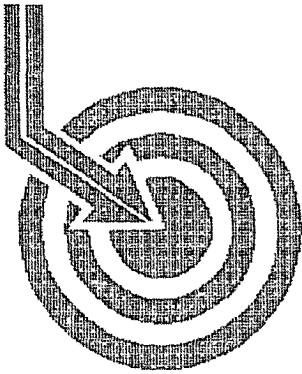


30.015.36408



Scientific Drilling

CIMAREX ENERGY

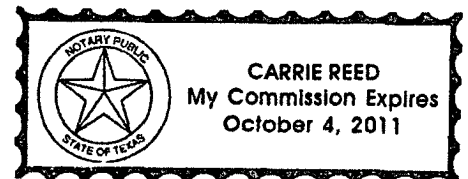
Field: Cottonwood Draw
Site: Eddy County, NM
Well: White City 14 Federal #5
Wellpath: VH - Job #32K1008804
Survey: 10/12/08

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

.....Luhan.....Company Representative

Notorized this date 24th of November, 2008.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: CIMAREX ENERGY	Date: 11/15/2008	Time: 16:26:05	Page: 1
Field: Cottonwood Draw	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE: 0.0	
Well: White City 14 Federal #5	Section (VS) Reference:	Well: (0.00N,0.00E,179.71Azi)	
Wellpath: VH - Job #32K1008804	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 10/12/08 KSRG 0'-2393'	Start Date: 10/12/2008
Company: Scientific Drilling Internatio	Engineer: Pena w/P&M
Tool: Keeper;Keeper Gyro	Tied-to: From Surface

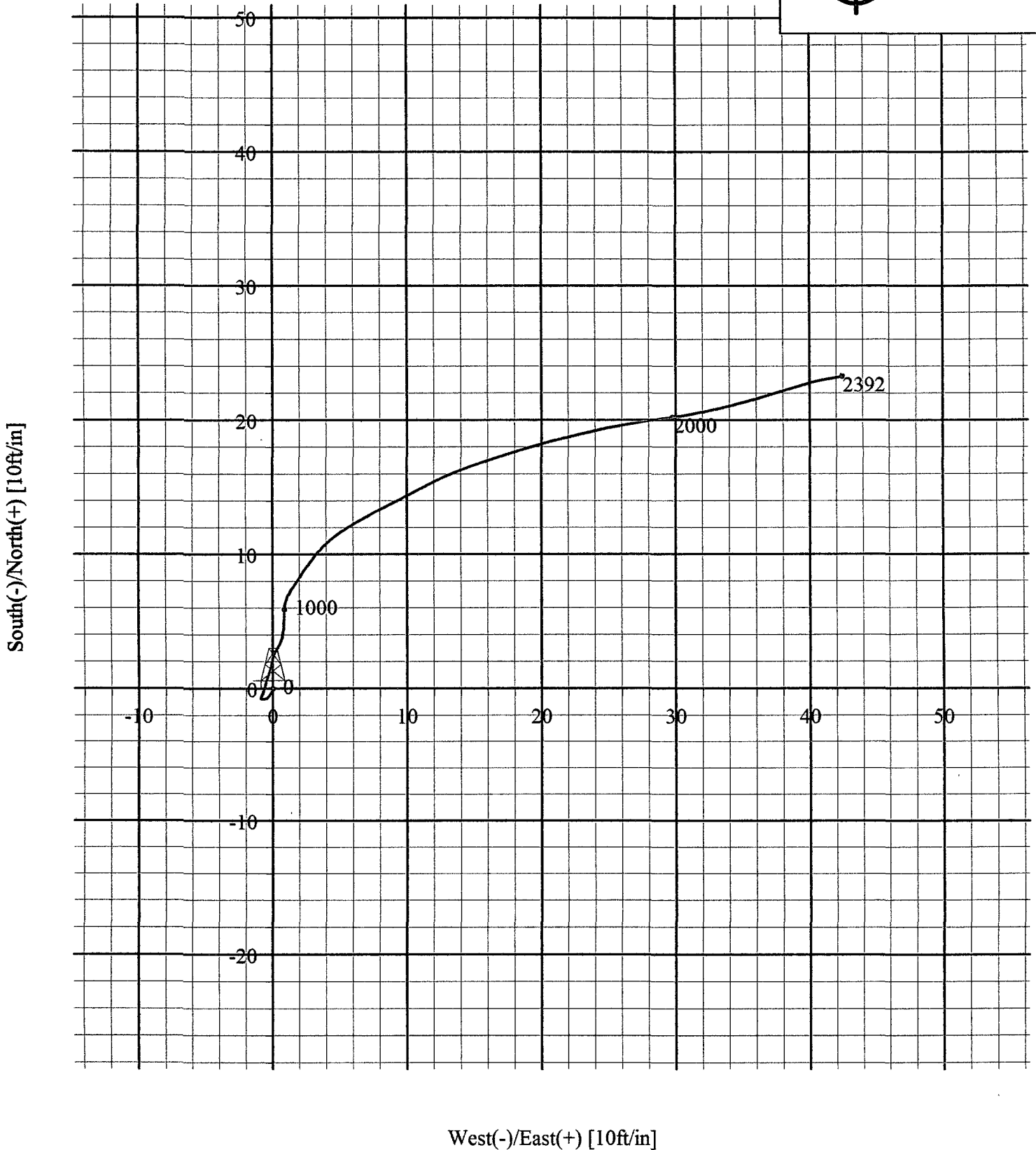
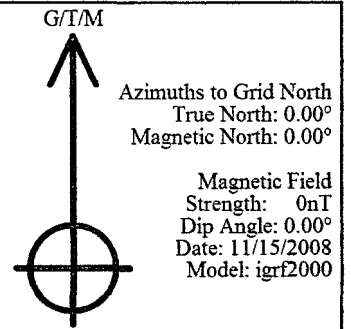
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.49	206.23	100.00	0.38	-0.38	-0.19	0.49	0.43	206.23
200.00	0.25	271.55	200.00	0.76	-0.76	-0.60	0.45	0.97	218.06
300.00	0.09	262.94	300.00	0.76	-0.76	-0.89	0.16	1.18	229.39
400.00	0.53	24.30	400.00	0.35	-0.35	-0.78	0.58	0.86	245.64
500.00	0.29	7.86	499.99	-0.32	0.32	-0.55	0.26	0.64	299.91
600.00	0.63	23.54	599.99	-1.08	1.07	-0.30	0.36	1.12	344.36
700.00	0.54	3.94	699.98	-2.05	2.05	-0.05	0.22	2.05	358.64
800.00	0.74	34.45	799.98	-3.05	3.05	0.35	0.39	3.07	6.53
900.00	0.88	4.94	899.97	-4.34	4.35	0.78	0.43	4.42	10.18
1000.00	0.87	0.87	999.96	-5.87	5.87	0.86	0.06	5.93	8.31
1100.00	1.26	33.90	1099.94	-7.54	7.54	1.48	0.71	7.69	11.12
1200.00	1.55	35.53	1199.91	-9.54	9.56	2.88	0.29	9.98	16.78
1300.00	1.54	53.52	1299.87	-11.43	11.46	4.75	0.48	12.40	22.51
1400.00	2.16	63.08	1399.82	-13.07	13.11	7.51	0.69	15.11	29.81
1500.00	2.27	61.64	1499.75	-14.85	14.90	10.93	0.12	18.48	36.26
1600.00	2.38	70.06	1599.67	-16.48	16.55	14.63	0.36	22.09	41.47
1700.00	2.50	73.80	1699.57	-17.77	17.87	18.67	0.20	25.84	46.26
1800.00	2.45	76.74	1799.48	-18.85	18.97	22.85	0.14	29.69	50.30
1900.00	2.15	80.45	1899.40	-19.63	19.77	26.78	0.33	33.28	53.56
2000.00	1.28	82.14	1999.35	-20.08	20.23	29.73	0.87	35.97	55.77
2100.00	1.90	78.61	2099.32	-20.55	20.71	32.47	0.63	38.51	57.46
2200.00	2.15	73.66	2199.25	-21.39	21.57	35.89	0.30	41.87	59.00
2300.00	1.99	73.15	2299.19	-22.40	22.60	39.35	0.16	45.38	60.13
2393.00	1.88	83.41	2392.14	-23.03	23.24	42.41	0.39	48.36	61.28



**Scientific
Drilling**

Field: Cottonwood Draw
Site: Eddy County, NM
Well: White City 14 Federal #5
Wellpath: VH - Job #32K1008804
Survey: 10/12/08



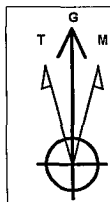


Project: Eddy Co., New Mexico
 Site: White City 14 Fed #5
 Well: White City "14" Fed #5H
 Wellbore: Lateral #1
 Plan: Plan #2 (White City "14" Fed #5H/Lateral #1)



PROJECT DETAILS Eddy Co., New Mexico

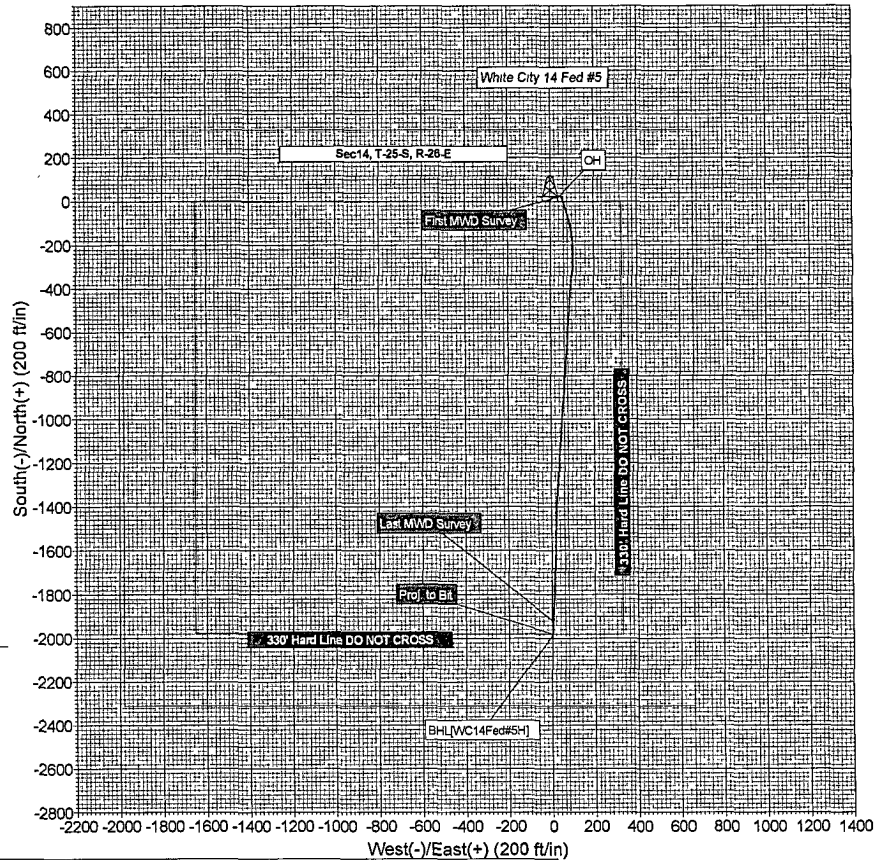
Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level



Azimuths to Grid North
 True North: -0.04°
 Magnetic North: 8.16°
 Strength: 48778 nT
 Magnetic Field
 Dip Angle: 60.06°
 Date: 10/12/2008
 Model: IGRF200510

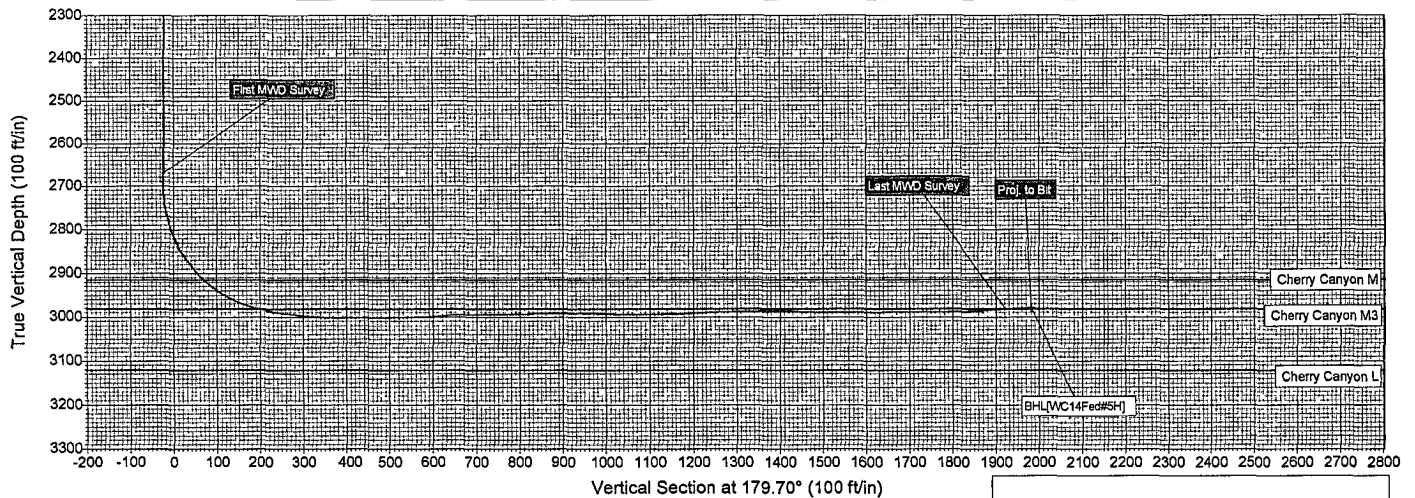
ANNOTATIONS

TVD	MD	Annotation
2905.35	2931.00	Tie In
2906.04	2932.00	Build 17.63'/100' TFO 22.96
3002.00	3194.93	EOC Hold 90 INC.: 182.90 AZI



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	2931.00	46.00	166.50	2905.35	-60.30	79.30	0.00	0.00	60.72	
2	2932.00	46.00	166.50	2906.04	-61.00	79.47	0.00	0.00	61.42	
3	3194.93	90.00	182.90	3002.00	-295.59	95.69	17.63	22.96	295.09	
4	4861.55	90.00	182.90	3002.00	-1980.06	10.47	0.00	0.00	1980.09	PBHL#2[WC14Fed#5H]



Final

Plan: Plan #2 (White City "14" Fed #5H/Lateral #1)
 Created By: Heather Vennoy Date: October 24, 2008