(November 1994)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA
JUN 15 2009

FORM APPROVED
OMB No. 1004-0135
Expires July 31, 1996

Lease Serial No.
NM-19423

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Pintail 23 Federal No. 4

2. Name of Operator
Cimarex Energy Co. of Colorado

9. API Well No.
30-015-36717

3a. Address
5215 N. O'Connor Blvd., Ste. 1500; Irving, TX 75039

3b Phone No. *(include area code)*
972-401-3111

10. Field and Pool, or Exploratory Area
Cottonwood Draw; Delaware Wildcat

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SHL 2310 FSL & 1980 FWL 23-25S-26E
BHL 330 FSL & 1650 FWL

11. County or Parish, State
Eddy County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☒ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change SHL
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

Cimarex currently has an approved permit for the Pintail 23 Federal No. 4 at the location above with a pilot hole. Cimarex would like to change the SHL of the well and change drilling plans to drill through the curve instead of drilling a pilot hole and milling out for the lateral.

Revised C-102, preliminary directional plan, and drilling plans are attached.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Previous Location
SHL 2310 FSL & 1980 FWL
BHL 330 FSL & 1650 FWL
23-25S-26E

New Location
SHL 2600 FSL & 1980 FWL UNORTHODOX
BHL 330 FSL & 1650 FWL LOCATION
23-25S-26E

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*	Title
Natalie Krueger	Regulatory Analyst
Signature	Date
Natalie Krueger	June 4, 2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
/s/ Don Peterson		JUN 17 2009
Conditions of Approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office CARLSBAD FIELD OFFICE	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

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

OIL CONSERVATION DIVISION

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

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-36717		Cottonwood Draw; Delaware Wildcat

Property Code	Property Name	Well Number
	PINTAIL "23" FEDERAL	4

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3282'

Surface Location

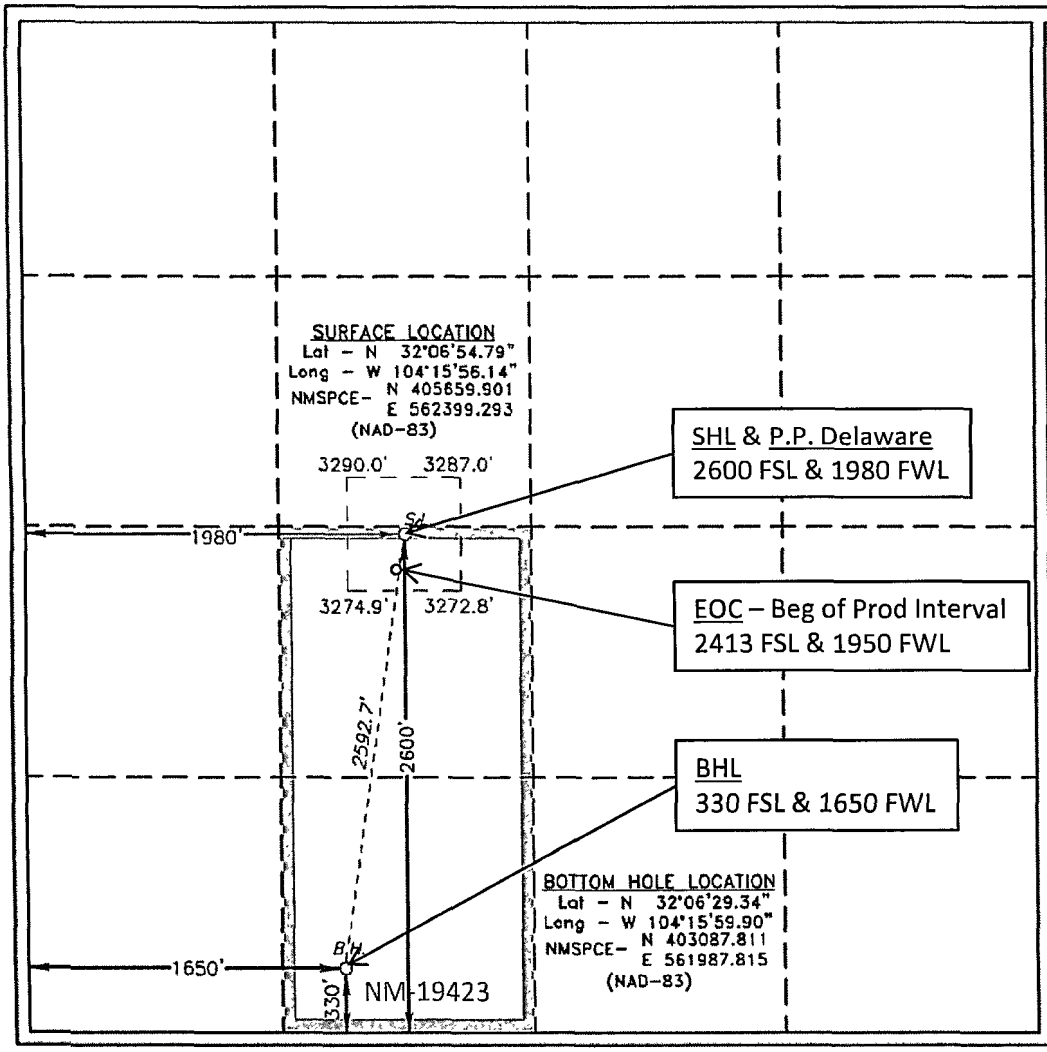
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	23	25 S	26 E		2600	SOUTH	1980	WEST	EDDY

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
N	23	25 S	26 E		330	SOUTH	1650	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
80			NSL Pending

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 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 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.

Zeno Farris 6/4/2009

Signature Date

Zeno Farris

Printed Name

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 supervison, and that the same is true and correct to the best of my belief.

JUNE 1, 2006

Date Surveyed

Signature & Seal of Professional Surveyor

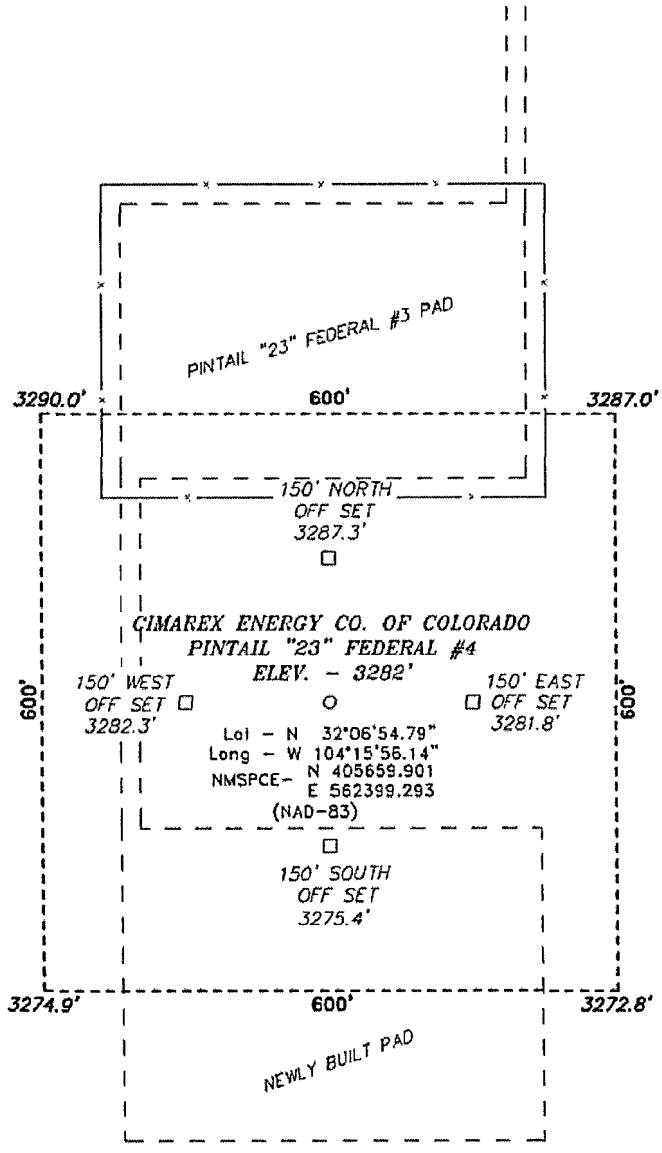
NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

No. 21410

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 23, TOWNSHIP 25 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, **NEW MEXICO.**



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM JUNCTION OF BLACK RIVER VILLAGE AND OLD CAVERN HWY, GO SOUTH 7.1 MILES TO LEASE ROAD, ON LEASE ROAD TURN WEST FOR 0.9 MILES TO OLD PAD, ON LEASE ROAD GO SOUTHWEST 1.4 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTHEAST 0.1 MILES TO PROPOSED LEASE ROAD.

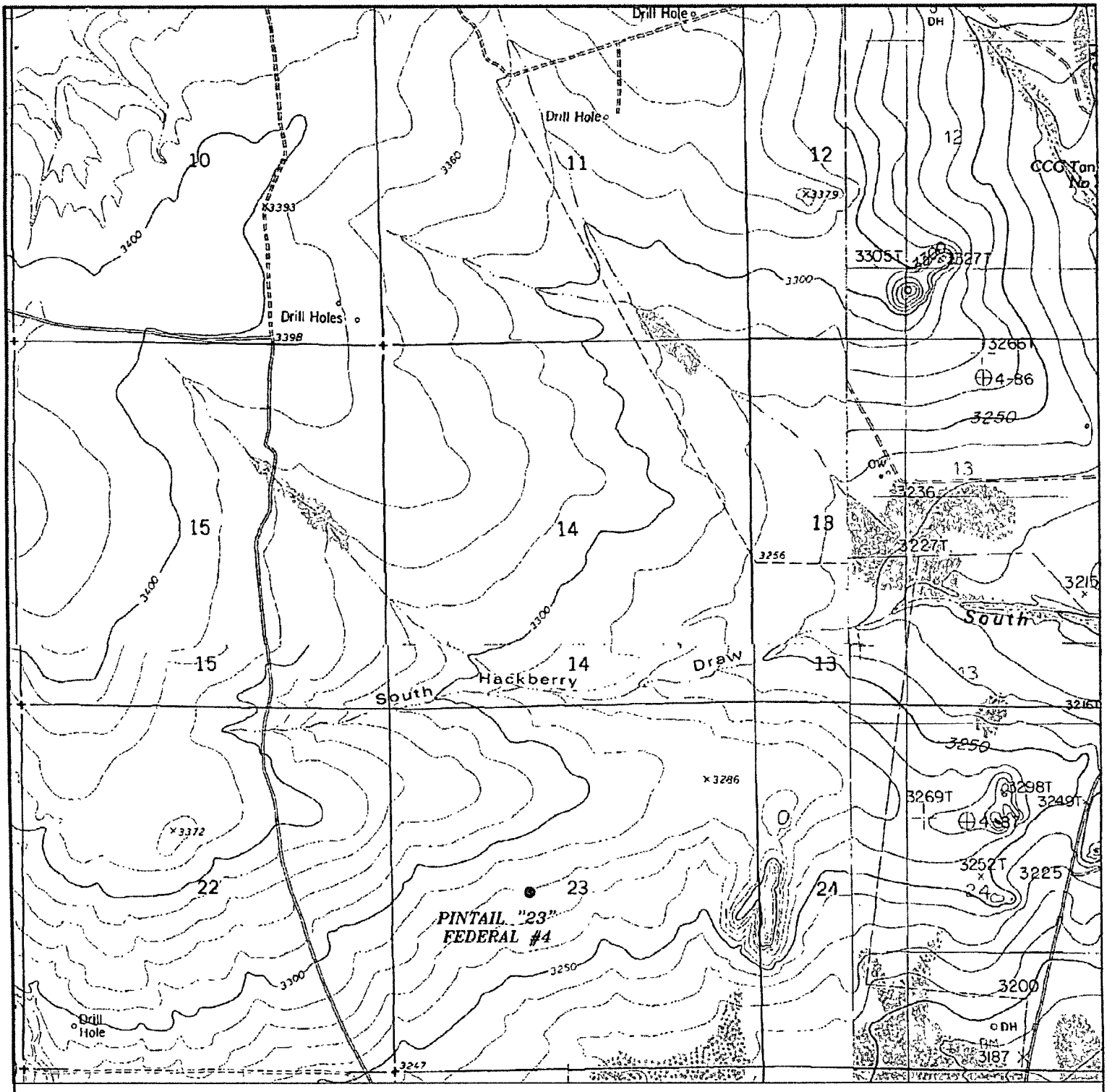
BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

CIMAREX ENERGY CO. OF COLORADO

REF: PINTAIL "23" FEDERAL #4 / WELL PAD TOPO

THE PINTAIL "23" FEDERAL #4 LOCATED 2600' FROM THE SOUTH LINE AND 1980' FROM THE WEST LINE OF SECTION 23, TOWNSHIP 25 SOUTH, RANGE 26 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 21415	Drawn By: J. SMALL		
Date: 06-02-2009	Disk: JMS 21415	Survey Date: 06-01-2009	Sheet 1 of 1 Sheets



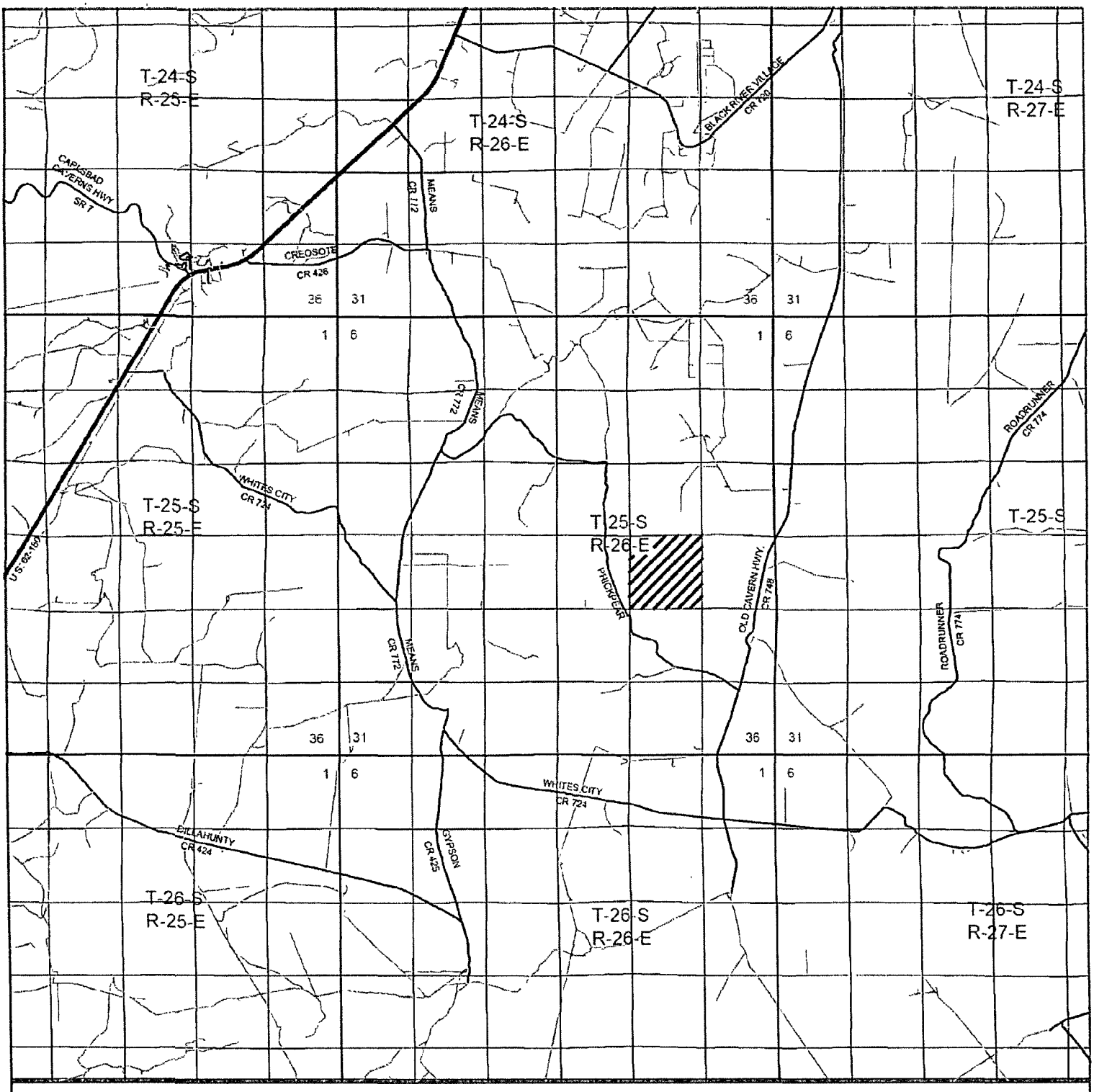
PINTAIL "23" FEDERAL #4
Located 2600' FSL and 1980' FWL
Section 23, Township 25 South, Range 26 East,
N.M.P.M., Eddy County, New Mexico.

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:	JMS 21415
Survey Date:	06-01-2009
Scale:	1" = 2000'
Date:	06-02-2009

N

CIMAREX ENERGY CO. OF COLORADO



PINTAIL "23" FEDERAL #4
Located 2600' FSL and 1980' FWL
Section 23, Township 25 South, Range 26 East,
N.M.P.M., Eddy County, New Mexico.

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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:	JMS 21415
Survey Date:	06-01-2009
Scale:	1" = 2 Miles
Date:	06-02-2009

N

CIMAREX ENERGY CO. OF COLORADO

Revised Drilling Plan

Pintail 23 Federal No. 4 - Chg SHL & Drilling Plans

Cimarex Energy Co. of Colorado

SHL 2600 FSL & 1980 FWL; BHL 330 FSL & 1650 FWL

27-25S-26E - Eddy County, NM

Eddy County, NM

Casing - Surface casing drilling plans have not changed from the approved APD. ← See COA

Hole	Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
Surface	12¼	0'	to	430'	New	8⅝	24#	8-R	STC	J-55
Intermediate	7⅞	0'	to	2733'	New	5½	17#	8-R	BTC	J-55
Lateral (PEAK)	4¾"	2633'	to	5517'	New	2⅞	6.5#	8-R	EUE	L-80

Set intermediate casing at 2733' and drill out of bottom with 4¾" bit. Kick off lateral at 2803.' Hit end of curve at 3103' MD and drill to TD 5517' MD (2994' TVD). Set 2⅞" tubing from liner hanger at 2633' to TD at 6118.'

Cement - Surface casing cement plans have not changed from approved APD. ← See COA

Intermediate Lead: 600 sx Class C Light + 1/4# Flocele + 1# Gilsonite + 6% Gel + 12% Salt (wt 12.4, yld 2.37)

Tail: 400 sx Class C Neat + 2% $CaCl_2$ (wt 14.8, yld 1.34) ← See COA

Lateral No cement - Peak Liner

Cimarex Energy Co.

Eddy County (NM83E)
Sec 23-T25S-R26E
Pintail 23 Fed #4
Wellbore #1

Plan: 06-03-09

Standard Planning Report

03 June, 2009

Quantum Drilling Motors

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Pintail 23 Fed #4
Company:	Cimarex Energy Co.	**TVD Reference:**	WELL @ 0.0ft (Original Well Elev)
Project:	Eddy County (NM83E)	**MD Reference:**	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 23-T25S-R26E	**North Reference:**	Grid
Well:	Pintail 23 Fed #4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	06-03-09		

Project Eddy County (NM83E)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Sec 23-T25S-R26E

Site Position:		**Northing:**	407,021.87 ft	**Latitude:**	32° 7' 8.278 N
From:	Map	**Easting:**	561,065.25 ft	**Longitude:**	104° 16' 10.598 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.03 °

Well Pintail 23 Fed #4

Well Position	**+N/-S**	0.0 ft	**Northing:**	405,659.90 ft	**Latitude:**	32° 6' 54.792 N
	+E/-W	0.0 ft	**Easting:**	562,399.29 ft	**Longitude:**	104° 15' 55.095 W
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	0.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/06/03	8.12	60.03	48,729

Design 06-03-09

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	189.09

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,803.0	0.00	0.00	2,803.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,103.0	90.00	189.09	2,994.0	-188.6	-30.2	30.00	30.00	0.00	189.09	
5,516.8	90.00	189.09	2,994.0	-2,572.1	-411.5	0.00	0.00	0.00	0.00	Pintail 23 Fed #4 Pl

Quantum Drilling Motors

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Pintail 23 Fed #4
Company:	Cimarex Energy Co.	**TVD Reference:**	WELL @ 0.0ft (Original Well Elev)
Project:	Eddy County (NM83E)	**MD Reference:**	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 23-T25S-R26E	**North Reference:**	Grid
Well:	Pintail 23 Fed #4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	06-03-09		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1,041.0	0.00	0.00	1,041.0	0.0	0.0	0.0	0.00	0.00	0.00
Top Salt									
1,652.0	0.00	0.00	1,652.0	0.0	0.0	0.0	0.00	0.00	0.00
Base Salt									
1,854.0	0.00	0.00	1,854.0	0.0	0.0	0.0	0.00	0.00	0.00
Bell Canyon									
2,803.0	0.00	0.00	2,803.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - 30/100 @ 189.09 AZI									
2,820.0	5.10	189.09	2,820.0	-0.7	-0.1	0.8	29.96	29.96	0.00
Cherry Canyon									
2,892.2	26.76	189.09	2,889.0	-20.2	-3.2	20.5	30.01	30.01	0.00
Cherry Canyon M									
2,900.0	29.10	189.09	2,895.9	-23.8	-3.8	24.1	30.00	30.00	0.00
2,985.5	54.76	189.09	2,959.0	-79.8	-12.8	80.8	30.00	30.00	0.00
Cherry Canyon M3									
3,000.0	59.10	189.09	2,966.9	-91.7	-14.7	92.9	30.00	30.00	0.00
3,100.0	89.10	189.09	2,994.0	-185.6	-29.7	188.0	30.00	30.00	0.00
3,101.5	89.10	189.09	2,994.0	-187.1	-29.9	189.5	0.00	0.00	0.00
M3 TVD Target									
3,103.0	90.00	189.09	2,994.0	-188.6	-30.2	191.0	60.00	60.00	0.00
EOC - Hold to TD									
3,200.0	90.00	189.09	2,994.0	-284.4	-45.5	288.0	0.00	0.00	0.00
3,300.0	90.00	189.09	2,994.0	-383.1	-61.3	388.0	0.00	0.00	0.00
3,400.0	90.00	189.09	2,994.0	-481.8	-77.1	488.0	0.00	0.00	0.00
3,500.0	90.00	189.09	2,994.0	-580.6	-92.9	588.0	0.00	0.00	0.00
3,600.0	90.00	189.09	2,994.0	-679.3	-108.7	688.0	0.00	0.00	0.00
3,700.0	90.00	189.09	2,994.0	-778.1	-124.5	788.0	0.00	0.00	0.00
3,800.0	90.00	189.09	2,994.0	-876.8	-140.3	888.0	0.00	0.00	0.00
3,900.0	90.00	189.09	2,994.0	-975.6	-156.1	988.0	0.00	0.00	0.00
4,000.0	90.00	189.09	2,994.0	-1,074.3	-171.9	1,088.0	0.00	0.00	0.00
4,100.0	90.00	189.09	2,994.0	-1,173.1	-187.7	1,188.0	0.00	0.00	0.00
4,200.0	90.00	189.09	2,994.0	-1,271.8	-203.5	1,288.0	0.00	0.00	0.00
4,300.0	90.00	189.09	2,994.0	-1,370.5	-219.3	1,388.0	0.00	0.00	0.00
4,400.0	90.00	189.09	2,994.0	-1,469.3	-235.1	1,488.0	0.00	0.00	0.00
4,500.0	90.00	189.09	2,994.0	-1,568.0	-250.9	1,588.0	0.00	0.00	0.00
4,600.0	90.00	189.09	2,994.0	-1,666.8	-266.6	1,688.0	0.00	0.00	0.00
4,700.0	90.00	189.09	2,994.0	-1,765.5	-282.4	1,788.0	0.00	0.00	0.00
4,800.0	90.00	189.09	2,994.0	-1,864.3	-298.2	1,888.0	0.00	0.00	0.00
4,900.0	90.00	189.09	2,994.0	-1,963.0	-314.0	1,988.0	0.00	0.00	0.00
5,000.0	90.00	189.09	2,994.0	-2,061.8	-329.8	2,088.0	0.00	0.00	0.00
5,100.0	90.00	189.09	2,994.0	-2,160.5	-345.6	2,188.0	0.00	0.00	0.00
5,200.0	90.00	189.09	2,994.0	-2,259.2	-361.4	2,288.0	0.00	0.00	0.00
5,300.0	90.00	189.09	2,994.0	-2,358.0	-377.2	2,388.0	0.00	0.00	0.00
5,400.0	90.00	189.09	2,994.0	-2,456.7	-393.0	2,488.0	0.00	0.00	0.00
5,500.0	90.00	189.09	2,994.0	-2,555.5	-408.8	2,588.0	0.00	0.00	0.00
5,516.8	90.00	189.09	2,994.0	-2,572.1	-411.5	2,604.8	0.00	0.00	0.00
TD at 5516.8 - Pintail 23 Fed #4 PBHL									

Quantum Drilling Motors

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Pintail 23 Fed #4
Company:	Cimarex Energy Co.	**TVD Reference:**	WELL @ 0.0ft (Original Well Elev)
Project:	Eddy County (NM83E)	**MD Reference:**	WELL @ 0.0ft (Original Well Elev)
Site:	Sec 23-T25S-R26E	**North Reference:**	Grid
Well:	Pintail 23 Fed #4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	06-03-09		

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Pintail 23 Fed #4 PBH - plan hits target - Point	0.00	0.00	2,994.0	-2,572.1	-411.5	403,087.81	561,987.81	32° 6' 29.340 N	104° 15' 59.898 W

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,820.0	2,820.0	Cherry Canyon		0.00	
1,041.0	1,041.0	Top Salt		0.00	
1,854.0	1,854.0	Bell Canyon		0.00	
3,101.5	2,994.0	M3 TVD Target		0.00	
2,985.5	2,959.0	Cherry Canyon M3		0.00	
2,892.2	2,889.0	Cherry Canyon M		0.00	
1,652.0	1,652.0	Base Salt		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,803.0	2,803.0	0.0	0.0	KOP - 30/100 @ 189.09 AZI
3,103.0	2,994.0	-188.6	-30.2	EOC - Hold to TD
5,516.8	2,994.0	-2,572.1	-411.5	TD at 5516.8

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Company of Colorado
LEASE NO.:	NM-19423
WELL NAME & NO.:	Pintail 23 Federal No.4
SURFACE HOLE FOOTAGE:	2600' FSL & 1980' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 1650' FWL
LOCATION:	Section 23, T. 25 S., R 26 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Since the original, approved location has already been built, the caliche on this location will all be used to build the new location. Once all of the caliche has been removed, the original location will need to be recontoured and reclaimed.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

Pad Berming:
The pad will be bermed on the south and west to prevent oil, salt, and other chemical contaminants from leaving the pad.

Tank Battery Liners and Berms:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Although this well will be drilled with a closed loop system and no reserve pits will be utilized, the v-door will be on the East side of the location.

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

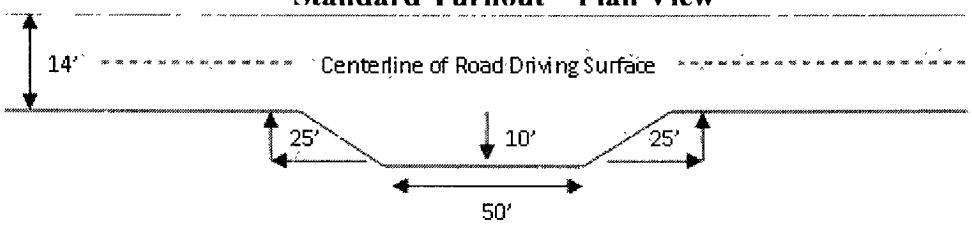
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

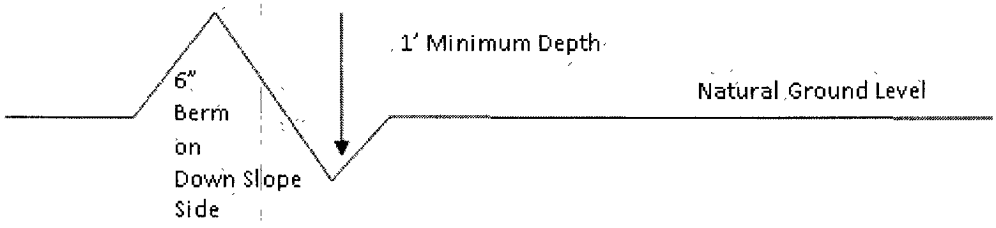
Standard Turnout – Plan View



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section Of Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 400'/4% + 100' = 200' lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

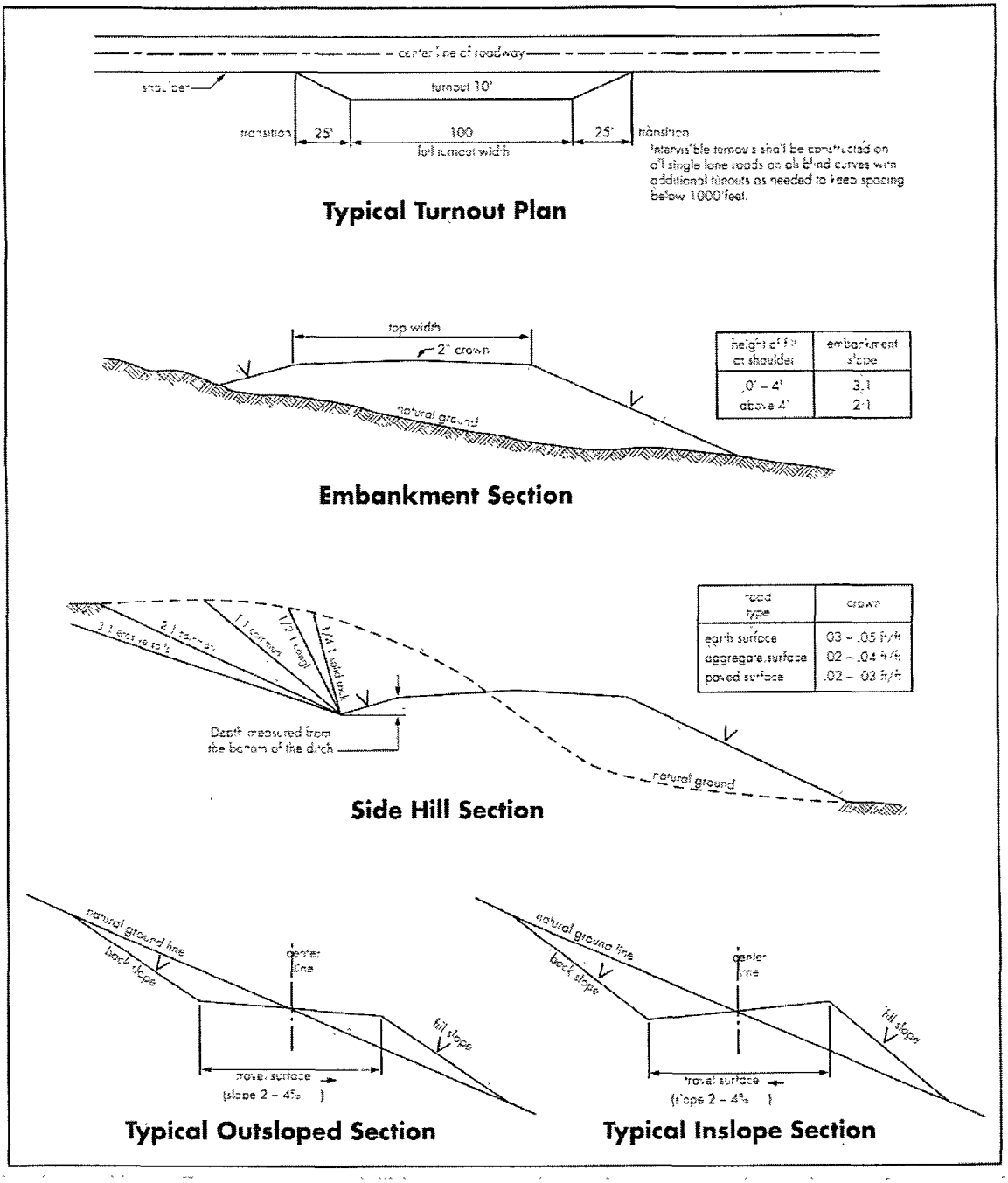
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Delaware** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

HIGH CAVE/KARST – CONTINGENCY CASING WILL BE REQUIRED IF LOST CIRCULATION OCCURS WHILE DRILLING THE SURFACE HOLE. THE SURFACE HOLE WILL HAVE TO BE REAMED AND A LARGER CASING INSTALLED. IF LOST CIRCULATION OCCURS WHILE DRILLING THE 7-7/8" HOLE AND THE CONTINGENCY CASING HAS NOT BEEN SET, THE CEMENT PROGRAM FOR THE 5-1/2" CASING WILL NEED TO BE MODIFIED AND THE BLM IS TO BE CONTACTED. A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE ARE REQUIRED IN HIGH CAVE/KARST AREAS.

Possible lost circulation in the Delaware.

1. The **8-5/8** inch surface casing shall be set at **approximately 430** feet and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial action will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **5-1/2** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a-c above.
    Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst concerns.

3. The minimum required fill of cement behind the **2-7/8** inch production casing is:

   ☒ Cement not required. Operator using Peak liner.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

   e. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 060809

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESEEDING PROCEDURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESEEDING PROCEDURE

Once the well has been drilled, completion procedures have been accomplished, all trash removed, reseed the location and all surrounding disturbed areas as follows:

Seed Mixture 4, for Gypsum Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Alkali Sacaton (Sporobolus airoides)	1.0
DWS Four-wing saltbush (Atriplex canescens)	5.0

DWS: DeWinged Seed

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.