80818864

Jam

# N.M. Oil Cons. DIV-Dist. 2 1301 W. Grand Avenue Artesia, NM 88210

Form 3160-3 (April 2004)	.,	-10	OMB No	APPROVED b. 1004-0137 March 31, 2007
DEPARTMENT OF THE IS BUREAU OF LAND MANA	5. Lease Serial No. NM 100586			
APPLICATION FOR PERMIT TO I			6. If Indian, Allotee	or Tribe Name
Ia. Type of work: DRILL REENTE	R	·····	7 If Unit or CA Agre	ement, Name and No.
lb. Type of Well: Oil Well Gas Well Other	Single Zone Mult	iple Zone	8. Lease Name and Wagon Wheel	"24" Federal #1
Name of Operator     Cimarex Energy Co.		( ),,	9. API Well No.	30-015- 335 Basin : Marrow,
3a. Address 15 E 5th, Ste 1000 Tulsa, OK 74103	3b. Phone No. (include area code) 918-585-1100		10. Field and Pool, or	Exploratory
4. Location of Well (Report location clearly and in accordance with any	State requirements.*)		11. Sec., T. R. M. or B	lk. and Survey or Area
At surface Sec 24-22S-22E; 1163' FNL & 1482' FWL, Eddy County  At proposed prod. zone Same			Sec 24-22S-221	E NMPM
14. Distance in miles and direction from nearest town or post office*  Approx 34 miles Southwest of Carlsbad, NM			12. County or Parish  Eddy	i3. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No. of acres in lease 1600	17. Spacir	g Unit dedicated to this v	vell
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  2660'	The state of the s		/BIA Bond No. on file 	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4366.2' GL	22. Approximate date work will sta 07/29/2004	art*	23. Estimated duration 45 days	1
	24. Attachments	C	ARLSBAD CONT	ROLLED WATER BAS
The following, completed in accordance with the requirements of Onshore	e Oil and Gas Order No.1, shall be	attached to th	is form:	
Well plat certified by a registered surveyor.     A Drilling Plan.	4. Bond to cover Item 20 above).		ns unless covered by an	existing bond on file (see
3. A Surface Use Plan (if the location is on National Forest System I SUPO shall be filed with the appropriate Forest Service Office).	ands, the 5. Operator certification	ication e specific inf	ormation and/or plans as	may be required by the
25. Signature Mol Semon	Name (Printed/Typed) Steve J. Simonton			Date 07/19/2004
Title Drilling Superintendent				<del>.</del>
Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed) Jo	Name (Printed/Typed) Joe G. Lara		Date 3 AUG 2004
ACTING FIELD MANAGER	Office CA1	RLSBA	AD FIELD C	OFFICE
Application approval does not warrant or certify that the applicant holds conduct operations thereon.  Conditions of approval, if any, are attached.	e legal or equitable title to those rig		ject lease which would e	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cri-	ime for any person knowingly and	willfully to n	nake to any department o	r agency of the United

\*(Instructions on page 2)

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

RECEIVED

AUG 0 5 2004

GEB ARTESIA

Witness Surface Casing

Cimarex Energy Co., Wagon Wheel '24' Federal #1 Section 24-T22S-R22E, Eddy County, New Mexico. (Federal Lease No. US NM 100586).

This plan is to accompany Application for "Permit to Drill" the subject well which is located approximately 25 miles West and 4 miles South of Carlsbad, New Mexico. The following is a discussion of pertinent information concerning the possible effect, which the proposed drilling well may have on the environment of the well and road sites and surrounding acreage. A copy will be posted on the derrick floor so that all contractors and sub-contractors will be aware of all items of this plan.

#### 1. EXISTING ROADS:

- A. Directions to well: From the intersection of St. Hwy. #137 (Queens Hwy.) and Eddy Co. Rd. #405 (H Bar Y Ranch Rd.) go 2.4 miles West/Southwest on Co. Rd. #405 to a caliche road on the right (Cawley Rd), Follow Cawley Rd. North/Northwest for 3.3 miles to a good caliche road on the left. Turn left (SW) and follow caliche road west for .3 miles. Turn South and go .3 miles, turn West and go 1.2 miles, turn South and go .5 miles. Follow road survey 3150' to proposed location.
- B. Pad Mitigation: The topsoil will be stockpiled for surface restoration; will maintain a 3:1 slope ratio. The reserve pit will be lined. The pad will be drained above the cut on the north side of location draining east. Culverts will be placed along the new road construction as necessary to accommodate runoff.. All surface equipment will be painted Fed Juniper Green. Upon completion of drilling the location and surrounding area will be cleared of debris and will be reseeded using the appropriate BLM Seed Mix. During the life of the well, there may be either a compressor or a pump-jack installed. No drilling or construction will take place during those restricted periods of time as determined by the BLM.

#### 2. PLANNED ACCESS ROADS:

- A. Length and Width: 3131' of new access road is needed. The existing and new access road right-of-way will be approximately 20 feet wide, with the actual road surface being approximately 16 feet wide.
- B. Construction: The 3131' of new access road to the proposed Wagon Wheel '24' Federal #1 well site will be new road construction and will provide all weather access to this property. Native on-site material will be used for surfacing with gravel furnished from a private commercial source. The entire length of location road will be maintained in a prudent manner with a motor grader as an all weather road. Maintenance activity shall include but not be limited to rerocking, reshaping, compacting and crowning said location road as necessary. Any ruts, rills, and eroded areas will be filled and blocked drainages and culverts will be cleared. Attached is a plat of the proposed location road and detailed section maps showing the location of existing roads.
- showing the location of existing roads. Cathequarks will be maintained, kept free of soil, in order.

  C. Turnouts: No turnouts are proposed to prevent livestock crossing from one allotment to another.

- D. Culverts: Culverts are proposed as necessary
- E. Cuts and Fills: An approximately 1.2' cut along the South side of the well site and an approximately 1.1' fill along the North side of the well site will be required. An approximately 1.4' cut along the West side of the well site and an approximately 1.7' fill along the East side of the well site will be required. (see attached plat).
- F. Gates, Cattleguards: No Gates or Cattleguards are needed see special stips.
- G. Off Lease ROW: None

#### 3. LOCATION OF EXISTING WELLS —

A. There are no existing wells in the section.

#### 4. LOCATION OF EXSITING AND/OR PROPOSED FACILITIES:

- A. Location of Tank Batteries, Production Facilities, Production Gathering and Service Lines:
  - In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion (including compression). The condensate tank will be enclosed by a dike and all BLM standards regarding compressors will be met.
  - 2 The flow-line from this well will have to be constructed. It will be buried gas pipeline that will be approx. 2060.9' in length (See attached pipeline plat) and tie into an existing gas transmission pipeline. The pipe diameter, wall thickness and pipe wall strength will be determined upon the establishment of production and will be in accordance to BLM standards and regulations. The line will be owned and operated by Cimarex Energy Co. and qualifies for APD/ROW process.
  - 3 Produced water, if any, will be stored on the well site in a closed or netted water tank and on regular intervals will be hauled to an approved disposal site.

### 5. LOCATION AND TYPE OF WATER SUPPLY

A. Water will be obtained from a non-federal private source.

## 6. SOURCE OF CONSTRUCTION MATERIALS:

A. No additional construction materials will be required to build the proposed location. The topsoil will be stockpiled for restoration. The dirt from the reserve pit will be back-sloped and saved for use when the pit is rehabilitated.

#### 7. METHODS FOR HANDLING WASTE DISPOSAL:

A. A Conventional Drilling System will be used. The drill cuttings, fluids and completion fluids will be placed in the reserve pit. The reserve pit will be fenced with wire mesh on three sides away from the pad during drilling and the

## Surface Use Plan - Wagon Wheel '24' Federal #1

Page 3

fourth side fenced as soon as the rig moves out. The reserve pit will be backfilled and leveled as soon as practical.

- B. All garbage and trash will be placed in specially constructed wire mesh containers. Upon cleanup, the refuse in the containers will be hauled to an approved landfill site.
  - 1 All produced water will be collected in tanks until transported to an approved disposal system.

#### 8. ANCILLARY FACILITIES:

A. None

### 9. WELL SITE LAYOUT:

A. Attached sketch shows the relative location and dimensions of the well pad, and reserve pit. The well pad will be 300' X 200'. The reserve pit will be 150' X 150'. (see diagram).

#### 10. PLANS FOR RESTORATION OF SURFACE:

A. Pit will be filled and leveled as soon as practical. If well is productive, drilling pad will remain as well service pad. If dry hole, the pad will be ripped and reseeded per regulations. See Pad Mitigation for details of the surface restoration and seeding details.

### 11. OTHER INFORMATION:

- A. **Terrain/Topography** Gently sloping areas with ridges or mesa tops and Limestone out crops in places.
- B. Soil: Ector stony loam, 0 to 9 percent slope- grayish brown stony loam to light colored limestone bedrock
- C. Flora and Fauna: scrubland community consisting mainly of black grama, blue grama, beargrass, tobosa, sotol, agave, ocotillo, snakeweed, tarbush, and vucca.
- **D. Ponds and Streams:** None. Playas in the area will be avoided.
- E. Residence and Other Structures: There are no occupied residences or buildings within one quarter of a mile of the proposed well location
- F. Land Use: grazing, wildlife, mineral development.
- G. Water Wells: No water wells are located in Section.
- H. Arrovos, Canvons, etc.: none.
- I. Well Sign; Sign identifying and locating the well will be maintained at drill site with the spudding of the well.
- J. Archaeological Resources: Archaeological Survey is forth coming.
- K. Surface Ownership: Bureau of Land Management
- 12. **Operator's Representatives:** Field personnel who can be contacted concerning compliance of the Surface Use Plan are as follows:

Steve Simonton, Drilling Superintendent Cimarex Energy Co. 15 East 5<sup>th</sup> Street, Suite 1000 Tulsa, OK 74103 918-295-1710

### 13. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed by Cimarex Energy Co., and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

BY: Steve Simonton, Drilling Superintendent

DATE

## CIMAREX ENERGY CO.

WELL NAME: Wagon Wheel '24' Federal #1

## **DRILLING PROGNOSIS**

1. Location of Proposed Well: 1163' FNL & 1482' FWL Section 24, T22S-R22E, Eddy

County, New Mexico

2. Unprepared Ground Elevation:

4366'

3. The geological name of the surface formation is Queen

4. Type of drilling tools will be rotary

5. Proposed drilling depth is 9950'

The estimated tops of important geologic markers are as follows:

ZONES	TOPS (MD)
Queen	Surface
San Andres	588
Glorieta	2184
Yeso	2235
Bone Spring	3206
Bone Spring 3 <sup>rd</sup> SS	6007
Wolfcamp	6099
Cisco	7508
Canyon	7990
Strawn	8191
Atoka	8585
Morrow LS	9202
Middle Morrow	9390
Lower Morrow	9562
Barnett Marker #1	9803

7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

ZONES	<b>DEPTH</b>	<u>FLUID</u>
San Andres	0-1000'	Water
Morrow	9202 - 9803'	Gas

## 8. The proposed casing program is as follows:

Surface: 13-3/8", 48 ppf, H40, STC set at 1000'; WITNESS

Burst - 1730 psi, Collapse - 770 psi, Joint Strength - 322,000#, Body Strength - 541,000#

Intermediate: 9-5/8", 36 ppf, J55, STC set at 2300';

Burst – 2020 psi, Collapse – 3520 psi, Joint Strength – 394,000#, Body Strength – 564,000#

**Production:** 5-1/2", 17 ppf, N80, LTC set at 9800';

Burst - 7740 psi, Collapse - 6280 psi, Joint Strength - 348,000#, Body Strength - 397,000#

## 9. Cement Program:

**Surface 13-3/8"** Lead: 600 sx 35:65 Poz C + 2% CaCl<sub>2</sub> + 6% Bentonite +

1/4 #/sk cellophane flake mixed @ 12.6 ppg, 10.8 gps

WITNESS water, 1.97 ft<sup>3</sup>/sk. 100% excess over gauge

**Tail:** 205 sx Class C + 2%  $CaCl_2 + \frac{1}{4}$  #/sk cellophane

flake mixed @ 14.8 ppg, 6.29 gps water, 1.34 ft<sup>3</sup>/sk

100% excess over gauge

Intermediate 9- 5/8": Lead: 405 sx 35:65 Poz C + 5% salt + 6% Bentonite +  $\frac{1}{4}$ 

#/sk cellophane flake + 0.2% antifoam mixed @ 12.6 ppg, 11.2 gps water, 2.04 ft<sup>3</sup>/sk. 100% excess over gauge **Tail:** 190 sx Class C + 1% CaCl<sub>2</sub> +  $\frac{1}{4}$  #/sk cellophane flake mixed @ 14.8 ppg, 6.29 gps water, 1.34 ft<sup>3</sup>/sk

50% excess over gauge

Production 5-1/2" 785 sks 50:50 Poz H + 5% salt + 2% Bentonite + 0.3%

Fluid Loss + 0.2% dispersant + 0.2% antifoam + 0.2% retarder mixed @ 14.4 ppg, 6.0 gps, 1.31 ft<sup>3</sup>/sk. 30%

excess over gauge.

Stage Collar Program: Not anticipated at this time.

### 10. Pressure Control Equipment:

A schematic diagram of the final BOP stack showing sizes and pressure ratings is attached. A schematic diagram of the manifold showing sizes and pressure ratings is attached. The BOP will be set on casing head after drilling and setting surface casing. Pressure tests will be done as needed & after nippling up on the surface casing. Ram-Type preventors shall be actuated to test proper functioning at least once a day. The annular-type blowout preventor shall be actuated on the drill pipe at least once each week.

#### 11 Drilling Mud Prognosis:

DEPTH INTERVAL	WEIGHT (ppg)	VISCOSITY (Sec/Qt)	FLUID LOSS (ml/30 min)	MUD TYPE
0-1000	8.4 - 9.0	27 - 40	NC	Fresh water, native
1000 - 2300	8.4 - 8.6	28 - 32	NC	Fresh water, gel
				sweeps
2300 - 9950	8.4 - 9.5	28 - 45	NC-10	Low Solids /
				Lightly dispersed

12. The testing, logging, and coring programs are as follows:

Neutron - Density: Surface to TD

Laterlog: Base of Intermediate to TD

Sonic: Base of Intermediate to TD

Formation Tester: 10 to 20 settings in Morrow.

Possible DST in Wolfcamp Possible DST in Morrow

13. Abnormal temperatures are not anticipated to be encountered nor any other potential hazards such as Hydrogen Sulfide Gas. Low risk H<sub>2</sub>S equipment will be used.

Estimated Bottom hole pressures: Morrow - +/- 4800 psi

14. The anticipated starting date is sometime around July 29, 2004, with duration of drilling/completion operations for approximately 45 days thereafter.

## United State Department of the Interior Bureau of Land Management Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201-1287

## Statement Accepting Responsibility for Operations

**Operator Name:** 

Cimarex Energy Co.

Street or Box:

15 E 5<sup>th</sup>, Ste 1000

City, State:

Tulsa, OK

Zip Code:

74103

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No:

NM 100586

Legal Description of Land:

Sec 24-22S-22E

Eddy County, NM

Formation(s) (if applicable):

**Bond Coverage:** 

Cimarex Energy Co. is individually bonded with the BLM

**BLM Bond File No.:** 

C0B000011

**Authorized Signature:** 

Title:

Drilling Superintendent

Date:

July 16, 2004

#### State of New Mexico

DISTRICT I 1625 N. FRENCE DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

DISTRICT II
1301 W. GRAND AVENUR, ARTESIA, NM 88210

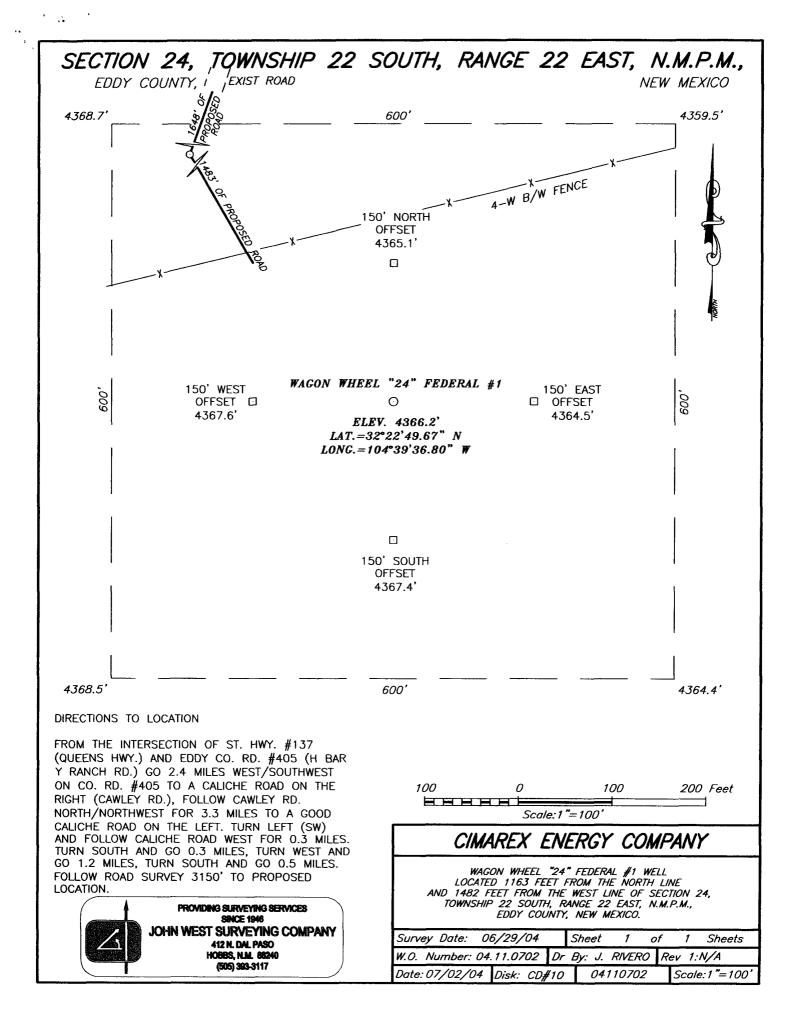
OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505 Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

Certificate No. GARY EDSON

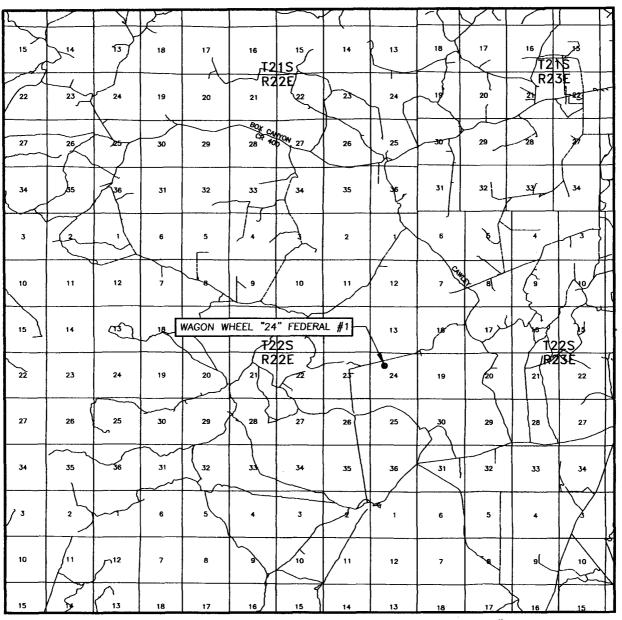
12641

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

DISTRICT IV -WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR., SANTA FE, NM 87505 Pool Code Pool Name API Number Well Number Property Code Property Name WAGON WHEEL 24 **FEDERAL** OGRID No. Operator Name Elevation CIMAREX ENERGY COMPANY 4366 Surface Location UL or lot No. Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line County 24 22-S 22-E 1163' NORTH 1482 WEST **EDDY** Bottom Hole Location If Different From Surface UL or lot No. Section Range Lot Idn Feet from the North/South line Feet from the East/West line County Township Dedicated Acres Joint or Infill Consolidation Code Order No. 320 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 OPERATOR CERTIFICATION I hereby certify the the information ontained herein is true and complete to the owledge and belief. 4368.7 4359.5 600' 4368.5' 4364.4 SURVEYOR CERTIFICATION GEODETIC COORDINATES I hereby certify that the well location shown NAD 27 NME on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and Y=502282.0 N correct to the best of my belief. X=399086.7 E Date Surveyed Committee of Comm JUNE 29, 2004 LAT.=32'22'49.67" N LONG.=104'39'36.80" W JR Professional Surveyor 04.11.0702



# VICINITY MAP



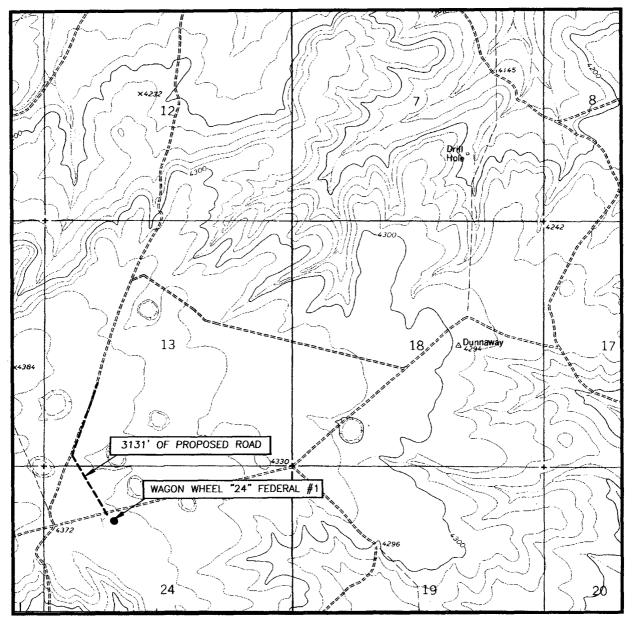
SCALE: 1" = 2 MILES

SEC. <u>24</u> IW	P. 22-5 RGE. 22-E
SURVEY	N.M.P.M.
COUNTY	EDDY
DESCRIPTION_1	163' FNL & 1482' FWL
ELEVATION	4366'
OPERATOR	CIMAREX ENERGY COMPANY
LEASE WACON	WHEEL "24" FEDERAL





# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CAWLEY DRAW, N.M.

CONTOUR INTERVAL: CAWLEY DRAW, N.M. - 20'

SEC. 24 TWP. 22-S RGE. 22-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1163' FNL & 1482' FWL

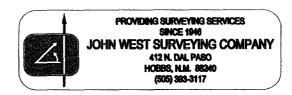
ELEVATION 4366'

CIMAREX

OPERATOR ENERGY COMPANY

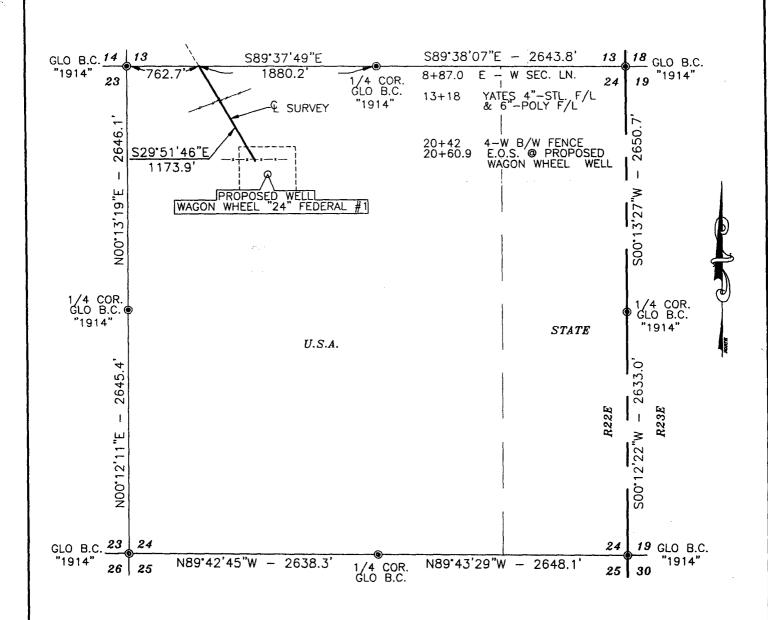
LEASE WAGON WHEEL FEDERAL "24"

U.S.G.S. TOPOGRAPHIC MAP





SECTION 24, TOWNSHIP 22 SOUTH, RANGE 22 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

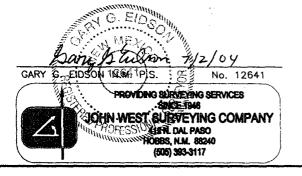


## DESCRIPTION

A STRIP OF LAND 50.0 FEET WIDE AND 1173.9 FEET OR 0.222 MILES IN LENGTH CROSSING USA LAND IN SECTION 24, TOWNSHIP 22 SOUTH, RANGE 22 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE CENTERLINE.

NOTE: BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



1000 0 1000 2000 FEET

Scale:1"=1000'

## CIMAREX ENERGY COMPANY

SURVEY A PIPELINE IN SECTION 24, TOWNSHIP 22 SOUTH, RANGE 22 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 06/30/04	Sheet 1 of 1 Sheets
W.O. Number: 04.11.0831	Drawn By: J. RIVERO
Date: 07/02/04 DISK:CD#10	04110831

SECTION 13, TOWNSHIP 22 SOUTH, RANGE 22 EAST, N.M.P.M., NEW MEXICO. EDDY COUNTY, 1/4 COR. GLO B.C. "1914" GLO B.C. 11 12 S89'47'51"E - 2640.9' S89'41'46"E - 2642.6' 12 7 GLO B.C. '1914' 1914" 14 18 13 တံ U.S.A.**S00.1** 1/4 COR. GLO B.C. "1914" 1/4 COR. GLO B.C. 1914 2646.1 NOO'14'00"E S00.09,37,W S19'32'42"W 578.6 BEGIN SURVEY @ TAP ON AGAVE P/L 0+00 · E SURVEY 0 + 09AGAVE BPL S29'51'46"E 308.4 5+78.6 P.I. 49'24'28" LT. GLO B.C. 14 1880.2 18 GLO B.C. 8+87.0 F - W SEC. LN. 24 19 "1914" "1914" N89'38'07'W - 2643.8' N89'37'49"W

## DESCRIPTION

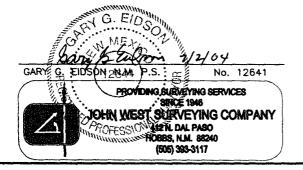
1/4 COR. GLO B.C. "1914"

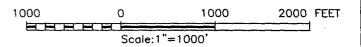
A STRIP OF LAND 50.0 FEET WIDE AND 887.0 FEET OR 0.168 MILES IN LENGTH CROSSING USA LAND IN SECTION 13, TOWNSHIP 22 SOUTH, RANGE 22 EAST, NMPM, EDDY COUNTY, NEW MEXICO AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE CENTERLINE.

NOTE: BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

23

I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.





## CIMAREX ENERGY COMPANY

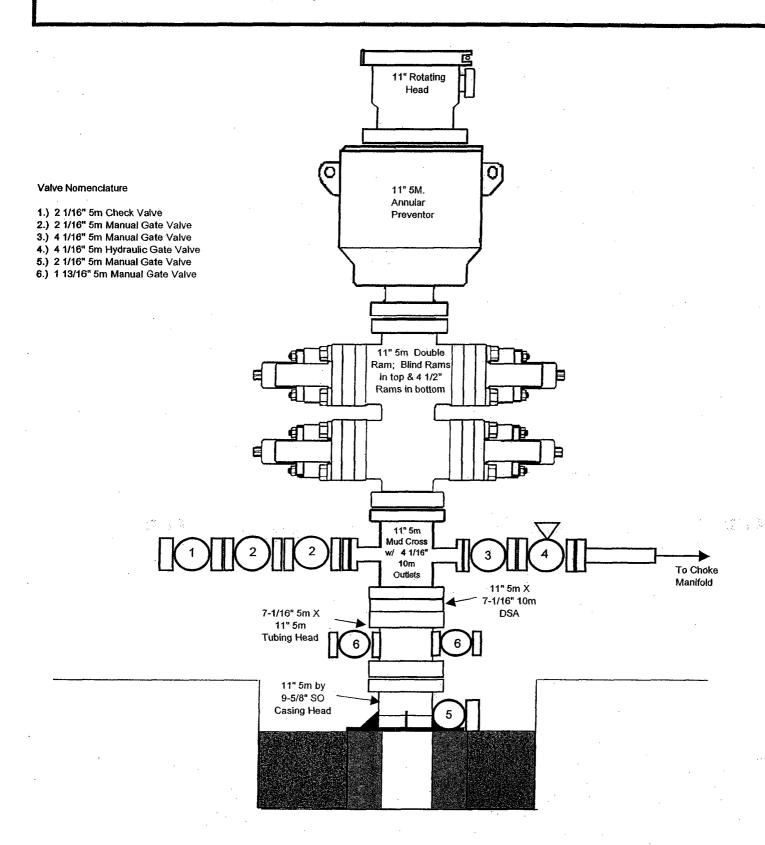
SURVEY A PIPELINE CROSSING SECTION 13, TOWNSHIP 22 SOUTH, RANGE 22 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

1	Survey Date: 06/30/04	Sheet 1 of 1 Sheets
Ì	W.O. Number: 04.11.0831	Drawn By: J. RIVERO
	Date: 07/02/04; DISK:00#10	04110831

## CIMAREX ENERGY CO.

Wagon Wheel "24" Federal # 1

## **Proposed Blowout Preventor Stack**



Cimarex Energy Co. - Wagon Wheel "24" Federal #1
Choke Manifold

