

Cimarex Energy Co.

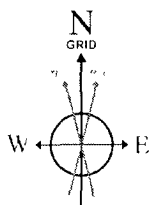
Location Eddy County NM
Field Parkway
Facility Parkway 11 State Com No. 3H

Slot No. 3H SHL
Well No. 3H
Wellbore No. 3H PWB

30-015-38093

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	181.990	0.00	0.00	0.00	0.00	0.00
EST. KOP	7759.00	0.000	181.990	7759.00	0.00	0.00	0.00	0.00
END OF CURVE	8059.00	90.000	181.990	7949.99	190.87	-6.63	30.00	190.99
No. 3H PBHL	12654.43	90.000	181.990	7950.00	4783.53	166.21	0.00	4786.42



BGGM (1945.0 to 2011.0) Dip: 60.57° Field: 48987.6 nT
Magnetic North is 7.98 degrees East of True North (at 8/20/2010)
Grid North is 0.16 degrees East of True North

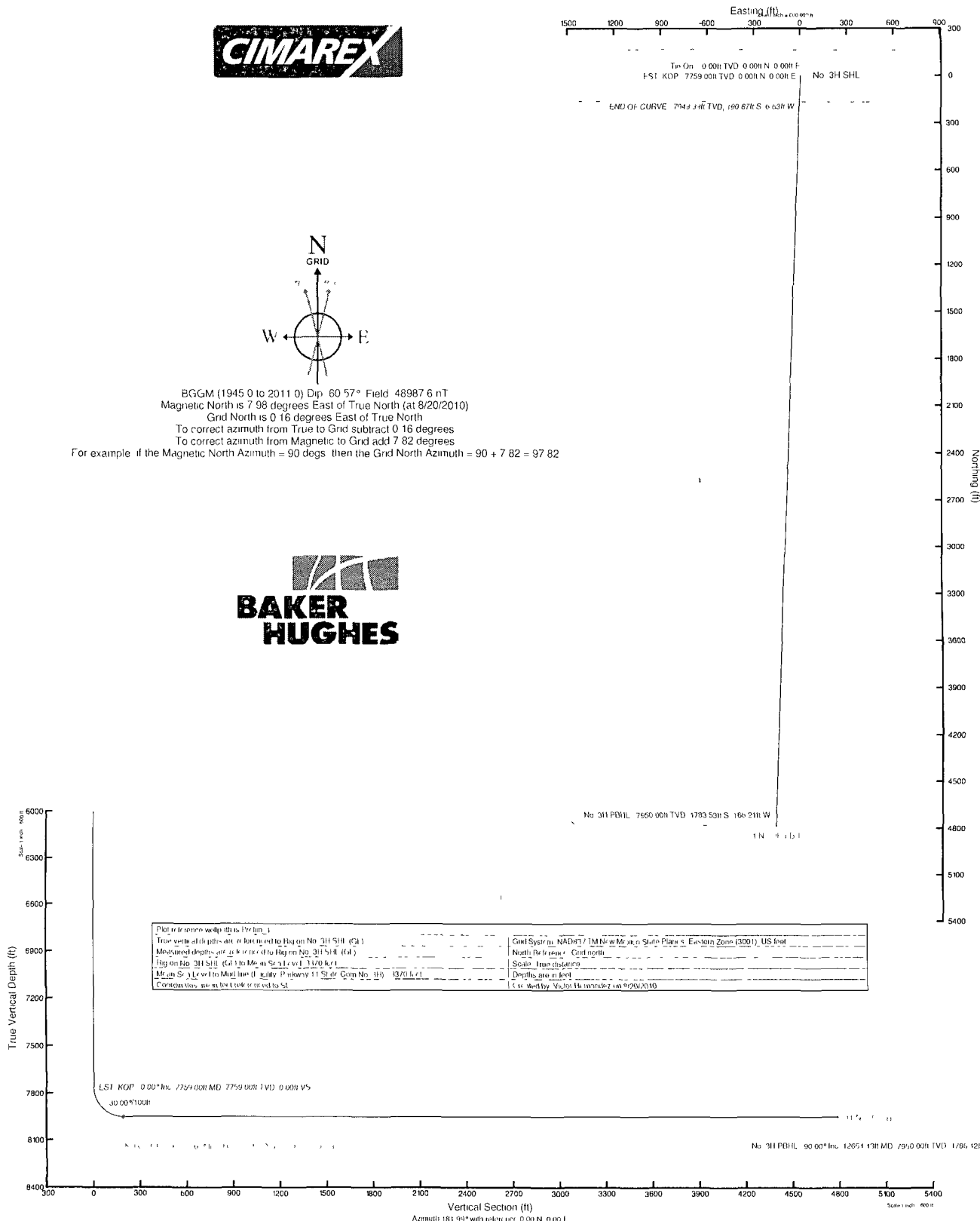
To correct azimuth from True to Grid subtract 0.16 degrees

To correct azimuth from Magnetic to Grid add 7.82 degrees

For example if the Magnetic North Azimuth = 90 degs then the Grid North Azimuth = 90 + 7.82 = 97.82



**BAKER
HUGHES**





Planned Wellpath Report

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REPORT IDENTIFICATION

Operator **Cimarex Energy Co.**
Area **Eddy County, NM**
Field **Parkway**
Facility **Parkway 11 State Com No. 3H**

Slot **No. 3H SHL**
Well **No. 3H**
Wellbore **No. 3H PWB**

REPORT SETUP

Projection System **NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet** Software System **WellArchitect® 2.0**
North Reference **Grid** User **Victor Hernandez**
Scale **0.999918** Report Generated **8/20/2010 at 3:18:39 PM**
Convergence at slot **0.16° East** Database/Source file **WA_Midland/No. 3H_PWB.xml**

WELLPOINT DATA

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	630732.70	611942.30	32°40'54.974"N	104°02'34.008"W
Facility Reference Pt			630732.70	611942.30	32°40'54.974"N	104°02'34.008"W
Field Reference Pt			623994.14	604893.77	32°39'45.403"N	104°03'53.063"W

WELLPATH DATA

Calculation method	Minimum curvature	Rig on No. 3H SHL (GL) to GL	0.00ft
Horizontal Reference Pt	SL	Rig on No. 3H SHL (GL) to Mean Sea Level	3370.00ft
Vertical Reference Pt	Rig on No. 3H SHL (GL)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (GL)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	181.99°



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REFERENCE WELL PATH IDENTIFICATION

Operator **Cimarex Energy Co.**

Slot **No. 3H SHL**

Area **Eddy County, NM**

Well **No. 3H**

Field **Parkway**

Wellbore **No. 3H PWB**

Facility **Parkway 11 State Com No. 3H**

WELLPATH DATA (52 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0 00	0 000	181 990	0 00	0 00	0 00	0 00	630732 70	611942 30	32°40'54 974"N	104°02'34 008"W	0 00	Tie On
7759 00	0 000	181 990	7759 00	0 00	0 00	0 00	630732 70	611942 30	32°40'54 974"N	104°02'34 008"W	0 00	FST KOP
7859 00	30 000	181 990	7854 49	25 59	-25 57	-0 89	630731 81	611916 73	32°40'54 721"N	104°02'34 020"W	30 00	
7959 00	60 000	181 990	7924 40	95 49	-95 44	-3 32	630729 38	611846 87	32°40'54 030"N	104°02'34 050"W	30 00	
8059 00	90 000	181 990	7949 99	190 99	-190 87	-6 63	630726 07	611751 45	32°40'53 086"N	104°02'34 092"W	30 00	END OF CURVE
8059 00	90 000	181 990	7949 99	190 99	-190 87	-6 63	630726 07	611751 45	32°40'53 086"N	104°02'34 092"W	0 00	
8159 00	90 000	181 990	7949 99	290 99	-290 81	-10 10	630722 60	611651 51	32°40'52 097"N	104°02'34 136"W	0 00	
8259 00	90 000	181 990	7949 99	390 99	-390 75	-13 58	630719 12	611551 58	32°40'51 108"N	104°02'34 180"W	0 00	
8359 00	90 000	181 990	7949 99	490 99	-490 69	-17 05	630715 65	611451 65	32°40'50 119"N	104°02'34 224"W	0 00	
8459 00	90 000	181 990	7949 99	590 99	-590 63	-20 52	630712 18	611351 72	32°40'49 131"N	104°02'34 267"W	0 00	
8559 00	90 000	181 990	7949 99	690 99	-690 57	-24 00	630708 71	611251 79	32°40'48 142"N	104°02'34 311"W	0 00	
8659 00	90 000	181 990	7949 99	790 99	-790 51	-27 47	630705 23	611151 86	32°40'47 153"N	104°02'34 355"W	0 00	
8759 00	90 000	181 990	7949 99	890 99	-890 45	-30 94	630701 76	611051 93	32°40'46 164"N	104°02'34 399"W	0 00	
8859 00	90 000	181 990	7949 99	990 99	-990 39	-34 41	630698 29	610951 99	32°40'45 176"N	104°02'34 443"W	0 00	
8959 00	90 000	181 990	7949 99	1090 99	-1090 33	-37 89	630694 82	610852 06	32°40'44 187"N	104°02'34 487"W	0 00	
9059 00	90 000	181 990	7949 99	1190 99	-1190 27	-41 36	630691 35	610752 13	32°40'43 198"N	104°02'34 530"W	0 00	
9159 00	90 000	181 990	7949 99	1290 99	-1290 21	-44 83	630687 87	610652 20	32°40'42 209"N	104°02'34 574"W	0 00	
9259 00	90 000	181 990	7949 99	1390 99	-1390 15	-48 30	630684 40	610552 27	32°40'41 221"N	104°02'34 618"W	0 00	
9359 00	90 000	181 990	7949 99	1490 99	-1490 09	-51 78	630680 93	610452 34	32°40'40 232"N	104°02'34 662"W	0 00	
9459 00	90 000	181 990	7949 99	1590 99	-1590 03	-55 25	630677 46	610352 41	32°40'39 243"N	104°02'34 706"W	0 00	
9559 00	90 000	181 990	7949 99	1690 99	-1689 97	-58 72	630673 98	610252 48	32°40'38 254"N	104°02'34 749"W	0 00	
9659 00	90 000	181 990	7949 99	1790 99	-1789 91	-62 19	630670 51	610152 54	32°40'37 266"N	104°02'34 793"W	0 00	
9759 00	90 000	181 990	7949 99	1890 99	-1889 85	-65 67	630667 04	610052 61	32°40'36 277"N	104°02'34 837"W	0 00	
9859 00	90 000	181 990	7949 99	1990 99	-1989 79	-69 14	630663 57	609952 68	32°40'35 288"N	104°02'34 881"W	0 00	
9959 00	90 000	181 990	7949 99	2090 99	-2089 72	-72 61	630660 09	609852 75	32°40'34 299"N	104°02'34 925"W	0 00	
10059 00	90 000	181 990	7949 99	2190 99	-2189 66	-76 08	630656 62	609752 82	32°40'33 311"N	104°02'34 969"W	0 00	
10159 00	90 000	181 990	7949 99	2290 99	-2289 60	-79 56	630653 15	609652 89	32°40'32 322"N	104°02'35 012"W	0 00	
10259 00	90 000	181 990	7949 99	2390 99	-2389 54	-83 03	630649 68	609552 96	32°40'31 333"N	104°02'35 056"W	0 00	
10359 00	90 000	181 990	7949 99	2490 99	-2489 48	-86 50	630646 20	609453 02	32°40'30 344"N	104°02'35 100"W	0 00	
10459 00	90 000	181 990	7949 99	2590 99	-2589 42	-89 98	630642 73	609353 09	32°40'29 356"N	104°02'35 144"W	0 00	



Planned Wellpath Report

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REFERENCE WELL: 3H SHL

Operator **Cimarex Energy Co.**

Slot **No. 3H SHL**

Area **Eddy County, NM**

Well **No. 3H**

Field **Parkway**

Wellbore **No. 3H PWB**

Facility **Parkway 11 State Com No. 3H**

WELLPATH DATA (52 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10559 00†	90 000	181 990	7949 99	2690 99	-2689 36	-93 45	630639 26	609253 16	32°40'28 367"N	104°02'35 188"W	0 00	
10659 00†	90 000	181 990	7949 99	2790 99	-2789 30	-96 92	630635 79	609153 23	32°40'27 378"N	104°02'35 232"W	0 00	
10759 00†	90 000	181 990	7949 99	2890 99	-2889 24	-100 39	630632 32	609053 30	32°40'26 389"N	104°02'35 275"W	0 00	
10859 00†	90 000	181 990	7949 99	2990 99	-2989 18	-103 87	630628 84	608953 37	32°40'25 401"N	104°02'35 319"W	0 00	
10959 00†	90 000	181 990	7949 99	3090 99	-3089 12	-107 34	630625 37	608853 44	32°40'24 412"N	104°02'35 363"W	0 00	
11059 00†	90 000	181 990	7950 00	3190 99	-3189 06	-110 81	630621 90	608753 51	32°40'23 423"N	104°02'35 407"W	0 00	
11159 00†	90 000	181 990	7950 00	3290 99	-3289 00	-114 28	630618 43	608653 57	32°40'22 434"N	104°02'35 451"W	0 00	
11259 00†	90 000	181 990	7950 00	3390 99	-3388 94	-117 76	630614 95	608553 64	32°40'21 446"N	104°02'35 494"W	0 00	
11359 00†	90 000	181 990	7950 00	3490 99	-3488 88	-121 23	630611 48	608453 71	32°40'20 457"N	104°02'35 538"W	0 00	
11459 00†	90 000	181 990	7950 00	3590 99	-3588 82	-124 70	630608 01	608353 78	32°40'19 468"N	104°02'35 582"W	0 00	
11559 00†	90 000	181 990	7950 00	3690 99	-3688 76	-128 17	630604 54	608253 85	32°40'18 479"N	104°02'35 626"W	0 00	
11659 00†	90 000	181 990	7950 00	3790 99	-3788 70	-131 65	630601 06	608153 92	32°40'17 491"N	104°02'35 670"W	0 00	
11759 00†	90 000	181 990	7950 00	3890 99	-3888 64	-135 12	630597 59	608053 99	32°40'16 502"N	104°02'35 714"W	0 00	
11859 00†	90 000	181 990	7950 00	3990 99	-3988 58	-138 59	630594 12	607954 06	32°40'15 513"N	104°02'35 757"W	0 00	
11959 00†	90 000	181 990	7950 00	4090 99	-4088 52	-142 06	630590 65	607854 12	32°40'14 524"N	104°02'35 801"W	0 00	
12059 00†	90 000	181 990	7950 00	4190 99	-4188 46	-145 54	630587 18	607754 19	32°40'13 536"N	104°02'35 845"W	0 00	
12159 00†	90 000	181 990	7950 00	4290 99	-4288 40	-149 01	630583 70	607654 26	32°40'12 547"N	104°02'35 889"W	0 00	
12259 00†	90 000	181 990	7950 00	4390 99	-4388 34	-152 48	630580 23	607554 33	32°40'11 558"N	104°02'35 933"W	0 00	
12359 00†	90 000	181 990	7950 00	4490 99	-4488 28	-155 95	630576 76	607454 40	32°40'10 569"N	104°02'35 976"W	0 00	
12459 00†	90 000	181 990	7950 00	4590 99	-4588 22	-159 43	630573 29	607354 47	32°40'09 581"N	104°02'36 020"W	0 00	
12559 00†	90 000	181 990	7950 00	4690 99	-4688 16	-162 90	630569 81	607254 54	32°40'08 592"N	104°02'36 064"W	0 00	
12654 43	90 000	181 990	7950 00	4786 42	-4783 53	-166 21	630566 50	607159 17	32°40'07 648"N	104°02'36 106"W	0 00	No 3H PBHL



Planned Wellpath Report

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Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	Parkway	Wellbore	No. 3H PWB
Facility	Parkway 11 State Com No. 3H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) 11 No. 3H PBHL	12654.43	7950.00	4783.53	-166.21	630566.50	607159.17	32°40'07.648"N	104°02'36.106"W	point

SURVEY PROGRAM Ref Wellbore: No. 3H PWB Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	12654.43	NaviTrak (Standard)		No. 3H PWB