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OCD-ARTESIA

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NM OCD ARTESIA

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-01085	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Cimarex Energy Co. of Colorado		7. If Unit or CA Agreement, Name and No.	
3a. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701		8. Lease Name and Well No. Irwin 23-14 Federal No. 3 [5056]	
3b. Phone No (include area code) 432-571-7800		9. API Well No. 30-015-39893	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 23-19S-30E; 1300 FNL & 755 FEL At proposed prod. Zone 14-19S-30E; 1650 FNL & 330 FWL Horizontal Bone Spring test		10. Field and Pool, or Exploratory Benson; Bone Spring [5200]	
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Bk. and Survey or Area 23 & 14-T19S-R30E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 20'		12. County or Parish Eddy	
16. No of acres in lease 760 acres		13. State NM	
17. Spacing Unit dedicated to this well E2, E2W2, SWNW, W2SW 14-19S-30E N2NE, NENW 23-19S-30E			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30'		19. Proposed Depth MD 15152 TVD 8800	
20. BLM/BIA Bond No. on File NM-2575			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3281' GR		22. Approximate date work will start* 10.15.11	
		23. Estimated duration 25-30 days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|--|--|
| 1. Well plat certified by a registered surveyor | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2. A Drilling Plan | 5. Operator Certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature Zeno Farris	Name (Printed/Typed) Zeno Farris	Date 08.25.11
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Title Manager Operations Administration		
Approved By (Signature) [Signature] Douglas J. Burger	Name (Printed/Typed) Douglas J. Burger	Date JAN 18 2012
Title for STATE DIRECTOR	Office NM STATE OFFICE	

Application approval 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.

Conditions of approval, if any, are attached.

Title 18 U.S.S. Section 1001 and Title 43 U.S.C Section 1212, make 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 page 2)

CAPTAN CONTROLLED WATER BASIN
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

APPROVAL FOR TWO YEARS

Operator Certification Statement

Irwin 23-14 Federal No. 3

Cimarex Energy Co. of Colorado

Unit A, Section 23

T19S-R30E, Eddy County, NM

Operator's Representative

Cimarex Energy Co. of Colorado

600 N. Marienfeld St., Ste. 600

Midland, TX 79701

Office Phone: (432) 571-7800

Zeno Farris

CERTIFICATION: I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 25th day of August, 2011

NAME: Zeno Farris
Zeno Farris

TITLE: Manager Operations Administration

ADDRESS: 600 N. Marienfeld St., Ste. 600
Midland, TX 79701

TELEPHONE: (432) 620-1938

EMAIL: zfarris@cimarex.com

Field Representative: Same as above

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

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

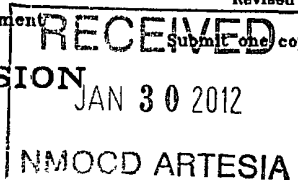
DISTRICT III
1060 Rio Brazos Rd., Aztec, NM 87410

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 October 15, 2009

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



Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-3893	Pool Code 5260	Pool Name Benson; Bone Spring
Property Code 390576	Property Name IRWIN "23-14" Federal	Well Number 3
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3281'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	19 S	30 E		1300	NORTH	755	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
E	14	19 S	30 E		1650	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
760			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

BOTTOM HOLE
Lat - N 32°39'47.09"
Long - W 103°57'00.58"
NMSPCE- N 605172.719
E 659254.069
(NAD-83)

EOC
1022 FNL & 796 FEL

SURFACE LOCATION
Lat - N 32°38'58.25"
Long - W 103°56'11.57"
NMSPCE- N 600252.8
E 663462.3
(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.

Zeno Farris 8/29/2011
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 supervision and that the same is true and correct to the best of my belief.

GARY L. JONES
Date Surveyed Signature & Seal of Professional Surveyor

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Scale 1"=2000'



Planned Wellpath Report

Prelim_1

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Irwin) Sec 23-14, T19S, R30E	Wellbore	No. 3H PWB
Facility	Irwin 23-14 Site Location		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Calhphik
Scale	0.999926	Report Generated	7/21/2011 at 2:49:20 PM
Convergence at slot	0.21° East	Database/Source file	WA Midland/No._3H_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	600107.08	663301.24	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W
Facility Reference Pt			0.00	0.00	30°59'18.404"N	106°03'38.987"W
Field Reference Pt			663522.30	600253.00	32°38'58.255"N	103°56'10.864"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 3H SHL (RKB) to GL	3281.00ft
Horizontal Reference Pt	Slot	Rig on No. 3H SHL (RKB) to Mean Sea Level	3281.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RKB)	Rig on No. 3H SHL (RKB) to Mud Line at Slot (No. 3H SHL)	3281.00ft
MD Reference Pt	Rig on No. 3H SHL (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	319.46°



Planned Wellpath Report

Prelim_1

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WELLPATH DATA (158 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	319.458	0.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	Tie On
100.00†	0.000	319.458	100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
200.00†	0.000	319.458	200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
300.00†	0.000	319.458	300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
400.00†	0.000	319.458	400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
500.00†	0.000	319.458	500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
600.00†	0.000	319.458	600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
700.00†	0.000	319.458	700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
800.00†	0.000	319.458	800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
900.00†	0.000	319.458	900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1000.00†	0.000	319.458	1000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1100.00†	0.000	319.458	1100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1200.00†	0.000	319.458	1200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1300.00†	0.000	319.458	1300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1400.00†	0.000	319.458	1400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1500.00†	0.000	319.458	1500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1600.00†	0.000	319.458	1600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1700.00†	0.000	319.458	1700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1800.00†	0.000	319.458	1800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
1900.00†	0.000	319.458	1900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2000.00†	0.000	319.458	2000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2100.00†	0.000	319.458	2100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2200.00†	0.000	319.458	2200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2300.00†	0.000	319.458	2300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2400.00†	0.000	319.458	2400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2500.00†	0.000	319.458	2500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2600.00†	0.000	319.458	2600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2700.00†	0.000	319.458	2700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2800.00†	0.000	319.458	2800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
2900.00†	0.000	319.458	2900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3000.00†	0.000	319.458	3000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3100.00†	0.000	319.458	3100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3200.00†	0.000	319.458	3200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3300.00†	0.000	319.458	3300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3400.00†	0.000	319.458	3400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3500.00†	0.000	319.458	3500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	Delaware Sand
3600.00†	0.000	319.458	3600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3700.00†	0.000	319.458	3700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3800.00†	0.000	319.458	3800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
3900.00†	0.000	319.458	3900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4000.00†	0.000	319.458	4000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4100.00†	0.000	319.458	4100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4200.00†	0.000	319.458	4200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4300.00†	0.000	319.458	4300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4400.00†	0.000	319.458	4400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Irwin) Sec 23-14, T19S, R30E	Wellbore	No. 3H PWB
Facility	Irwin 23-14 Site Location		

WELLPATH DATA (158 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4500.00†	0.000	319.458	4500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4600.00†	0.000	319.458	4600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4700.00†	0.000	319.458	4700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4800.00†	0.000	319.458	4800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
4900.00†	0.000	319.458	4900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5000.00†	0.000	319.458	5000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5100.00†	0.000	319.458	5100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5200.00†	0.000	319.458	5200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5300.00†	0.000	319.458	5300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5400.00†	0.000	319.458	5400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5500.00†	0.000	319.458	5500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5600.00†	0.000	319.458	5600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5700.00†	0.000	319.458	5700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5800.00†	0.000	319.458	5800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
5900.00†	0.000	319.458	5900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6000.00†	0.000	319.458	6000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6100.00†	0.000	319.458	6100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6200.00†	0.000	319.458	6200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6300.00†	0.000	319.458	6300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6350.00†	0.000	319.458	6350.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	Bone Spring
6400.00†	0.000	319.458	6400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6500.00†	0.000	319.458	6500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6600.00†	0.000	319.458	6600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6700.00†	0.000	319.458	6700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6800.00†	0.000	319.458	6800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
6900.00†	0.000	319.458	6900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7000.00†	0.000	319.458	7000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7100.00†	0.000	319.458	7100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7200.00†	0.000	319.458	7200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7300.00†	0.000	319.458	7300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7400.00†	0.000	319.458	7400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7500.00†	0.000	319.458	7500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7600.00†	0.000	319.458	7600.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7700.00†	0.000	319.458	7700.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7750.00†	0.000	319.458	7750.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	1st Bone Spring Shale
7800.00†	0.000	319.458	7800.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
7900.00†	0.000	319.458	7900.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
8000.00†	0.000	319.458	8000.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
8100.00†	0.000	319.458	8100.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
8200.00†	0.000	319.458	8200.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
8300.00†	0.000	319.458	8300.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
8400.00†	0.000	319.458	8400.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
8500.00†	0.000	319.458	8500.00	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	
8513.52	0.000	319.458	8513.52	0.00	0.00	0.00	663462.30	600252.80	32°38'58.256"N	103°56'11.565"W	0.00	Est KOP
8600.00†	17.296	319.458	8598.69	12.95	9.84	8.42	663453.88	600262.64	32°38'58.353"N	103°56'11.663"W	20.00	



Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Irwin) Sec 23-14, T19S, R30E	Wellbore	No. 3H PWB
Facility	Irwin 23-14 Site Location		

WELLPATH DATA (158 stations) * = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8601.37+	17.570	319.458	8600.00	13.36	10.16	-8.69	663453.61	600262.96	32°38'58.356"N	103°56'11.666"W	20.00	2nd Bone Spring Shale
8700.00+	37.296	319.458	8687.11	58.58	44.52	-38.08	663424.23	600297.31	32°38'58.697"N	103°56'12.009"W	20.00	
8800.00+	57.296	319.458	8754.58	131.69	100.08	-85.60	663376.71	600352.87	32°38'59.249"N	103°56'12.562"W	20.00	
8900.00+	77.296	319.458	8792.99	223.48	169.83	-145.26	663317.05	600422.61	32°38'59.941"N	103°56'13.257"W	20.00	
8963.52+	90.000	319.458	8800.00	286.48	217.70	-186.21	663276.10	600470.49	32°39'00.416"N	103°56'13.734"W	20.00	EOC
9000.00+	90.000	319.458	8800.00	322.96	245.43	-209.92	663252.39	600498.21	32°39'00.692"N	103°56'14.010"W	0.00	
9100.00+	90.000	319.458	8800.00	422.96	321.42	-274.92	663187.40	600574.19	32°39'01.446"N	103°56'14.767"W	0.00	
9200.00+	90.000	319.458	8800.00	522.96	397.41	-339.92	663122.40	600650.18	32°39'02.200"N	103°56'15.524"W	0.00	
9300.00+	90.000	319.458	8800.00	622.96	473.40	-404.92	663057.41	600726.17	32°39'02.955"N	103°56'16.280"W	0.00	
9400.00+	90.000	319.458	8800.00	722.96	549.40	-469.93	662992.41	600802.16	32°39'03.709"N	103°56'17.037"W	0.00	
9500.00+	90.000	319.458	8800.00	822.96	625.39	-534.93	662927.41	600878.14	32°39'04.463"N	103°56'17.794"W	0.00	
9600.00+	90.000	319.458	8800.00	922.96	701.38	-599.93	662862.42	600954.13	32°39'05.217"N	103°56'18.551"W	0.00	
9700.00+	90.000	319.458	8800.00	1022.96	777.38	-664.93	662797.42	601030.12	32°39'05.972"N	103°56'19.308"W	0.00	
9800.00+	90.000	319.458	8800.00	1122.96	853.37	-729.93	662732.43	601106.11	32°39'06.726"N	103°56'20.065"W	0.00	
9900.00+	90.000	319.458	8800.00	1222.96	929.36	-794.93	662667.43	601182.09	32°39'07.480"N	103°56'20.822"W	0.00	
10000.00+	90.000	319.458	8800.00	1322.96	1005.36	-859.93	662602.44	601258.08	32°39'08.235"N	103°56'21.579"W	0.00	
10100.00+	90.000	319.458	8800.00	1422.96	1081.35	-924.93	662537.44	601334.07	32°39'08.989"N	103°56'22.336"W	0.00	
10200.00+	90.000	319.458	8800.00	1522.96	1157.34	-989.93	662472.45	601410.06	32°39'09.743"N	103°56'23.093"W	0.00	
10300.00+	90.000	319.458	8800.00	1622.96	1233.34	-1054.93	662407.45	601486.04	32°39'10.498"N	103°56'23.850"W	0.00	
10400.00+	90.000	319.458	8800.00	1722.96	1309.33	-1119.93	662342.46	601562.03	32°39'11.252"N	103°56'24.607"W	0.00	
10500.00+	90.000	319.458	8800.00	1822.96	1385.32	-1184.93	662277.46	601638.02	32°39'12.006"N	103°56'25.364"W	0.00	
10600.00+	90.000	319.458	8800.00	1922.96	1461.32	-1249.93	662212.47	601714.00	32°39'12.760"N	103°56'26.121"W	0.00	
10700.00+	90.000	319.458	8800.00	2022.96	1537.31	-1314.93	662147.47	601789.99	32°39'13.515"N	103°56'26.878"W	0.00	
10800.00+	90.000	319.458	8800.00	2122.96	1613.30	-1379.93	662082.47	601865.98	32°39'14.269"N	103°56'27.634"W	0.00	
10900.00+	90.000	319.458	8800.00	2222.96	1689.29	-1444.93	662017.48	601941.97	32°39'15.023"N	103°56'28.391"W	0.00	
11000.00+	90.000	319.458	8800.00	2322.96	1765.29	-1509.93	661952.48	602017.95	32°39'15.778"N	103°56'29.148"W	0.00	
11100.00+	90.000	319.458	8800.00	2422.96	1841.28	-1574.93	661887.49	602093.94	32°39'16.532"N	103°56'29.905"W	0.00	
11200.00+	90.000	319.458	8800.00	2522.96	1917.27	-1639.93	661822.49	602169.93	32°39'17.286"N	103°56'30.662"W	0.00	
11300.00+	90.000	319.458	8800.00	2622.96	1993.27	-1704.93	661757.50	602245.92	32°39'18.040"N	103°56'31.419"W	0.00	
11400.00+	90.000	319.458	8800.00	2722.96	2069.26	-1769.93	661692.50	602321.90	32°39'18.795"N	103°56'32.176"W	0.00	
11500.00+	90.000	319.458	8800.00	2822.96	2145.25	-1834.93	661627.51	602397.89	32°39'19.549"N	103°56'32.933"W	0.00	
11600.00+	90.000	319.458	8800.00	2922.96	2221.25	-1899.93	661562.51	602473.88	32°39'20.303"N	103°56'33.690"W	0.00	
11700.00+	90.000	319.458	8800.00	3022.96	2297.24	-1964.93	661497.52	602549.87	32°39'21.057"N	103°56'34.447"W	0.00	
11800.00+	90.000	319.458	8800.00	3122.96	2373.23	-2029.93	661432.52	602625.85	32°39'21.812"N	103°56'35.204"W	0.00	
11900.00+	90.000	319.458	8800.00	3222.96	2449.23	-2094.93	661367.52	602701.84	32°39'22.566"N	103°56'35.961"W	0.00	
12000.00+	90.000	319.458	8800.00	3322.96	2525.22	-2159.93	661302.53	602777.83	32°39'23.320"N	103°56'36.718"W	0.00	
12100.00+	90.000	319.458	8800.00	3422.96	2601.21	-2224.94	661237.53	602853.81	32°39'24.075"N	103°56'37.475"W	0.00	
12200.00+	90.000	319.458	8800.00	3522.96	2677.21	-2289.94	661172.54	602929.80	32°39'24.829"N	103°56'38.232"W	0.00	
12300.00+	90.000	319.458	8800.00	3622.96	2753.20	-2354.94	661107.54	603005.79	32°39'25.583"N	103°56'38.989"W	0.00	
12400.00+	90.000	319.458	8800.00	3722.96	2829.19	-2419.94	661042.55	603081.78	32°39'26.337"N	103°56'39.746"W	0.00	
12500.00+	90.000	319.458	8800.00	3822.96	2905.18	-2484.94	660977.55	603157.76	32°39'27.092"N	103°56'40.503"W	0.00	
12600.00+	90.000	319.458	8800.00	3922.96	2981.18	-2549.94	660912.56	603233.75	32°39'27.846"N	103°56'41.260"W	0.00	
12700.00+	90.000	319.458	8800.00	4022.96	3057.17	-2614.94	660847.56	603309.74	32°39'28.600"N	103°56'42.017"W	0.00	
12800.00+	90.000	319.458	8800.00	4122.96	3133.16	-2679.94	660782.57	603385.73	32°39'29.354"N	103°56'42.774"W	0.00	
12900.00+	90.000	319.458	8800.00	4222.96	3209.16	-2744.94	660717.57	603461.71	32°39'30.109"N	103°56'43.531"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Irwin) Sec 23-14, T19S, R30E	Wellbore	No. 3H PWB
Facility	Irwin 23-14 Site Location		

WELLPATH DATA (158 stations) T = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13000.00†	90.000	319.458	8800.00	4322.96	3285.15	-2809.94	660652.57	603537.70	32°39'30.863"N	103°56'44.288"W	0.00	
13100.00†	90.000	319.458	8800.00	4422.96	3361.14	-2874.94	660587.58	603613.69	32°39'31.617"N	103°56'45.045"W	0.00	
13200.00†	90.000	319.458	8800.00	4522.96	3437.14	-2939.94	660522.58	603689.68	32°39'32.371"N	103°56'45.802"W	0.00	
13300.00†	90.000	319.458	8800.00	4622.96	3513.13	-3004.94	660457.59	603765.66	32°39'33.126"N	103°56'46.560"W	0.00	
13400.00†	90.000	319.458	8800.00	4722.96	3589.12	-3069.94	660392.59	603841.65	32°39'33.880"N	103°56'47.317"W	0.00	
13500.00†	90.000	319.458	8800.00	4822.96	3665.12	-3134.94	660327.60	603917.64	32°39'34.634"N	103°56'48.074"W	0.00	
13600.00†	90.000	319.458	8800.00	4922.96	3741.11	-3199.94	660262.60	603993.62	32°39'35.388"N	103°56'48.831"W	0.00	
13700.00†	90.000	319.458	8800.00	5022.96	3817.10	-3264.94	660197.61	604069.61	32°39'36.143"N	103°56'49.588"W	0.00	
13800.00†	90.000	319.458	8800.00	5122.96	3893.09	-3329.94	660132.61	604145.60	32°39'36.897"N	103°56'50.345"W	0.00	
13900.00†	90.000	319.458	8800.00	5222.96	3969.09	-3394.94	660067.62	604221.59	32°39'37.651"N	103°56'51.102"W	0.00	
14000.00†	90.000	319.458	8800.00	5322.96	4045.08	-3459.94	660002.62	604297.57	32°39'38.405"N	103°56'51.859"W	0.00	
14100.00†	90.000	319.458	8800.00	5422.96	4121.07	-3524.94	659937.62	604373.56	32°39'39.160"N	103°56'52.616"W	0.00	
14200.00†	90.000	319.458	8800.00	5522.96	4197.07	-3589.94	659872.63	604449.55	32°39'39.914"N	103°56'53.373"W	0.00	
14300.00†	90.000	319.458	8800.00	5622.96	4273.06	-3654.94	659807.63	604525.54	32°39'40.668"N	103°56'54.130"W	0.00	
14400.00†	90.000	319.458	8800.00	5722.96	4349.05	-3719.94	659742.64	604601.52	32°39'41.422"N	103°56'54.887"W	0.00	
14500.00†	90.000	319.458	8800.00	5822.96	4425.05	-3784.94	659677.64	604677.51	32°39'42.177"N	103°56'55.644"W	0.00	
14600.00†	90.000	319.458	8800.00	5922.96	4501.04	-3849.94	659612.65	604753.50	32°39'42.931"N	103°56'56.401"W	0.00	
14700.00†	90.000	319.458	8800.00	6022.96	4577.03	-3914.94	659547.65	604829.49	32°39'43.685"N	103°56'57.159"W	0.00	
14800.00†	90.000	319.458	8800.00	6122.96	4653.03	-3979.95	659482.66	604905.47	32°39'44.439"N	103°56'57.916"W	0.00	
14900.00†	90.000	319.458	8800.00	6222.96	4729.02	-4044.95	659417.66	604981.46	32°39'45.193"N	103°56'58.673"W	0.00	
15000.00†	90.000	319.458	8800.00	6322.96	4805.01	-4109.95	659352.67	605057.45	32°39'45.948"N	103°56'59.430"W	0.00	
15100.00†	90.000	319.458	8800.00	6422.96	4881.01	-4174.95	659287.67	605133.44	32°39'46.702"N	103°57'00.187"W	0.00	
15151.70	90.000	319.458	8800.00	6474.66	4920.29	-4208.55	659254.07	605172.72	32°39'47.092"N	103°57'00.578"W	0.00	No. 1H PBHL

HOLE & CASING SECTIONS - Ref Wellbore: No. 3H PWB - Ref Wellpath: Prelim 1									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
17.5in Open Hole	0.00	500.00	500.00	0.00	500.00	0.00	0.00	0.00	0.00
13.375in Casing	0.00	500.00	500.00	0.00	500.00	0.00	0.00	0.00	0.00
12.25in Open Hole	500.00	4000.00	3500.00	500.00	4000.00	0.00	0.00	0.00	0.00
9.625in Casing	0.00	4000.00	4000.00	0.00	4000.00	0.00	0.00	0.00	0.00
8.75in Open Hole	4000.00	15151.70	11151.70	4000.00	8800.00	0.00	0.00	4920.29	-4208.55
5.5in Casing	0.00	15151.70	15151.70	0.00	8800.00	0.00	0.00	4920.29	-4208.55



Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Irwin) Sec 23-14, T19S, R30E	Wellbore	No. 3H PWB
Facility	Irwin 23-14 Site Location		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No. 3H PBHL	15151.70	8800.00	4920.29	-4208.55	659254.07	605172.72	32°39'47.092"N	103°57'00.578"W	point

SURVEY PROGRAM - Ref Wellbore: No. 3H PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
3281.00	15151.70	NaviTrak (Standard)		No. 3H PWB

16" Diverter System

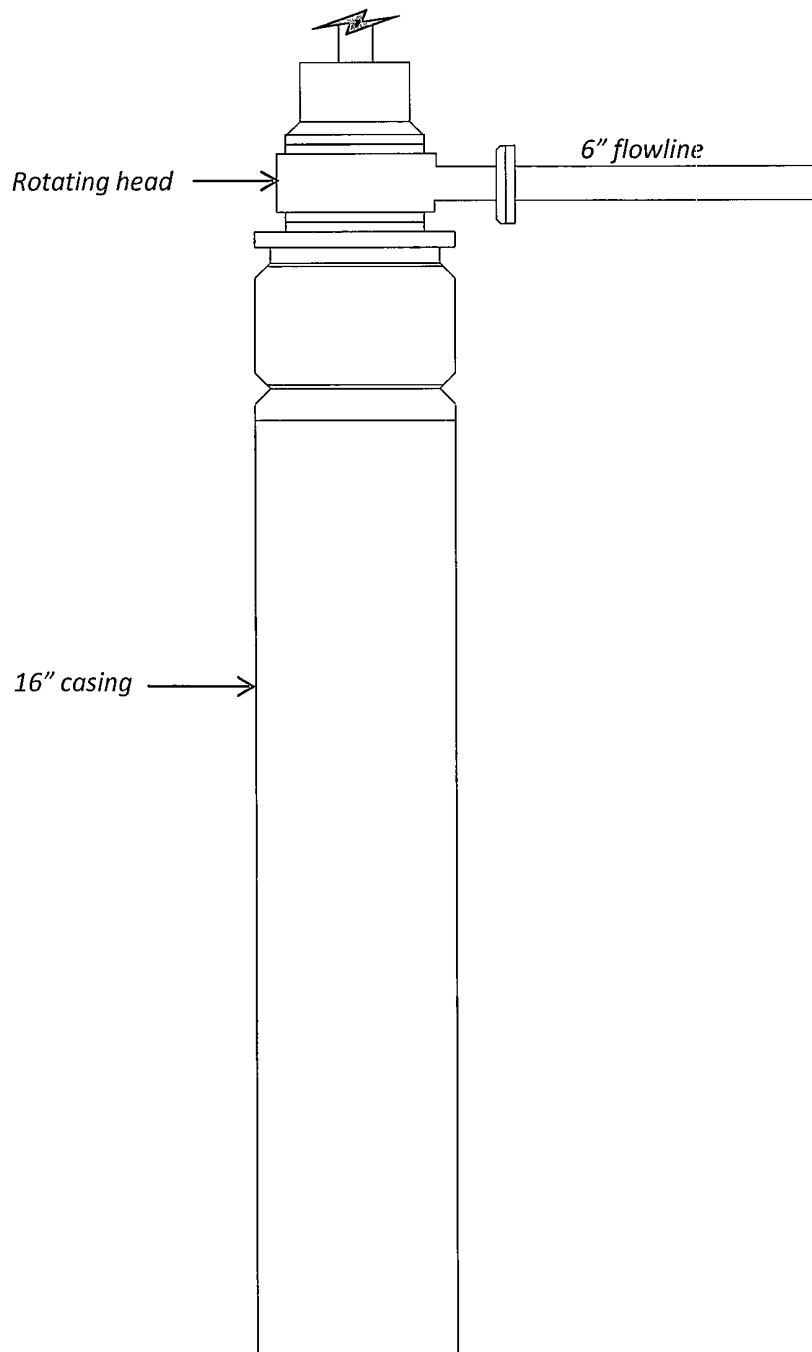


Exhibit E-1 – 16" Diverter System

Irwin 23 14 Federal No. 3

Cimarex Energy Co. of Colorado

SHL: 23-19S-30E; 1300 FNL & 755 FEL

BHL: 14-19S-30E; 1650 FNL & 330 FWL

Eddy County, NM

Key 884

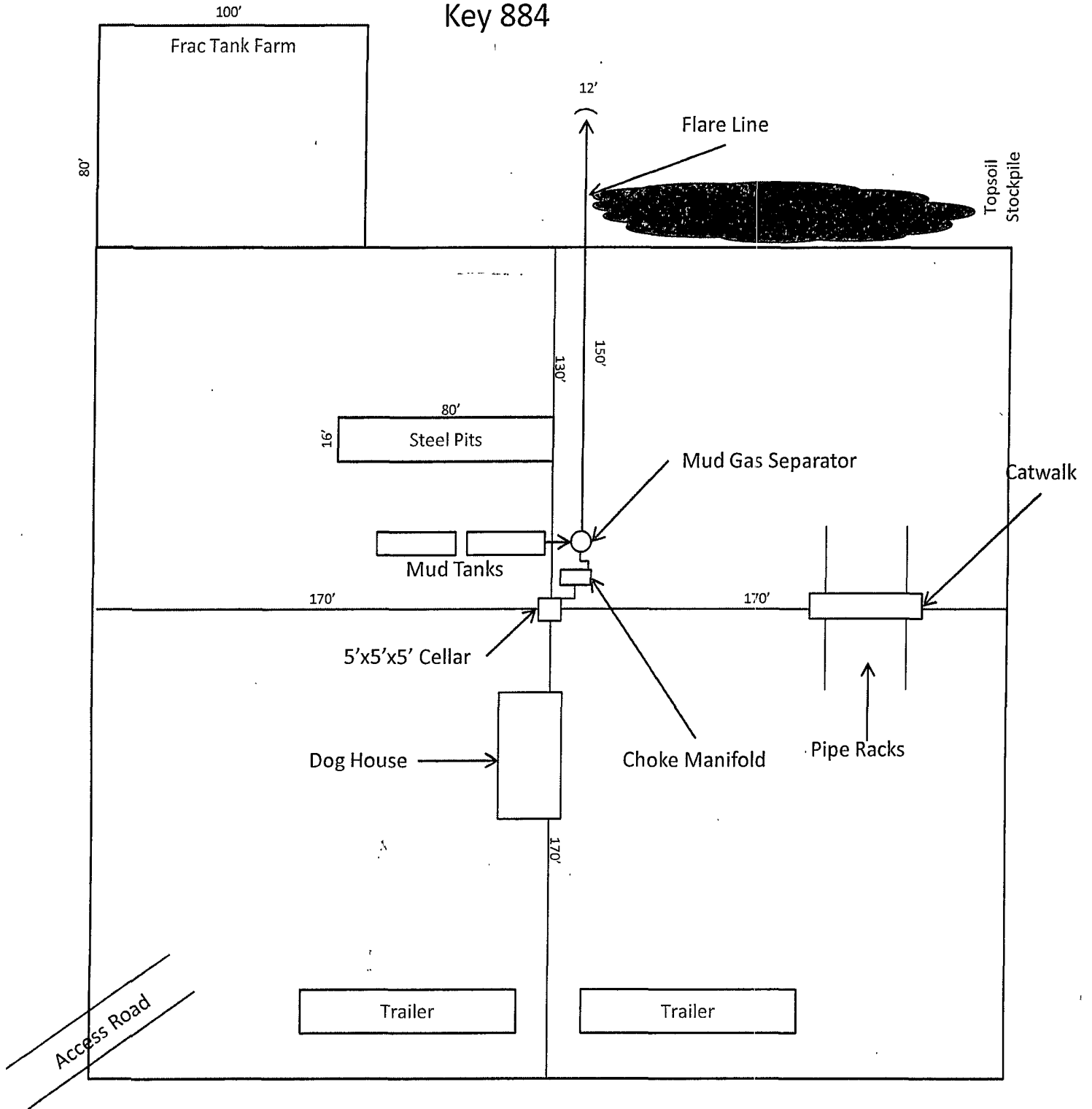


Exhibit D – Rig Diagram
Irwin 23-14 Federal No. 3
 Cimarex Energy Co. of Colorado
 SHL: 23-19S-30E; 1300 FNL & 755 FEL
 BHL: 14-19S-30E; 1650 FNL & 330 FWL
 Eddy County, NM

Combined pad limited to 135' east from center hole of Irwin 23-14 Fed #1
 excluding area needed for stringer See COAs JJJ

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S
 - B. Physical effects and hazards
 - C. Proper use of safety equipment and life support systems.
 - D. Principle and operation of H₂S detectors, warning system and briefing areas.
 - E. Evacuation procedure, routes and first aid.
 - F. Proper use of 30 minute pressure demand air pack.
- 2 H₂S Detection and Alarm Systems:
 - A. H₂S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers:
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
- 4 Condition Flags and Signs:
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only emergency personnel admitted to location.
- 5 Well control equipment:
 - A. See exhibit "E"
- 6 Communication:
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing:

No DSTs or cores are planned at this time.
- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

H₂S Contingency Plan
Irwin 23-14 Federal No. 3
Cimarex Energy Co. of Colorado
Unit A, Section 23
T19S-R30E, Eddy County, NM

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H₂S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
 - ◆ Detection of H₂S, and
 - ◆ Measures for protection against the gas,
 - ◆ Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contacts

Irwin 23-14 Federal No. 3

Cimarex Energy Co. of Colorado

Unit A, Section 23

T19S-R30E, Eddy County, NM

Company Office

Cimarex Energy Co. of Colorado	800-969-4789
Co. Office and After-Hours Menu	

Key Personnel

Name	Title	Office	Mobile
Doug Park	Drilling Manager	432-620-1934	972-333-1407
Dee Smith	Drilling Super	432-620-1933	972-882-1010
Jim Evans	Drilling Super	432-620-1929	972-465-0564
Roy Shirley	Field Super		432-634-2136

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

Santa Fe

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National

National Emergency Response Center (Washington, D.C.)	800-424-8802
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Medical

Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other

Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		

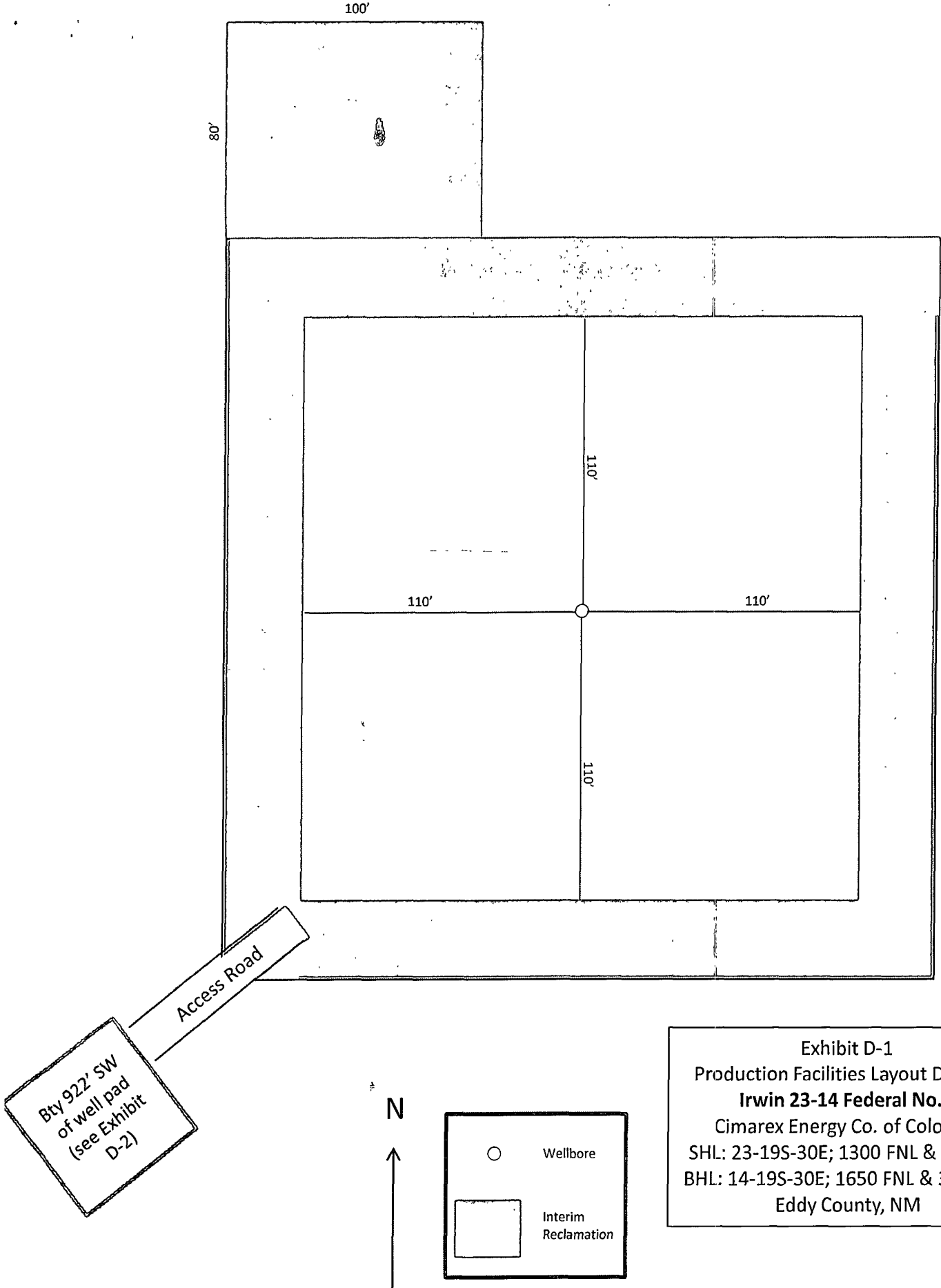


Exhibit D-1
Production Facilities Layout Diagram
Irwin 23-14 Federal No. 3
Cimarex Energy Co. of Colorado
SHL: 23-19S-30E; 1300 FNL & 755 FEL
BHL: 14-19S-30E; 1650 FNL & 330 FWL
Eddy County, NM

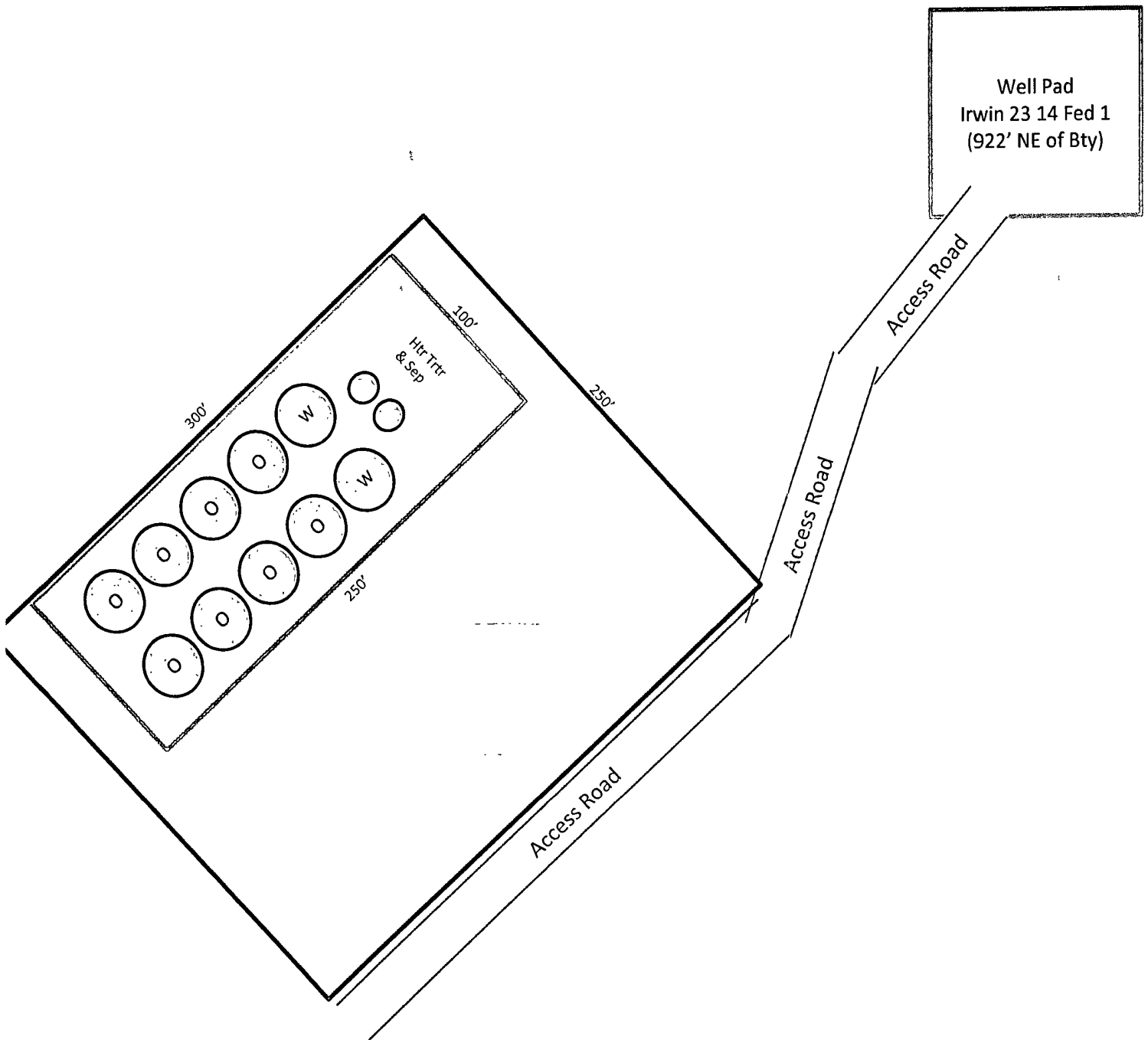


Exhibit D-2
Battery Diagram
Irwin 23-14 Federal No. 1-4
Cimarex Energy Co. of Colorado
SWNE 23-19S-30E
Eddy County, NM

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CIMAREX ENERGYCO OF COLORADO
LEASE NO.:	NM-01085
WELL NAME & NO.:	IRWIN 23-14 FEDERAL #3
SURFACE HOLE FOOTAGE:	1300' FNL & 755' FEL
BOTTOM HOLE FOOTAGE:	1650' FNL & 330' FWL (Sec. 14)
LOCATION:	Section 23, T. 19 S., R. 30 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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - ROW application**
 - Tank Battery**
 - Pad Restriction**
 - Berming**
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - R-111-P Potash
 - H2S Requirements
 - Logging requirements
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☒ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**

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)

ROW Application

Access road, electric line, flowlines, and tank battery pad shall be applied for by ROW

Off lease storage agreement

An off lease storage agreement shall be applied for prior to production of well

Pad restriction

The well pad will be restricted to 135 east from the Irwin 23 14 Federal #1 excluding area needed for stringer

Berming

Berm well pad with berm a minimum of 12 inches high

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) 234-6235 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 in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 4 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

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

Payment shall be made to the BLM prior to removal of any federal mineral materials. 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 twenty (20) 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

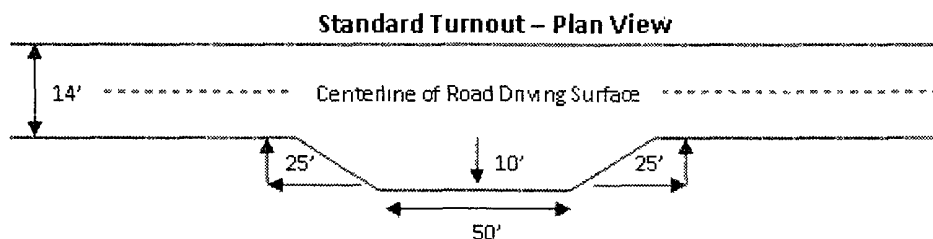
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

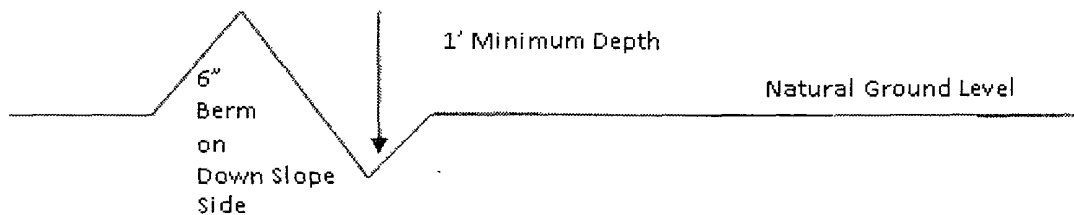


Drainage

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 a 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:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

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

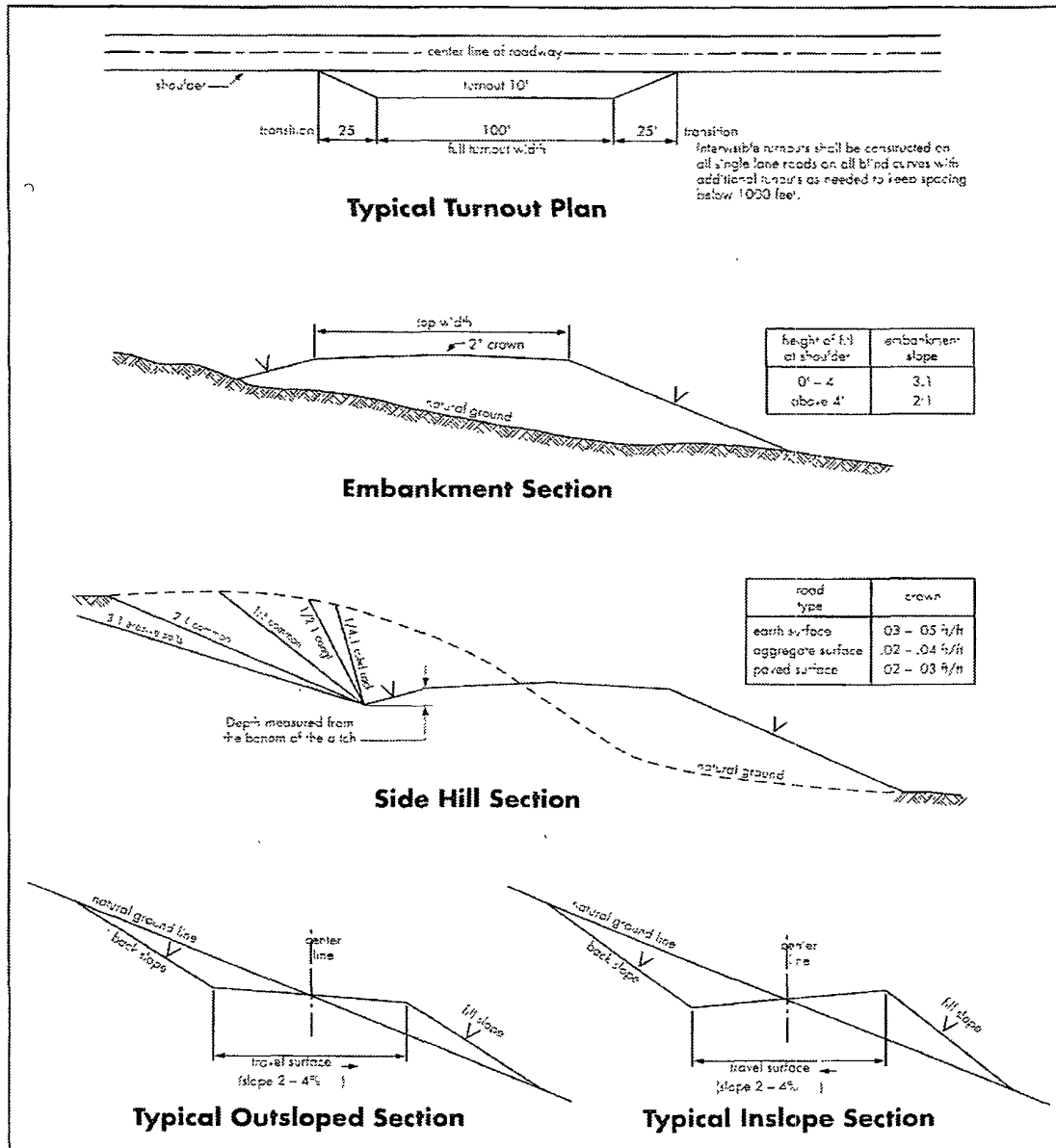
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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. **Due to recent H₂S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements 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 is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

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.

R-111-P Potash

Possible brine and water flows in the Artesia and Salado Groups.

Possible lost circulation in the Capitan Reef and the Artesia Group.

1. The 16 inch surface casing shall be set at **approximately 325 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Additional cement may be required as the excess calculates to be 10%.**
 - 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - 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 cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 11-3/4 inch intermediate casing is:
 - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

3. The minimum required fill of cement behind the 8-5/8 inch 2nd intermediate casing is:
 - ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash and Capitan Reef.**
4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - ☒ Cement as proposed (TOC 1500'). Operator shall provide method of verification. **Additional cement may be required as the excess calculates to 2%.**
5. 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.
6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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. **A variance is granted for the use of a diverter on the 16" surface casing.**
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 11-3/4 inch casing shoe shall be **3000 (3M) psi. Operator installing a 5M system but testing as a 3M.**
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

- b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- c. The results of the test shall be reported to the appropriate BLM office.
- d. 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.**
- e. 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.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 122311

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

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the

release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
 - (1) Land clearing.
 - (2) Earth-disturbing and earth-moving work.
 - (3) Blasting.
 - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 20 feet.
7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.
8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.
9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.
10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.
13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.
14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines, " Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

Seed Mixture 2, for Sandy 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:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

*Pounds of pure live seed:

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