

ATS-12-927
EA-13-486

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OCD-Artesia AUG 29 2013
NMOCD ARTESIA

JOS
8/29/2013

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

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SHL NM-092160; BHL NM-120887
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" 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. Switch 28 33 Federal Com 1H <40101>
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30-015- 41635
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 75 FNL & 990 FEL; 28-25S-26E At proposed prod. Zone 660 FSL & 710 FEL; 33-25S-26E Horizontal Wolfcamp Test		10. Field and Pool, or Exploratory Sage Draw; Wolfcamp, E <96890>
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area SHL 28-25S-26E BHL 33-25S-26E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 75	16. No of acres in lease NM-092160 - 1320 acres NM-120887 - 720 acres	12. County or Parish Eddy
17. Spacing Unit dedicated to this well E/2E/2 320 acres	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. n/a	19. Proposed Depth MD 19091, TVD 9430 Pilot hole 10200'	20. BLM/BIA Bond No. on File NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3330' GR	22. Approximate date work will start* 08.15.12	23. Estimated duration 30-35 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 <i>Paula Brunson</i>	Name (Printed/Typed) Paula Brunson	Date 07.23.12
Title Drilling Technician, Regulatory		
Approved By (Signature) <i>/s/George MacDonell</i>	Name (Printed/Typed) George MacDonell	Date AUG 23 2013
Title FIELD MANAGER		
Office CARLSBAD FIELD 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)

Carlsbad Controlled Water Basin

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Approval Subject to General Requirements
& Special Stipulations Attached

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 86210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1090 Rio Brazos Rd., Aztec, NM 87410
Phone: (505) 894-6176 Fax: (505) 394-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3480 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number 30-015- 41635	Pool Code 96890	Pool Name Sagedraw; Wolfcamp, E (GAS)
Property Code 38581 40101	Property Name SWITCH 28 33 FEDERAL COM	Well Number 1H
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3330'

Surface Location

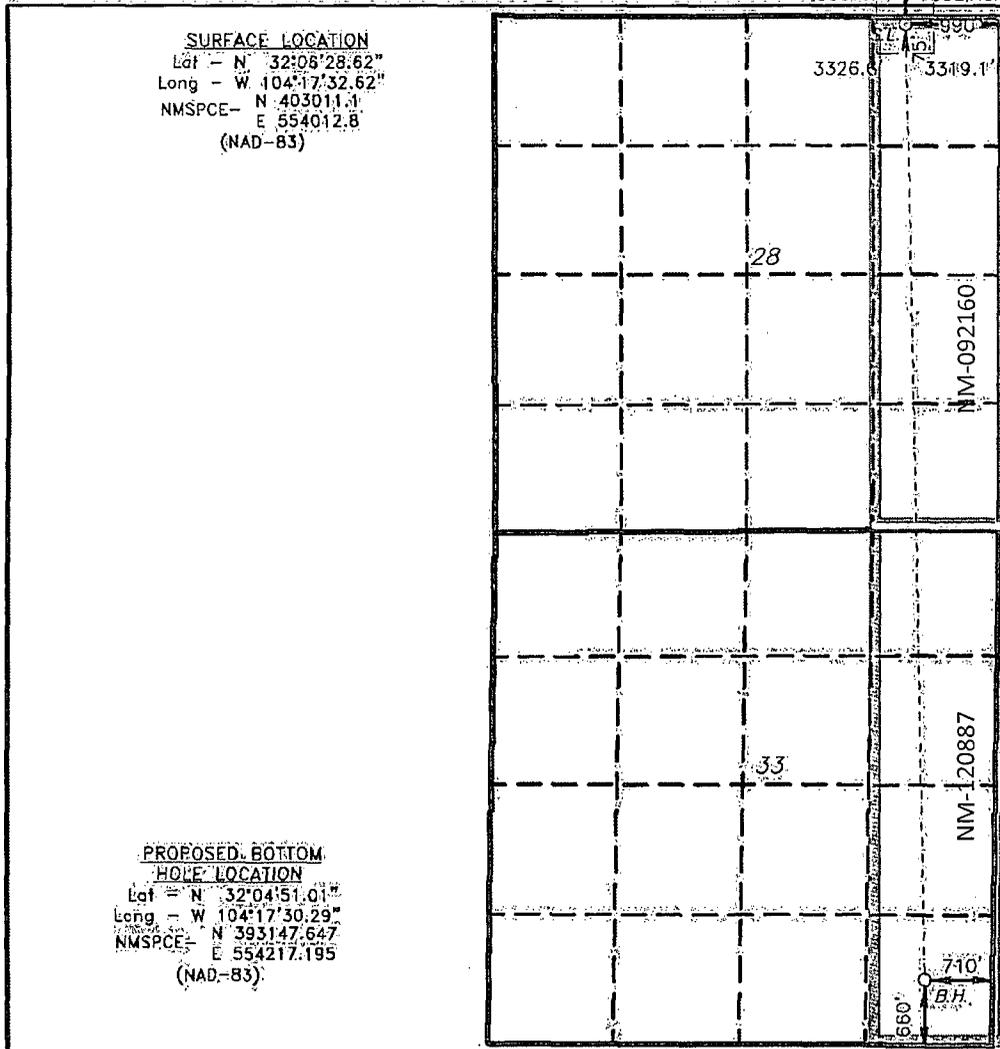
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	28	25 S	26 E		75	NORTH	990	EAST	EDDY

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
P	33	25 S	26 E		660	SOUTH	710	EAST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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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.

Paula Brunson 7/5/2012
Signature Date
Paula Brunson
Printed Name
pbrunson@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 supervision and that the same is true and correct to the best of my belief.

DECEMBER 7 2012
Date Surveyed
Signature & Seal of Professional Surveyor
Certificate No. Gary L. Jones 7977
BASIN SURVEYS

Operator Certification Statement
Switch 28 33 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit A, Section 28
T25S-R26E, 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 5th day of July, 2012

NAME: 
Paula Brunson

TITLE: Drilling Technician, Regulatory

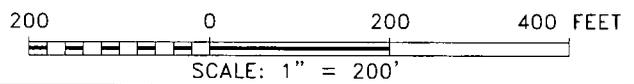
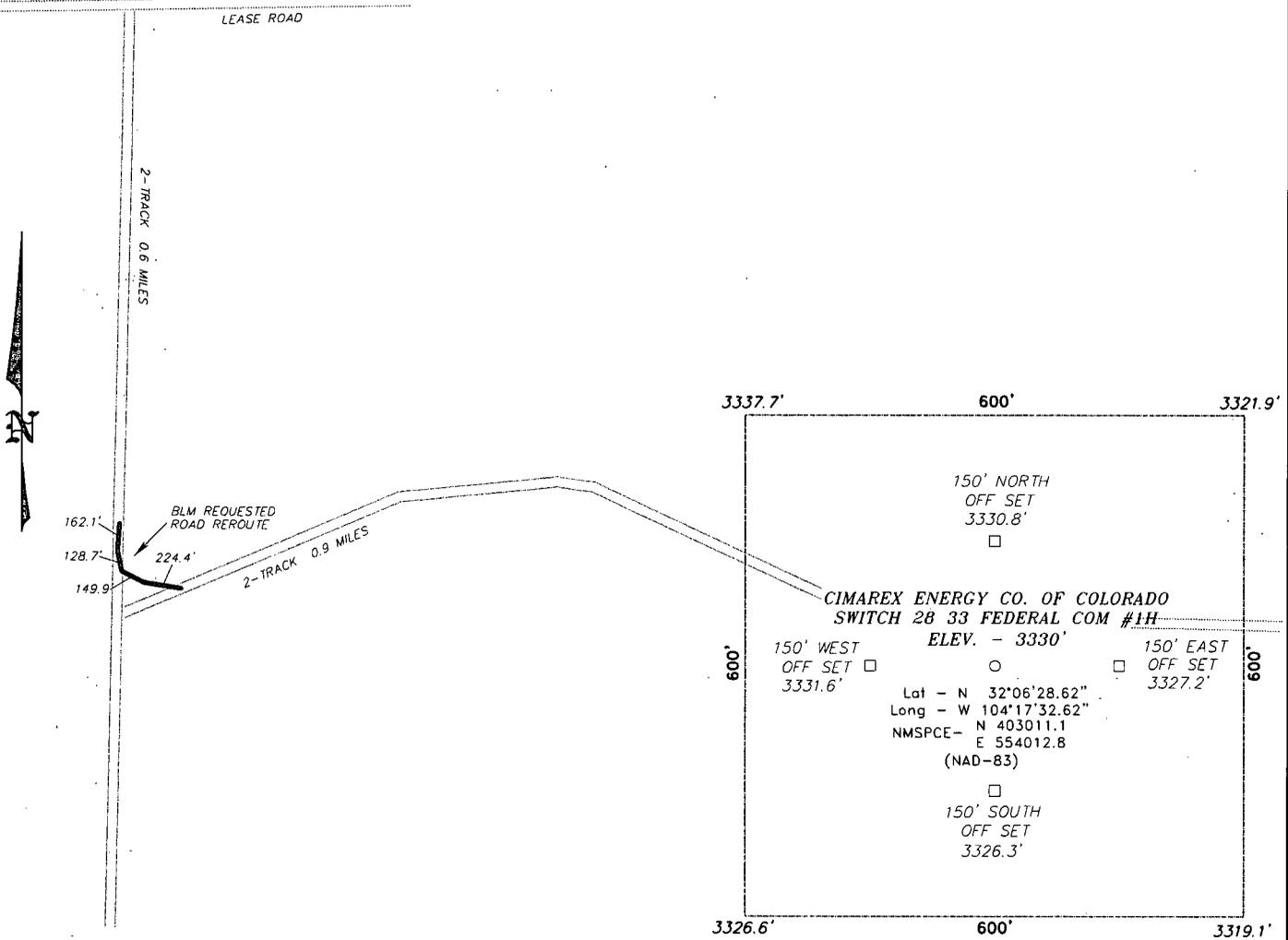
ADDRESS: 600 N Marienfeld St Ste 600
Midland TX 79701

TELEPHONE: Office Phone: (432) 571-7800

EMAIL: pbrunson@cimarex.com

Field Representative: Same as above

SECTION 28, TOWNSHIP 25 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF MEANS AND WHITE CITY, GO NORTH ON MEANS FOR 0.5 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST 1.25 MILES TO RANCH ROAD, ON RANCH ROAD GO SOUTH 0.6 MILES TO RANCH ROAD, ON RANCH ROAD GO EAST 0.9 MILES TO PROPOSED LEASE ROAD.

CIMAREX ENERGY CO. OF COLORADO

REF: SWITCH 28 33 FEDERAL COM #1H / WELL PAD TOPO

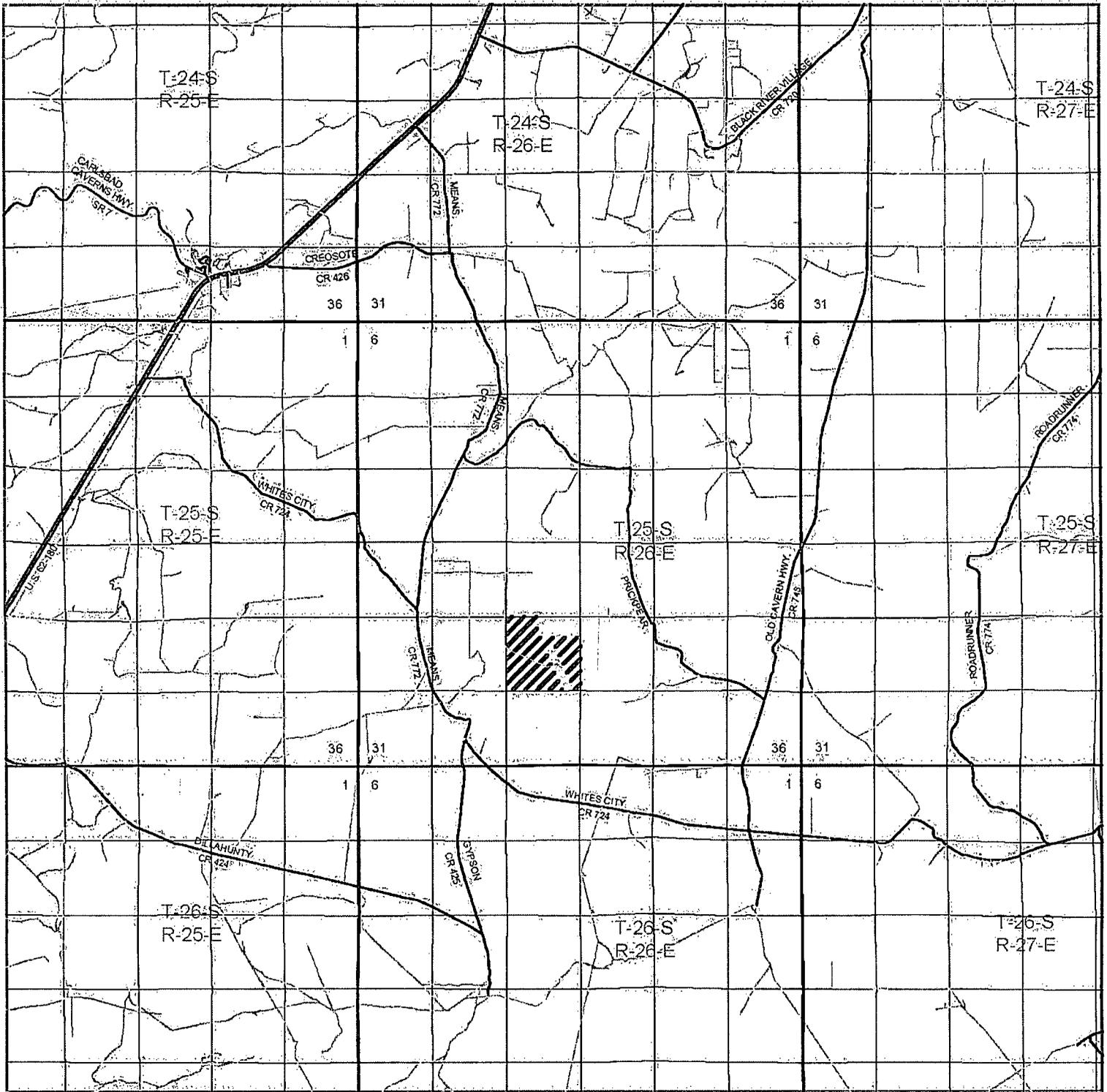
THE SWITCH 28 33 FEDERAL COM #1H LOCATED 75'
FROM THE NORTH LINE AND 990' FROM THE EAST LINE OF
SECTION 28, TOWNSHIP 25 SOUTH, RANGE 26 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 25638 Drawn By: J. SMALL

Date: 12-13-2011 Disk: JMS 25638

Survey Date: 12-07-2011 Sheet 1 of 1 Sheets



SWITCH 28 33 FEDERAL COM #1H
 Located 75' FNL and 990' FEL
 Section 28, Township 25 South, Range 26 East,
 N.M.P.M., Eddy County, New Mexico.

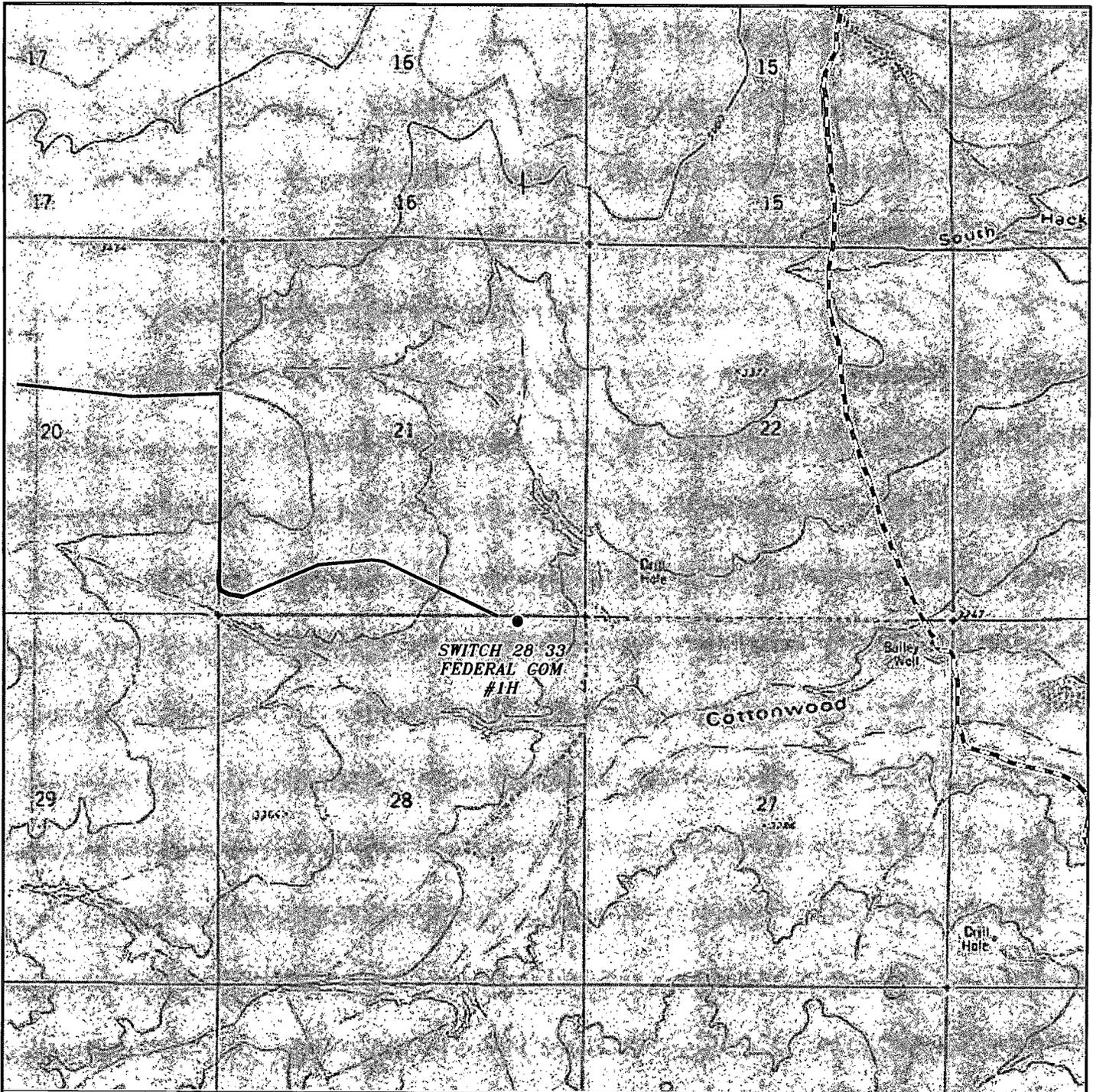
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 in the oilfield

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

W.O. Number:	JMS 25638
Survey Date:	12-07-2011
Scale:	1" = 2 Miles
Date:	12-13-2011

**CIMAREX
 ENERGY CO.
 OF COLORADO**

Exhibit B



SWITCH 28 33 FEDERAL COM #1H
 Located 75' FNL and 990' FEL
 Section 28, Township 25 South, Range 26 East,
 N.M.P.M., Eddy County, New Mexico.

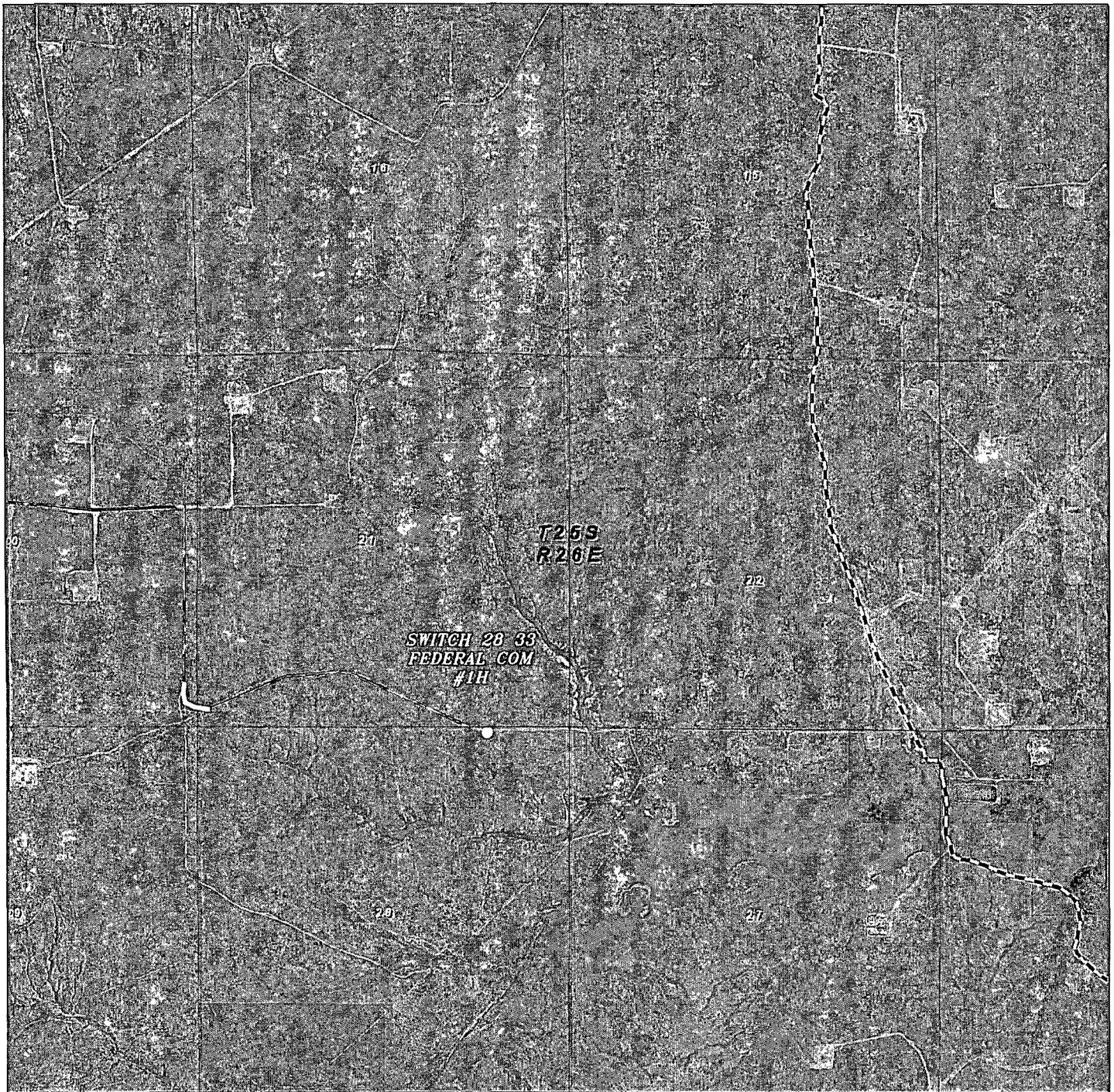

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 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

W.O. Number:	JMS 25638
Survey Date:	12-07-2011
Scale:	1" = 2000'
Date:	12-13-2011

**CIMAREX
 ENERGY CO.
 OF COLORADO**

11/11/11

11/11/11



SWITCH 28 33 FEDERAL COM #1H
 Located 75' FNL and 990' FEL
 Section 28, Township 25 South, Range 26 East,
 N.M.P.M., Eddy County, New Mexico.

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 basinsurveys.com

W.O. Number: JMS 25638

Scale: 1" = 2000'

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



CIMAREX
 ENERGY CO.
 OF COLORADO

Application to Drill
Switch 28 33 Federal Com 1H
 Cimarex Energy Co. of Colorado
 Unit A, Section 28
 T25S-R26E, Eddy County, NM

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

1. Location SHL 75 FNL & 990 FEL; ; 28-25S-26E
 BHL 660 FSL & 710 FEL; 33-25S-26E
2. Elevation above sea level: 3330' GR
3. Geologic name of surface formation: Quaternary 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: Pilot hole 10200'

6. Estimated tops of geological markers:

Rustler	390	1st Bone Spring Ss	6262
Top Salt	1039	2nd Bone Spring Ss	6812
Base Salt	1591	2nd BS Ss Lower	7548
Delaware	1795	3rd Bone Spring Ss	8109
Cherry Canyon	2764	Wolfcamp	8466
Brushy Canyon	3766	Wolfcamp B	9062
Brushy Canyon Lower	5035	Wolfcamp C	9237
Bone Spring	5320	Wolfcamp D	9355
Bone Spring "A" Shale	5494	Wolfcamp E / TD	9904
Bone Spring "C" Shale	5732		

7. Possible mineral bearing formations:

Bone Spring	Gas
Delaware	Oil
Delaware	Oil

8. Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 450'	8.4 - 8.6	28	NC	FW
450' to 1780'	10.0	30-32	NC	Brine
1780' to 9153'	8.4-9.0	28-29	NC	FW and brine, use hi-vis sweeps to keep hole clean

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 8 3/4" pilot hole to 10200 and log. Pump 30bbls MUDPUSHII 12ppg, followed by 495 sks Type H Cement, D080 (Dispersant) 0.080 gal/sk, D177 (Retarder) 0.045gal/sk 17.5 ppg yield 0.94 & 0% Excess from 10200 to 8953. Set whipstock and kick off 8 3/4" lateral @ 8953 and drill to TD @ 19091 MD, 9430 TVD.

Application to Drill
Switch 28 33 Federal Com 1H
 Cimarex Energy Co. of Colorado
 Unit A, Section 28
 T255-R26E, Eddy County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface 1	17 1/2"	0' to 450'	New 13 3/8"	48#	STC	H-40
Intermediate	12 1/4"	0' to 1780'	New 9 5/8"	36#	LTC	J-55
Production	8 3/4"	0' to 9153'	New 7"	26#	LTC	P-110
Liner	6 1/8"	9000' to 19091'	New 4 1/2"	11.6#	BTC	P-110

10 Cementing:

Surface Lead: 220SKS ExtendaCem CZ 13.5ppg 1.76yield, 120% excess
 Tail: 185SKS Halcem C + 2% CaCl 14.8ppg 1.35 yield 50% Excess
TOC Surface Centralizers per Onshore Order 2.III.B.1.f

Intermediate Lead: 355SKS Econocem HLC + 5% Salt + 5lb/sk Kalseal 12.9ppg 1.88yield Tail 35% excess: 225SKS
 Halcem C + 1% CaCl 14.8ppg 1.34 yield 50% Excess
TOC Surface

Production Lead: 1245SKS Econocem HLH + 5% salt, 5lbm/sk Kalseal 12.9ppg 1.89 yield, 100% excess
 Tail: 100SKS Versacem H + 0.5% Halad-322 + 0.35% HR-601 14.5ppg 1.22 yield 50% Excess
TOC Surface Centralizers every 2nd joint in the curve to provide adequate cement coverage every 100'.

Liner Lead: 770 sks, 14.5ppg, 1.22 yield, 10% Excess
TOC Liner Hanger @ 9000'

See
COA

According to the NM State Engineer, depth to ground water is 14 feet. Fresh water zones will be protected by setting 13 3/8" casing at 450' and 9 5/8" casing at 1780' and cementing to surface. Hydrocarbon zones will be protected by setting 5 1/2" casing at 19091' and cementing to surface.

Collapse Factor Burst Factor Tension Factor

1.125 1.125 1.6

11 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure B.O.P. 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 below 4612.' 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 separator will be installed before drilling out of the surface casing.

BOP unit will be hydraulically operated. BOP will be nipped 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.

Before drilling out of the surface casing BOPs will be tested to 250 psi low and 3000 psi high by an independent service company. Hydril will be tested to 250 psi low and 1500 psi high. Before drilling out of the intermediate casing BOPs will be tested to 250 psi low and 5000 psi high. Hydril will be tested to 250 psi low and 2500 high.

Cimarex Energy Co. of Colorado (operator) requests a variance if Cactus 101 (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.

Manufacturer: Midwest Hose & Specialty

Serial Number: 59473

Length: 35' Size: 4-1/16" Ends - flanges/clamps

WP rating: 10,000 psi Anchors required by manufacturer – Yes/No

Application to Drill
Switch 28 33 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit A, Section 28
T25S-R26E, Eddy County, NM

13. Testing, Logging and Coring Program:

- A. Mud logging program: No mud logging program.
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR Surface to TD
- C. No DSTs or cores are planned at this time.

14. Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex has encountered H₂S in a one-time encounter in an Intra-salt Pocket and while drilling and completing wells in the Delaware Mountain Group. In this regard, attached is an H₂S Drilling Operations Plan. The ROEs encountered do not meet the BLM's minimum requirements for the submission of a "Public Protection Plan" for the drilling and completion of this well. 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 **3500 psi** Estimated BHT **175°**

15. Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take 25-35 days

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

16. 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 potentialized as **an oil well.**



Planned Wellpath Report

Rev-A.0
Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Switch) Sec 28, T25S,R26E	Wellbore	No.1H PWB
Facility	Switch 28 33 Fed Com No.1H		

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	Gentbry
Scale	0.999909	Report Generated	7/2/2012 at 2:11:35 PM
Convergence at slot	0.02° East	Database/Source file	WA Midland/No.1H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W
Facility Reference Pt			554012.80	403011.10	32°06'28.621"N	104°17'32.624"W
Field Reference Pt			554012.80	403011.10	32°06'28.621"N	104°17'32.624"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.1H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.1H SHL (RT) to Mean Sea Level	3330.00ft
Vertical Reference Pt	Rig on No.1H SHL (RT)	Rig on No.1H SHL (RT) to Mud Line at Slot (No.1H SHL)	0.00ft
MD Reference Pt	Rig on No.1H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.81°



Planned Wellpath Report

Rev-A.0
Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Switch) Sec 28, T25S,R26E	Wellbore	No.1H PWB
Facility	Switch 28 33 Fed Com No.1H		

WELLPATH DATA (211 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	178.813	0.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Tie On
100.00†	0.000	178.813	100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
200.00†	0.000	178.813	200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
300.00†	0.000	178.813	300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
400.00†	0.000	178.813	400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
500.00†	0.000	178.813	500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
600.00†	0.000	178.813	600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
700.00†	0.000	178.813	700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
800.00†	0.000	178.813	800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
900.00†	0.000	178.813	900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1000.00†	0.000	178.813	1000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1039.00†	0.000	178.813	1039.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Top Salt
1100.00†	0.000	178.813	1100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1200.00†	0.000	178.813	1200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1300.00†	0.000	178.813	1300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1400.00†	0.000	178.813	1400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1500.00†	0.000	178.813	1500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1591.00†	0.000	178.813	1591.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Base Salt
1600.00†	0.000	178.813	1600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1700.00†	0.000	178.813	1700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1795.00†	0.000	178.813	1795.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Delaware
1800.00†	0.000	178.813	1800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
1900.00†	0.000	178.813	1900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2000.00†	0.000	178.813	2000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2100.00†	0.000	178.813	2100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2200.00†	0.000	178.813	2200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2300.00†	0.000	178.813	2300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2400.00†	0.000	178.813	2400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2500.00†	0.000	178.813	2500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2600.00†	0.000	178.813	2600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2700.00†	0.000	178.813	2700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2764.00†	0.000	178.813	2764.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Cherry Canyon
2800.00†	0.000	178.813	2800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
2900.00†	0.000	178.813	2900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3000.00†	0.000	178.813	3000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3100.00†	0.000	178.813	3100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3200.00†	0.000	178.813	3200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3300.00†	0.000	178.813	3300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3400.00†	0.000	178.813	3400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3500.00†	0.000	178.813	3500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3600.00†	0.000	178.813	3600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3700.00†	0.000	178.813	3700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3766.00†	0.000	178.813	3766.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Brushy Canyon
3800.00†	0.000	178.813	3800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
3900.00†	0.000	178.813	3900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Switch) Sec 28, T25S,R26E	Wellbore	No.1H PWB
Facility	Switch 28 33 Fed Com No.1H		

WELLPATH DATA (211 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
4000.00†	0.000	178.813	4000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4100.00†	0.000	178.813	4100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4200.00†	0.000	178.813	4200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4300.00†	0.000	178.813	4300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4400.00†	0.000	178.813	4400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4500.00†	0.000	178.813	4500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4600.00†	0.000	178.813	4600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4700.00†	0.000	178.813	4700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4800.00†	0.000	178.813	4800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
4900.00†	0.000	178.813	4900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5000.00†	0.000	178.813	5000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5035.00†	0.000	178.813	5035.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Brushy Canyon Lower
5100.00†	0.000	178.813	5100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5200.00†	0.000	178.813	5200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5300.00†	0.000	178.813	5300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5320.00†	0.000	178.813	5320.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Bone Spring
5400.00†	0.000	178.813	5400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5494.00†	0.000	178.813	5494.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Bone Spring "A" Shale
5500.00†	0.000	178.813	5500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5600.00†	0.000	178.813	5600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5700.00†	0.000	178.813	5700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5732.00†	0.000	178.813	5732.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Bone Spring "C" Shale
5800.00†	0.000	178.813	5800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
5900.00†	0.000	178.813	5900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6000.00†	0.000	178.813	6000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6100.00†	0.000	178.813	6100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6200.00†	0.000	178.813	6200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6262.00†	0.000	178.813	6262.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	1st Bone Spring Ss
6300.00†	0.000	178.813	6300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6400.00†	0.000	178.813	6400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6500.00†	0.000	178.813	6500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6600.00†	0.000	178.813	6600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6700.00†	0.000	178.813	6700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6800.00†	0.000	178.813	6800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
6812.00†	0.000	178.813	6812.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	2nd Bone Spring Ss
6900.00†	0.000	178.813	6900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7000.00†	0.000	178.813	7000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7100.00†	0.000	178.813	7100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7200.00†	0.000	178.813	7200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7300.00†	0.000	178.813	7300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7400.00†	0.000	178.813	7400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7500.00†	0.000	178.813	7500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7548.00†	0.000	178.813	7548.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	2nd BS Ss Lower
7600.00†	0.000	178.813	7600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7700.00†	0.000	178.813	7700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Switch) Sec 28, T25S,R26E	Wellbore	No.1H PWB
Facility	Switch 28 33 Fed Com No.1H		

WELLPATH DATA (211 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
7800.00†	0.000	178.813	7800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
7900.00†	0.000	178.813	7900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8000.00†	0.000	178.813	8000.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8100.00†	0.000	178.813	8100.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8109.00†	0.000	178.813	8109.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	3rd Bone Spring Ss
8200.00†	0.000	178.813	8200.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8300.00†	0.000	178.813	8300.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8400.00†	0.000	178.813	8400.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8466.00†	0.000	178.813	8466.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Wolfcamp
8500.00†	0.000	178.813	8500.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8600.00†	0.000	178.813	8600.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8700.00†	0.000	178.813	8700.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8800.00†	0.000	178.813	8800.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8900.00†	0.000	178.813	8900.00	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	
8952.50	0.000	178.813	8952.50	0.00	0.00	0.00	554012.80	403011.10	32°06'28.621"N	104°17'32.624"W	0.00	Est KOP
9000.00†	5.700	178.813	8999.92	2.36	-2.36	0.05	554012.85	403008.74	32°06'28.597"N	104°17'32.624"W	12.00	
9062.98†	13.257	178.813	9062.00	12.72	-12.72	0.26	554013.06	402998.38	32°06'28.495"N	104°17'32.621"W	12.00	Wolfcamp B
9100.00†	17.699	178.813	9097.67	22.60	-22.60	0.47	554013.27	402988.51	32°06'28.397"N	104°17'32.619"W	12.00	
9200.00†	29.698	178.813	9189.07	62.72	-62.71	1.30	554014.10	402948.40	32°06'28.000"N	104°17'32.610"W	12.00	
9257.28†	36.571	178.813	9237.00	94.01	-93.99	1.95	554014.75	402917.12	32°06'27.691"N	104°17'32.602"W	12.00	Wolfcamp C
9300.00†	41.697	178.813	9270.13	120.96	-120.94	2.51	554015.31	402890.17	32°06'27.424"N	104°17'32.596"W	12.00	
9400.00†	53.696	178.813	9337.31	194.79	-194.75	4.04	554016.83	402816.37	32°06'26.694"N	104°17'32.578"W	12.00	
9431.29†	57.451	178.813	9355.00	220.60	-220.55	4.57	554017.37	402790.57	32°06'26.438"N	104°17'32.572"W	12.00	Wolfcamp D
9500.00†	65.695	178.813	9387.68	280.97	-280.90	5.82	554018.62	402730.22	32°06'25.841"N	104°17'32.558"W	12.00	
9600.00†	77.694	178.813	9419.03	375.73	-375.65	7.78	554020.58	402635.48	32°06'24.903"N	104°17'32.536"W	12.00	
9700.00†	89.693	178.813	9429.99	474.94	-474.84	9.84	554022.64	402536.30	32°06'23.922"N	104°17'32.512"W	12.00	
9702.56	90.000	178.813	9430.00	477.50	-477.40	9.89	554022.69	402533.75	32°06'23.897"N	104°17'32.511"W	12.00	EOC
9800.00†	90.000	178.813	9430.00	574.94	-574.82	11.91	554024.71	402436.33	32°06'22.933"N	104°17'32.488"W	0.00	
9900.00†	90.000	178.813	9430.00	674.94	-674.80	13.98	554026.78	402336.36	32°06'21.943"N	104°17'32.465"W	0.00	
10000.00†	90.000	178.813	9430.00	774.94	-774.78	16.05	554028.85	402236.39	32°06'20.954"N	104°17'32.441"W	0.00	
10100.00†	90.000	178.813	9430.00	874.94	-874.76	18.13	554030.92	402136.42	32°06'19.965"N	104°17'32.418"W	0.00	
10200.00†	90.000	178.813	9430.00	974.94	-974.74	20.20	554032.99	402036.45	32°06'18.975"N	104°17'32.394"W	0.00	
10300.00†	90.000	178.813	9430.00	1074.94	-1074.71	22.27	554035.07	401936.49	32°06'17.986"N	104°17'32.370"W	0.00	
10400.00†	90.000	178.813	9430.00	1174.94	-1174.69	24.34	554037.14	401836.52	32°06'16.997"N	104°17'32.347"W	0.00	
10500.00†	90.000	178.813	9430.00	1274.94	-1274.67	26.41	554039.21	401736.55	32°06'16.007"N	104°17'32.323"W	0.00	
10600.00†	90.000	178.813	9430.00	1374.94	-1374.65	28.48	554041.28	401636.58	32°06'15.018"N	104°17'32.299"W	0.00	
10700.00†	90.000	178.813	9430.00	1474.94	-1474.63	30.55	554043.35	401536.61	32°06'14.029"N	104°17'32.276"W	0.00	
10800.00†	90.000	178.813	9430.00	1574.94	-1574.61	32.63	554045.42	401436.64	32°06'13.039"N	104°17'32.252"W	0.00	
10900.00†	90.000	178.813	9430.00	1674.94	-1674.59	34.70	554047.49	401336.67	32°06'12.050"N	104°17'32.228"W	0.00	
11000.00†	90.000	178.813	9430.00	1774.94	-1774.56	36.77	554049.57	401236.70	32°06'11.061"N	104°17'32.205"W	0.00	
11100.00†	90.000	178.813	9430.00	1874.94	-1874.54	38.84	554051.64	401136.73	32°06'10.071"N	104°17'32.181"W	0.00	
11200.00†	90.000	178.813	9430.00	1974.94	-1974.52	40.91	554053.71	401036.76	32°06'09.082"N	104°17'32.157"W	0.00	
11300.00†	90.000	178.813	9430.00	2074.94	-2074.50	42.98	554055.78	400936.79	32°06'08.093"N	104°17'32.134"W	0.00	
11400.00†	90.000	178.813	9430.00	2174.94	-2174.48	45.06	554057.85	400836.82	32°06'07.103"N	104°17'32.110"W	0.00	
11500.00†	90.000	178.813	9430.00	2274.94	-2274.46	47.13	554059.92	400736.85	32°06'06.114"N	104°17'32.087"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Switch) Sec 28, T25S,R26E	Wellbore	No.1H PWB
Facility	Switch 28 33 Fed Com No.1H		

WELLPATH DATA (211 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
11600.00†	90.000	178.813	9430.00	2374.94	-2374.44	49.20	554061.99	400636.89	32°06'05.125"N	104°17'32.063"W	0.00	
11700.00†	90.000	178.813	9430.00	2474.94	-2474.41	51.27	554064.07	400536.92	32°06'04.135"N	104°17'32.039"W	0.00	
11800.00†	90.000	178.813	9430.00	2574.94	-2574.39	53.34	554066.14	400436.95	32°06'03.146"N	104°17'32.016"W	0.00	
11900.00†	90.000	178.813	9430.00	2674.94	-2674.37	55.41	554068.21	400336.98	32°06'02.157"N	104°17'31.992"W	0.00	
12000.00†	90.000	178.813	9430.00	2774.94	-2774.35	57.49	554070.28	400237.01	32°06'01.167"N	104°17'31.968"W	0.00	
12100.00†	90.000	178.813	9430.00	2874.94	-2874.33	59.56	554072.35	400137.04	32°06'00.178"N	104°17'31.945"W	0.00	
12200.00†	90.000	178.813	9430.00	2974.94	-2974.31	61.63	554074.42	400037.07	32°05'59.189"N	104°17'31.921"W	0.00	
12300.00†	90.000	178.813	9430.00	3074.94	-3074.28	63.70	554076.49	399937.10	32°05'58.199"N	104°17'31.897"W	0.00	
12400.00†	90.000	178.813	9430.00	3174.94	-3174.26	65.77	554078.57	399837.13	32°05'57.210"N	104°17'31.874"W	0.00	
12500.00†	90.000	178.813	9430.00	3274.94	-3274.24	67.84	554080.64	399737.16	32°05'56.221"N	104°17'31.850"W	0.00	
12600.00†	90.000	178.813	9430.00	3374.94	-3374.22	69.92	554082.71	399637.19	32°05'55.231"N	104°17'31.827"W	0.00	
12700.00†	90.000	178.813	9430.00	3474.94	-3474.20	71.99	554084.78	399537.22	32°05'54.242"N	104°17'31.803"W	0.00	
12800.00†	90.000	178.813	9430.00	3574.94	-3574.18	74.06	554086.85	399437.25	32°05'53.253"N	104°17'31.779"W	0.00	
12900.00†	90.000	178.813	9430.00	3674.94	-3674.16	76.13	554088.92	399337.28	32°05'52.263"N	104°17'31.756"W	0.00	
13000.00†	90.000	178.813	9430.00	3774.94	-3774.13	78.20	554090.99	399237.32	32°05'51.274"N	104°17'31.732"W	0.00	
13100.00†	90.000	178.813	9430.00	3874.94	-3874.11	80.27	554093.07	399137.35	32°05'50.285"N	104°17'31.708"W	0.00	
13200.00†	90.000	178.813	9430.00	3974.94	-3974.09	82.34	554095.14	399037.38	32°05'49.295"N	104°17'31.685"W	0.00	
13300.00†	90.000	178.813	9430.00	4074.94	-4074.07	84.42	554097.21	398937.41	32°05'48.306"N	104°17'31.661"W	0.00	
13400.00†	90.000	178.813	9430.00	4174.94	-4174.05	86.49	554099.28	398837.44	32°05'47.317"N	104°17'31.637"W	0.00	
13500.00†	90.000	178.813	9430.00	4274.94	-4274.03	88.56	554101.35	398737.47	32°05'46.327"N	104°17'31.614"W	0.00	
13600.00†	90.000	178.813	9430.00	4374.94	-4374.01	90.63	554103.42	398637.50	32°05'45.338"N	104°17'31.590"W	0.00	
13700.00†	90.000	178.813	9430.00	4474.94	-4473.98	92.70	554105.49	398537.53	32°05'44.349"N	104°17'31.567"W	0.00	
13800.00†	90.000	178.813	9430.00	4574.94	-4573.96	94.77	554107.57	398437.56	32°05'43.359"N	104°17'31.543"W	0.00	
13900.00†	90.000	178.813	9430.00	4674.94	-4673.94	96.85	554109.64	398337.59	32°05'42.370"N	104°17'31.519"W	0.00	
14000.00†	90.000	178.813	9430.00	4774.94	-4773.92	98.92	554111.71	398237.62	32°05'41.381"N	104°17'31.496"W	0.00	
14100.00†	90.000	178.813	9430.00	4874.94	-4873.90	100.99	554113.78	398137.65	32°05'40.391"N	104°17'31.472"W	0.00	
14200.00†	90.000	178.813	9430.00	4974.94	-4973.88	103.06	554115.85	398037.68	32°05'39.402"N	104°17'31.448"W	0.00	
14300.00†	90.000	178.813	9430.00	5074.94	-5073.86	105.13	554117.92	397937.71	32°05'38.413"N	104°17'31.425"W	0.00	
14400.00†	90.000	178.813	9430.00	5174.94	-5173.83	107.20	554120.00	397837.75	32°05'37.423"N	104°17'31.401"W	0.00	
14500.00†	90.000	178.813	9430.00	5274.94	-5273.81	109.28	554122.07	397737.78	32°05'36.434"N	104°17'31.377"W	0.00	
14600.00†	90.000	178.813	9430.00	5374.94	-5373.79	111.35	554124.14	397637.81	32°05'35.445"N	104°17'31.354"W	0.00	
14700.00†	90.000	178.813	9430.00	5474.94	-5473.77	113.42	554126.21	397537.84	32°05'34.455"N	104°17'31.330"W	0.00	
14800.00†	90.000	178.813	9430.00	5574.94	-5573.75	115.49	554128.28	397437.87	32°05'33.466"N	104°17'31.307"W	0.00	
14900.00†	90.000	178.813	9430.00	5674.94	-5673.73	117.56	554130.35	397337.90	32°05'32.477"N	104°17'31.283"W	0.00	
15000.00†	90.000	178.813	9430.00	5774.94	-5773.71	119.64	554132.42	397237.93	32°05'31.487"N	104°17'31.259"W	0.00	
15100.00†	90.000	178.813	9430.00	5874.94	-5873.68	121.71	554134.50	397137.96	32°05'30.498"N	104°17'31.236"W	0.00	
15200.00†	90.000	178.813	9430.00	5974.94	-5973.66	123.78	554136.57	397037.99	32°05'29.509"N	104°17'31.212"W	0.00	
15300.00†	90.000	178.813	9430.00	6074.94	-6073.64	125.85	554138.64	396938.02	32°05'28.519"N	104°17'31.188"W	0.00	
15400.00†	90.000	178.813	9430.00	6174.94	-6173.62	127.92	554140.71	396838.05	32°05'27.530"N	104°17'31.165"W	0.00	
15500.00†	90.000	178.813	9430.00	6274.94	-6273.60	129.99	554142.78	396738.08	32°05'26.541"N	104°17'31.141"W	0.00	
15600.00†	90.000	178.813	9430.00	6374.94	-6373.58	132.07	554144.85	396638.11	32°05'25.551"N	104°17'31.117"W	0.00	
15700.00†	90.000	178.813	9430.00	6474.94	-6473.56	134.14	554146.92	396538.15	32°05'24.562"N	104°17'31.094"W	0.00	
15800.00†	90.000	178.813	9430.00	6574.94	-6573.53	136.21	554149.00	396438.18	32°05'23.573"N	104°17'31.070"W	0.00	
15900.00†	90.000	178.813	9430.00	6674.94	-6673.51	138.28	554151.07	396338.21	32°05'22.583"N	104°17'31.047"W	0.00	
16000.00†	90.000	178.813	9430.00	6774.94	-6773.49	140.35	554153.14	396238.24	32°05'21.594"N	104°17'31.023"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Switch) Sec 28, T25S,R26E	Wellbore	No.1H PWB
Facility	Switch 28 33 Fed Com No.1H		

WELLPATH DATA (211 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
16100.00†	90.000	178.813	9430.00	6874.94	-6873.47	142.42	554155.21	396138.27	32°05'20.605"N	104°17'30.999"W	0.00	
16200.00†	90.000	178.813	9430.00	6974.94	-6973.45	144.50	554157.28	396038.30	32°05'19.615"N	104°17'30.976"W	0.00	
16300.00†	90.000	178.813	9430.00	7074.94	-7073.43	146.57	554159.35	395938.33	32°05'18.626"N	104°17'30.952"W	0.00	
16400.00†	90.000	178.813	9430.00	7174.94	-7173.40	148.64	554161.43	395838.36	32°05'17.637"N	104°17'30.928"W	0.00	
16500.00†	90.000	178.813	9430.00	7274.94	-7273.38	150.71	554163.50	395738.39	32°05'16.647"N	104°17'30.905"W	0.00	
16600.00†	90.000	178.813	9430.00	7374.94	-7373.36	152.78	554165.57	395638.42	32°05'15.658"N	104°17'30.881"W	0.00	
16700.00†	90.000	178.813	9430.00	7474.94	-7473.34	154.85	554167.64	395538.45	32°05'14.669"N	104°17'30.857"W	0.00	
16800.00†	90.000	178.813	9430.00	7574.94	-7573.32	156.93	554169.71	395438.48	32°05'13.679"N	104°17'30.834"W	0.00	
16900.00†	90.000	178.813	9430.00	7674.94	-7673.30	159.00	554171.78	395338.51	32°05'12.690"N	104°17'30.810"W	0.00	
17000.00†	90.000	178.813	9430.00	7774.94	-7773.28	161.07	554173.85	395238.54	32°05'11.701"N	104°17'30.787"W	0.00	
17100.00†	90.000	178.813	9430.00	7874.94	-7873.25	163.14	554175.93	395138.58	32°05'10.711"N	104°17'30.763"W	0.00	
17200.00†	90.000	178.813	9430.00	7974.94	-7973.23	165.21	554178.00	395038.61	32°05'09.722"N	104°17'30.739"W	0.00	
17300.00†	90.000	178.813	9430.00	8074.94	-8073.21	167.28	554180.07	394938.64	32°05'08.733"N	104°17'30.716"W	0.00	
17400.00†	90.000	178.813	9430.00	8174.94	-8173.19	169.36	554182.14	394838.67	32°05'07.743"N	104°17'30.692"W	0.00	
17500.00†	90.000	178.813	9430.00	8274.94	-8273.17	171.43	554184.21	394738.70	32°05'06.754"N	104°17'30.668"W	0.00	
17600.00†	90.000	178.813	9430.00	8374.94	-8373.15	173.50	554186.28	394638.73	32°05'05.765"N	104°17'30.645"W	0.00	
17700.00†	90.000	178.813	9430.00	8474.94	-8473.13	175.57	554188.36	394538.76	32°05'04.775"N	104°17'30.621"W	0.00	
17800.00†	90.000	178.813	9430.00	8574.94	-8573.10	177.64	554190.43	394438.79	32°05'03.786"N	104°17'30.597"W	0.00	
17900.00†	90.000	178.813	9430.00	8674.94	-8673.08	179.72	554192.50	394338.82	32°05'02.797"N	104°17'30.574"W	0.00	
18000.00†	90.000	178.813	9430.00	8774.94	-8773.06	181.79	554194.57	394238.85	32°05'01.807"N	104°17'30.550"W	0.00	
18100.00†	90.000	178.813	9430.00	8874.94	-8873.04	183.86	554196.64	394138.88	32°05'00.818"N	104°17'30.527"W	0.00	
18200.00†	90.000	178.813	9430.00	8974.94	-8973.02	185.93	554198.71	394038.91	32°04'59.829"N	104°17'30.503"W	0.00	
18300.00†	90.000	178.813	9430.00	9074.94	-9073.00	188.00	554200.79	393938.94	32°04'58.839"N	104°17'30.479"W	0.00	
18400.00†	90.000	178.813	9430.00	9174.94	-9172.98	190.07	554202.86	393838.97	32°04'57.850"N	104°17'30.456"W	0.00	
18500.00†	90.000	178.813	9430.00	9274.94	-9272.95	192.15	554204.93	393739.01	32°04'56.861"N	104°17'30.432"W	0.00	
18600.00†	90.000	178.813	9430.00	9374.94	-9372.93	194.22	554207.00	393639.04	32°04'55.871"N	104°17'30.408"W	0.00	
18700.00†	90.000	178.813	9430.00	9474.94	-9472.91	196.29	554209.07	393539.07	32°04'54.882"N	104°17'30.385"W	0.00	
18800.00†	90.000	178.813	9430.00	9574.94	-9572.89	198.36	554211.14	393439.10	32°04'53.893"N	104°17'30.361"W	0.00	
18900.00†	90.000	178.813	9430.00	9674.94	-9672.87	200.43	554213.21	393339.13	32°04'52.903"N	104°17'30.338"W	0.00	
19000.00†	90.000	178.813	9430.00	9774.94	-9772.85	202.51	554215.29	393239.16	32°04'51.914"N	104°17'30.314"W	0.00	
19091.54	90.000	178.813	9430.00†	9866.49	-9864.37	204.40	554217.18	393147.65	32°04'51.009"N	104°17'30.292"W	0.00	No.1H PBHL



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Switch) Sec 28, T25S,R26E	Wellbore	No.1H PWB
Facility	Switch 28 33 Fed Com No.1H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.1H PBHL	19091.54	9430.00	9864.37	204.41	554217.19	393147.65	32°04'51.009"N	104°17'30.292"W	point

SURVEY PROGRAM - Ref Wellbore: No.1H PWB Ref Wellpath: Rev-A.0				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	19091.54	NaviTrak (Standard)		No.1H PWB

SR & A

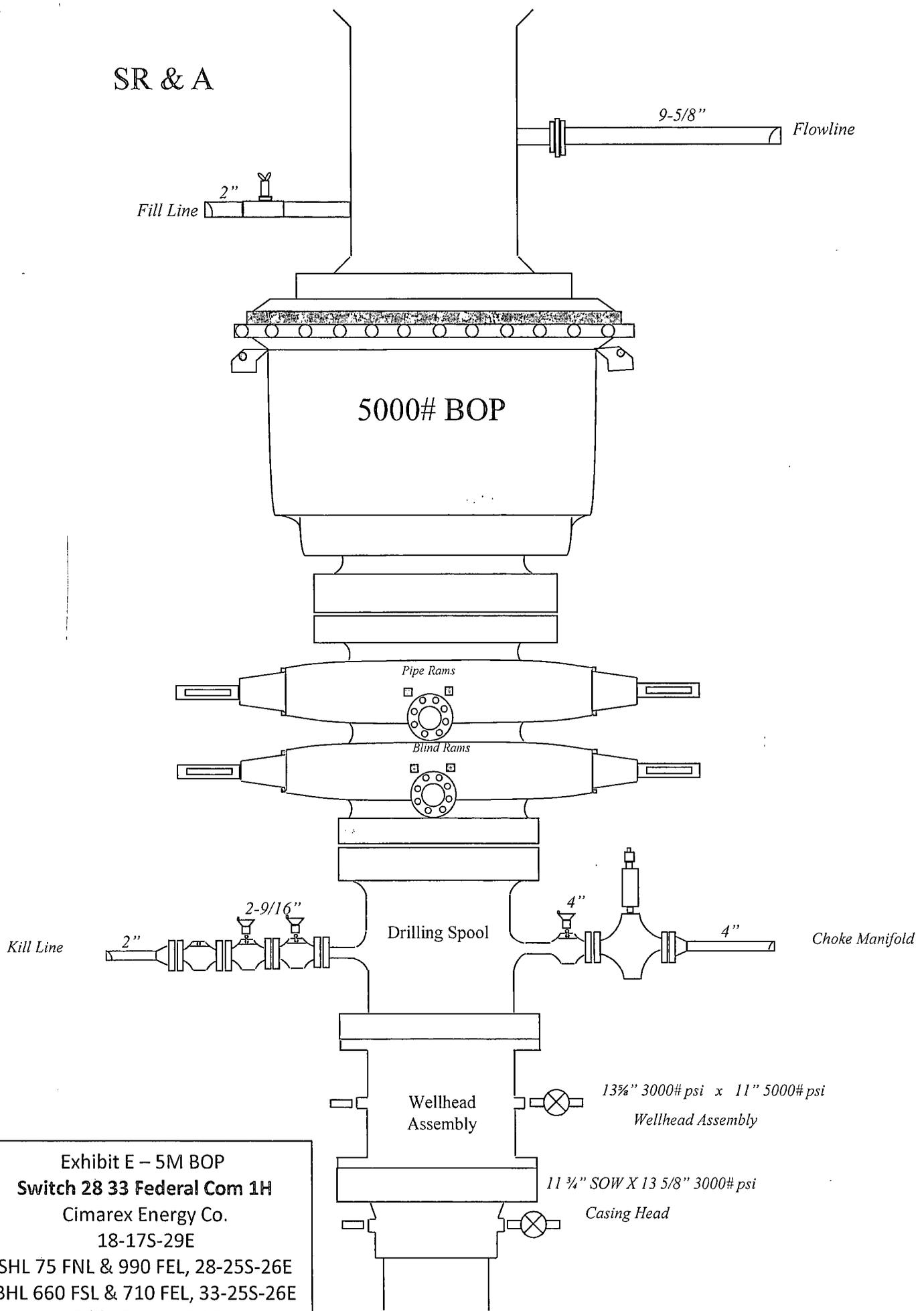
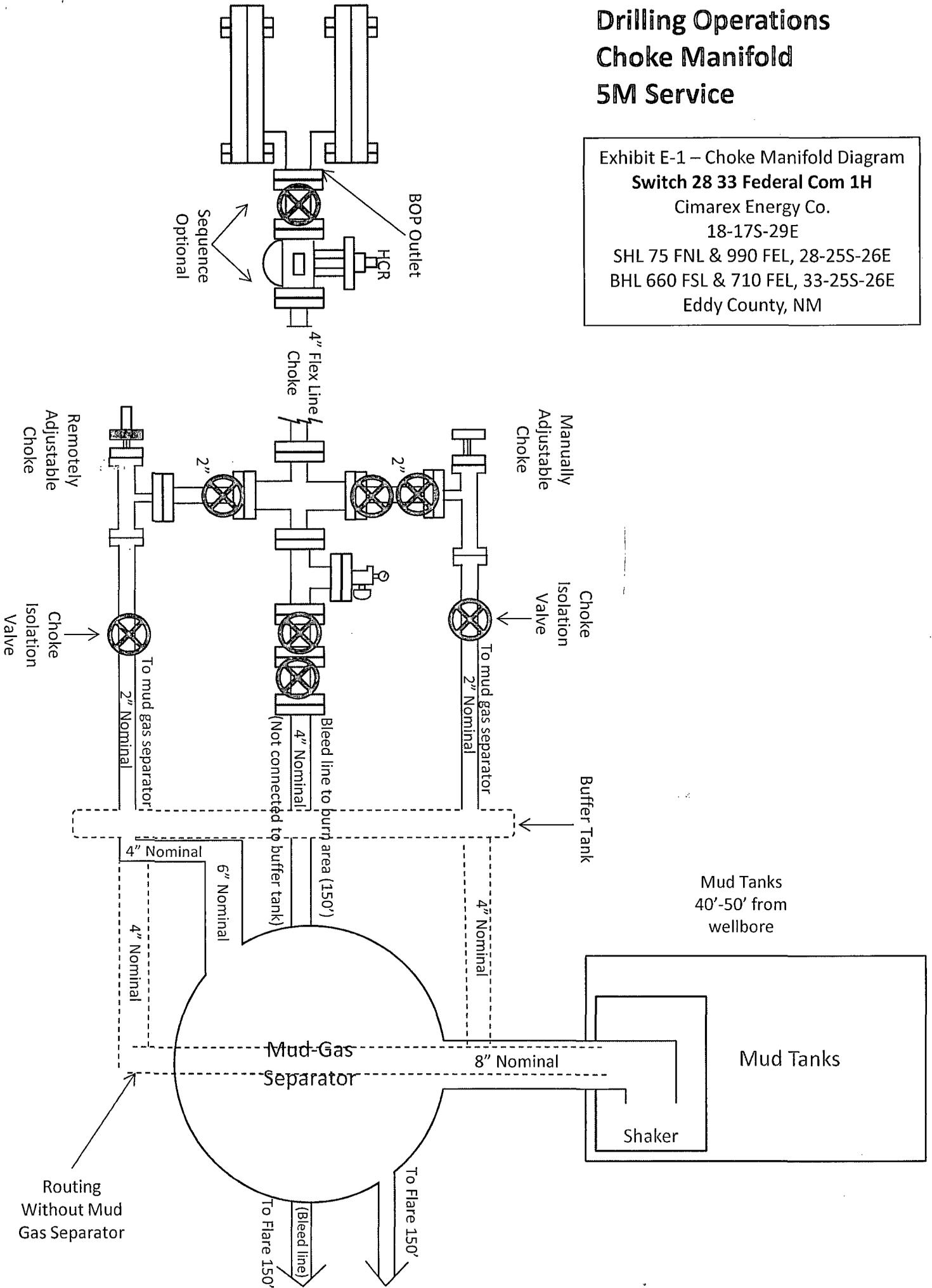
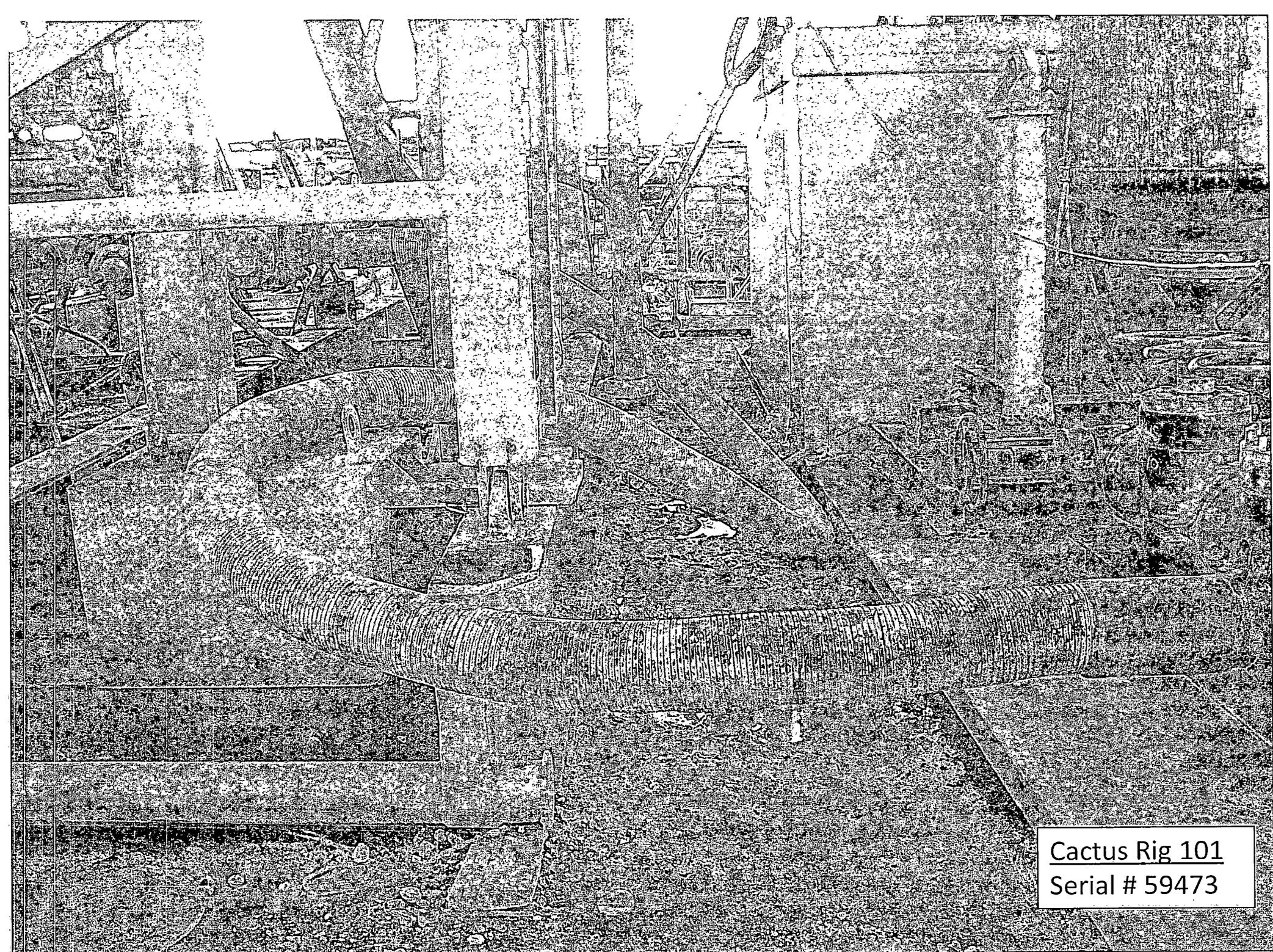


Exhibit E – 5M BOP
Switch 28 33 Federal Com 1H
Cimarex Energy Co.
18-17S-29E
SHL 75 FNL & 990 FEL, 28-25S-26E
BHL 660 FSL & 710 FEL, 33-25S-26E
Eddy County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram
Switch 28 33 Federal Com 1H
 Cimarex Energy Co.
 18-17S-29E
 SHL 75 FNL & 990 FEL, 28-25S-26E
 BHL 660 FSL & 710 FEL, 33-25S-26E
 Eddy County, NM





Cactus Rig 101
Serial # 59473

M I D W E S T

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS		P.O. Number: Rig#101 Asset#M5358
HOSE SPECIFICATIONS		
Type: CHOKELINE	Length: 35'	
I.D. 4" INCHES	O.D. 8" INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI	BURST PRESSURE PSI
COUPLINGS		
Type of End Fitting 4 1/16 10K FLANGE		
Type of Coupling: SWEDGED	MANUFACTURED BY MIDWEST HOSE & SPECIALTY	
PROCEDURE		
<i>Hose assembly pressure tested with water at ambient temperature.</i>		
TIME HELD AT TEST PRESSURE 15 MIN.	ACTUAL BURST PRESSURE: 0 PSI	
COMMENTS: s/n#59473 Asset#M5358 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes		
Date: 5/19/2010	Tested By: BOBBY FINK	Approved: MENDI JACKSON

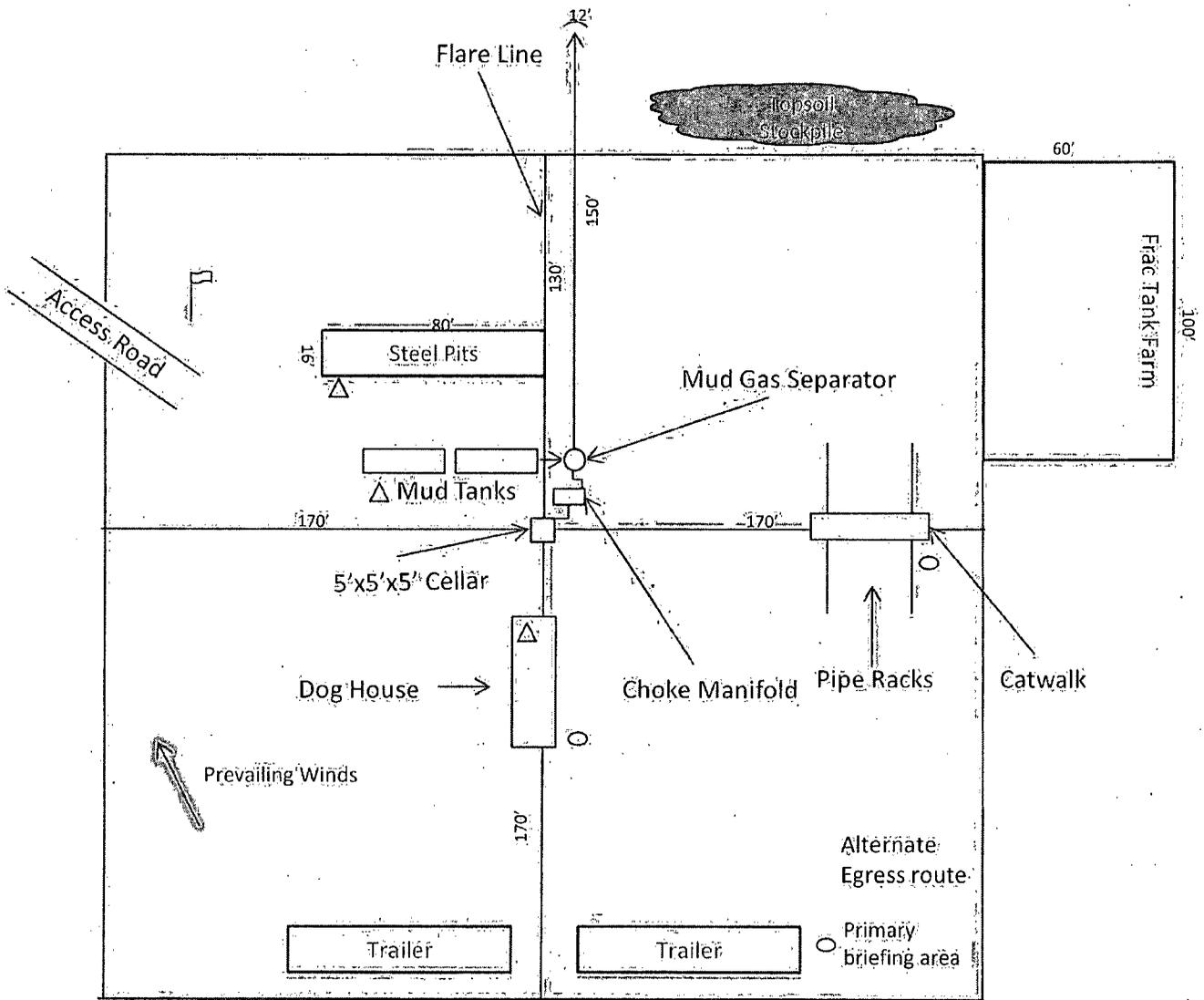


Midwest Hose
& Specialty, Inc.

Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)



-  Wind-Direction Indicators (wind sock or streamers)
-  H2S Monitors (alarms at bell nipple and shale shaker)
-  Briefing Areas



Exhibit D - Rig Diagram
Switch 28-33 Federal Com 1H
 Cimarex Energy Co.
 18-17S-29E
 SHL 75 FNL & 990 FEL, 28-25S-26E
 BHL 660 FSL & 710 FEL, 33-25S-26E
 Eddy County, NM

Surface Use Plan
Switch 28 33 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit A, Section 28
T25S-R26E, Eddy County, NM

1. Existing Roads: Area maps, Exhibit "A" shows the proposed well site as staked. Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, and Exhibit "C-1" is a well site layout map, showing proposed road to location and existing road.
 - A. The maximum width of the driving surface will be 15.' The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.
 - B. From the junction of Means Rd and White City, go north on Means for 0.5 miles to lease road, on lease road go east 1.25 miles to ranch road, on ranch road go south 0.6 miles to ranch road, on ranch road go east 0.9 miles to proposed lease road.
2. Planned Access Roads: Approximately 7920' of existing two-track road will be upgraded for use. The maximum width of the driving surface will be 15.' The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche
3. Location of Existing Wells in a One-Mile Radius - Exhibit A
 - A. Water wells - None known
 - B. Disposal wells - None known
 - C. Drilling wells - None known
 - D. Producing wells - As shown on Exhibit "A"
 - E. Abandoned wells - As shown on Exhibit "A"
4. Location of Proposed Production Facilities:

If on completion this well is a producer, a tank battery will be used and the necessary production equipment will be installed at the wellsite. See production facilities layout diagram. Any changes to the facilities or off-site facilities will be accompanied by a Sundry Notice.
5. Location and Type of Water Supply:

Water will be purchased locally from a commercial source and trucked over the access roads.
6. Source of Construction Material:

If possible, native caliche will be obtained from the excavation of drill site. Topsoil will be pushed back from the drill site and existing caliche will be ripped and compacted. Then topsoil will be stockpiled on location as depicted on Exhibit "D" (rig layout). If additional material is needed, it will be purchased from a BLM-approved pit as near as possible to the well
7. Methods of Handling Waste Material:
 - A. Drill cuttings will be separated by a series of solids removal equipment and stored in steel containment pits and then hauled to a state-approved disposal facility.
 - B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.
 - C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
 - D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically and hauled to a waste disposal facility. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
 - E. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

H₂S Contingency Plan
Switch 28 33 Federal Com 1H
 Cimarex Energy Co. of Colorado
 Unit A, Section 28
 T25S-R26E, 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

Stata Production Company'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. Stata Production Company's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contacts

Switch 28 33 Federal Com 1H

Cimarex Energy Co. of Colorado

Unit A, Section 28

T255-R26E, Eddy County, NM

Company Office

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

800-969-4789

Key Personnel

Name	Title	Office	Mobile
Larry Seigrist	Drilling Manager	432-620-1934	972-333-1407
Scott Lucas	Field Drilling Super		432-894-5572
Jeff Lajoie	Field Drilling Super		432-257-9889
Tommy Herring	Field Drilling Super		432-238-2450

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		

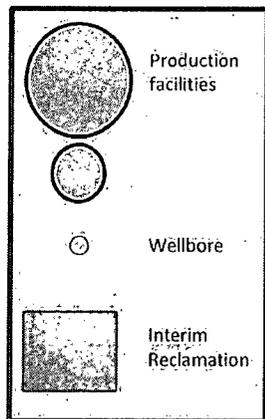
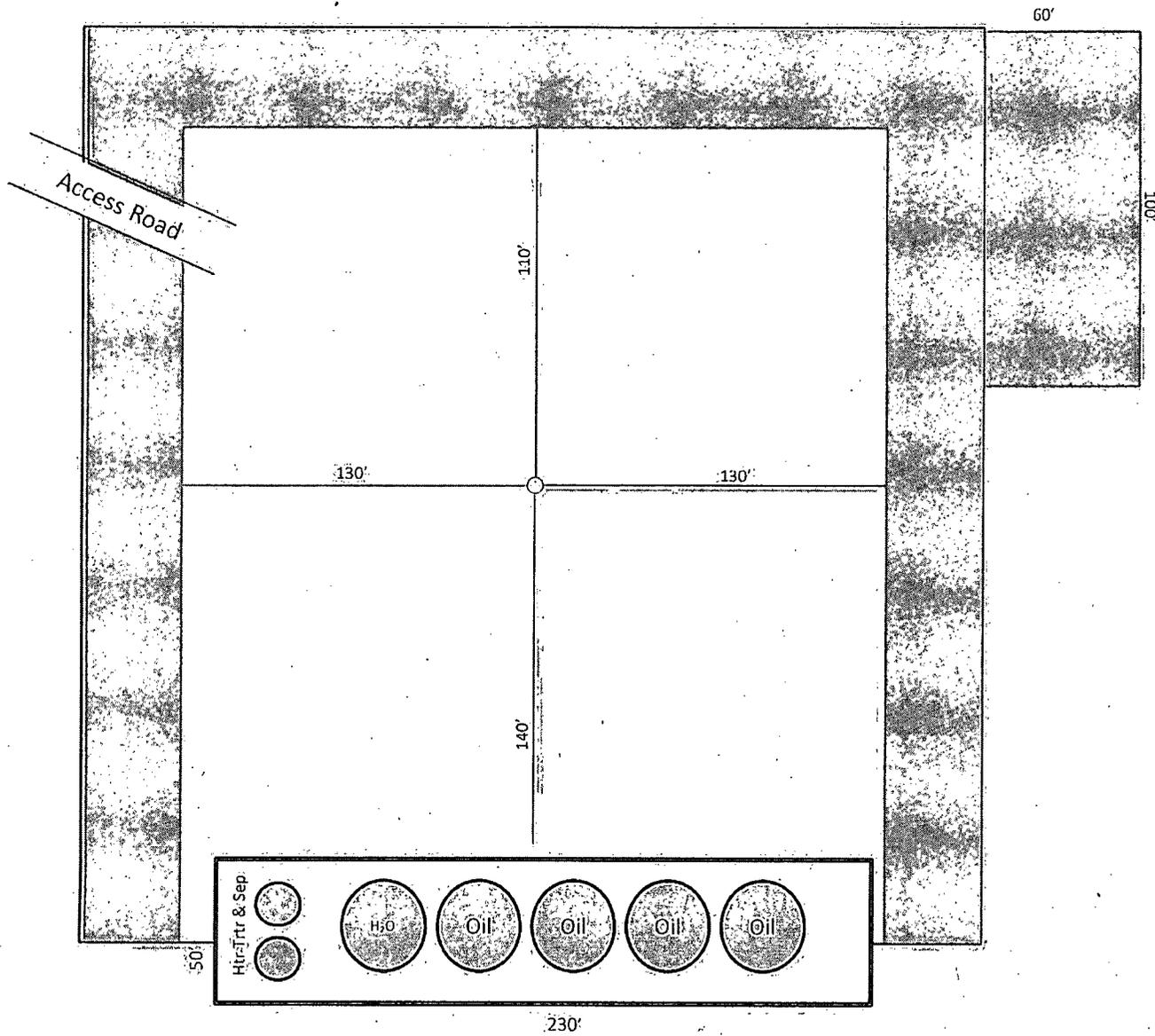


Exhibit D-1
 Production Facilities Layout Diagram
 Switch 28:33 Federal Com 1H
 Cimarex Energy Co.
 18-17S-29E
 SHL 75 FNL & 990 FEL, 28-25S-26E
 BHL 660 FSL & 710 FEL, 33-25S-26E
 Eddy County, NM

Surface Use Plan
Switch 28 33 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit A, Section 28
T25S-R26E, Eddy County, NM

1. Existing Roads: Area maps, Exhibit "A" shows the proposed well site as staked. Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, and Exhibit "C-1" is a well site layout map, showing proposed road to location and existing road.
 - A. The maximum width of the driving surface will be 15.' The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.
 - B. From the junction of Means Rd and White City, go north on Means for 0.5 miles to lease road, on lease road go east 1.25 miles to ranch road, on ranch road go south 0.6 miles to ranch road, on ranch road go east 0.9 miles to
2. Planned Access Roads: No new access road is planned.
3. Location of Existing Wells in a One-Mile Radius - Exhibit A
 - A. Water wells - None known
 - B. Disposal wells - None known
 - C. Drilling wells - None known
 - D. Producing wells - As shown on Exhibit "A"
 - E. Abandoned wells - As shown on Exhibit "A"
4. Location of Proposed Production Facilities:

If on completion this well is a producer, a tank battery will be used and the necessary production equipment will be installed at the wellsite. See production facilities layout diagram. Any changes to the facilities or off-site facilities will be accompanied by a Sundry Notice.
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Surface Use Plan
Switch 28 33 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit A, Section 28
T25S-R26E, Eddy County, NM

8. Ancillary Facilities:

- A. No camps or airstrips to be constructed.

9. Well Site Layout:

- A. Exhibit "D" shows location and rig layout.
- C. Mud pits in the closed circulating system will be steel pits and the cuttings will be stored in steel containment pits.
- D. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility.
- E. If the well is a producer, those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10. Plans for Restoration of Surface:

Rehabilitation of the location will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, those areas of the location not essential to production facilities and operations will be reclaimed and seeded per BLM requirements. Please see Production Facilities Layout Diagram, exhibit D-1.

11. Other Information

- A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- B. The wellsite is on surface owned by Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
- C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.
- D. There are no known dwellings within 1½ miles of this location.

BHL: 330 FNL & 660 FEL

V-Door East. Battery Northwest. Interim Reclamation: North and east. On same pad as #6H & Switch #1H). No new road required due to being just east of #6H.

Switch 28 Fed #1H:

SHL: 75 FNL & 990 FEL, Sec. 28, T. 25 S., R. 26 E.

BHL: 330 FSL & 660 FEL

V-Door East. Battery: South. Interim reclamation: South, east, west. Location on same pad as Oracle #6 & 7H, therefore, no new road required.

Oracle 21 Fed #8H:

SHL: 75 FSL & 2310 FEL, Section 21, T. 25 S., R. 26 E.

BHL: 330 FNL & 1980 FEL

V-Door East. Battery: North. Interim reclamation: East and west. Road from northwest corner to north to proposed road that will run from the Oracle 6 & 7 pad to just north of this location on west to the Switch #4H.

Switch 28 Fed #2H:

SHL: 75 FNL & 2310 FEL, Sec 28, T. 25 S., R. 26 E.

BHL: 330 FSL & 1980 FEL

V-Door East. Battery: South. Interim reclamation: East and west. No access road required since it's on same pad with Oracle #8H.

Switch 28 Fed Com #3H:

SHL: 35 FNL & 2110 FWL, Sec 28, T. 25 S., R. 26 E.

BHL: 330 FSL & 1980 FWL, Sec 28, T. 25 S., R. 26 E.

V-Door East. Battery: North. Interim reclamation: south, east and west. Access road from Northeast corner of pad to north, to intersect road between Switch 2 to 4 (See Basin Survey road plats on this). (Berm pad due to drainages to south and west)

Switch 28 Fed Com #4H:

SHL: 200 FSL & 660 FWL, Sec 28, T. 25 S., R. 26 E.

BHL: 330 FSL & 660 FEL. Sec. 21, T, 25 S., R. 26 E.

V-Door North. Battery: North. Interim reclamation: South, west, east. (Berm pad due to drainages to south and west). Access road from Northeast corner of pad to north, then to west, to the section line line, running north south. This will be the main access road in as well as pipeline route system.

On-site 12/09/11

Parks Fed Com #3H:

SHL: 1980 FSL & 200 FEL, Section 9, T. 25 S., R. 26 E.

BHL: 1980 FSL & 330 FWL

V-Door East. Battery:South. Interim reclamation: North, west, east. Access road from well, south, to the #2H well.

Seldom Seen 15 Fed #9H:

SHL: 390 FSL & 690 FEL, Sec 15, T. 25 S., R. 26 E.

BHL: 330 FNL & 660 FEL

V-Door East. Battery? Interim reclamation: South and east. No access road required. Just 170 ft. south of the #5 well, which is just south of the #1 well.

Seldom Seen 15 Fed #8H:

SHL: 350 FSL & 1980 FEL, Sec. 15, T. 25 S., R. 26 E.

BHL: 330 FNL & 1980 FEL

V-Door West. Frac Pad West. Battery East. Interim reclamation: North, south, west. Access road from northeast corner of pad east to main road.

Seldom Seen 15 Fed #6H

SHL: 75 FSL & 660 FWL, Sec. 15, T. 25 S., R. 26 E.

BHL: 330 FNL & 660 FWL

V-Door East. Battery West. Interim reclamation: North and east. Access from southeast corner of pad, east to tie into the road route from the Seldom Seen #7H.

Moved the Cottonwood Draw 22 Fed #9H well north to share the same pad as the Seldom Seen #6H pad:

Cottonwood Draw 22 Fed #9H:

SHL: 75 FNL & 660 FWL, Sec 22, T. 25 S., R. 26 E.

BHL: 330 FSL & 660 FWL

V-Door East. Battery West. Interim reclamation: South. Access road will run east to tie into road to the Cottonwood Draw 22 Fed #11H & Seldom Seen 7H.

Sorry, I got this out late, I was under the weather a while. I am set up for Tuesday with John to get the two we have left: The Chosa Draw 27 Fed Com #11H and the Chosa Draw 27 Fed #8H.

Thanks! Barry

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Co. of Colorado
LEASE NO.:	NM-120887
WELL NAME & NO.:	Switch 28 33 Federal Com #1
SURFACE HOLE FOOTAGE:	0075' FNL & 0990' FEL
BOTTOM HOLE FOOTAGE:	0660' FSL & 0710' FEL (SEC. 33, T.25S., R26E)
LOCATION:	Section 28, T. 25 S., R 26 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
 - Surfacing of access road
 - Water leadouts
 - Cave/Karst
 - Communitization Agreement
- Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- Road Section Diagram**
- Drilling**
 - Cement Requirements
 - H₂S – Onshore Order 6
 - Critical Cave/Karst.
 - 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)

Access roads consisting of upgraded two tracks to the well location shall be surfaced.

Water leadouts shall be constructed as needed to prevent erosion as a result of the road construction.

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

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

Construction:

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

No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

The pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

Tank Battery Liners and Berms:

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

Leak Detection System:

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

Automatic Shut-off Systems:

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

Cave/Karst Subsurface Mitigation

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

Rotary Drilling with Fresh Water:

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

Directional Drilling:

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

Lost Circulation:

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

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

Abandonment Cementing:

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

Pressure Testing:

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

Communitization Agreement

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. In addition, the well sign shall include the surface and bottom hole lease numbers. If the Communitization Agreement number is known, it shall also be on the sign. If not, it shall be placed on the sign when the sign is replaced.

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 required.

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 required on the new access road driving surface. The surfacing material may be required to be removed at the time of reclamation.

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

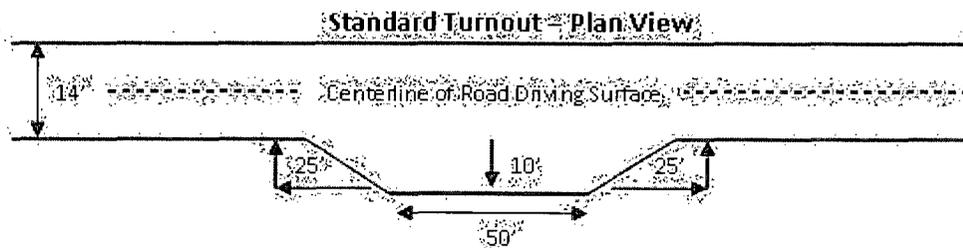
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

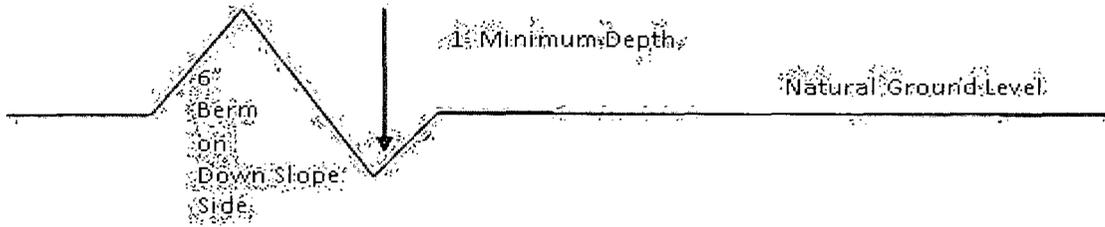


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing 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

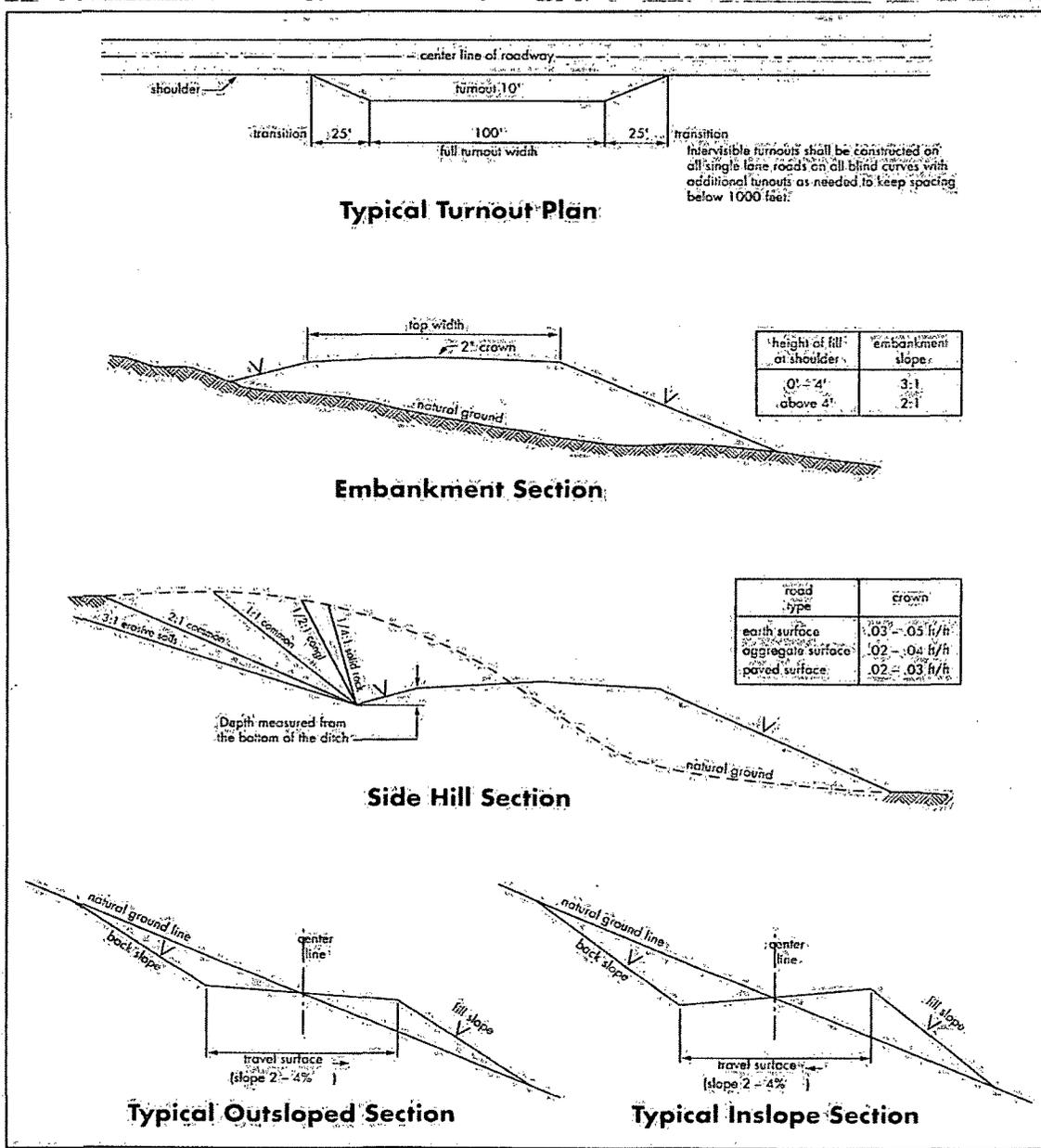
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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 in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Eddy County

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

1. **A Hydrogen Sulfide (H₂S) Drilling Plan should be activated prior to drilling out the surface shoe. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
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 top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#).

Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

Wait on cement (WOC) time prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. 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.

Critical cave/karst.

Possible lost circulation in the Delaware formation.

Possible abnormal pressures in the Wolfcamp formation.

1. The **13-3/8** inch surface casing shall be set **as proposed at approximately 450 feet** and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with 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 **9-5/8** 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 cave/karst. Additional cement may be needed as excess calculates to 21 %.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

The pilot hole plugging procedure is approved as written. Note plug top on subsequent drilling report. Additional cement may be required - plug length calculated to be 130 feet short of whipstock for gauge hole.

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

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Formation below the 7" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:

- Cement shall come to the top of liner. If cement does not come to the top of the liner, contact the appropriate BLM office. **Excess cement calculates to negative 2%.** Approved for 150 foot liner tieback.

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.

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. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M) psi**.
 - 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, 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. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.

- d. The results of the test shall be reported to the appropriate BLM office.
- e. 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.**
- f. 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. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

F. 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.

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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 (not applied for in APD)

C. ELECTRIC LINES (not applied for in APD)

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).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 4, for Gypsum Sites

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

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

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

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

DWS: DeWinged Seed

*Pounds of pure live seed:

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