ATS-10-817

OCD-HOBBS

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Form 3160-3
(April 2004)

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
SHL NM-123524, BHL NM-28880

6. If Indian, Allotee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

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

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Lynch 23 Federal Com No. 2H (38591)

2. Name of Operator
Cimarex Energy Co. of Colorado (162683)

9. API Well No.
30-025- 40123

3a. Address
600 N. Marienfeld St., Ste. 600; Midland, TX 79701

3b. Phone No. *(include area code)*
432-571-7800

10. Field and Pool, or Exploratory
Lea; Bone Spring, S (37580)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At Surface 330 FNL & 660 FEL (A) At Bottom Hole 330 FSL & 660 FEL

At proposed prod. Zone 330 FNL & 660 FEL *Horizontal Bone Spring test*

11. Sec., T. R. M. or Blk. and Survey or Area
23-20S-34E

14. Distance in miles and direction from nearest town or post office*

12. County or Parish
Lea

13. State
NM

15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
330'	NM-125173 - 160 acres NM-28880 - 160.75 acres	E2E2 160
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on File**
1170'	MD 15511' TVD 11050'	NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3657' GR	11.15.10	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
2. A Drilling Plan
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator Certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Zeno Farris	Zeno Farris	11.02.10

Title
Manager Operations Administration

Approved By *(Signature)*	Name (Printed/Typed)	Date
/s/ Robert A. Casias		APR 20 2011
Title STATE DIRECTOR Acting	**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. APPROVAL FOR TWO YEARS

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)*

SEE ATTACHED FOR CONDITIONS OF APPROVAL

KZ 05/02/11

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

MAY 04 2011

CAPITAN CONTROLLED WATER BASIN

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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 July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-40123	37580	Lea Bone Spring; South

Property Code	Property Name	Well Number
38591	LYNCH "23" FEDERAL COM	2H

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3657

Surface Location

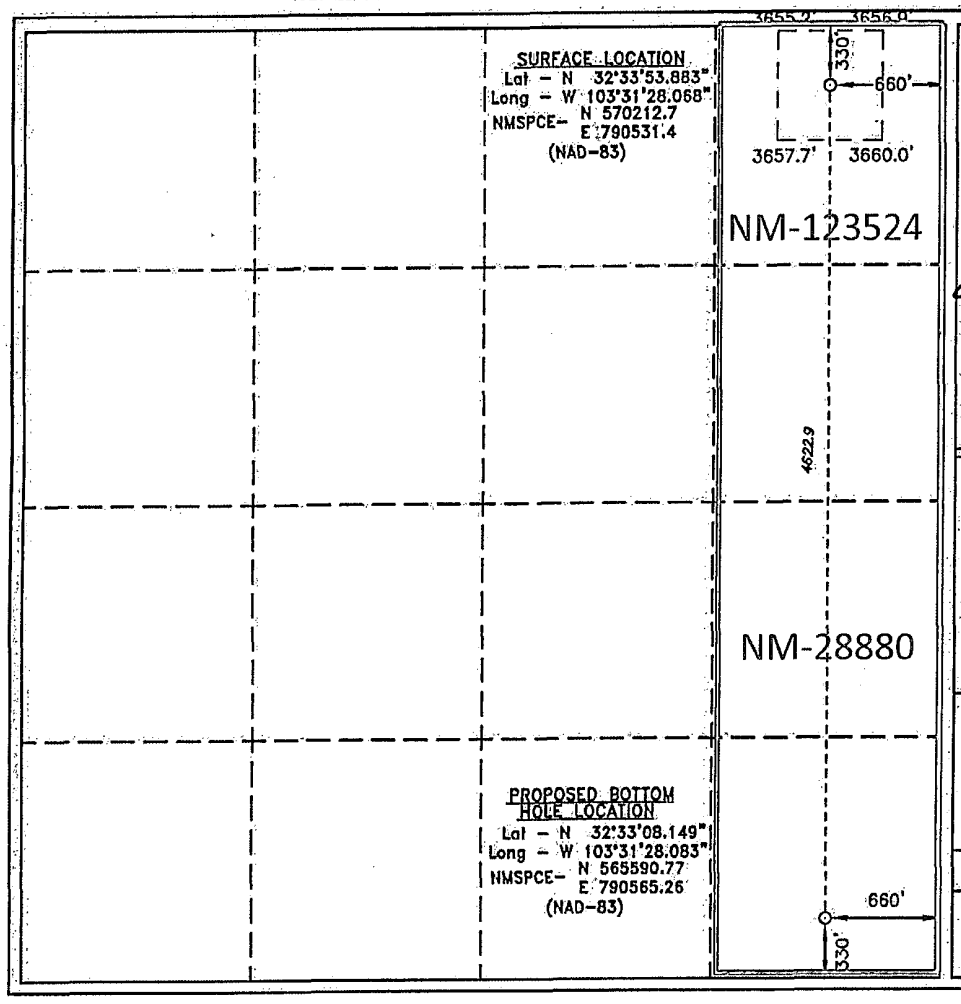
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	20 S	34 E		330	NORTH	660	EAST	LEA

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
P	23	20 S	34 E		330	SOUTH	660	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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 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, 11-2-10

Signature Date

Zeno Farris

Printed Name

Zfarris@cimarex.com

Email Address

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.

SEPTEMBER 14, 2010

Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

W.O. 23364

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 23364

Application to Drill
Lynch 23 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit A, Section 23
T20S-R34E, Lea County, NM

HOBBS OCD

MAY 02 2011

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In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1 Location: SHL 330 FNL & 660 FEL
BHL 330 FSL & 660 FEL

2 Elevation above sea level: 3657' GR

3 Geologic name of surface formation: Quaternery Alluvium Deposits

4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.

5 Proposed drilling depth: MD 15511' TVD 11050'

6 Estimated tops of geological markers:

Rustler	1600'	Bone Spring	7850'
Top Salt	1960'	Wolfcamp	11100'
Bottom Salt	3400'		
Yates	3500'		
Capitan	3650'		
Delaware	5180'		

7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil
Yates/7 Rivers	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1700'	8.4 - 8.6	28	NC	FW
1700' to 5500'	10.0	30-32	NC	Brine water
5500' to 10750'	8.4 - 9.5	30-32	NC	FW, brine
10750' to 15511'	8.4	28-29	NC	2% KCl

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Proposed drilling Plan

Drill 8¾" hole to 10750. Run 7" casing from 0-10750 and cement. Drill out of the bottom of the 7" casing with a 6⅛" bit and kick off 6⅛" lateral @ 10771 and drill to TD @ 15511 MD, 11050 TVD. Run 4½" liner from 10450 to TD and cement.

9 Casing & Cementing Program:

String	Hole Size	Depth			Casing OD		Weight	Collar	Grade
Surface	17½"	0'	to	1700'	New	13⅜"	54.5#	STC	J-55
Intermediate	12¼"	0'	to	5500'	New	9⅝"	40#	LTC	**N-80
Production	8¾"	0'	to	10750'	New	7"	26#	LTC	P-110
Liner	6⅛"	10450'	to	15511'	New	4½"	11.6#	*LTC/BTC*	P-110

**Use BTC from 10450-11089 and LTC from 11089-15511

10 Cementing:

Surface Lead: 992 sx Halcem C + Bentomite + 2% CaCl, 13.5 ppg 1.75 yield 100% Excess
Tail: 235 sx Halcem C + 2% CaCl, 14.2 ppg, 1.34 yield, 100% Excess
TOC Surface Centralizers per Onshore Order 2.III.B.1.f

Intermediate Lead: 1925 sx Econocem + 5% Salt + 5 lbm/sk Gilsonite (wt 14.6, yld 1.54) 70% Excess
Tail: 195 sks Halcem + 1% $CaCl_2$ (wt 14.8, yld 1.34) 25% Excess
TOC Surface

Production Lead: 360 SKS EconoCem - H + 0.2 % HR-601 2.44 11.9ppg 2.44 yield
Tail: 170 SKS Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess
* ~~TOC 5300~~ 5000' See COA

Liner 471 SKS Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess
Centralizers every 3rd joint in lateral to provide adequate cement every 100' unless lateral doglegs require greater spacing between centralizers.

According to the State engineer, depth to ground water is 115.' Fresh water zones will be protected by setting 13⅜" casing at 1700' and cementing to surface. Hydrocarbon zones will be protected by setting 9⅝" casing at 5500' and cementing to surface, and by setting 7" casing at 10750' and cementing to ~~5300'~~ 5000' See COA

Collapse Factor	*Burst Factor*	*Tension Factor*
1.125	1.125	1.6

**Intermediate casing will be kept liquid filled while running in hole to meet BLM minimum collapse safety factor.
* See COA

11 Pressure control Equipment:

Exhibit "E". A 13⅝" 5000 PSI working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. Mud gas seperator will be available if drilling in H2S areas.

BOP unit will be hydraulically operated. BOP will be nippled up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the 13⅜" casing through the running of production casing, the well will be equipped with a 5000 psi BOP system.

BOPS will be tested by an independent service company to 250 psi low and 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high.

12 Testing, Logging and Coring Program: * See COA

A. Mud logging program: 2 man unit from 5480' to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H_2S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H_2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H_2S Safety package on all wells, attached is an "H_2S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP **3000 psi** Estimated BHT **130°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.
Drilling expected to take 30-35 days
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.
Bone Spring pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **an oil well.**

SR & A

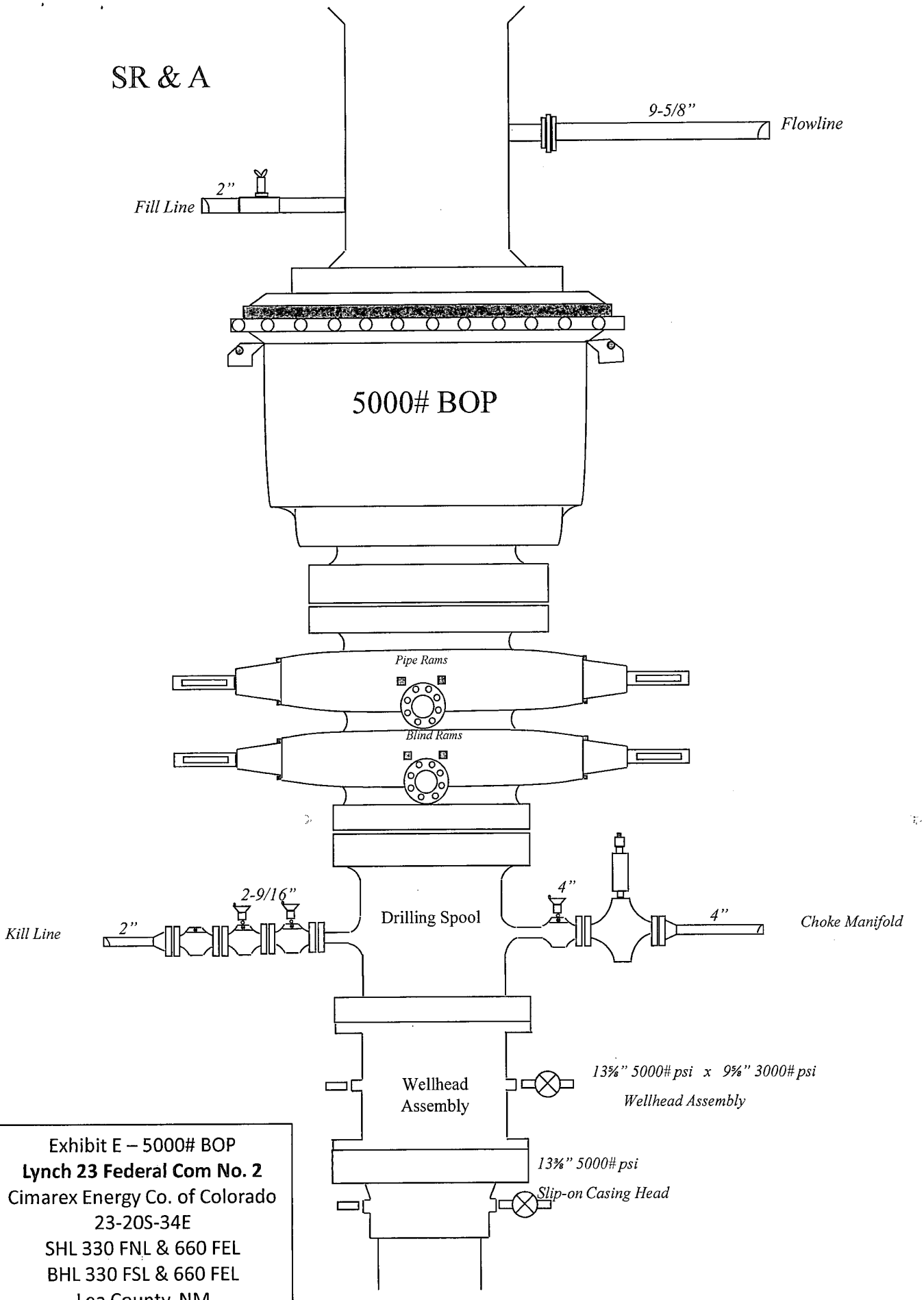
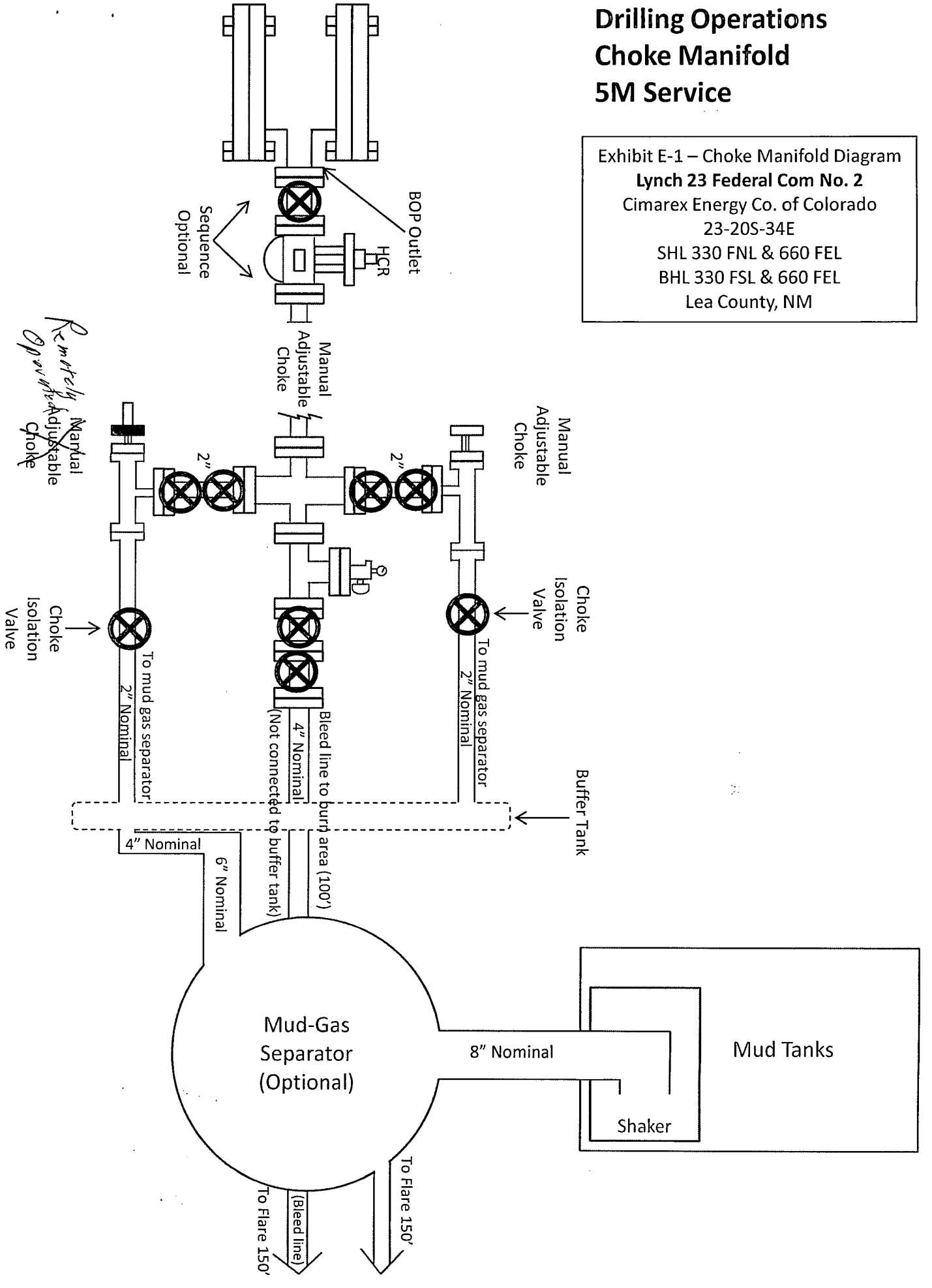


Exhibit E – 5000# BOP
Lynch 23 Federal Com No. 2
Cimarex Energy Co. of Colorado
23-20S-34E
SHL 330 FNL & 660 FEL
BHL 330 FSL & 660 FEL
Lea County, NM

Drilling Operations
Choke Manifold
5M Service

Exhibit E-1 – Choke Manifold Diagram
Lynch 23 Federal Com No. 2
Cimarex Energy Co. of Colorado
23-20S-34E
SHL 330 FNL & 660 FEL
BHL 330 FSL & 660 FEL
Lea County, NM



Key 881

Exhibit D – Rig Diagram
Lynch '23' Fed Com 2
Cimarex Energy Co. of Colorado
23-20S-34E
SHL 330 FNL & 660 FEL
BHL 330 FSL & 660 FEL
Lea County, NM

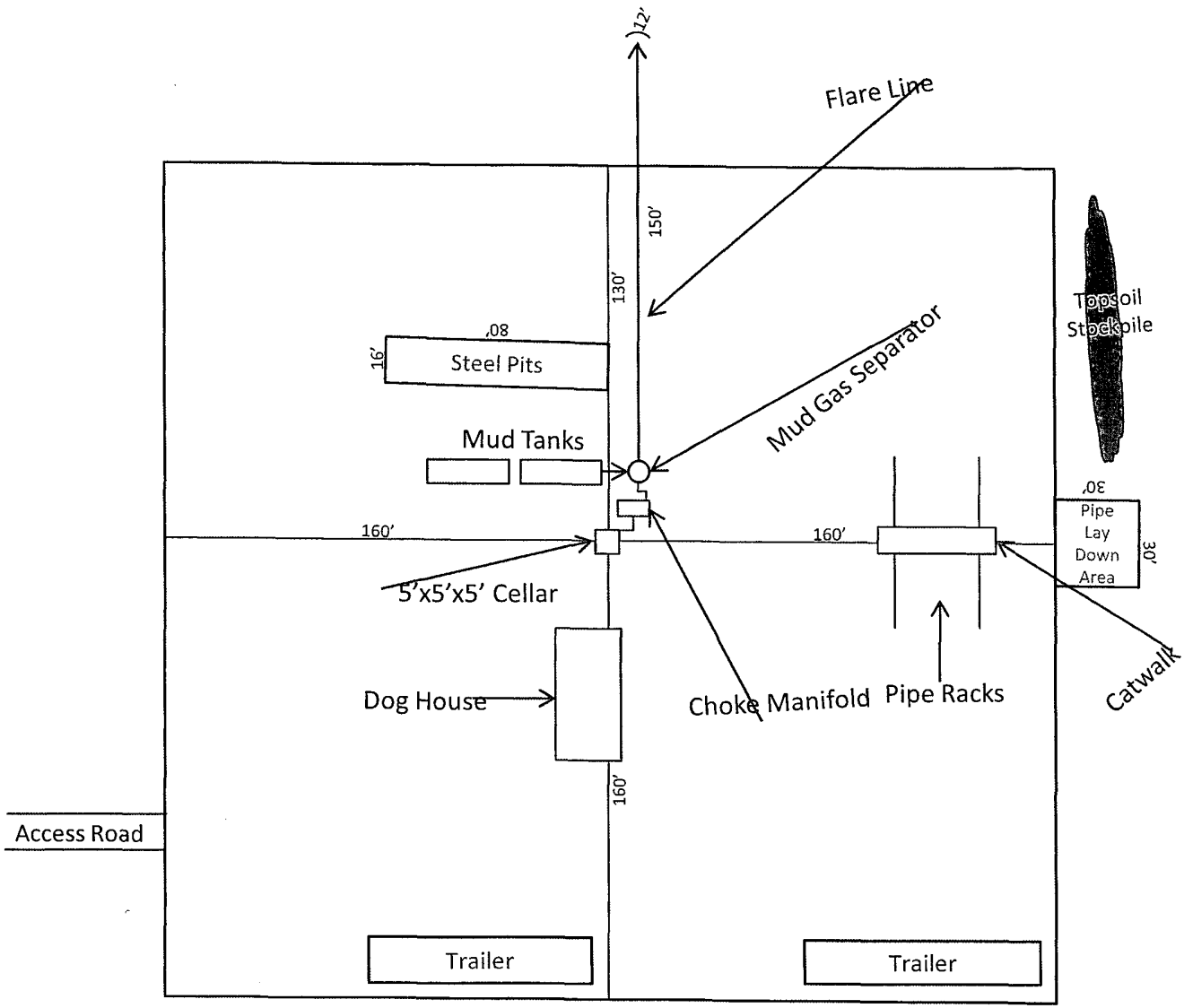
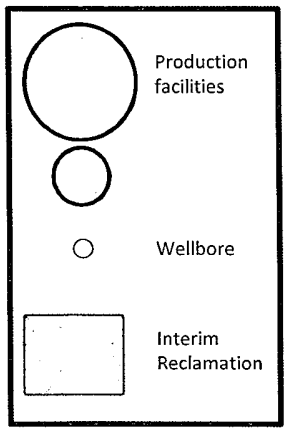
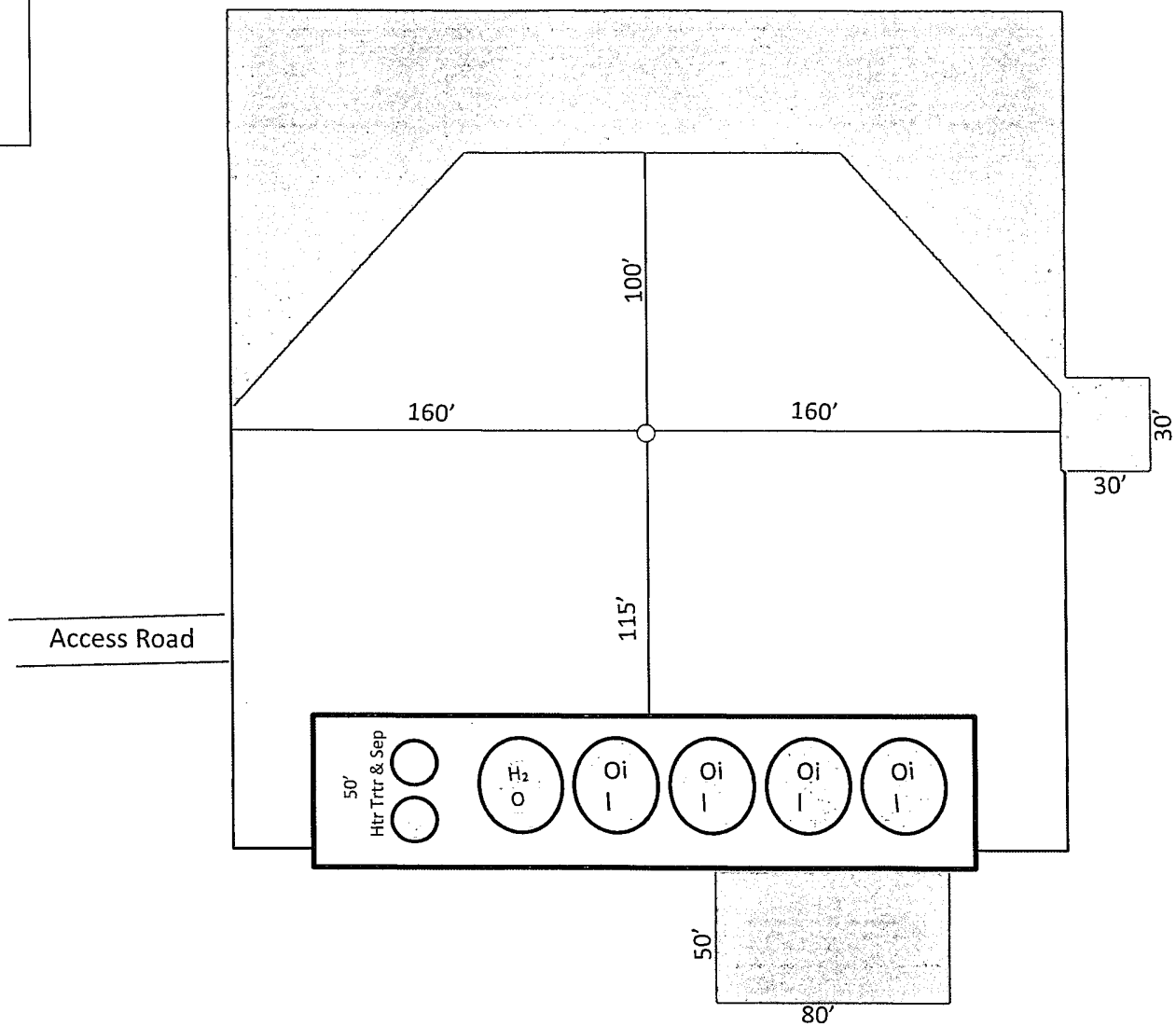


Exhibit D-1
Production Facilities Layout Diagram
Lynch '23' Fed Com 2
Cimarex Energy Co. of Colorado
23-20S-34E
SHL 330 FNL &660 FEL
BHL 330 FSL & 660 FEL
Lea County, NM





1 All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:
   A. Characteristics of H_2S
   B. Physical effects and hazards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2 H_2S Detection and Alarm Systems:
   A. H_2S 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 (H_2S 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 H_2S has on tubular goods and other mechanical equipment.

9 If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H_2S scavengers if necessary.

H_2S Contingency Plan
Lynch 23 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit A, Section 23
T20S-R34E, Lea County, NM

Emergency Procedures

In the event of a release of gas containing H_2S, 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 H_2S 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 H_2S, 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 (SO_2). 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 H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	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).

H_2S Contingency Plan Emergency Contacts
Lynch 23 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit A, Section 23
T20S-R34E, Lea County, NM

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

Planned Wellpath Report

Prelim_1

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No. 2H PWB
Facility	Lynch 23 Fed Com No. 2H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.99998	Report Generated	10/19/2010 at 10:03:25 AM
Convergence at slot	0.44° East	Database/Source file	WA_Midland/No._2H_PWB.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W
Facility Reference Pt			790531.40	570212.70	32°33'53.883"N	103°31'28.068"W
Field Reference Pt			789361.60	570203.60	32°33'53.881"N	103°31'41.737"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 2H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 2H SHL (RT) to Mean Sea Level	3657.00ft
Vertical Reference Pt	Rig on No. 2H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.58°

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No. 2H PWB
Facility	Lynch 23 Fed Com No. 2H		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	179.580	0.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	Tie On
100.00†	0.000	179.580	100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
200.00†	0.000	179.580	200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
300.00†	0.000	179.580	300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
400.00†	0.000	179.580	400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
500.00†	0.000	179.580	500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
600.00†	0.000	179.580	600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
700.00†	0.000	179.580	700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
800.00†	0.000	179.580	800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
900.00†	0.000	179.580	900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1000.00†	0.000	179.580	1000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1100.00†	0.000	179.580	1100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1200.00†	0.000	179.580	1200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1300.00†	0.000	179.580	1300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1400.00†	0.000	179.580	1400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1500.00†	0.000	179.580	1500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1600.00†	0.000	179.580	1600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1700.00†	0.000	179.580	1700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1800.00†	0.000	179.580	1800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
1900.00†	0.000	179.580	1900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2000.00†	0.000	179.580	2000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2100.00†	0.000	179.580	2100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2200.00†	0.000	179.580	2200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2300.00†	0.000	179.580	2300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2400.00†	0.000	179.580	2400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2500.00†	0.000	179.580	2500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2600.00†	0.000	179.580	2600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2700.00†	0.000	179.580	2700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2800.00†	0.000	179.580	2800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
2900.00†	0.000	179.580	2900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No. 2H PWB
Facility	Lynch 23 Fed Com No. 2H		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3000.00†	0.000	179.580	3000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3100.00†	0.000	179.580	3100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3200.00†	0.000	179.580	3200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3300.00†	0.000	179.580	3300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3400.00†	0.000	179.580	3400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3500.00†	0.000	179.580	3500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3600.00†	0.000	179.580	3600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3700.00†	0.000	179.580	3700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3800.00†	0.000	179.580	3800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
3900.00†	0.000	179.580	3900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4000.00†	0.000	179.580	4000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4100.00†	0.000	179.580	4100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4200.00†	0.000	179.580	4200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4300.00†	0.000	179.580	4300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4400.00†	0.000	179.580	4400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4500.00†	0.000	179.580	4500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4600.00†	0.000	179.580	4600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4700.00†	0.000	179.580	4700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4800.00†	0.000	179.580	4800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
4900.00†	0.000	179.580	4900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5000.00†	0.000	179.580	5000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5100.00†	0.000	179.580	5100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5200.00†	0.000	179.580	5200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5300.00†	0.000	179.580	5300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5400.00†	0.000	179.580	5400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5500.00†	0.000	179.580	5500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5600.00†	0.000	179.580	5600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5700.00†	0.000	179.580	5700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5800.00†	0.000	179.580	5800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
5900.00†	0.000	179.580	5900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No. 2H PWB
Facility	Lynch 23 Fed Com No. 2H		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
6000.00†	0.000	179.580	6000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6100.00†	0.000	179.580	6100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6200.00†	0.000	179.580	6200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6300.00†	0.000	179.580	6300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6400.00†	0.000	179.580	6400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6500.00†	0.000	179.580	6500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6600.00†	0.000	179.580	6600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6700.00†	0.000	179.580	6700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6800.00†	0.000	179.580	6800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
6900.00†	0.000	179.580	6900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7000.00†	0.000	179.580	7000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7100.00†	0.000	179.580	7100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7200.00†	0.000	179.580	7200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7300.00†	0.000	179.580	7300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7400.00†	0.000	179.580	7400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7500.00†	0.000	179.580	7500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7600.00†	0.000	179.580	7600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7700.00†	0.000	179.580	7700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7800.00†	0.000	179.580	7800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
7900.00†	0.000	179.580	7900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8000.00†	0.000	179.580	8000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8100.00†	0.000	179.580	8100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8200.00†	0.000	179.580	8200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8300.00†	0.000	179.580	8300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8400.00†	0.000	179.580	8400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8500.00†	0.000	179.580	8500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8600.00†	0.000	179.580	8600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8700.00†	0.000	179.580	8700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8800.00†	0.000	179.580	8800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
8900.00†	0.000	179.580	8900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No. 2H PWB
Facility	Lynch 23 Fed Com No. 2H		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
9000.00†	0.000	179.580	9000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9100.00†	0.000	179.580	9100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9200.00†	0.000	179.580	9200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9300.00†	0.000	179.580	9300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9400.00†	0.000	179.580	9400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9500.00†	0.000	179.580	9500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9600.00†	0.000	179.580	9600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9700.00†	0.000	179.580	9700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9800.00†	0.000	179.580	9800.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
9900.00†	0.000	179.580	9900.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10000.00†	0.000	179.580	10000.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10100.00†	0.000	179.580	10100.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10200.00†	0.000	179.580	10200.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10300.00†	0.000	179.580	10300.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10400.00†	0.000	179.580	10400.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10500.00†	0.000	179.580	10500.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10600.00†	0.000	179.580	10600.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10700.00†	0.000	179.580	10700.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	
10771.00	0.000	179.580	10771.00	0.00	0.00	0.00	790531.40	570212.70	32°33'53.883"N	103°31'28.068"W	0.00	EST. KOP
10800.00†	8.120	179.580	10799.90	2.05	-2.05	0.02	790531.42	570210.65	32°33'53.863"N	103°31'28.068"W	28.00	
10900.00†	36.120	179.580	10891.62	39.33	-39.33	0.29	790531.69	570173.37	32°33'53.494"N	103°31'28.068"W	28.00	
11000.00†	64.120	179.580	10955.11	115.31	-115.31	0.84	790532.24	570097.40	32°33'52.742"N	103°31'28.068"W	28.00	
11088.99	89.036	179.580	10975.60	201.18	-201.18	1.47	790532.87	570011.53	32°33'51.893"N	103°31'28.068"W	28.00	END OF CURVE
11100.00†	89.036	179.580	10975.78	212.20	-212.19	1.55	790532.95	570000.51	32°33'51.784"N	103°31'28.069"W	0.00	
11200.00†	89.036	179.580	10977.47	312.18	-312.18	2.29	790533.69	569900.53	32°33'50.794"N	103°31'28.069"W	0.00	
11300.00†	89.036	179.580	10979.15	412.17	-412.16	3.02	790534.42	569800.55	32°33'49.805"N	103°31'28.069"W	0.00	
11400.00†	89.036	179.580	10980.83	512.16	-512.14	3.75	790535.15	569700.57	32°33'48.816"N	103°31'28.069"W	0.00	
11500.00†	89.036	179.580	10982.51	612.14	-612.12	4.48	790535.88	569600.59	32°33'47.826"N	103°31'28.070"W	0.00	
11600.00†	89.036	179.580	10984.20	712.13	-712.11	5.22	790536.62	569500.61	32°33'46.837"N	103°31'28.070"W	0.00	
11700.00†	89.036	179.580	10985.88	812.11	-812.09	5.95	790537.35	569400.63	32°33'45.848"N	103°31'28.070"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Cimarex Energy Co.**	Slot	**No. 2H SHL**
Area	**Lea County, NM**	Well	**No. 2H**
Field	**(Lynch) Sec 23, T20S, R34E**	Wellbore	**No. 2H PWB**
Facility	**Lynch 23 Fed Com No. 2H**		

WELLPATH DATA (159 stations) **† = interpolated/extrapolated station**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11800.00†	89.036	179.580	10987.56	912.10	-912.07	6.68	790538.08	569300.65	32°33'44.858"N	103°31'28.071"W	0.00	
11900.00†	89.036	179.580	10989.25	1012.08	-1012.06	7.41	790538.81	569200.66	32°33'43.869"N	103°31'28.071"W	0.00	
12000.00†	89.036	179.580	10990.93	1112.07	-1112.04	8.15	790539.55	569100.68	32°33'42.880"N	103°31'28.071"W	0.00	
12100.00†	89.036	179.580	10992.61	1212.06	-1212.02	8.88	790540.28	569000.70	32°33'41.890"N	103°31'28.072"W	0.00	
12200.00†	89.036	179.580	10994.29	1312.04	-1312.01	9.61	790541.01	568900.72	32°33'40.901"N	103°31'28.072"W	0.00	
12300.00†	89.036	179.580	10995.98	1412.03	-1411.99	10.34	790541.74	568800.74	32°33'39.912"N	103°31'28.072"W	0.00	
12400.00†	89.036	179.580	10997.66	1512.01	-1511.97	11.08	790542.48	568700.76	32°33'38.922"N	103°31'28.073"W	0.00	
12500.00†	89.036	179.580	10999.34	1612.00	-1611.96	11.81	790543.21	568600.78	32°33'37.933"N	103°31'28.073"W	0.00	
12600.00†	89.036	179.580	11001.02	1711.99	-1711.94	12.54	790543.94	568500.80	32°33'36.944"N	103°31'28.073"W	0.00	
12700.00†	89.036	179.580	11002.71	1811.97	-1811.92	13.27	790544.67	568400.82	32°33'35.954"N	103°31'28.074"W	0.00	
12800.00†	89.036	179.580	11004.39	1911.96	-1911.91	14.01	790545.41	568300.84	32°33'34.965"N	103°31'28.074"W	0.00	
12900.00†	89.036	179.580	11006.07	2011.94	-2011.89	14.74	790546.14	568200.85	32°33'33.976"N	103°31'28.074"W	0.00	
13000.00†	89.036	179.580	11007.76	2111.93	-2111.87	15.47	790546.87	568100.87	32°33'32.986"N	103°31'28.075"W	0.00	
13100.00†	89.036	179.580	11009.44	2211.91	-2211.86	16.20	790547.60	568000.89	32°33'31.997"N	103°31'28.075"W	0.00	
13200.00†	89.036	179.580	11011.12	2311.90	-2311.84	16.94	790548.34	567900.91	32°33'31.008"N	103°31'28.075"W	0.00	
13300.00†	89.036	179.580	11012.80	2411.89	-2411.82	17.67	790549.07	567800.93	32°33'30.018"N	103°31'28.076"W	0.00	
13400.00†	89.036	179.580	11014.49	2511.87	-2511.80	18.40	790549.80	567700.95	32°33'29.029"N	103°31'28.076"W	0.00	
13500.00†	89.036	179.580	11016.17	2611.86	-2611.79	19.13	790550.53	567600.97	32°33'28.040"N	103°31'28.076"W	0.00	
13600.00†	89.036	179.580	11017.85	2711.84	-2711.77	19.87	790551.27	567500.99	32°33'27.051"N	103°31'28.076"W	0.00	
13700.00†	89.036	179.580	11019.53	2811.83	-2811.75	20.60	790552.00	567401.01	32°33'26.061"N	103°31'28.077"W	0.00	
13800.00†	89.036	179.580	11021.22	2911.82	-2911.74	21.33	790552.73	567301.03	32°33'25.072"N	103°31'28.077"W	0.00	
13900.00†	89.036	179.580	11022.90	3011.80	-3011.72	22.06	790553.46	567201.05	32°33'24.083"N	103°31'28.077"W	0.00	
14000.00†	89.036	179.580	11024.58	3111.79	-3111.70	22.80	790554.20	567101.06	32°33'23.093"N	103°31'28.078"W	0.00	
14100.00†	89.036	179.580	11026.26	3211.77	-3211.69	23.53	790554.93	567001.08	32°33'22.104"N	103°31'28.078"W	0.00	
14200.00†	89.036	179.580	11027.95	3311.76	-3311.67	24.26	790555.66	566901.10	32°33'21.115"N	103°31'28.078"W	0.00	
14300.00†	89.036	179.580	11029.63	3411.74	-3411.65	24.99	790556.39	566801.12	32°33'20.125"N	103°31'28.079"W	0.00	
14400.00†	89.036	179.580	11031.31	3511.73	-3511.64	25.73	790557.13	566701.14	32°33'19.136"N	103°31'28.079"W	0.00	
14500.00†	89.036	179.580	11033.00	3611.72	-3611.62	26.46	790557.86	566601.16	32°33'18.147"N	103°31'28.079"W	0.00	
14600.00†	89.036	179.580	11034.68	3711.70	-3711.60	27.19	790558.59	566501.18	32°33'17.157"N	103°31'28.080"W	0.00	
14700.00†	89.036	179.580	11036.36	3811.69	-3811.59	27.92	790559.32	566401.20	32°33'16.168"N	103°31'28.080"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Cimarex Energy Co.**	Slot	**No. 2H SHL**
Area	**Lea County, NM**	Well	**No. 2H**
Field	**(Lynch) Sec 23, T20S, R34E**	Wellbore	**No. 2H PWB**
Facility	**Lynch 23 Fed Com No. 2H**		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14800.00†	89.036	179.580	11038.04	3911.67	-3911.57	28.66	790560.06	566301.22	32°33'15.179"N	103°31'28.080"W	0.00	
14900.00†	89.036	179.580	11039.73	4011.66	-4011.55	29.39	790560.79	566201.24	32°33'14.189"N	103°31'28.081"W	0.00	
15000.00†	89.036	179.580	11041.41	4111.65	-4111.54	30.12	790561.52	566101.25	32°33'13.200"N	103°31'28.081"W	0.00	
15100.00†	89.036	179.580	11043.09	4211.63	-4211.52	30.85	790562.25	566001.27	32°33'12.211"N	103°31'28.081"W	0.00	
15200.00†	89.036	179.580	11044.77	4311.62	-4311.50	31.59	790562.99	565901.29	32°33'11.221"N	103°31'28.082"W	0.00	
15300.00†	89.036	179.580	11046.46	4411.60	-4411.48	32.32	790563.72	565801.31	32°33'10.232"N	103°31'28.082"W	0.00	
15400.00†	89.036	179.580	11048.14	4511.59	-4511.47	33.05	790564.45	565701.33	32°33'09.243"N	103°31'28.082"W	0.00	
15500.00†	89.036	179.580	11049.82	4611.57	-4611.45	33.78	790565.18	565601.35	32°33'08.253"N	103°31'28.082"W	0.00	
15510.58	89.036	179.580	11050.00	4622.15	-4622.03	33.86	790565.26	565590.77	32°33'08.149"N	103°31'28.083"W	0.00	No. 2H PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 2H PBHL	15510.58	11050.00	-4622.03	33.86	**790565.26**	**565590.77**	32°33'08.149"N	103°31'28.083"W	point

SURVEY PROGRAM Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15510.58	NaviTrak (Standard)		No. 2H PWB