

OCD-HOBBS

ATS-12-779

HOBBS OCD

Form 3160-3
(April 2004)

SEP 20 2012

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No NMNM 127895	
1b Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2 Name of Operator Cimarex Energy Co.		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. Double X 25 Federal No. 5 #39348	
3b Phone No. (include area code) 432-571-7800		9. API Well No. 30-025-40765	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 430 FNL & 2065 FEL Unit B At proposed prod Zone 330 FSL & 2310 FEL Unit D Horizontal Bone Spring test		10. Field and Pool, or Exploratory WC-025-06 5283201M; 97784	
11 Distance in miles and direction from nearest town or post office*		11 Sec., T. R. M. or Blk. and Survey or Area B9 UPPER SHALE	
12 County or Parish Lea		13 State NM	
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line if any) 330'	16. No of acres in lease 640 acres	17 Spacing Unit dedicated to this well W2E2 160 acres	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 150' from #6	19. Proposed Depth MD 14134' TVD 9725'	20 BLM/BIA Bond No on File COB000011	
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3567' GR	22. Approximate date work will start* 12.01.12	23 Estimated duration 25-30 days	

24. Attachments

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

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

25. Signature <i>Celeste G. Dale</i>	Name (Printed/Typed) Celeste G. Dale	Date 5.14.12
Title Regulatory Analyst		
Approved By (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date SEP 18 2012
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

Title 18 U.S.C. 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)

APPROVAL FOR TWO YEARS

Approval Subject to General Requirements
& Special Stipulations Attached

Carlsbad Controlled Water Basin

SEP 25 2012

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Drilling Plan
Double X 25 Federal No. 5
 Cimarex Energy Co.
 Unit B, Section 25
 T24S-R32E, Lea 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 430 FNL & 2065 FEL
 BHL 330 FSL & 2310 FEL

- 2 **Elevation above sea level:** 3567' 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:** MD 14134' TVD 9725'

- 6 **Estimated tops of geological markers:**

Rustler	1080'
Top of Salt	1400'
Castile	3400'
Base of Salt	4680'
Delaware Sands	5000'
Basal Brushy Canyon	8660'
Bone Spring	8900'
Avalon Shale	9275'

- 7 **Possible mineral bearing formations:**

Delaware	Oil
Avalon	Oil
Bone Spring	Oil

8 **Proposed Mud Circulating System:**

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1125' 495'	8.4 - 8.6	28	NC	FW
1125' to 4900'	10.0	30-32	NC	Brine
4900' to 14134'	8.5-9.5	27-45	NC	2% KCL

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

Proposed drilling Plan

Drill 8-3/4" hole to 9439'. Continue drilling lateral through the curve to 14134' TMD, 9725' TVD. Run 5½" 17# P-110 LTC from 0-14235' and cement.

Drilling Plan
Double X 25 Federal No. 5
 Cimarex Energy Co.
 Unit B, Section 25
 T24S-R32E, Lea County, NM

9 Casing & Cementing Program:

see COA

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface 1	17 1/2"	0' to 1125'	New 13 3/8"	48#	STC	H-40
Intermediate	12 1/4"	0' to 4900'	New 9 5/8"	40#	LTC	J-55
Production	7 7/8" or 8 3/4"	0' to 14134'	New 5 1/2"	17#	LTC	P-110

10 Cementing:

Surface Lead: 545SKS Halcem C + 4% Bentomite + 2% CaCl 13.5ppg 1.75 yield 100% Excess
 Tail: 420SKS Halcem C + 2% CaCl 14.2ppg 1.34 yield 50% Excess
TOC Surface Centralizers per Onshorder 2.III.B.1.f

Intermediate Lead: 1655SKS Econocem + 5% Salt + 5# Gilsonite 14.6ppg 1.54 yield 70% Excess
 Tail: 200SKS Halcem + 1% CaCl 14.8ppg 1.34 yield 25% Excess
TOC Surface

Production Lead: 1030SKS Econocem H + 0.5% CFR-3 + 0.1% HR-601 11.9ppg 2.44 yield 50% Excess
 Tail: 1305SKS Versacem H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess
 Cement volumes will be adjusted according to hole size.
TOC 3800' Centralizers every 3rd joint in lateral to provide adequate cement coverage every 100' unless lateral doglegs require greater spacing between centralizers.

According to the NM State Engineer, depth to ground water is 100 feet. Fresh water zones will be protected by setting 13 3/8" casing at 1125' and 9 5/8" casing at 4900' and cementing to surface. Hydrocarbon zones will be protected by setting 5 1/2" casing at 14235' and cementing to 3800'.

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
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 10K blind rams and two sets of 10K 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 4900'. 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 available if drilling in H2S areas.

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 Scandril Eagle (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.

Manufacturer: Gates E&S North America

Serial Number: L31853011112

Length: 35' Size: 3-1/16" Ends - flanges/clamps

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

Drilling Plan
Double X 25 Federal No. 5
Cimarex Energy Co.
Unit B, Section 25
T24S-R32E, Lea County, NM

12 Testing, Logging and Coring Program: *See COA*

- A. Mud logging program: 2 man unit from 4900 to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR Surface to TD
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H₂S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S Safety package on all wells, attached is an "H₂S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP **4380 psi** Estimated BHT **130°**

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

Drilling expected to take 30-35 days

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

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.

Bone Spring pay will be perforated and stimulated.

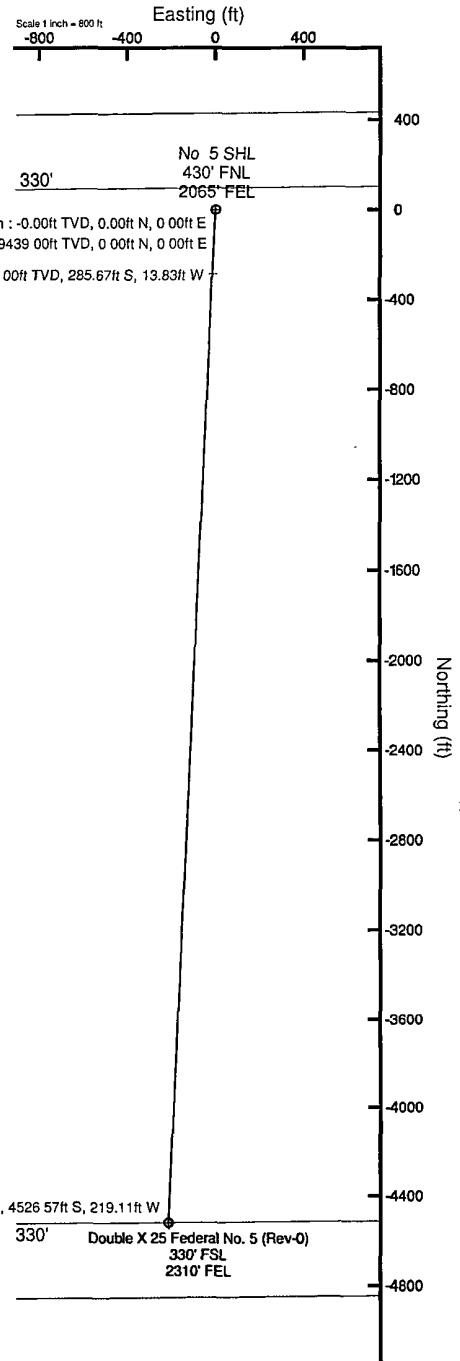
The proposed well will be tested and potential as **an oil well.**



Cimarex Energy Co.

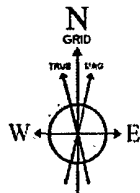
Location: Lea County, NM
Field: (Double X)Sec 25, T24S, R32E
Facility: Double X 25 Federal No. 5

Slot: No. 5 SHL
Well: No. 5
Wellbore: No. 5 PWB

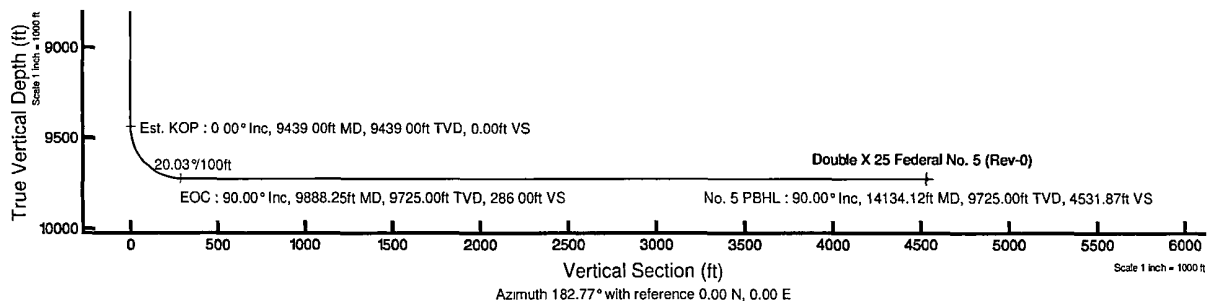


Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	182.771	0.00	0.00	0.00	0.00	0.00
Est KOP	9439.00	0.000	182.771	9439.00	0.00	0.00	0.00	0.00
EOC	9888.25	90.000	182.771	9725.00	-285.67	-13.83	20.03	286.00
No. 5 PBHL	14134.12	90.000	182.771	9725.00	-4526.57	-219.11	0.00	4531.87

Plot reference wellpath is Rev-A 0	
True vertical depths are referenced to Rig on No. 5 SHL (RT)	Grid System NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 5 SHL (RT)	North Reference Grid north
Rig on No. 5 SHL (RT) to Mean Sea Level 3567 feet	Scale True distance
Mean Sea Level to Mud line (At Slot No. 5 SHL) -3567 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by harkol on 4/20/2012



BGGM (1945.0 to 2013.0) Dip: 60.09° Field: 48510 nT
Magnetic North is 7.58 degrees East of True North (at 4/20/2012)
Grid North is 0.38 degrees East of True North
To correct azimuth from True to Grid subtract 0.38 degrees
To correct azimuth from Magnetic to Grid add 7.21 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.21 = 97.21





Planned Wellpath Report

Rev-A.0
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 5 SHL
Area	Lea County, NM	Well	No. 5
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No. 5 PWB
Facility	Double X 25 Federal No. 5		

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	Harrkol
Scale	0.999964	Report Generated	4/20/2012 at 11:11:31 AM
Convergence at slot	0.38° East	Database/Source file	WA Midland/No._5_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	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W
Facility Reference Pt			759991.60	435303.90	32°11'41.108"N	103°37'35.328"W
Field Reference Pt			758836.50	435394.30	32°11'42.077"N	103°37'48.763"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 5 SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 5 SHL (RT) to Mean Sea Level	3567.00ft
Vertical Reference Pt	Rig on No. 5 SHL (RT)	Rig on No. 5 SHL (RT) to Mud Line at Slot (No. 5 SHL)	0.00ft
MD Reference Pt	Rig on No. 5 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	182.77°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 5 SHL
Area	Lea County, NM	Well	No. 5
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No. 5 PWB
Facility	Double X 25 Federal No. 5		

WELLPATH DATA (149 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	182.771	0.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Tie On
100.00†	0.000	182.771	100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
200.00†	0.000	182.771	200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
300.00†	0.000	182.771	300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
400.00†	0.000	182.771	400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
500.00†	0.000	182.771	500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
600.00†	0.000	182.771	600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
700.00†	0.000	182.771	700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
800.00†	0.000	182.771	800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
900.00†	0.000	182.771	900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1000.00†	0.000	182.771	1000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1080.00†	0.000	182.771	1080.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Rustler
1100.00†	0.000	182.771	1100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1200.00†	0.000	182.771	1200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1300.00†	0.000	182.771	1300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1400.00†	0.000	182.771	1400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Salt
1500.00†	0.000	182.771	1500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1600.00†	0.000	182.771	1600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1700.00†	0.000	182.771	1700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1800.00†	0.000	182.771	1800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
1900.00†	0.000	182.771	1900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2000.00†	0.000	182.771	2000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2100.00†	0.000	182.771	2100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2200.00†	0.000	182.771	2200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2300.00†	0.000	182.771	2300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2400.00†	0.000	182.771	2400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2500.00†	0.000	182.771	2500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2600.00†	0.000	182.771	2600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2700.00†	0.000	182.771	2700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2800.00†	0.000	182.771	2800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
2900.00†	0.000	182.771	2900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3000.00†	0.000	182.771	3000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3100.00†	0.000	182.771	3100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3200.00†	0.000	182.771	3200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3300.00†	0.000	182.771	3300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3400.00†	0.000	182.771	3400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Castille
3500.00†	0.000	182.771	3500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3600.00†	0.000	182.771	3600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3700.00†	0.000	182.771	3700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3800.00†	0.000	182.771	3800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
3900.00†	0.000	182.771	3900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4000.00†	0.000	182.771	4000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4100.00†	0.000	182.771	4100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4200.00†	0.000	182.771	4200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4300.00†	0.000	182.771	4300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	



Planned Wellpath Report

Rev-A.0
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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 5 SHL
Area	Lea County, NM	Well	No. 5
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No. 5 PWB
Facility	Double X 25 Federal No. 5		

WELLPATH DATA (149 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
4400.00†	0.000	182.771	4400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4500.00†	0.000	182.771	4500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4600.00†	0.000	182.771	4600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4680.00†	0.000	182.771	4680.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Base Salt
4700.00†	0.000	182.771	4700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4800.00†	0.000	182.771	4800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
4900.00†	0.000	182.771	4900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5000.00†	0.000	182.771	5000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Delaware
5100.00†	0.000	182.771	5100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5200.00†	0.000	182.771	5200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5300.00†	0.000	182.771	5300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5400.00†	0.000	182.771	5400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5500.00†	0.000	182.771	5500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5600.00†	0.000	182.771	5600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5700.00†	0.000	182.771	5700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5800.00†	0.000	182.771	5800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
5900.00†	0.000	182.771	5900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6000.00†	0.000	182.771	6000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6100.00†	0.000	182.771	6100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6200.00†	0.000	182.771	6200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6300.00†	0.000	182.771	6300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6400.00†	0.000	182.771	6400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6500.00†	0.000	182.771	6500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6600.00†	0.000	182.771	6600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6700.00†	0.000	182.771	6700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6800.00†	0.000	182.771	6800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
6900.00†	0.000	182.771	6900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7000.00†	0.000	182.771	7000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7100.00†	0.000	182.771	7100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7200.00†	0.000	182.771	7200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7300.00†	0.000	182.771	7300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7400.00†	0.000	182.771	7400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7500.00†	0.000	182.771	7500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7600.00†	0.000	182.771	7600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7700.00†	0.000	182.771	7700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7800.00†	0.000	182.771	7800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
7900.00†	0.000	182.771	7900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8000.00†	0.000	182.771	8000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8100.00†	0.000	182.771	8100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8200.00†	0.000	182.771	8200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8300.00†	0.000	182.771	8300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8400.00†	0.000	182.771	8400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8500.00†	0.000	182.771	8500.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8600.00†	0.000	182.771	8600.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8660.00†	0.000	182.771	8660.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Basal Brushy Canyon



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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 5 SHL
Area	Lea County, NM	Well	No. 5
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No. 5 PWB
Facility	Double X 25 Federal No. 5		

WELLPATH DATA (149 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
8700.00†	0.000	182.771	8700.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8800.00†	0.000	182.771	8800.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
8900.00†	0.000	182.771	8900.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Bone Spring
9000.00†	0.000	182.771	9000.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
9100.00†	0.000	182.771	9100.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
9200.00†	0.000	182.771	9200.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
9275.00†	0.000	182.771	9275.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Avalon Shale
9300.00†	0.000	182.771	9300.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
9400.00†	0.000	182.771	9400.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	
9439.00†	0.000	182.771	9439.00	0.00	0.00	0.00	759991.60	435303.90	32°11'41.108"N	103°37'35.328"W	0.00	Est. KOP
9500.00†	12.220	182.771	9499.54	6.48	-6.47	-0.31	759991.29	435297.43	32°11'41.044"N	103°37'35.332"W	20.03	
9600.00†	32.254	182.771	9591.63	44.13	-44.08	-2.13	759989.47	435259.82	32°11'40.672"N	103°37'35.356"W	20.03	
9700.00†	52.287	182.771	9665.25	111.05	-110.92	-5.37	759986.23	435192.98	32°11'40.011"N	103°37'35.399"W	20.03	
9800.00†	72.321	182.771	9711.49	199.15	-198.91	-9.63	759981.97	435104.99	32°11'39.140"N	103°37'35.455"W	20.03	
9888.25	90.000	182.771	9725.00	286.00	-285.67	-13.83	759977.77	435018.25	32°11'38.282"N	103°37'35.511"W	20.03	EOC
9900.00†	90.000	182.771	9725.00	297.75	-297.40	-14.40	759977.20	435006.51	32°11'38.166"N	103°37'35.518"W	0.00	
10000.00†	90.000	182.771	9725.00	397.75	-397.29	-19.23	759972.37	434906.63	32°11'37.178"N	103°37'35.582"W	0.00	
10100.00†	90.000	182.771	9725.00	497.75	-497.17	-24.07	759967.54	434806.75	32°11'36.190"N	103°37'35.646"W	0.00	
10200.00†	90.000	182.771	9725.00	597.75	-597.05	-28.90	759962.70	434706.87	32°11'35.202"N	103°37'35.710"W	0.00	
10300.00†	90.000	182.771	9725.00	697.75	-696.94	-33.74	759957.87	434606.99	32°11'34.214"N	103°37'35.774"W	0.00	
10400.00†	90.000	182.771	9725.00	797.75	-796.82	-38.57	759953.03	434507.11	32°11'33.226"N	103°37'35.838"W	0.00	
10500.00†	90.000	182.771	9725.00	897.75	-896.70	-43.40	759948.20	434407.23	32°11'32.238"N	103°37'35.902"W	0.00	
10600.00†	90.000	182.771	9725.00	997.75	-996.59	-48.24	759943.36	434307.35	32°11'31.250"N	103°37'35.966"W	0.00	
10700.00†	90.000	182.771	9725.00	1097.75	-1096.47	-53.07	759938.53	434207.47	32°11'30.262"N	103°37'36.029"W	0.00	
10800.00†	90.000	182.771	9725.00	1197.75	-1196.35	-57.91	759933.69	434107.59	32°11'29.274"N	103°37'36.093"W	0.00	
10900.00†	90.000	182.771	9725.00	1297.75	-1296.23	-62.74	759928.86	434007.71	32°11'28.286"N	103°37'36.157"W	0.00	
11000.00†	90.000	182.771	9725.00	1397.75	-1396.12	-67.58	759924.02	433907.84	32°11'27.298"N	103°37'36.221"W	0.00	
11100.00†	90.000	182.771	9725.00	1497.75	-1496.00	-72.41	759919.19	433807.96	32°11'26.310"N	103°37'36.285"W	0.00	
11200.00†	90.000	182.771	9725.00	1597.75	-1595.88	-77.25	759914.35	433708.08	32°11'25.322"N	103°37'36.349"W	0.00	
11300.00†	90.000	182.771	9725.00	1697.75	-1695.77	-82.08	759909.52	433608.20	32°11'24.334"N	103°37'36.413"W	0.00	
11400.00†	90.000	182.771	9725.00	1797.75	-1795.65	-86.92	759904.69	433508.32	32°11'23.346"N	103°37'36.477"W	0.00	
11500.00†	90.000	182.771	9725.00	1897.75	-1895.53	-91.75	759899.85	433408.44	32°11'22.358"N	103°37'36.541"W	0.00	
11600.00†	90.000	182.771	9725.00	1997.75	-1995.42	-96.59	759895.02	433308.56	32°11'21.370"N	103°37'36.604"W	0.00	
11700.00†	90.000	182.771	9725.00	2097.75	-2095.30	-101.42	759890.18	433208.68	32°11'20.382"N	103°37'36.668"W	0.00	
11800.00†	90.000	182.771	9725.00	2197.75	-2195.18	-106.26	759885.35	433108.80	32°11'19.394"N	103°37'36.732"W	0.00	
11900.00†	90.000	182.771	9725.00	2297.75	-2295.07	-111.09	759880.51	433008.92	32°11'18.406"N	103°37'36.796"W	0.00	
12000.00†	90.000	182.771	9725.00	2397.75	-2394.95	-115.93	759875.68	432909.04	32°11'17.418"N	103°37'36.860"W	0.00	
12100.00†	90.000	182.771	9725.00	2497.75	-2494.83	-120.76	759870.84	432809.16	32°11'16.430"N	103°37'36.924"W	0.00	
12200.00†	90.000	182.771	9725.00	2597.75	-2594.71	-125.60	759866.01	432709.28	32°11'15.442"N	103°37'36.988"W	0.00	
12300.00†	90.000	182.771	9725.00	2697.75	-2694.60	-130.43	759861.17	432609.41	32°11'14.453"N	103°37'37.052"W	0.00	
12400.00†	90.000	182.771	9725.00	2797.75	-2794.48	-135.27	759856.34	432509.53	32°11'13.465"N	103°37'37.116"W	0.00	
12500.00†	90.000	182.771	9725.00	2897.75	-2894.36	-140.10	759851.50	432409.65	32°11'12.477"N	103°37'37.179"W	0.00	
12600.00†	90.000	182.771	9725.00	2997.75	-2994.25	-144.94	759846.67	432309.77	32°11'11.489"N	103°37'37.243"W	0.00	
12700.00†	90.000	182.771	9725.00	3097.75	-3094.13	-149.77	759841.83	432209.89	32°11'10.501"N	103°37'37.307"W	0.00	
12800.00†	90.000	182.771	9725.00	3197.75	-3194.01	-154.61	759837.00	432110.01	32°11'09.513"N	103°37'37.371"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 5 SHL
Area	Lea County, NM	Well	No. 5
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No. 5 PWB
Facility	Double X 25 Federal No. 5		

WELLPATH DATA (149 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
12900.00†	90.000	182.771	9725.00	3297.75	-3293.90	-159.44	759832.17	432010.13	32°11'08.525"N	103°37'37.435"W	0.00	
13000.00†	90.000	182.771	9725.00	3397.75	-3393.78	-164.28	759827.33	431910.25	32°11'07.537"N	103°37'37.499"W	0.00	
13100.00†	90.000	182.771	9725.00	3497.75	-3493.66	-169.11	759822.50	431810.37	32°11'06.549"N	103°37'37.563"W	0.00	
13200.00†	90.000	182.771	9725.00	3597.75	-3593.54	-173.95	759817.66	431710.49	32°11'05.561"N	103°37'37.627"W	0.00	
13300.00†	90.000	182.771	9725.00	3697.75	-3693.43	-178.78	759812.83	431610.61	32°11'04.573"N	103°37'37.691"W	0.00	
13400.00†	90.000	182.771	9725.00	3797.75	-3793.31	-183.61	759807.99	431510.73	32°11'03.585"N	103°37'37.754"W	0.00	
13500.00†	90.000	182.771	9725.00	3897.75	-3893.19	-188.45	759803.16	431410.85	32°11'02.597"N	103°37'37.818"W	0.00	
13600.00†	90.000	182.771	9725.00	3997.75	-3993.08	-193.28	759798.32	431310.98	32°11'01.609"N	103°37'37.882"W	0.00	
13700.00†	90.000	182.771	9725.00	4097.75	-4092.96	-198.12	759793.49	431211.10	32°11'00.621"N	103°37'37.946"W	0.00	
13800.00†	90.000	182.771	9725.00	4197.75	-4192.84	-202.95	759788.65	431111.22	32°10'59.633"N	103°37'38.010"W	0.00	
13900.00†	90.000	182.771	9725.00	4297.75	-4292.73	-207.79	759783.82	431011.34	32°10'58.645"N	103°37'38.074"W	0.00	
14000.00†	90.000	182.771	9725.00	4397.75	-4392.61	-212.62	759778.98	430911.46	32°10'57.657"N	103°37'38.138"W	0.00	
14100.00†	90.000	182.771	9725.00	4497.75	-4492.49	-217.46	759774.15	430811.58	32°10'56.669"N	103°37'38.202"W	0.00	
14134.12	90.000	182.771	9725.00	4531.87	-4526.57	-219.11	759772.50	430777.50	32°10'56.332"N	103°37'38.223"W	0.00	No. 5 PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) Double X 25 Federal No. 5 (Rev-0)	14134.12	9725.00	-4526.57	-219.11	759772.50	430777.50	32°10'56.332"N	103°37'38.223"W	point

SURVEY PROGRAM - Ref Wellbore: No. 5 PWB Ref Wellpath: Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	14134.12	NaviTrak (Standard)		No. 5 PWB

SR & A

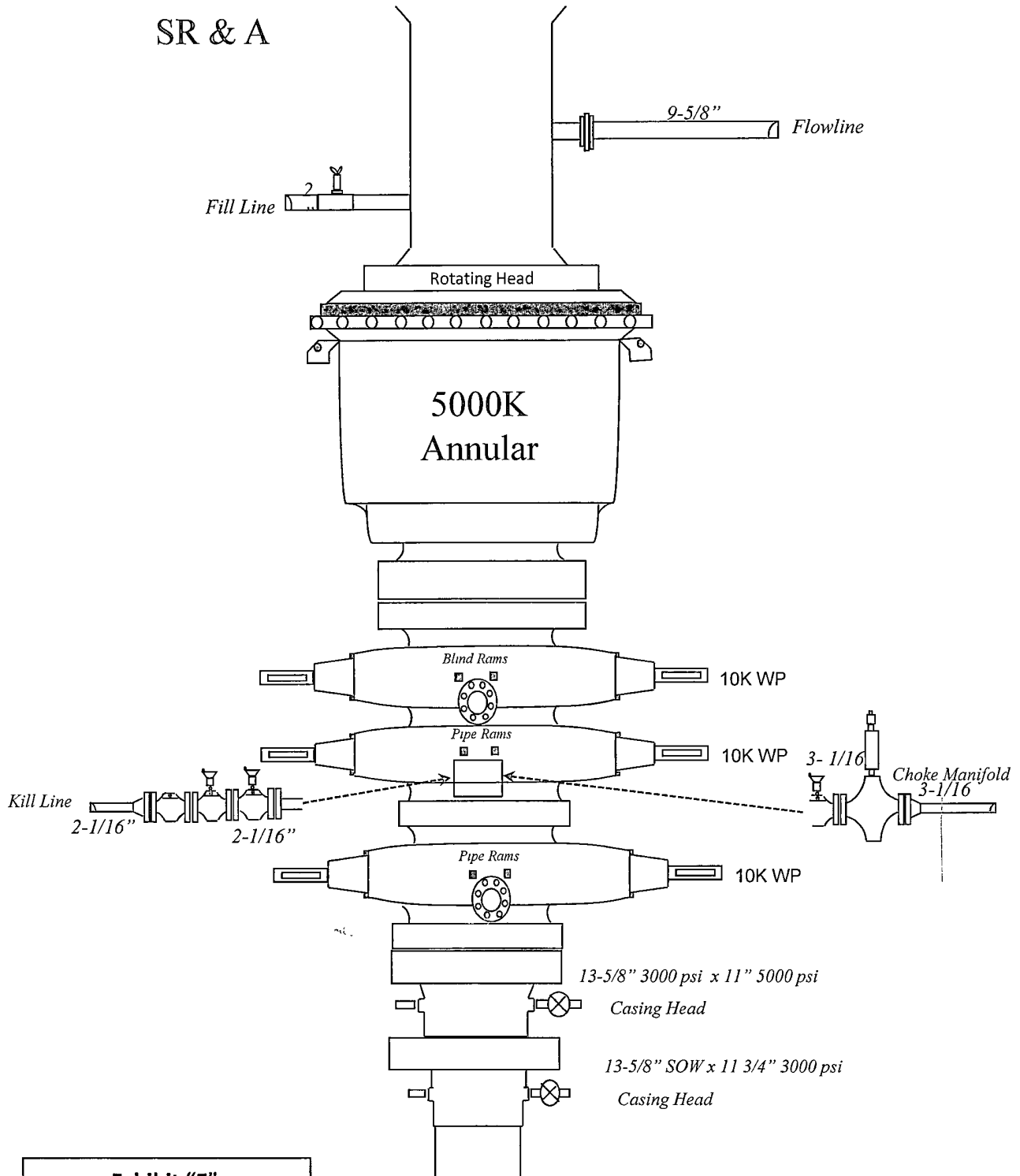


Exhibit "E"

5M BOP

Double X 25 Federal 5

Cimarex Energy Co.

25-24S-32E

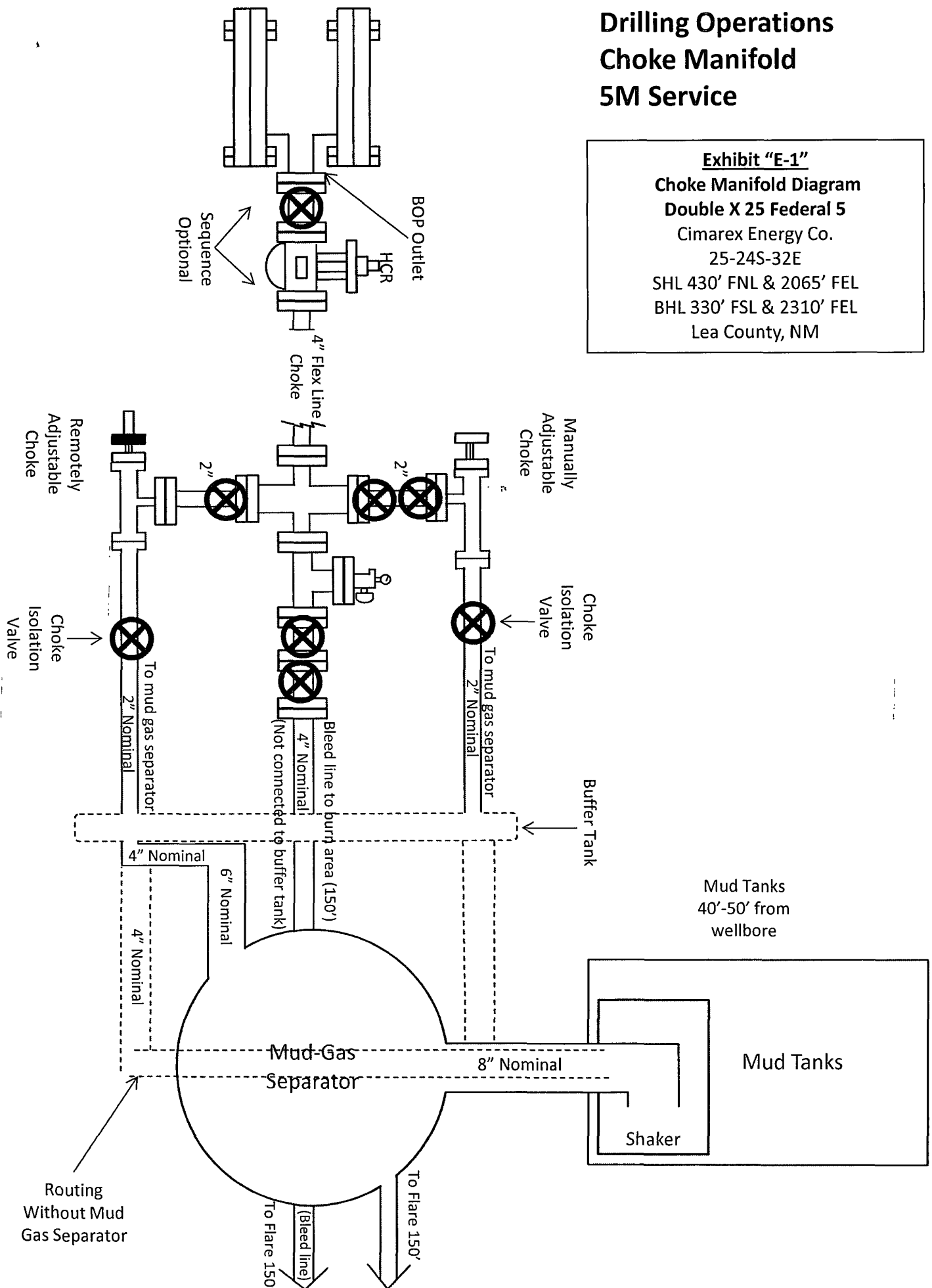
SHL 430' FNL & 2065' FEL

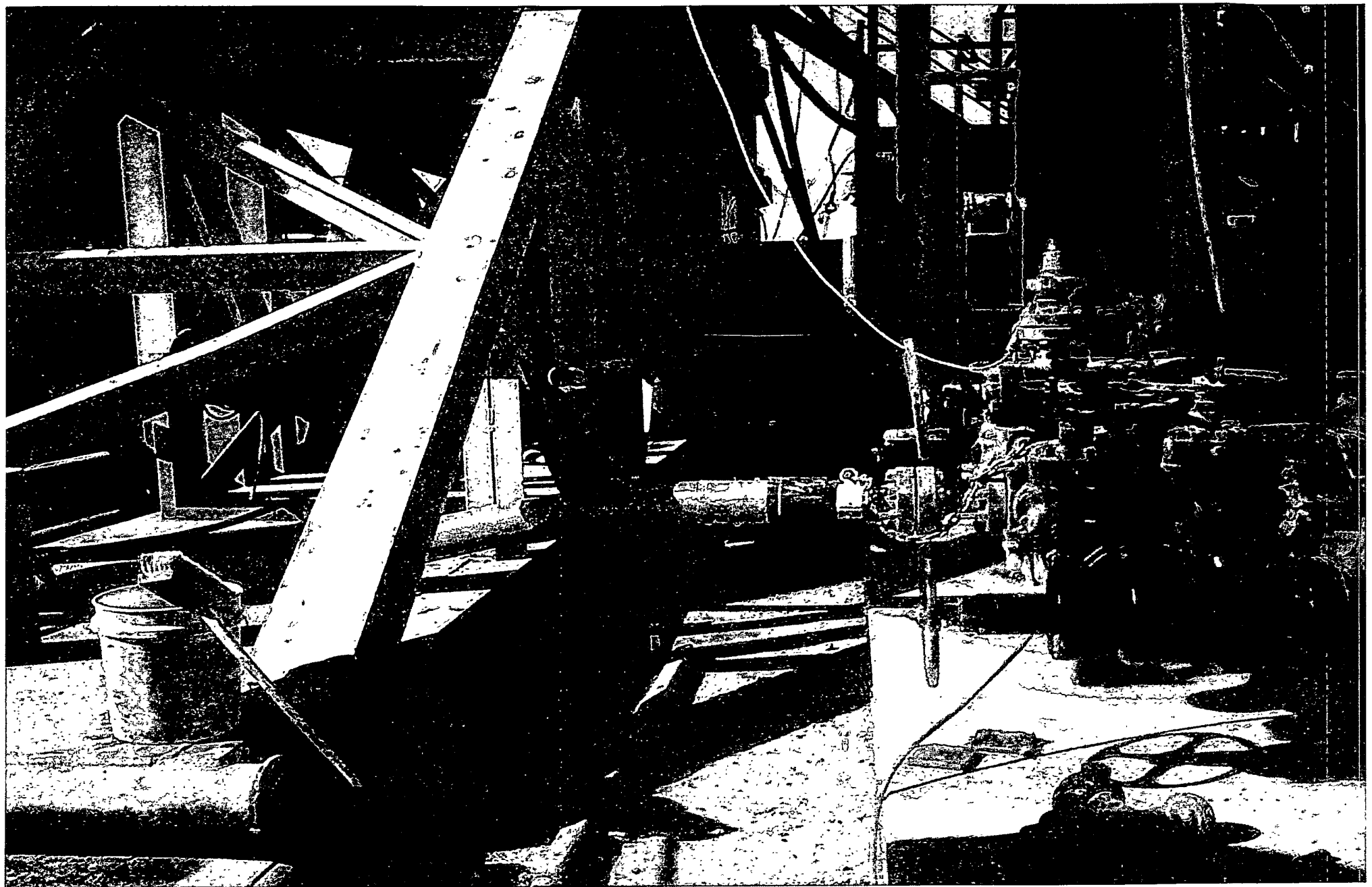
BHL 330' FSL & 2310' FEL

Lea County, NM

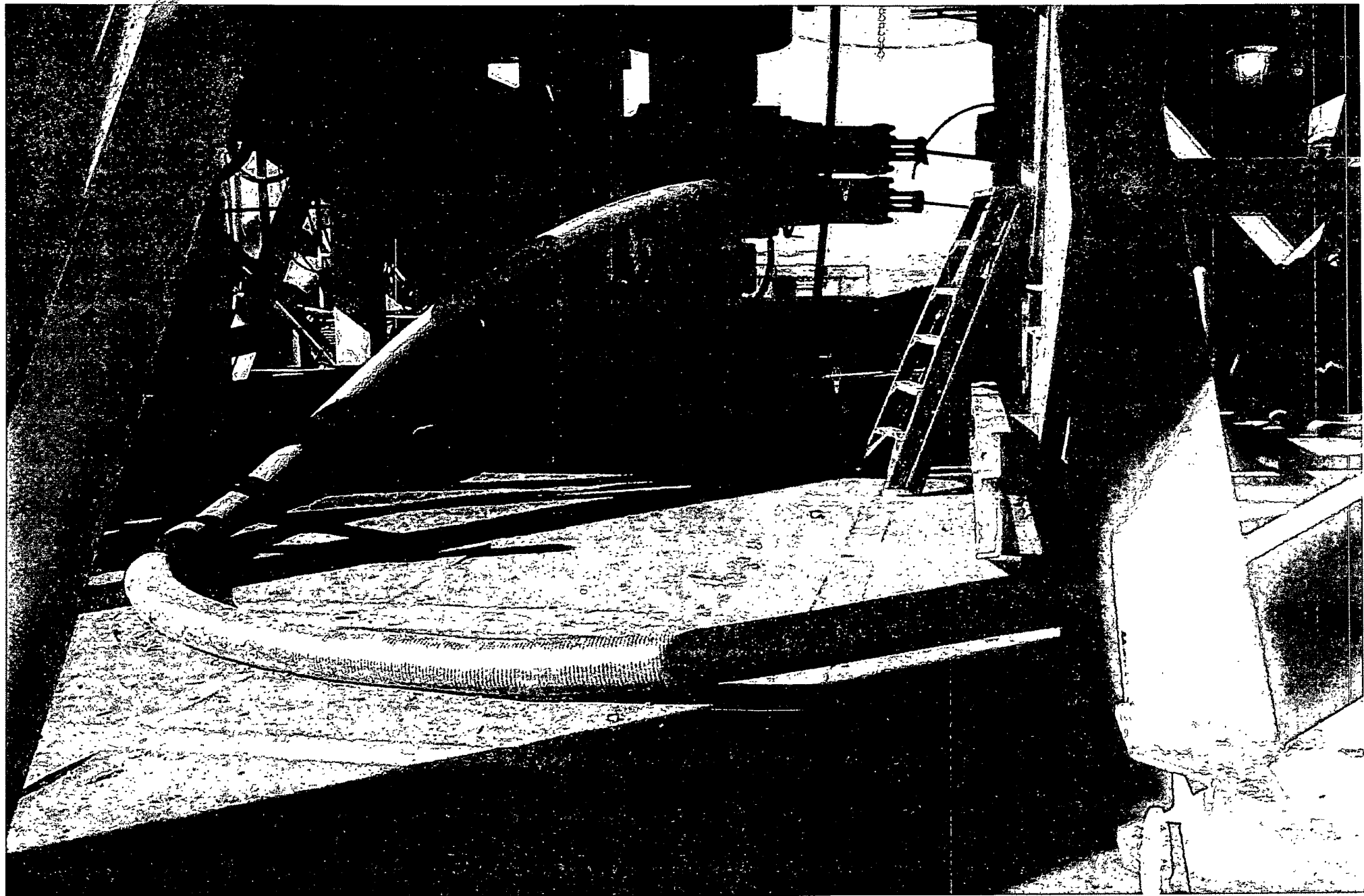
Drilling Operations Choke Manifold 5M Service

Exhibit "E-1"
Choke Manifold Diagram
Double X 25 Federal 5
Cimarex Energy Co.
25-24S-32E
SHL 430' FNL & 2065' FEL
BHL 330' FSL & 2310' FEL
Lea County, NM

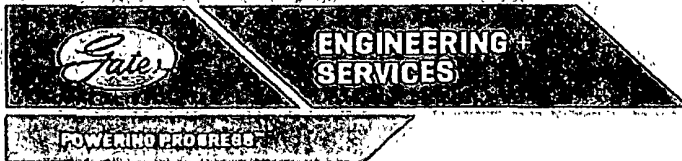




Scandrill Eagle
Serial # L31853011112D



Scandrell Eagle
Serial # L31853011112D



GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISIT, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE E PRESSURE TEST CERTIFICATE

Customer :	SPECIALTY SALES	Test Date :	3/13/2012
Customer Ref. :	44479-S	Certificate No. :	D-031312-2
Invoice No. :	184955	Created By :	RORY BOYD

Product Description: 10K3.542.0CK41/1610K FLANGES

End Fitting 1 :	4 1/16 10K FLANGE	End Fitting 2 :	4 1/16 10K FLANGE
Gates Part No. :	4773-6291	Hose Serial No. :	L31853011112D-031312-2
Assembly Code :	L31853011112	Test Pressure :	15,000 PSI
Working Pressure :	10,000 PSI		

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to API 7K requirements and passed the hydrostatic test per API Spec 7K, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Technician :	JOE R.	Technical Supervisor :	RAM V.
Date :	3/13/2012	Date :	3/13/2012
Signature :		Signature :	
Quality Manager :	RORY B.	Testing Operator :	MARK M.
Date :	3/13/2012	Date :	3/13/2012
Signature :		Signature :	

Cimarex Energy Co. of Colorado – Closed-Loop System Design Plan

Equipment List

- Primary Shakers
- Mud Cleaner – hydro-cyclones
- 1 or 2 Centrifuges (depending on well depth)
- De-watering system with pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing (may not be necessary for shallower wells)
- Drying Augur
- Sump Drying Augur
- Sump
- Cuttings Boxes
- Reserve Fluids Tank Farm
- Wire Mesh Trash Enclosure (spent motor oils kept in separate containers and later sent to approved landfill)

Operation and Maintenance

The Cimarex Zero Discharge system is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This ensures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, pills, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

These closed loop operations can be monitored by our service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

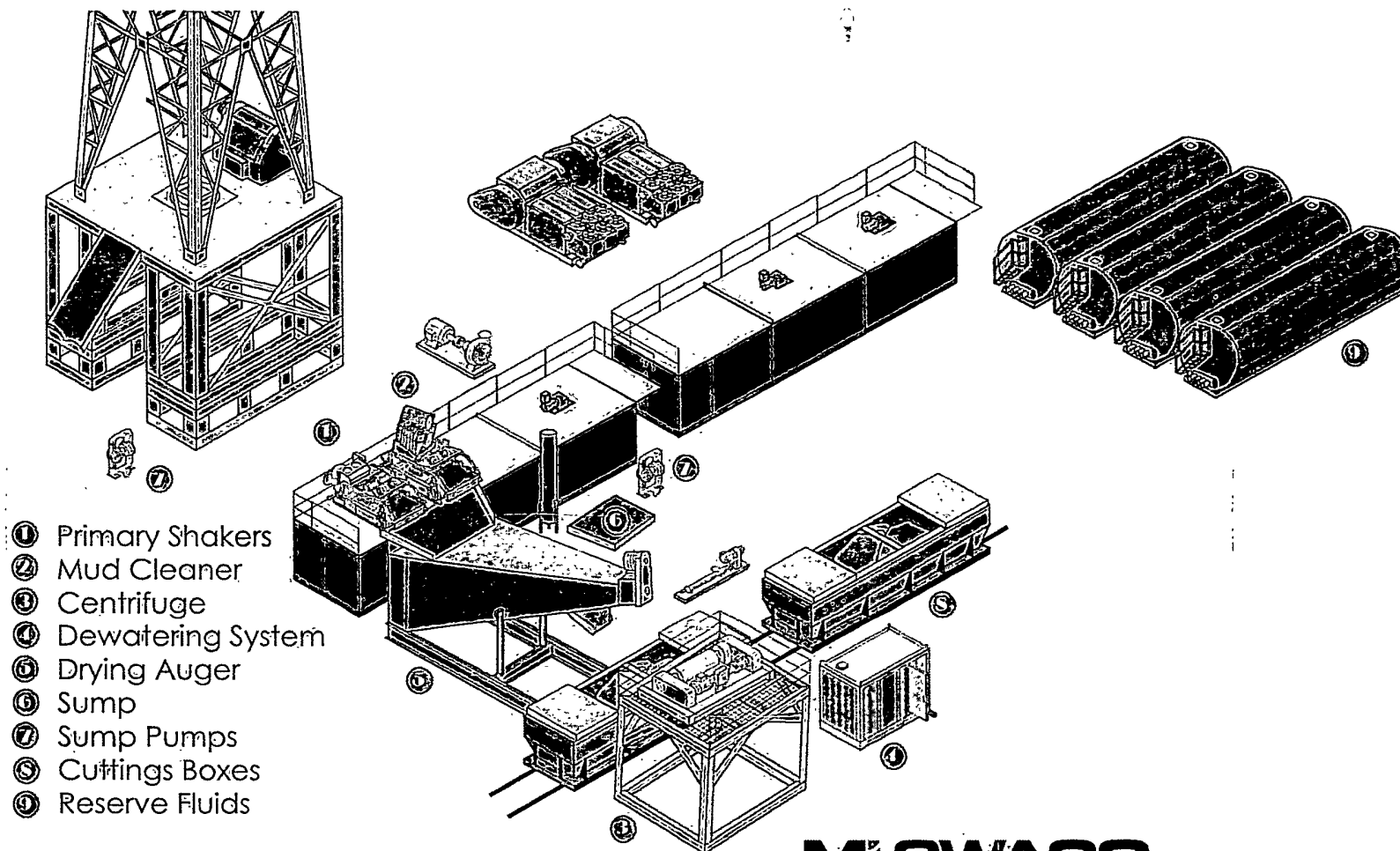
Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and tested for all regulated toxic materials. If found they are removed and disposed of per regulatory requirements.

Closure Plan

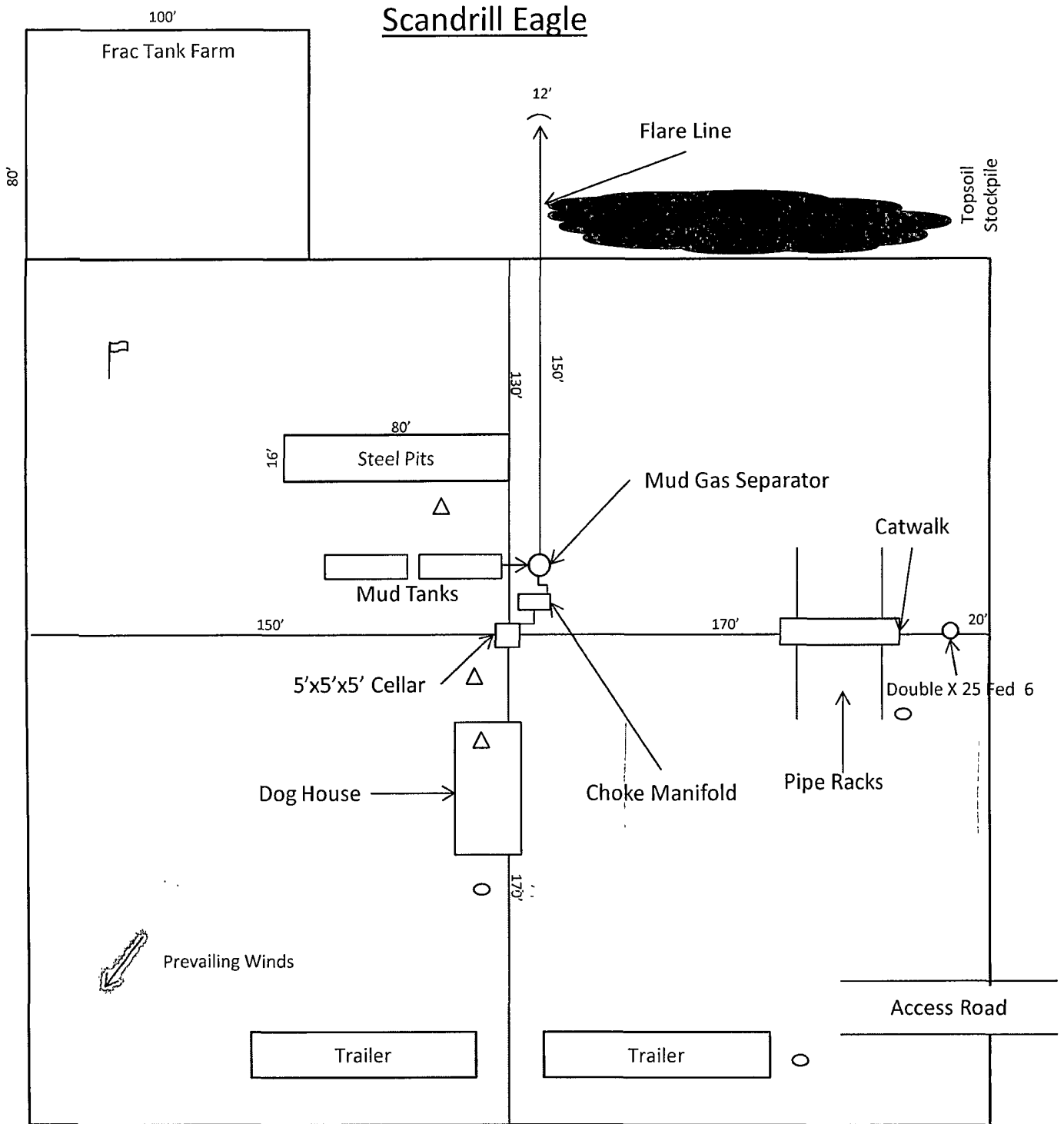
During drilling operations, all liquids, drilling fluids, and cuttings will be hauled off via CRI (Controlled Recovery Incorporated, Permit R-9166).



Closed Loop with Drying Auger and Dewatering System



Mi SWACO



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

Exhibit "D"
Rig Diagram
Double X 25 Fed 5
 Cimarex Energy Co.
 25-24S-32E
 SHL 430' FNL & 2065' FEL
 BHL 330' FSL & 2310' FEL
 Lea County, NM



Hydrogen Sulfide Drilling Operations Plan

Double X 25 Federal No. 5

Cimarex Energy Co.

Unit B, Section 25

T24S-R32E, Lea County, NM

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

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