

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 16, 2010

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-38394	Pool Code	Pool Name
Property Code	Property Name MAYARO "22" STATE	Well Number 4
OGRID No.	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3584'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	22	17 S	28 E		1730	SOUTH	1470	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	22	17 S	28 E		1650	SOUTH	1650	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

HOBBS OCD FEB 13 2012 RECEIVED	SURFACE LOCATION Lat - N 32°49'03.170" Long - W 104°09'35.695" NMSPC- N 661200.1 E 594612.6 (NAD-83)	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____ Email Address _____
BOTTOM HOLE LOCATION Lat - N 32°49'02.374" Long - W 104°09'37.842" NMSPC- N 661119.32 E 594429.50 (NAD-83)	BH 1650' 1730' 1470' 200.18'	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date Surveyed _____ Signature & Seal of Professional Surveyor _____ Certificate No. Gary L. Jones 7977 BASIN SURVEYS 23459



PHOENIX
TECHNOLOGY SERVICES

HOBBS OCD

FEB 13 2012

RECEIVED

February 7, 2012

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

Dear District 1

Re: Cimarex Energy
Mayaro 22 State #4
Lea Co., NM
API #30-015-38394
Job No. 1210046

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Paul Perhonis	4H	627	4,832	01/20/12	01/24/12	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Gretchen Briggs
Operations Administrator

Certified mail receipt number: **7010 1670 0000 9227 7355**

Phoenix Technology Services
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1210046

OPERATOR Cimarex

WELL NAME Mayaro 22 State No 4

COUNTY & STATE Lea, New Mexico

API WELL NUMBER 30-015-38394

PROPOSED DIRECTION 246.19

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
547 ft	546.90 ft	1.3 ft	223.6 ft	-6.65 ft	-6.56 ft	Gyro

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
20-Jan-12	627 ft	1.4	212.1

SURVEY INSTRUMENT
TYPE
Phoenix MWD

HOBBS OCD

FEB 13 2012

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
24-Jan-12	4,832 ft	3.1	264.3

TO THE BEST OF MY KNOWLEDGE **RECEIVED**
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
24-Jan-12	4,895 ft	3.1	264.3

Paul Perhonis

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

1/24/12

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.74
DECLINATION OR GRID	DECLINATION

MWD SUPERVISOR 1

Paul Perhonis

DIRECTIONAL DRILLER 1

David Reeves

MWD SUPERVISOR 2

0

DIRECTIONAL DRILLER 2

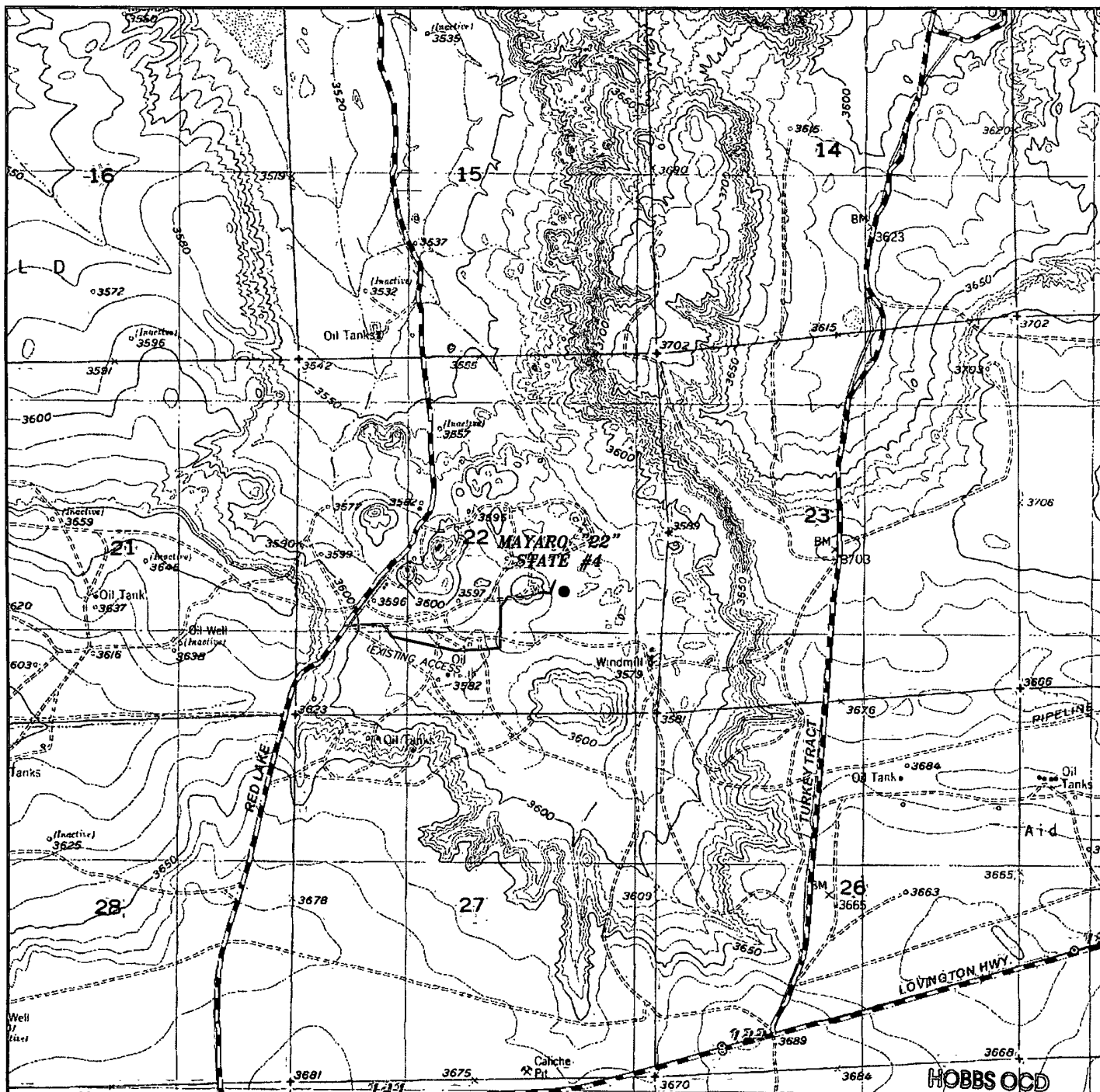
Vance Nivens

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)

Sheet 1 of 1 Sheets



MAYARO "22" STATE #4

Located 1730' FSL and 1470' FEL

Section 22, Township 17 South, Range 28 East,
N.M.P.M., Eddy County, New Mexico.

FEB 13 2012

RECEIVED

basin
surveys

focused on excellence
in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

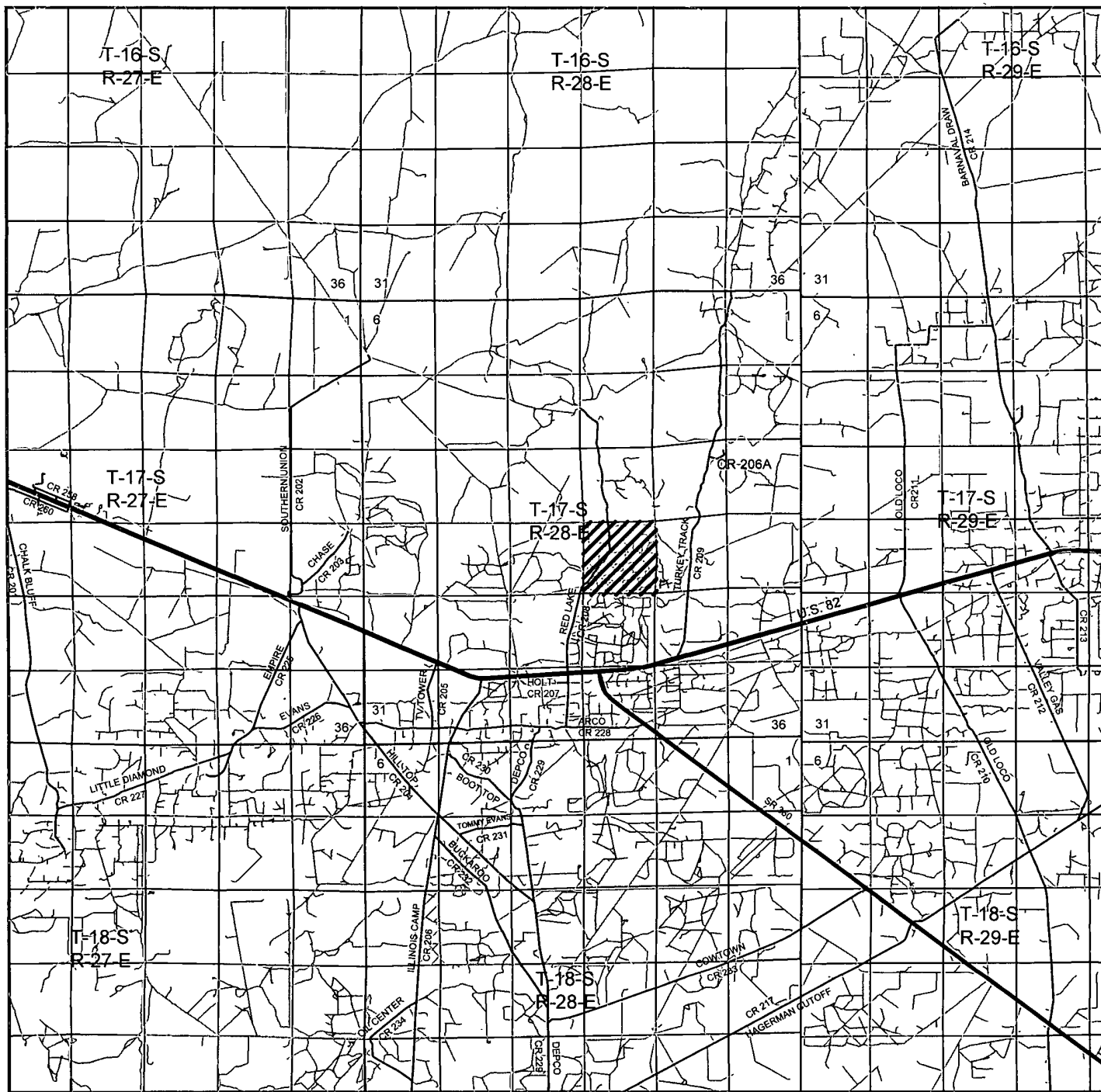
W.O. Number: BJN 23459

Survey Date: 10-06-2010

Scale: 1" = 2000'

Date: 10-12-2010

CIMAREX
ENERGY CO.
OF COLORADO



MAYARO "22" STATE #4

HOBBS OCD

Located 1730' FSL and 1470' FEL

Section 22, Township 17 South, Range 28 East FEB 13 2012

N.M.P.M., Eddy County, New Mexico.

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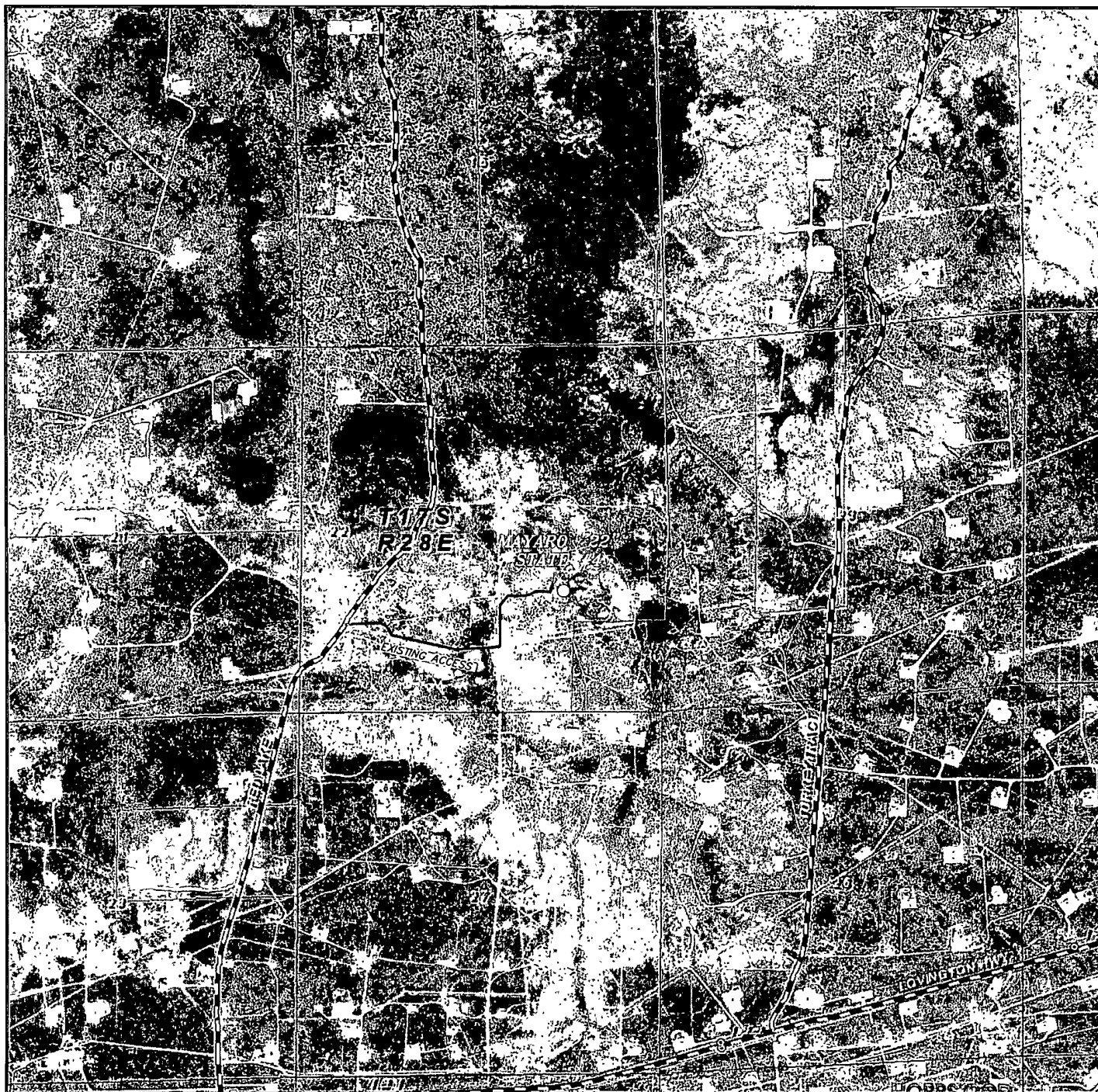
W.O. Number: BJN 23459

Survey Date: 10-06-2010

Scale: 1" = 2 Miles

Date: 10-12-2010

CIMAREX
ENERGY CO.
OF COLORADO



MAYARO "22" STATE #4
 Located 1730' FSL and 1470' FEL
 Section 22, Township 17 South, Range 28 East,
 N.M.P.M., Eddy County, New Mexico.

FEB 13 2012

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 basin-surveys.com

W.O. Number: BJN 23459

Scale: 1" = 2000'

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND

CIMAREX
 ENERGY CO.
 OF COLORADO



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

RECEIVED

FEB 13 2012

HOBBS OCD



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

Well	Job # 1210046		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty		0.00 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

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)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	270.00

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



Phoenix Technology Services
Cimarex Energy, Survey Report

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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)	EW (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

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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: _____