

Grynberg 11 Federal Com No. 3

11-25S-26E

Eddy County, NM

Perf Interval	Frac Stage	Amount and Type of Material Used
8169-8171'	Stage 1	7058 g 30# Linear, 1217 g 20# Flush, 4834 g 20# XL Borate, 5648# 16/30 Sand
7699-7701'	Stage 2	1121 g 7½% HCl, 10514 g 30# Linear, 5761 g 30# XL Borate, 6024# 16/30 Sand
7339-7341'	Stage 3	1246 g 7½% HCL, 8419 g 30# Linear, 5312 g 30# XL Borate, 5016# 16/30 Sand
6949-6951'	Stage 4	1177 g 7½% HCl, 8169 g 30# Linear, 5065 g 30# XL Borate, 5109# 16/30 Sand
6599-6601'	Stage 5	1010 g 7½% HCL, 7633 g 30# Linear, 5009 g 30# XL Borate, 5041# 16/30 Sand
6229-6231'	Stage 6	966 g 7½% HCL, 6275 g 30# Linear, 4990 g 30# XL Borate, 5170# 16/30 Sand
5899-5901'	Stage 7	1413 g 7½% HCL, 4955 g 30# Linear, 5336 g 30# XL Borate, 5149# 16/30 Sand
5549-5551'	Stage 8	3833 g 20# Linear, 4500 g 20# XL Borate, 5000# 16/30 Sand
5209-5211'	Stage 9	1403 g 7½% HCl, 2944 g 30# Linear, 5635 g 30# XL Borate, 6780# 16/30 Sand

Cimarex Energy Co.

Project: Eddy County (NM27E)
Site: Sec 11-T25S-R26E
Well: Grynberg 11 Fed #3
Wellbore: Wellbore #1
Design: 07-28-09
Version:

Phase: Planned

WELL DETAILS: Grynberg 11 Fed #3

+N/-S +E/-W Northing Easting Ground Level: 3328.0
0.0 0.0 415062.70 520332.00 32° 8' 27.985 N 104° 16' 3.520 W Slot



Azimuths to Grid North
Total Correction: 8.09°
Magnetic Field
Strength: 48719.5nT
Dip Angle: 65.05°
Date: 2009/06/02
Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	5682.0	90.30	353.00	4816.4	939.0	-64.1	0.00	0.00	940.2	
2	6116.4	91.25	6.00	4810.5	1372.4	-67.9	3.00	85.75	1373.6	
3	6241.4	91.25	6.00	4807.8	1496.7	-54.8	0.00	0.00	1497.6	
4	6475.8	90.70	358.99	4803.8	1730.7	-44.6	3.00	-94.42	1731.2	
5	8195.5	90.70	358.99	4782.8	3450.0	-75.0	0.00	-110.13	3450.8	Grynberg 11 Fed #3 PBHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Drilling Corridor	4775.0	3450.0	-75.0	418512.70	520257.00
Grynberg 11 Fed #3 PBHL	4782.8	3450.0	-75.0	418512.70	520257.00

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
4816.4	5682.0	90.30	353.00	939.0	-64.1	940.2	0.0	Tie onto Surveys / Build and Turn 3/100
4810.5	6116.4	91.25	6.00	1372.4	-67.9	1373.6	434.4	Begin Hold
4807.8	6241.4	91.25	6.00	1496.7	-54.8	1497.6	559.4	Drop and Turn 3/100
4803.8	6475.8	90.70	358.99	1730.7	-44.6	1731.2	793.7	Hold to TD
4782.8	8195.5	90.70	358.99	3450.0	-75.0	3450.8	2513.3	TD at 8195.5

