

EOG Resources

30-015-39505

Eddy County, NM (NAD27 NME)
Parkway "23" State Com #5H
Parkway "23" State Com #5H
OH - Job #32D0212189

Design: Actual

SDI Standard Survey Report

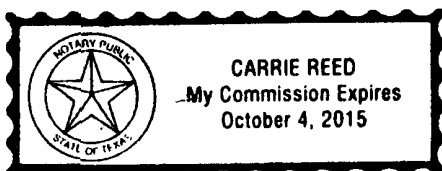
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 20th of April, 2012.

[Signature]

Notary Signature
County of Midland
State of Texas



Company:	EOG Resources	Local Co-ordinate Reference:	Well Parkway "23" State Com #5H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RF @ 3328 60usft (Precision #523)
Site:	Parkway "23" State Com #5H	MD Reference:	RF @ 3328 60usft (Precision #523)
Well:	Parkway "23" State Com #5H	North Reference:	Grid
Wellbore:	OH - Job #32D0212189	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

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	Parkway "23" State Com #5H		
Site Position:		Northing:	600,568 90 usft
From:	Map	Easting:	586,330 10 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 39' 2 708 N
		Longitude:	104° 3' 10 245 W
		Grid Convergence:	0 15 °

Well	Parkway "23" State Com #5H		
Well Position	+N/-S	0 00 usft	Northing: 600,568 90 usft
	+E/-W	0 00 usft	Easting: 586,330 10 usft
Position Uncertainty	0 00 usft	Wellhead Elevation:	usft
		Latitude:	32° 39' 2 708 N
		Longitude:	104° 3' 10 245 W
		Ground Level:	3,310 60 usft

Wellbore	OH - Job #32D0212189				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/23/12	7 76	60 48	48,752

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	03/07/12		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100 00	269 00	Gyro (OH - Job #32D0212189)	Keeper	Keeper Standard Rate Gyro
415 00	11,455 00	MWD (OH - Job #32D0212189)	MWD	MWD - Standard ISCWSA

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
100 00	0 45	87 88	100 00	0 01	0 39	87 88	0 39
200 00	0 80	192 89	200 00	-0 65	0 63	136 00	0 91
269 00	0 80	244 26	268 99	-1 33	0 09	176 22	1 33
Gyro Tie-in							
415 00	1 93	207 83	414 95	-3 95	-1 98	206 62	4 42
508 00	1 76	210 70	507 90	-6 56	-3 44	207 66	7 41
599 00	0 79	200 35	598 88	-8 35	-4 37	207 63	9 42
690 00	0 53	178 99	689 87	-9 36	-4 58	206 08	10 42
780 00	0 53	181 63	779 87	-10 19	-4 59	204 22	11 18
872 00	0 70	150 60	871 86	-11 11	-4 32	201 26	11 92

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Site:	Parkway "23" State Com #5H	MD Reference:	RF @ 3328 60usft (Precision #523)
Well:	Parkway "23" State Com #5H	North Reference:	Grid
Wellbore:	OH - Job #32D0212189	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
963 00	0 88	117 56	962 85	-11 91	-3 43	196 06	12 40
1,055 00	2 11	63 24	1,054 82	-11 48	-1 29	186 41	11 55
1,146 00	1 93	75 02	1,145 77	-10 33	1 69	170 73	10 46
1,235 00	0 87	70 73	1,234 74	-9 72	3 77	158 79	10 42
1,325 00	0 62	57 70	1,324 73	-9 23	4 83	152 39	10 42
1,416 00	0 53	34 06	1,415 73	-8 62	5 48	147 55	10 21
1,511 00	0 62	20 70	1,510 72	-7 78	5 91	142 77	9 76
1,607 00	0 70	332 10	1,606 72	-6 77	5 82	139 33	8 93
1,702 00	0 97	324 28	1,701 71	-5 61	5 08	137 84	7 56
1,798 00	0 18	325 07	1,797 70	-4 82	4 52	136 88	6 61
1,893 00	0 35	336 23	1,892 70	-4 43	4 31	135 79	6 19
1,989 00	0 44	323 22	1,988 70	-3 87	3 97	134 24	5 55
2,085 00	0 70	325 77	2,084 69	-3 09	3 42	132 07	4 61
2,180 00	0 79	323 31	2,179 68	-2 09	2 71	127 62	3 42
2,276 00	0 70	326 39	2,275 68	-1 07	1 99	118 24	2 25
2,371 00	0 88	332 54	2,370 67	0 06	1 33	87 22	1 33
2,467 00	0 84	322 46	2,466 66	1 28	0 56	23 65	1 39
2,562 00	0 97	320 76	2,561 65	2 45	-0 37	351 33	2 48
2,658 00	0 97	315 31	2,657 63	3 66	-1 46	338 25	3 94
2,754 00	1 06	310 56	2,753 62	4 81	-2 71	330 66	5 52
2,849 00	0 53	285 00	2,848 61	5 50	-3 80	325 37	6 68
2,944 00	0 53	278 92	2,943 60	5 68	-4 66	320 66	7 34
3,040 00	0 53	110 00	3,039 60	5 60	-4 68	320 12	7 29
3,135 00	0 79	110 61	3,134 60	5 22	-3 65	325 01	6 37
3,230 00	0 88	99 19	3,229 59	4 87	-2 32	334 54	5 39
3,354 00	0 26	115 01	3,353 58	4 60	-1 12	346 27	4 73
3,449 00	0 18	5 67	3,448 58	4 66	-0 91	348 90	4 74
3,544 00	0 26	359 34	3,543 58	5 02	-0 90	349 82	5 10
3,639 00	0 18	346 95	3,638 58	5 38	-0 94	350 12	5 46
3,734 00	0 62	200 44	3,733 58	5 04	-1 15	347 15	5 17
3,830 00	0 88	222 41	3,829 57	4 01	-1 83	335 50	4 41
3,926 00	1 23	252 56	3,925 55	3 16	-3 31	313 68	4 58
4,021 00	0 44	289 65	4,020 54	2 98	-4 63	302 77	5 50
4,117 00	1 06	280 07	4,116 53	3 26	-5 85	299 12	6 69
4,212 00	0 88	233 40	4,211 52	2 98	-7 30	292 18	7 88
4,308 00	1 06	161 50	4,307 51	1 69	-7 61	282 55	7 79
4,404 00	1 06	73 52	4,403 50	1 10	-6 47	279 67	6 57
4,499 00	1 14	53 92	4,498 48	1 91	-4 87	291 42	5 23
4,594 00	1 32	46 01	4,593 46	3 23	-3 32	314 20	4 63
4,690 00	1 32	39 60	4,689 43	4 85	-1 82	339 45	5 18
4,785 00	0 35	134 26	4,784 43	5 49	-0 91	350 57	5 56
4,881 00	0 18	36 26	4,880 42	5 40	-0 61	353 54	5 44
4,976 00	0 09	328 93	4,975 42	5 59	-0 56	354 25	5 62
5,071 00	0 44	344 49	5,070 42	6 00	-0 70	353 36	6 04
5,167 00	0 79	336 23	5,166 42	6 96	-1 06	351.31	7 04

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Well:	Parkway "23" State Com #5H	North Reference:	Grid
Wellbore:	OH - Job #32D0212189	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,262 00	1 06	310 04	5,261 41	8 13	-2 00	346 17	8 37
5,357 00	1 32	319 79	5,356 38	9 53	-3 38	340 47	10 11
5,453 00	1 85	321 73	5,452 35	11 59	-5 05	336 44	12 64
5,548 00	0 97	286 13	5,547 32	13 02	-6 78	332 50	14 68
5,643 00	0 35	40 04	5,642 32	13 46	-7 36	331 33	15 34
5,738 00	0 70	36 43	5,737 31	14 15	-6 83	334 24	15 71
5,834 00	1 58	345 37	5,833 29	15 91	-6 82	336 80	17 30
5,929 00	1 85	323 22	5,928 25	18 40	-8 07	336 33	20 09
6,024 00	1 85	351 26	6,023 20	21 14	-9 22	336 45	23 07
6,119 00	0 70	72 56	6,118 18	22 83	-8 90	338 72	24 51
6,215 00	1 41	82 31	6,214 17	23 17	-7 17	342 81	24 25
6,310 00	1 58	75 98	6,309 13	23 64	-4 74	348 67	24 11
6,406 00	1 32	67 64	6,405 10	24 38	-2 43	354 31	24 50
6,430 00	1 41	65 79	6,429 10	24 61	-1 91	355 57	24 68
6,457 00	1 14	56 91	6,456 09	24 89	-1 38	356 83	24 93
6,489 00	2 55	78 36	6,488 07	25 21	-0 41	359 06	25 21
6,521 00	7 03	90 05	6,519 95	25 35	2 24	5 06	25 45
6,553 00	11 43	91 45	6,551 53	25 27	7 37	16 27	26 32
6,584 00	15 65	91 54	6,581 66	25 08	14 63	30 25	29 03
6,616 00	20 40	91 01	6,612 08	24 86	24 52	44 60	34 92
6,680 00	28 23	90 14	6,670 36	24 63	50 85	64 16	56 51
6,712 00	32 01	90 84	6,698 04	24 49	66 91	69 90	71 25
6,743 00	34 73	90 93	6,723 92	24 22	83 96	73 91	87 38
6,775 00	37 20	92 16	6,749 82	23 71	102 74	77 00	105 44
6,807 00	40 10	92 16	6,774 81	22 96	122 71	79 40	124 84
6,839 00	43 09	91 63	6,798 74	22 26	143 94	81 21	145 65
6,871 00	46 34	90 93	6,821 48	21 76	166 45	82 55	167 86
6,903 00	49 24	90 75	6,842 97	21 41	190 14	83 57	191 34
6,935 00	51 97	90 93	6,863 28	21 05	214 87	84 40	215 89
6,966 00	55 22	90 66	6,881 68	20 71	239 81	85 07	240 70
6,998 00	58 56	90 40	6,899 15	20 46	266 61	85 61	267 39
7,031 00	62 34	88 11	6,915 43	20 84	295 31	85 96	296 04
7,063 00	65 69	86 62	6,929 45	22 17	324 04	86 09	324 79
7,095 00	69 29	86 53	6,941 70	23 94	353 54	86 13	354 35
7,127 00	73 07	87 06	6,952 02	25 63	383 78	86 18	384 63
7,159 00	76 85	87 32	6,960 32	27 14	414 64	86 25	415 52
7,191 00	80 02	88 03	6,966 73	28 41	445 96	86 35	446 86
7,222 00	81 60	88 29	6,971 68	29 39	476 54	86 47	477 45
7,254 00	82 04	87 85	6,976 24	30 46	508 20	86 57	509 11
7,286 00	82 04	87 78	6,980 67	31 67	539 87	86 64	540 80
7,318 00	83 89	88 11	6,984 59	32 81	571 61	86 72	572 55
7,350 00	85 38	88 64	6,987 58	33 71	603 45	86 80	604 39
7,382 00	87 49	88 47	6,989 57	34 52	635 38	86 89	636 31
7,477 00	87 41	89 08	6,993 80	36 55	730 26	87 14	731 18

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Well:	Parkway "23" State Com #5H	North Reference:	Grid
Wellbore:	OH - Job #32D0212189	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

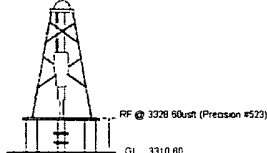
Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
7,573 00	86 88	88 20	6,998 58	38 82	826 11	87 31	827 03
7,668 00	86 70	88 64	7,003.90	41 44	920 93	87 42	921 86
7,764 00	86 44	88 73	7,009 64	43 64	1,016 73	87 54	1,017 67
7,859 00	88 11	89 17	7,014 16	45 37	1,111 60	87 66	1,112 53
7,955 00	87 41	88 55	7,017 91	47 28	1,207 51	87 76	1,208 44
8,050 00	86 88	88 73	7,022 64	49 53	1,302 37	87 82	1,303 31
8,145 00	87 14	88 20	7,027 60	52 08	1,397 20	87 87	1,398 17
8,241 00	90 40	89 43	7,029 66	54 06	1,493 14	87 93	1,494 12
8,336 00	90 31	89 08	7,029 07	55 30	1,588 13	88 01	1,589 10
8,431 00	89 52	88 64	7,029 21	57 19	1,683 11	88 05	1,684 09
8,527 00	89 43	88 29	7,030 09	59 76	1,779 08	88 08	1,780 08
8,623 00	89 25	88 64	7,031 20	62 33	1,875 03	88 10	1,876 07
8,718.00	89 08	88 82	7,032 58	64 43	1,970 00	88 13	1,971 05
8,813 00	88 11	88 99	7,034 91	66 25	2,064 95	88 16	2,066 02
8,909.00	88 20	89 26	7,038 00	67 71	2,160 89	88 21	2,161 95
9,005 00	86 79	88 90	7,042 20	69.25	2,256 79	88 24	2,257 85
9,100 00	85 38	87 76	7,048 68	72 01	2,351 52	88 25	2,352 62
9,196 00	85 65	88 47	7,056 19	75 16	2,447 17	88 24	2,448 33
9,292 00	88 55	88 90	7,061 05	77 36	2,543 02	88 26	2,544 19
9,387 00	88 72	88 90	7,063 31	79 19	2,637 97	88 28	2,639 16
9,482 00	89 69	89 61	7,064 63	80 42	2,732 95	88 31	2,734 14
9,578 00	88 02	89 52	7,066 54	81 15	2,828 93	88 36	2,830 09
9,674 00	87 32	90 31	7,070 45	81 29	2,924 85	88 41	2,925 98
9,769 00	85 12	90 57	7,076 71	80 56	3,019 63	88 47	3,020 71
9,864 00	84 42	90 49	7,085 37	79 69	3,114 23	88 53	3,115 25
9,959 00	86 00	90 93	7,093 30	78 52	3,208 89	88 60	3,209 85
10,055 00	87 67	90 66	7,098 60	77 19	3,304 73	88 66	3,305 63
10,150 00	87 76	91 28	7,102 39	75 58	3,399 64	88 73	3,400 48
10,246 00	87 23	91 10	7,106 59	73 59	3,495 53	88 79	3,496 30
10,341 00	89 78	91 37	7,109 06	71 54	3,590 46	88 86	3,591 18
10,437 00	89 66	90 12	7,109 53	70 29	3,686 45	88 91	3,687 12
10,532 00	89 52	90 05	7,110 21	70 15	3,781 45	88 94	3,782 10
10,627 00	88 20	89 78	7,112 10	70 29	3,876 43	88 96	3,877 07
10,723 00	87 05	89 08	7,116 08	71 25	3,972 34	88 97	3,972.98
10,819 00	86 88	88 99	7,121 16	72 86	4,068 19	88 97	4,068 84
10,914 00	86 09	88 64	7,126 99	74 82	4,162 99	88 97	4,163 66
11,009 00	85 38	88 38	7,134 05	77 28	4,257 70	88 96	4,258 40
11,105 00	83 98	88 55	7,142 95	79 85	4,353 25	88 95	4,353 98
11,201 00	83 10	87 41	7,153 76	83 21	4,448 57	88 93	4,449 35
11,297 00	83 27	87 32	7,165 15	87 59	4,543 80	88 90	4,544 64
11,393.00	81 95	87 32	7,177 49	92 04	4,638 89	88 86	4,639 80
Last MWD Survey							
11,455 00	81 95	87 32	7,186 18	94 91	4,700 21	88 84	4,701 17
Projection to Bit - PBHL-Parkway "23" State Com #5H							

Company:	EOG Resources	Local Co-ordinate Reference:	Well Parkway "23" State Com #5H
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Site:	Parkway "23" State Com #5H	MD Reference:	RF @ 3328 60usft (Precision #523)
Well:	Parkway "23" State Com #5H	North Reference:	Grid
Wellbore:	OH - Job #32D0212189	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,393 00	7,177 49	92.04	4,638 89	Last MWD Survey
11,455 00	7,186 18	94 91	4,700.21	Projection to Bit



Parkway "23" State Com #5H
Eddy County, NM (NAD27 NME)
Northing (Y) 600568.90
Easting (X) 586330.10
Plan #3 vs Actual - 7-7/8" Hole



WELL DETAILS: Parkway "23" State Com #5H

	North	East	Ground Level	3310 80	Latitude	Longitude	Slot
+N S	0.00	+E/W	0.00	600568.90	586330.10	32° 39' 2.708 N	104° 2' 10.345 W

SECTION DETAILS

Sec	MD	Inc	Ap	TVD	+N-S	+E-W	Diag	TFace	VSec	Target
1	8430.00	1.41	65.79	8429.10	24.61	-1.91	0.00	0.00	-1.35	
2	8512.00	1.41	65.79	8511.07	25.44	-0.06	0.00	0.00	0.51	
3	7253.95	87.99	88.07	6895.00	37.84	472.93	11.89	23.30	473.56	
4	11508.09	87.99	88.07	7139.00	108.90	4723.80	0.00	0.00	4735.01	PBHL-Parkway "23" State Com #5H

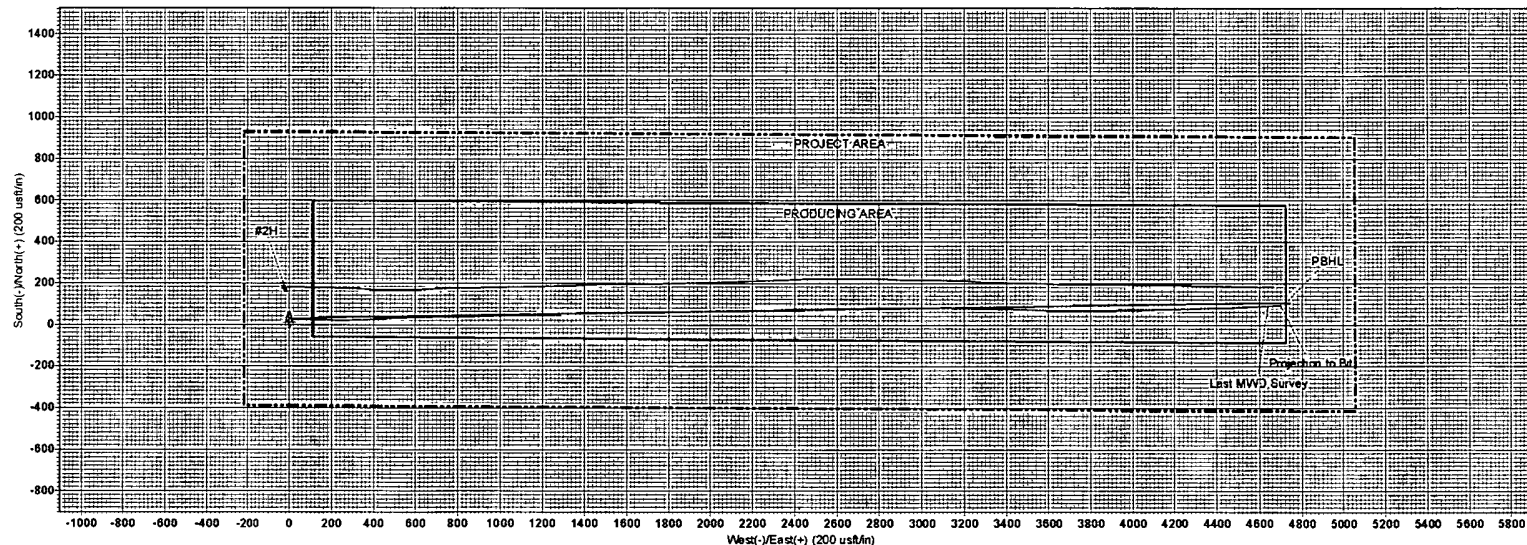
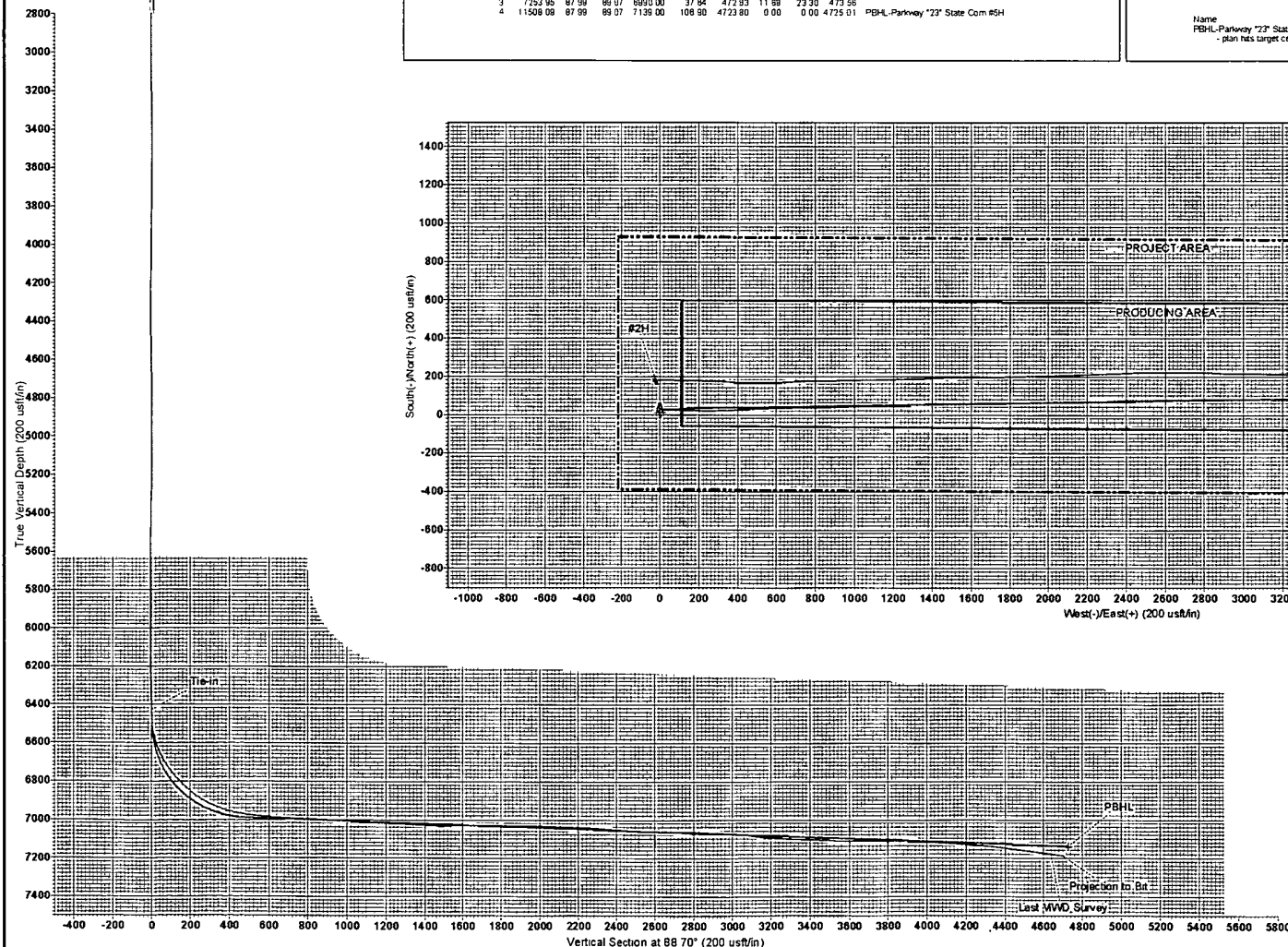
PROJECT DETAILS: Eddy County NM (NAD27 NME)
Geodetic System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone New Mexico East 3001
System Datum Mean Sea Level

SITE DETAILS: Parkway "23" State Com #5H
Site Centre Northing 600568.90
Easting 586330.10
Positional Uncertainty 0.00
Convergence 0.15
Local North Grid

Map System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone Name New Mexico East 3001
Local Origin Well Parkway "23" State Com #5H Grid North
Latitude 32° 39' 2.708 N
Longitude 104° 2' 10.345 W
Grid East 586330.10
Grid North 600568.90
Scale Factor 1.000
Geomagnetic Model IGRF 2010
Sample Date 23-Feb-12
Magnetic Declination 7.78°
Dip Angle from Horizontal 80.45°
Magnetic Field Strength 48752
To convert Magnetic North to Grid Add 7.60°
To convert True North to Grid Subtract 0.12°

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	North	East	Latitude	Longitude	Shape
PBHL-Parkway "23" State Com #5H 38.00	108.90	4723.80	600675.90	591053.90	32° 39' 3.636 N	104° 2' 14.980 W	Point	
- plan has target center								



LEGEND
 — Parkway "23" State Com #5H OH Actual VO
 — Parkway "23" State Com #5H OH Gyro
 — Parkway "23" State Com #5H OH MWD
 — Plan #3 - 7-7/8" Hole