



PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

30-015-38394

January 27, 2012

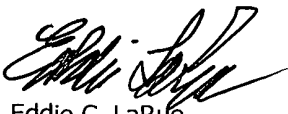
Cimarex Energy Co.
Attn: Jim Evans
600 N. Marienfeld, Suite 600
Midland, TX 79701

RE: Mayaro 22 State #4
1730' FSL & 1470' FEL
Sec. 22, T17S, R28E
Eddy County, New Mexico

Dear Sir,

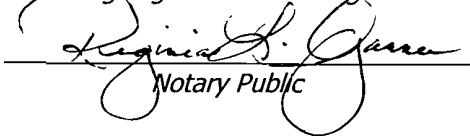
The attached is the Deviation Survey for the above captioned well.

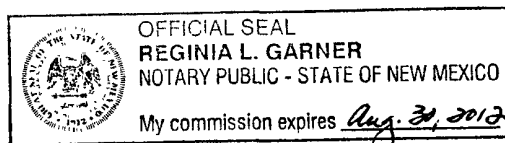
Very truly yours,


Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 27th day of January, 2012.


Notary Public



Pason DataHub Deviation Survey
Well Dossier 1326837734 - Mayaro 22 St #4
#

# Date	Depth	Deviation	Direction
1/18/2012	212	1.30	0.00
1/19/2012	371	4.20	0.00
1/20/2012	504	1.20	266.00
1/20/2012	656	1.30	211.60
1/20/2012	720	1.30	211.50
1/20/2012	811	1.20	208.60
1/20/2012	904	1.20	207.90
1/20/2012	1061	4.00	265.80
1/20/2012	1156	4.10	278.30
1/20/2012	1250	4.00	277.20
1/20/2012	1345	3.70	279.40
1/20/2012	1439	3.30	279.80
1/21/2012	1533	3.00	277.60
1/21/2012	1628	2.80	276.20
1/21/2012	1722	2.40	274.30
1/21/2012	1817	2.40	270.40
1/21/2012	1943	3.00	292.20
1/21/2012	2006	2.90	289.20
1/21/2012	2101	2.90	269.10
1/21/2012	2197	2.80	264.90
1/21/2012	2291	2.80	268.50
1/21/2012	2386	2.80	265.70
1/22/2012	2418	2.70	272.50
1/22/2012	2481	2.70	267.50
1/22/2012	2576	2.90	280.30
1/22/2012	2671	2.90	281.20
1/22/2012	2766	2.80	277.10
1/22/2012	2860	2.40	278.40
1/22/2012	2955	2.30	277.00
1/22/2012	3050	2.20	275.50
1/22/2012	3145	2.00	271.30
1/22/2012	3240	2.70	287.70
1/22/2012	3334	2.80	288.40
1/22/2012	3428	2.90	280.50
1/23/2012	3523	2.70	276.20
1/23/2012	3618	2.50	270.40
1/23/2012	3717	2.60	267.90
1/23/2012	3811	2.60	266.40
1/23/2012	3906	2.90	266.80
1/23/2012	4001	3.00	282.00
1/23/2012	4095	3.00	281.60
1/23/2012	4189	2.90	277.20
1/23/2012	4284	2.80	278.50
1/24/2012	4378	3.30	273.40
1/24/2012	4467	5.30	273.00
1/24/2012	4561	3.30	272.30
1/24/2012	4656	3.10	268.00
1/25/2012	4751	3.20	266.30
1/25/2012	4835	3.10	264.30

EOF

30.015-38394



PHOENIX
TECHNOLOGY SERVICES

Cimarex Energy Company of Colorado

Eddy County, NM (NAD 83)

Mayaro "22" State #4

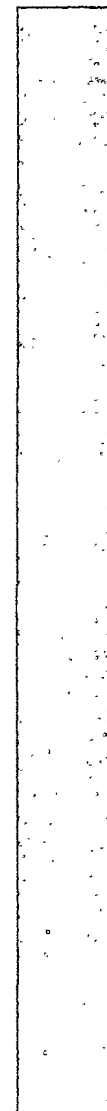
Job # 1210046

Silver Oak

Survey: Phoenix MWD Surveys

Cimarex Energy, Survey Report

26 January, 2012





Phoenix Technology Services
Cimarex Energy, Survey Report

Company:	Cimarex Energy Company of Colorado	Local Co-ordinate Reference:	Site Mayaro "22" State #4
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3601.00usft (Original Well Elev + 17' KB)
Site:	Mayaro "22" State #4	MD Reference:	Well @ 3601.00usft (Original Well Elev + 17' KB)
Well:	Job # 1210046	North Reference:	Grid:
Wellbore:	Silver Oak	Survey Calculation Method:	Minimum Curvature
Design:	Silver Oak	Database:	GCR DB.v5000

Project	Eddy County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Mayaro "22" State #4				
Site Position:	Northings:	661,200.10 usft	Latitude:	32° 49' 3.1702 N	
From: Map	Easting:	594,612.60 usft	Longitude:	104° 9' 35.6950 W	
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.09 °

Well	Job # 1210046					
Well Position	+N/-S	0.00 usft	Northings:	661,200.10 usft	Latitude:	32° 49' 3.1702 N
	+E/-W	0.00 usft	Easting:	594,612.60 usft	Longitude:	104° 9' 35.6950 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,584.00 usft	

Wellbore	Silver Oak				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	01/08/12	7.83	60.62	48,850

Design	Silver Oak				
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	270.00	

Survey Program	Date 01/26/12			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
627.00	4,895.00	Phoenix MWD Surveys (Silver Oak)	MWD	MWD - Standard



Phoenix Technology Services

Cimarex Energy, Survey Report

Company:	Cimarex Energy Company of Colorado	Local Co-ordinate Reference:	Site Mayaro "22" State #4
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3601.00usft (Original Well Elev. + 17' KB)
Site:	Mayaro "22" State #4	MD Reference:	Well @ 3601.00usft (Original Well Elev. + 17' KB)
Well:	Job # 1210046	North Reference:	Grid
Wellbore:	Silver Oak	Survey Calculation Method:	Minimum Curvature
Design:	Silver Oak	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)
547.00	1.33	223.59	3,054.10	546.90	-6.65	-6.56	6.56	0.00	661,193.45	594,606.04
627.00	1.40	212.10	2,974.12	626.88	-8.15	-7.72	7.72	0.35	661,191.95	594,604.88
First Phoenix MWD Surveys @ 627' MD										
657.00	1.30	211.60	2,944.13	656.87	-8.75	-8.09	8.09	0.34	661,191.35	594,604.51
720.00	1.30	211.50	2,881.14	719.86	-9.97	-8.84	8.84	0.00	661,190.13	594,603.76
812.00	1.20	208.60	2,789.16	811.84	-11.70	-9.84	9.84	0.13	661,188.40	594,602.76
904.00	1.20	207.90	2,697.18	903.82	-13.40	-10.76	10.76	0.02	661,186.70	594,601.84
1,060.00	4.00	265.80	2,541.34	1,059.66	-15.24	-16.95	16.95	2.25	661,184.86	594,595.65
1,156.00	4.10	278.30	2,445.58	1,155.42	-14.99	-23.68	23.68	0.92	661,185.11	594,588.92
1,250.00	4.00	277.20	2,351.82	1,249.18	-14.10	-30.26	30.26	0.13	661,186.00	594,582.34
1,345.00	3.70	279.50	2,257.03	1,343.97	-13.18	-36.57	36.57	0.36	661,186.92	594,576.03
1,439.00	3.30	279.80	2,163.21	1,437.79	-12.22	-42.23	42.23	0.43	661,187.88	594,570.37
1,533.00	3.00	277.60	2,069.35	1,531.65	-11.43	-47.33	47.33	0.34	661,188.67	594,565.27
1,627.00	2.80	276.20	1,975.47	1,625.53	-10.86	-52.05	52.05	0.23	661,189.24	594,560.55
1,722.00	2.40	274.30	1,880.57	1,720.43	-10.46	-56.35	56.35	0.43	661,189.64	594,556.25
1,817.00	2.40	270.30	1,785.65	1,815.35	-10.30	-60.32	60.32	0.18	661,189.80	594,552.28
1,943.00	3.00	291.40	1,659.79	1,941.21	-9.08	-66.03	66.03	0.91	661,191.02	594,546.57
2,006.00	2.90	281.20	1,596.87	2,004.13	-8.17	-69.12	69.12	0.85	661,191.93	594,543.48
2,101.00	2.90	269.10	1,501.99	2,099.01	-7.74	-73.88	73.88	0.64	661,192.36	594,538.72
2,196.00	2.80	264.90	1,407.11	2,193.89	-7.98	-78.60	78.60	0.24	661,192.12	594,534.00
2,291.00	2.80	268.50	1,312.22	2,288.78	-8.25	-83.23	83.23	0.19	661,191.85	594,529.37
2,417.00	2.70	272.50	1,186.37	2,414.63	-8.20	-89.27	89.27	0.17	661,191.90	594,523.33
2,481.00	2.70	267.50	1,122.44	2,478.56	-8.20	-92.28	92.28	0.37	661,191.90	594,520.32
2,576.00	2.90	280.30	1,027.55	2,573.45	-7.87	-96.88	96.88	0.69	661,192.23	594,515.72
2,671.00	2.90	281.20	932.67	2,668.33	-6.97	-101.60	101.60	0.05	661,193.13	594,511.00
2,765.00	2.80	277.10	838.79	2,762.21	-6.23	-106.22	106.22	0.24	661,193.87	594,506.38
2,860.00	2.40	278.40	743.89	2,857.11	-5.65	-110.49	110.49	0.43	661,194.45	594,502.11



Phoenix Technology Services

Cimarex Energy, Survey Report

Company:	Cimarex Energy Company of Colorado	Local Co-ordinate Reference:	Site Mayaro "22" State #4
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3601.00usft (Original Well Elev +.17' KB)
Site:	Mayaro "22" State #4	MD Reference:	Well @ 3601.00usft (Original Well Elev +.17' KB)
Well:	Job # 1210046	North Reference:	Grid
Wellbore:	Silver Oak	Survey Calculation Method:	Minimum Curvature
Design:	Silver Oak	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)	
2,955.00	2.30	277.00	648.97	2,952.03	-5.13	-114.35	114.35	0.12	661,194.97	594,498.25	
3,050.00	2.20	275.50	554.04	3,046.96	-4.72	-118.05	118.05	0.12	661,195.38	594,494.55	
3,145.00	2.00	271.30	459.10	3,141.90	-4.51	-121.52	121.52	0.27	661,195.59	594,491.08	
3,239.00	2.70	287.70	365.18	3,235.82	-3.80	-125.27	125.27	1.03	661,196.30	594,487.33	
3,333.00	2.80	288.40	271.29	3,329.71	-2.40	-129.56	129.56	0.11	661,197.70	594,483.04	
3,428.00	2.90	280.50	176.41	3,424.59	-1.23	-134.13	134.13	0.43	661,198.87	594,478.47	
3,522.00	2.70	276.20	82.52	3,518.48	-0.56	-138.67	138.67	0.31	661,199.54	594,473.93	
3,617.00	2.50	270.40	-12.38	3,613.38	-0.30	-142.96	142.96	0.35	661,199.80	594,469.64	
3,717.00	2.60	267.90	-112.28	3,713.28	-0.37	-147.41	147.41	0.15	661,199.73	594,465.19	
3,811.00	2.60	266.40	-206.19	3,807.19	-0.58	-151.67	151.67	0.07	661,199.52	594,460.93	
3,906.00	2.90	266.80	-301.08	3,902.08	-0.85	-156.22	156.22	0.32	661,199.25	594,456.38	
4,000.00	3.00	282.00	-394.96	3,995.96	-0.47	-161.00	161.00	0.84	661,199.63	594,451.60	
4,094.00	3.00	281.60	-488.83	4,089.83	0.53	-165.81	165.81	0.02	661,200.63	594,446.79	
4,189.00	2.90	277.20	-583.70	4,184.70	1.34	-170.63	170.63	0.26	661,201.44	594,441.97	
4,284.00	2.80	278.50	-678.58	4,279.58	1.98	-175.31	175.31	0.13	661,202.08	594,437.29	
4,378.00	3.30	273.40	-772.45	4,373.45	2.48	-180.28	180.28	0.60	661,202.58	594,432.32	
4,468.00	3.30	273.00	-862.30	4,463.30	2.77	-185.46	185.46	0.03	661,202.87	594,427.14	
4,562.00	3.30	272.30	-956.14	4,557.14	3.02	-190.86	190.86	0.04	661,203.12	594,421.74	
4,656.00	3.10	268.00	-1,050.00	4,651.00	3.04	-196.10	196.10	0.33	661,203.14	594,416.50	
4,752.00	3.20	266.30	-1,145.85	4,746.85	2.78	-201.37	201.37	0.14	661,202.88	594,411.23	
4,832.00	3.10	264.30	-1,225.73	4,826.73	2.42	-205.75	205.75	0.19	661,202.52	594,406.85	
Last Phoenix MWD Survey @ 4832' TVD											
4,895.00	3.10	264.30	-1,288.64	4,889.64	2.08	-209.14	209.14	0.00	661,202.18	594,403.46	
Projection to TD @ 4895' MD											



Phoenix Technology Services
Cimarex Energy, Survey Report

Company:	Cimarex Energy Company of Colorado	Local Co-ordinate Reference:	Site Mayaro "22" State #4
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3601.00usft (Original Well Elev. + 17' KB)
Site:	Mayaro "22" State #4	MD Reference:	Well @ 3601.00usft (Original Well Elev. + 17' KB)
Well:	Job # 1210046	North Reference:	Grid
Wellbore:	Silver Oak	Survey Calculation Method:	Minimum Curvature
Design:	Silver Oak	Database:	GCR DB v5000

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
627.00	626.88	-8.15	-7.72	First Phoenix MWD Surveys @ 627' MD
4,832.00	4,826.73	2.42	-205.75	Last Phoenix MWD Survey @ 4832' TVD
4,895.00	4,889.64	2.08	-209.14	Projection to TD @ 4895' MD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------