00	0.79	85.90	6,951.27	0.02	-4.74	-4.74	0.69	0.18	56.46
7,048.00	0.90	68.00	7,047.26	0.35	-3.38	-3.37	0.30	0.11	-18.65
7,143.00	0.60	48.60	7,142.25	0.96	-2.31	-2.29	0.41	-0.32	-20.42
7,237.00	0.70	57.80	7,236.24	1.59	-1.46	-1.42	0.15	0.11	9.79
7,333.00	0.53	48.98	7,332.24	2.19	-0.63	-0.58	0.20	-0.18	-9.19
7,428.00	0.53	45.27	7,427.24	2.79	0.02	0.08	0.04	0.00	-3.91
7,523.00	0.62	65.31	7,522.23	3.32	0.80	0.87	0.23	0.09	21.09
7,568.00	0.26	46.91	7,567.23	3.49	1.09	1.17	0.85	-0.80	-40.89
7,637.00	1.93	85.88	7,636.21	3.68	2.36	2.45	2.52	2.42	56.48
7,669.00	6.46	81.29	7,668.12	3.99	4.68	4.77	14.18	14.16	-14.34
7,700.00	11.87	78.32	7,698.71	4.90	9.53	9.64	17.51	17.45	-9.58
7,732.00	16.88	81.48	7,729.70	6.25	17.36	17.49	15.84	15.66	9.88
7,764.00	21.02	85.26	7,759.96	7.42	27.67	27.84	13.49	12.94	11.81
7,796.00	23.65	88.43	7,789.56	8.07	39.81	39.98	9.04	8.22	9.91
7,828.00	27.44	90.71	7,818.43	8.15	53.61	53.78	12.23	11.84	7.13
7,860.00	30.78	90.18	7,846.38	8.04	69.17	69.34	10.47	10.44	-1.66

Company: EOG Resources
Project: Eddy County, NM (NAD27 NME)
Site: Sand Tank "17" Federal Com #4H
Well: Sand Tank "17" Federal Com #4H
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Well Sand Tank "17" Federal Com #4H
TVD Reference: RF @ 3500 90usft (Precision #523)
MD Reference: RF @ 3500 90usft (Precision #523)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
7,892.00	32.80	89.22	7,873.58	8.13	86.03	86.19	6.51	6.31	-3.00
7,923.00	34.91	87.63	7,899.32	8.61	103.29	103.46	7.38	6.81	-5.13
7,955.00	37.37	86.49	7,925.16	9.58	122.13	122.32	7.97	7.69	-3.56
7,987.00	42.12	86.05	7,949.76	10.92	142.54	142.75	14.87	14.84	-1.38
8,018.00	45.20	87.02	7,972.19	12.20	163.90	164.14	10.17	9.94	3.13
8,050.00	46.78	88.34	7,994.42	13.13	186.90	187.15	5.76	4.94	4.13
8,082.00	48.54	89.83	8,015.97	13.51	210.55	210.80	6.49	5.50	4.66
8,114.00	51.88	91.50	8,036.45	13.21	235.13	235.37	11.18	10.44	5.22
8,146.00	55.31	92.20	8,055.44	12.38	260.86	261.08	10.86	10.72	2.19
8,177.00	58.74	92.38	8,072.31	11.34	286.85	287.03	11.08	11.06	0.58
8,209.00	62.08	92.38	8,088.11	10.18	314.65	314.79	10.44	10.44	0.00
8,241.00	65.42	92.47	8,102.26	8.97	343.32	343.43	10.44	10.44	0.28
8,272.00	68.76	92.12	8,114.32	7.83	371.84	371.92	10.82	10.77	-1.13
8,304.00	72.28	91.85	8,124.99	6.78	401.99	402.04	11.03	11.00	-0.84
8,336.00	75.97	91.50	8,133.75	5.88	432.75	432.77	11.58	11.53	-1.09
8,368.00	79.28	90.90	8,140.60	5.23	463.99	463.99	10.50	10.34	-1.88
8,400.00	82.92	90.01	8,145.55	4.98	495.60	495.59	11.70	11.38	-2.78
8,431.00	86.26	89.83	8,148.48	5.02	526.46	526.44	10.79	10.77	-0.58
8,464.00	88.55	89.48	8,149.97	5.22	559.42	559.40	7.02	6.94	-1.06
8,495.00	88.64	89.48	8,150.73	5.50	590.41	590.39	0.29	0.29	0.00
8,527.00	90.13	88.86	8,151.07	5.97	622.41	622.38	5.04	4.66	-1.94
8,622.00	90.13	88.78	8,150.86	7.92	717.39	717.38	0.08	0.00	-0.08
8,717.00	89.96	88.51	8,150.78	10.17	812.36	812.38	0.34	-0.18	-0.28
8,813.00	89.78	88.69	8,151.00	12.51	908.33	908.38	0.27	-0.19	0.19
8,909.00	89.33	89.30	8,151.75	14.20	1,004.31	1,004.38	0.79	-0.47	0.64
9,003.00	89.09	89.39	8,153.04	15.27	1,098.30	1,098.36	0.27	-0.26	0.10
9,099.00	89.78	87.81	8,153.99	17.62	1,194.26	1,194.35	1.80	0.72	-1.65
9,195.00	89.08	87.55	8,154.94	21.50	1,290.18	1,290.33	0.78	-0.73	-0.27
9,290.00	89.96	87.37	8,155.74	25.71	1,385.08	1,385.31	0.95	0.93	-0.19
9,386.00	89.78	87.19	8,155.96	30.27	1,480.97	1,481.28	0.27	-0.19	-0.19
9,481.00	89.78	87.19	8,156.32	34.93	1,575.85	1,576.24	0.00	0.00	0.00
9,577.00	89.60	87.19	8,156.84	39.63	1,671.74	1,672.21	0.19	-0.19	0.00
9,672.00	88.99	87.55	8,158.01	43.99	1,766.63	1,767.17	0.75	-0.64	0.38
9,768.00	90.48	87.63	8,158.45	48.03	1,862.54	1,863.15	1.55	1.55	0.08
9,862.00	90.75	87.81	8,157.45	51.77	1,956.46	1,957.13	0.35	0.29	0.19
9,958.00	90.75	87.28	8,156.19	55.88	2,052.36	2,053.10	0.55	0.00	-0.55
10,052.00	89.60	88.43	8,155.90	59.40	2,146.30	2,147.09	1.73	-1.22	1.22
10,148.00	89.43	88.16	8,156.71	62.25	2,242.25	2,243.08	0.33	-0.18	-0.28
10,243.00	88.64	88.69	8,158.31	64.86	2,337.20	2,338.07	1.00	-0.83	0.56
10,338.00	88.46	88.34	8,160.72	67.33	2,432.14	2,433.04	0.41	-0.19	-0.37
10,434.00	89.78	88.86	8,162.19	69.67	2,528.09	2,529.02	1.48	1.38	0.54
10,529.00	89.60	87.99	8,162.71	72.28	2,623.06	2,624.02	0.94	-0.19	-0.92
10,624.00	89.25	89.22	8,163.66	74.59	2,718.02	2,719.01	1.35	-0.37	1.29

Company: EOG Resources
Project: Eddy County, NM (NAD27 NME)
Site: Sand Tank "17" Federal Com #4H
Well: Sand Tank "17" Federal Com #4H
Wellbore: OH
Design: Actual

Local Co-ordinate Reference: Well, Sand Tank "17" Federal Com #4H
TVD Reference: RF @ 3500 90usft (Precision #523)
MD Reference: RF @ 3500 90usft (Precision #523)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

Survey

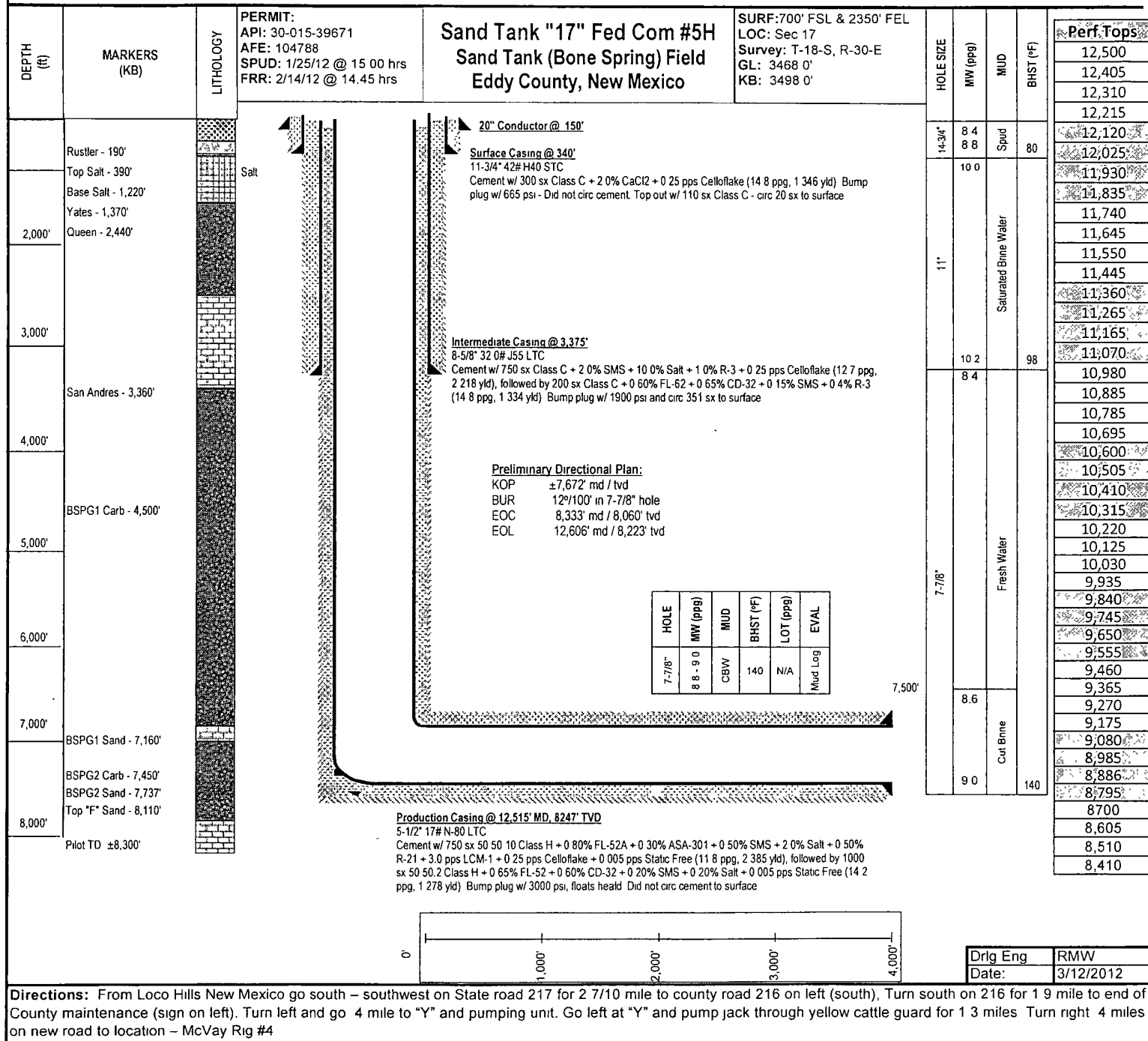
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,719.00	89.08	88.69	8,165.04	76.33	2,812.99	2,814.00	0.59	-0.18	-0.56
10,814.00	88.72	88.16	8,166.87	78.94	2,907.94	2,908.98	0.67	-0.38	-0.56
10,909.00	88.20	90.01	8,169.42	80.45	3,002.89	3,003.94	2.02	-0.55	1.95
11,005.00	89.08	90.18	8,171.70	80.30	3,098.86	3,099.89	0.93	0.92	0.18
11,100.00	89.25	90.10	8,173.08	80.06	3,193.85	3,194.85	0.20	0.18	-0.08
11,195.00	87.23	90.27	8,176.00	79.76	3,288.80	3,289.76	2.13	-2.13	0.18
11,291.00	85.74	90.45	8,181.89	79.15	3,384.62	3,385.54	1.56	-1.55	0.19
11,387.00	85.03	90.10	8,189.61	78.70	3,480.30	3,481.19	0.82	-0.74	-0.36
11,482.00	87.93	89.39	8,195.44	79.12	3,575.11	3,575.99	3.14	3.05	-0.75
11,578.00	88.11	89.22	8,198.76	80.28	3,671.05	3,671.92	0.26	0.19	-0.18
11,674.00	87.58	88.95	8,202.37	81.81	3,766.97	3,767.85	0.62	-0.55	-0.28
11,770.00	87.23	88.60	8,206.72	83.86	3,862.85	3,863.75	0.52	-0.36	-0.36
11,866.00	89.16	87.63	8,209.74	87.02	3,958.74	3,959.70	2.25	2.01	-1.01
11,962.00	87.05	88.51	8,212.92	90.25	4,054.63	4,055.63	2.38	-2.20	0.92
12,058.00	85.82	88.95	8,218.88	92.38	4,150.42	4,151.44	1.36	-1.28	0.46
12,154.00	85.38	88.78	8,226.25	94.27	4,246.11	4,247.16	0.49	-0.46	-0.18
12,250.00	85.03	87.72	8,234.27	97.19	4,341.73	4,342.82	1.16	-0.36	-1.10
12,346.00	84.77	88.43	8,242.81	100.41	4,437.30	4,438.43	0.78	-0.27	0.74
12,442.00	84.59	88.78	8,251.71	102.73	4,532.86	4,534.02	0.41	-0.19	0.36
Last MWD Survey									
12,501.00	84.59	88.78	8,257.27	103.98	4,591.58	4,592.76	0.00	0.00	0.00
Projection to Bit									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,442.00	8,251.71	102.73	4,532.86	Last MWD Survey
12,501.00	8,257.27	103.98	4,591.58	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

COMPLETION WELLSKETCH



Stage Number	Cluster Top	Cluster Bottom	Plug Depth	Perf Length
1	12,480	12,483	12,490	285
1	12,386	12,389	12,490	
1	12,292	12,295	12,490	
1	12,198	12,201	12,490	
2	12,104	12,107	12,148	290
2	12,010	12,013	12,148	
2	11,916	11,919	12,148	
2	11,817	11,820	12,148	
3	11,728	11,731	11,772	285
3	11,634	11,637	11,772	
3	11,540	11,543	11,772	
3	11,446	11,449	11,772	
4	11,352	11,355	11,396	285
4	11,258	11,261	11,396	
4	11,164	11,167	11,396	
4	11,070	11,073	11,396	
5	10,966	10,969	11,022	275
5	10,885	10,888	11,022	
5	10,788	10,801	11,022	
5	10,694	10,697	11,022	
6	10,600	10,603	10,644	285
6	10,502	10,505	10,644	
6	10,412	10,415	10,644	
6	10,318	10,321	10,644	
7	10,224	10,227	10,268	285
7	10,135	10,138	10,268	
7	10,036	10,039	10,268	
7	9,942	9,945	10,268	
8	9,756	9,759	9,892	193
8	9,660	9,663	9,892	
8	9,656	9,659	9,892	
8	9,566	9,569	9,892	
9	9,472	9,475	9,516	285
9	9,379	9,382	9,516	
9	9,280	9,283	9,516	
9	9,190	9,193	9,516	
10	9,096	9,099	9,140	285
10	9,002	9,005	9,140	
10	8,902	8,905	9,140	
10	8,814	8,817	9,140	
11	8720	8723	8,764	285
11	8,626	8,629	8,764	
11	8,538	8,541	8,764	
11	8,438	8,441	8,764	