

OCD-HOBBS
HOBBS OCD

JUL 16 2012

RECEIVED

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No NMNM 097892 127895 - per Zeno Farris	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name <i>4/3 dm</i>	
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. <i><39348></i>	
3b. Phone No (include area code) 432-571-7800		9. API Well No. 30-025- <i>40690</i>	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 330 FNL & 2055 FWL At proposed prod Zone 330 FSL & 2310 FWL Horizontal Bone Spring test		10. Field and Pool, or Exploratory <i>WC-025 607 5243225C; Lower</i> <i>Triple X; Bone Spring, West</i> <i><97964></i>	
11. Sec., T. R. M. or Blk and Survey or Area 25-24S-32E		12. County or Parish Lea	
13. State NM		14. Distance in miles and direction from nearest town or post office*	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line if any) 330'	16. No of acres in lease 640 acres	17. Spacing Unit dedicated to this well E2W2 160 acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 100'	19. Proposed Depth Pilot Hole TD 11300 MD 15470 TVD 10975	20. BLM/BIA Bond No. on File <i>NM 2575</i> <i>NMB000875</i> <i>COB000041</i>	
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3572' GR	22. Approximate date work will start* 08.01.12	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>Zeno Farris</i>	Name (Printed/Typed) Zeno Farris	Date 3.27.2012
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Title

Manager Operations Administration

Approved By (Signature) <i>/s/ Don Peterson</i>	Name (Printed/Typed)	Date <i>07-12-2012</i>
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Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached

Title 18 U.S.S. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

Carlsbad Controlled Water Basin

K2 07/12/12

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL FOR TWO YEARS

Application to Drill
Double X 25 Federal No. 4
 Cimarex Energy Co.
 Unit C, 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 330 FNL & 2055 FWL
 BHL 330 FSL & 2310 FWL
- 2 Elevation above sea level: 3572' 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 15470 TVD 10975
- 6 Estimated tops of geological markers:

Rustler	1080'
Top of Salt	1400'
Castile	3400'
Base of Salt	4700'
Delaware Sands	5000'
Brushy Canyon	8660'
Bone Spring	8900'
Avalon	9270'
FBSS	10000'
SBSS	10600'
3rd BS Carbonate	11100'
- 7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1125' 1170	8.4 - 8.6	28	NC	FW
1125' to 4900'	10.0	30-32	NC	Brine
4900' to 10657'	8.4-9.0	28-29	NC	FW and brine, use hi-vis sweeps to keep hole clean
10657' to 15470'	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" pilot hole to 11300 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 11300 to 10657. Set whipstock and kick off 8 3/4" lateral @ 10657 and drill to TD @ 15470 MD, 10975 TVD. Run 5 1/2" 17# P-110 LTC from 0-15470 and cement.

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 T24S-R32E, Lea County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface 1	17 1/2"	0' to 1170' 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 15470'	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 15470 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 Scandrill 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

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Unit C, 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 **4940 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 potentialized as **an oil well.**



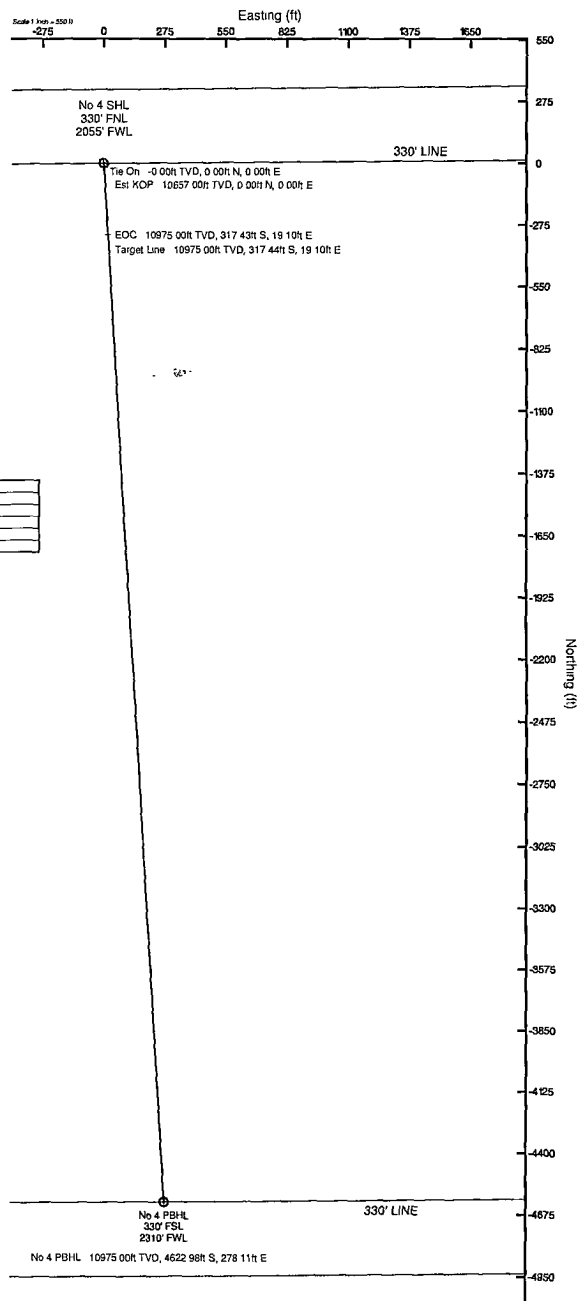
Cimarex Energy Co.

Location: Lea County, NM
Field: (Double X) Sec 25, T24S, R32E
Facility: Double X 25 Fed No 4

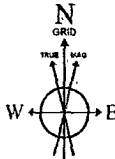
Slot: No 4 SHL
Well: No 4
Wellbore: No 4 PWB



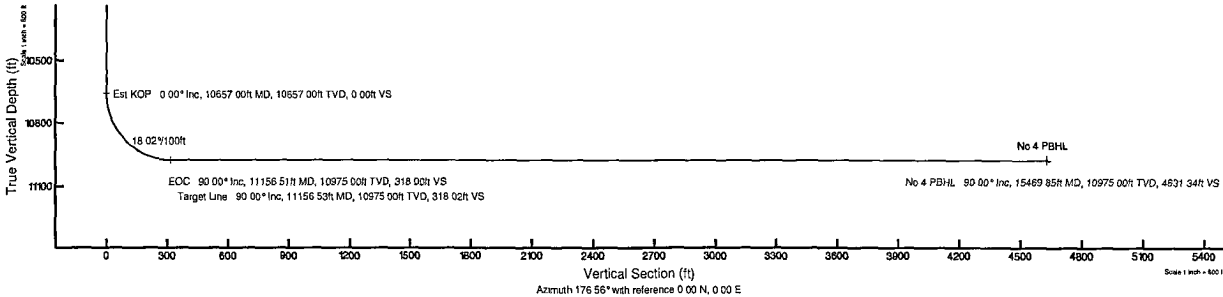
Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0 00	0 000	176 557	0 00	0 00	0 00	0 00	0 00
Est KOP	10657 00	0 000	176 557	10657 00	0 00	0 00	0 00	0 00
EOC	11156 51	90 000	176 557	10975 00	-317 43	19 10	18 02	318 02
Target Line	11156 53	90 000	176 557	10975 00	-317 44	19 10	2 00	318 02
No 4 PBHL	15469 85	90 000	176 557	10975 00	-4622 98	278 11	0 00	4631 34



Pic reference wellpath is Pictm 1	
True vertical depths are referenced to Rig on No 4 SHL (RT)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (2011), US feet
Measured depths are referenced to Rig on No 4 SHL (RT)	North Reference: Grid north
Rig on No 4 SHL (RT) to Mean Sea Level: 3572 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot No 4 SHL): 3572 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gendby on 2/23/2012



BGGM (1945 0 to 2013 0) Dip: 60 10° Field: 46529 nT
Magnetic North is 7 60 degrees East of True North (at 2/23/2012)
Grid North is 0 37 degrees East of True North
To correct azimuth from True to Grid subtract 0 37 degrees
To correct azimuth from Magnetic to Grid add 7 23 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 23 = 97 23





Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Lea County, NM	Well	No.4
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No.4 PWB
Facility	Double X 25 Fed No.4		

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	0.999963	Report Generated	2/23/2012 at 11:02:11 AM
Convergence at slot	0.37° East	Database/Source file	WA Midland/No.4_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	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W
Facility Reference Pt			758836.50	435394.30	32°11'42.077"N	103°37'48.763"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.4 SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.4 SHL (RT) to Mean Sea Level	3572.00ft
Vertical Reference Pt	Rig on No.4 SHL (RT)	Rig on No.4 SHL (RT) to Mud Line at Slot (No.4 SHL)	0.00ft
MD Reference Pt	Rig on No.4 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	176.56°



Planned Wellpath Report

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Field	(Double X)Sec 25, T24S, R32E	Wellbore	No.4 PWB
Facility	Double X 25 Fed No.4		

WELLPATH DATA (162 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	176.557	0.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Tie On
100.00†	0.000	176.557	100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
200.00†	0.000	176.557	200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
300.00†	0.000	176.557	300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
400.00†	0.000	176.557	400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
500.00†	0.000	176.557	500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
600.00†	0.000	176.557	600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
700.00†	0.000	176.557	700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
800.00†	0.000	176.557	800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
900.00†	0.000	176.557	900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1000.00†	0.000	176.557	1000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1080.00†	0.000	176.557	1080.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Rustler
1100.00†	0.000	176.557	1100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1200.00†	0.000	176.557	1200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1300.00†	0.000	176.557	1300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1400.00†	0.000	176.557	1400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Salt
1500.00†	0.000	176.557	1500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1600.00†	0.000	176.557	1600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1700.00†	0.000	176.557	1700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1800.00†	0.000	176.557	1800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
1900.00†	0.000	176.557	1900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2000.00†	0.000	176.557	2000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2100.00†	0.000	176.557	2100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2200.00†	0.000	176.557	2200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2300.00†	0.000	176.557	2300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2400.00†	0.000	176.557	2400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2500.00†	0.000	176.557	2500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2600.00†	0.000	176.557	2600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2700.00†	0.000	176.557	2700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2800.00†	0.000	176.557	2800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
2900.00†	0.000	176.557	2900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3000.00†	0.000	176.557	3000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3100.00†	0.000	176.557	3100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3200.00†	0.000	176.557	3200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3300.00†	0.000	176.557	3300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3400.00†	0.000	176.557	3400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Castille
3500.00†	0.000	176.557	3500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3600.00†	0.000	176.557	3600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3700.00†	0.000	176.557	3700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3800.00†	0.000	176.557	3800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
3900.00†	0.000	176.557	3900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4000.00†	0.000	176.557	4000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4100.00†	0.000	176.557	4100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4200.00†	0.000	176.557	4200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4300.00†	0.000	176.557	4300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Lea County, NM	Well	No.4
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No.4 PWB
Facility	Double X 25 Fed No.4		

WELLPATH DATA (162 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	176.557	4400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4500.00†	0.000	176.557	4500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4600.00†	0.000	176.557	4600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4700.00†	0.000	176.557	4700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Base Salt
4800.00†	0.000	176.557	4800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
4900.00†	0.000	176.557	4900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5000.00†	0.000	176.557	5000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Delaware Sands
5100.00†	0.000	176.557	5100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5200.00†	0.000	176.557	5200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5300.00†	0.000	176.557	5300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5400.00†	0.000	176.557	5400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5500.00†	0.000	176.557	5500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5600.00†	0.000	176.557	5600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5700.00†	0.000	176.557	5700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5800.00†	0.000	176.557	5800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
5900.00†	0.000	176.557	5900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6000.00†	0.000	176.557	6000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6100.00†	0.000	176.557	6100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6200.00†	0.000	176.557	6200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6300.00†	0.000	176.557	6300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6400.00†	0.000	176.557	6400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6500.00†	0.000	176.557	6500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6600.00†	0.000	176.557	6600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6700.00†	0.000	176.557	6700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6800.00†	0.000	176.557	6800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
6900.00†	0.000	176.557	6900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7000.00†	0.000	176.557	7000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7100.00†	0.000	176.557	7100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7200.00†	0.000	176.557	7200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7300.00†	0.000	176.557	7300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7400.00†	0.000	176.557	7400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7500.00†	0.000	176.557	7500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7600.00†	0.000	176.557	7600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7700.00†	0.000	176.557	7700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7800.00†	0.000	176.557	7800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
7900.00†	0.000	176.557	7900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8000.00†	0.000	176.557	8000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8100.00†	0.000	176.557	8100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8200.00†	0.000	176.557	8200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8300.00†	0.000	176.557	8300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8400.00†	0.000	176.557	8400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8500.00†	0.000	176.557	8500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8600.00†	0.000	176.557	8600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8660.00†	0.000	176.557	8660.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Basal Brushy Canyon
8700.00†	0.000	176.557	8700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Lea County, NM	Well	No.4
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No.4 PWB
Facility	Double X 25 Fed No.4		

WELLPATH DATA (162 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
8800.00†	0.000	176.557	8800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
8900.00†	0.000	176.557	8900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Bone Spring
9000.00†	0.000	176.557	9000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9100.00†	0.000	176.557	9100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9200.00†	0.000	176.557	9200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9270.00†	0.000	176.557	9270.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Avalon Shale
9300.00†	0.000	176.557	9300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9400.00†	0.000	176.557	9400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9500.00†	0.000	176.557	9500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9600.00†	0.000	176.557	9600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9700.00†	0.000	176.557	9700.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9800.00†	0.000	176.557	9800.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
9900.00†	0.000	176.557	9900.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
10000.00†	0.000	176.557	10000.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	1st BSS
10100.00†	0.000	176.557	10100.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
10200.00†	0.000	176.557	10200.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
10300.00†	0.000	176.557	10300.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
10400.00†	0.000	176.557	10400.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
10500.00†	0.000	176.557	10500.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	
10600.00†	0.000	176.557	10600.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	2nd BSS
10657.00	0.000	176.557	10657.00	0.00	0.00	0.00	758836.50	435394.30	32°11'42.077"N	103°37'48.763"W	0.00	Est KOP
10700.00†	7.748	176.557	10699.87	2.90	-2.90	0.17	758836.67	435391.40	32°11'42.049"N	103°37'48.761"W	18.02	
10800.00†	25.765	176.557	10795.23	31.61	-31.56	1.90	758838.40	435362.74	32°11'41.765"N	103°37'48.743"W	18.02	
10900.00†	43.783	176.557	10877.03	88.41	-88.25	5.31	758841.81	435306.05	32°11'41.204"N	103°37'48.708"W	18.02	
11000.00†	61.800	176.557	10937.25	167.73	-167.43	10.07	758846.57	435226.88	32°11'40.420"N	103°37'48.659"W	18.02	
11100.00†	79.818	176.557	10969.99	261.78	-261.31	15.72	758852.22	435133.00	32°11'39.491"N	103°37'48.600"W	18.02	
11156.51	90.000	176.557	10975.00	318.00	-317.43	19.10	758855.60	435076.89	32°11'38.935"N	103°37'48.565"W	18.02	EOC
11156.53	90.000	176.557	10975.00	318.02	-317.44	19.10	758855.60	435076.87	32°11'38.935"N	103°37'48.565"W	2.00	Target Line
11200.00†	90.000	176.557	10975.00	361.49	-360.83	21.71	758858.21	435033.48	32°11'38.506"N	103°37'48.538"W	0.00	
11300.00†	90.000	176.557	10975.00	461.49	-460.65	27.71	758864.21	434933.66	32°11'37.518"N	103°37'48.476"W	0.00	
11400.00†	90.000	176.557	10975.00	561.49	-560.47	33.72	758870.22	434833.85	32°11'36.529"N	103°37'48.413"W	0.00	
11500.00†	90.000	176.557	10975.00	661.49	-660.29	39.72	758876.22	434734.03	32°11'35.541"N	103°37'48.351"W	0.00	
11600.00†	90.000	176.557	10975.00	761.49	-760.11	45.73	758882.23	434634.22	32°11'34.553"N	103°37'48.289"W	0.00	
11700.00†	90.000	176.557	10975.00	861.49	-859.93	51.73	758888.23	434534.40	32°11'33.565"N	103°37'48.227"W	0.00	
11800.00†	90.000	176.557	10975.00	961.49	-959.75	57.74	758894.24	434434.59	32°11'32.577"N	103°37'48.164"W	0.00	
11900.00†	90.000	176.557	10975.00	1061.49	-1059.57	63.74	758900.24	434334.77	32°11'31.589"N	103°37'48.102"W	0.00	
12000.00†	90.000	176.557	10975.00	1161.49	-1159.39	69.75	758906.25	434234.95	32°11'30.601"N	103°37'48.040"W	0.00	
12100.00†	90.000	176.557	10975.00	1261.49	-1259.21	75.75	758912.25	434135.14	32°11'29.613"N	103°37'47.977"W	0.00	
12200.00†	90.000	176.557	10975.00	1361.49	-1359.03	81.76	758918.26	434035.32	32°11'28.625"N	103°37'47.915"W	0.00	
12300.00†	90.000	176.557	10975.00	1461.49	-1458.85	87.76	758924.26	433935.51	32°11'27.637"N	103°37'47.853"W	0.00	
12400.00†	90.000	176.557	10975.00	1561.49	-1558.67	93.77	758930.26	433835.69	32°11'26.648"N	103°37'47.791"W	0.00	
12500.00†	90.000	176.557	10975.00	1661.49	-1658.49	99.77	758936.27	433735.88	32°11'25.660"N	103°37'47.728"W	0.00	
12600.00†	90.000	176.557	10975.00	1761.49	-1758.31	105.78	758942.27	433636.06	32°11'24.672"N	103°37'47.666"W	0.00	
12700.00†	90.000	176.557	10975.00	1861.49	-1858.13	111.78	758948.28	433536.24	32°11'23.684"N	103°37'47.604"W	0.00	
12800.00†	90.000	176.557	10975.00	1961.49	-1957.95	117.79	758954.28	433436.43	32°11'22.696"N	103°37'47.542"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Lea County, NM	Well	No.4
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No.4 PWB
Facility	Double X 25 Fed No.4		

WELLPATH DATA (162 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	176.557	10975.00	2061.49	-2057.77	123.79	758960.29	433336.61	32°11'21.708"N	103°37'47.479"W	0.00	
13000.00†	90.000	176.557	10975.00	2161.49	-2157.59	129.80	758966.29	433236.80	32°11'20.720"N	103°37'47.417"W	0.00	
13100.00†	90.000	176.557	10975.00	2261.49	-2257.41	135.80	758972.30	433136.98	32°11'19.732"N	103°37'47.355"W	0.00	
13200.00†	90.000	176.557	10975.00	2361.49	-2357.23	141.81	758978.30	433037.17	32°11'18.744"N	103°37'47.292"W	0.00	
13300.00†	90.000	176.557	10975.00	2461.49	-2457.04	147.81	758984.31	432937.35	32°11'17.755"N	103°37'47.230"W	0.00	
13400.00†	90.000	176.557	10975.00	2561.49	-2556.86	153.82	758990.31	432837.53	32°11'16.767"N	103°37'47.168"W	0.00	
13500.00†	90.000	176.557	10975.00	2661.49	-2656.68	159.82	758996.32	432737.72	32°11'15.779"N	103°37'47.106"W	0.00	
13600.00†	90.000	176.557	10975.00	2761.49	-2756.50	165.83	759002.32	432637.90	32°11'14.791"N	103°37'47.043"W	0.00	
13700.00†	90.000	176.557	10975.00	2861.49	-2856.32	171.83	759008.33	432538.09	32°11'13.803"N	103°37'46.981"W	0.00	
13800.00†	90.000	176.557	10975.00	2961.49	-2956.14	177.84	759014.33	432438.27	32°11'12.815"N	103°37'46.919"W	0.00	
13900.00†	90.000	176.557	10975.00	3061.49	-3055.96	183.84	759020.34	432338.46	32°11'11.827"N	103°37'46.856"W	0.00	
14000.00†	90.000	176.557	10975.00	3161.49	-3155.78	189.85	759026.34	432238.64	32°11'10.839"N	103°37'46.794"W	0.00	
14100.00†	90.000	176.557	10975.00	3261.49	-3255.60	195.85	759032.34	432138.83	32°11'09.851"N	103°37'46.732"W	0.00	
14200.00†	90.000	176.557	10975.00	3361.49	-3355.42	201.86	759038.35	432039.01	32°11'08.863"N	103°37'46.670"W	0.00	
14300.00†	90.000	176.557	10975.00	3461.49	-3455.24	207.86	759044.35	431939.19	32°11'07.874"N	103°37'46.607"W	0.00	
14400.00†	90.000	176.557	10975.00	3561.49	-3555.06	213.87	759050.36	431839.38	32°11'06.886"N	103°37'46.545"W	0.00	
14500.00†	90.000	176.557	10975.00	3661.49	-3654.88	219.87	759056.36	431739.56	32°11'05.898"N	103°37'46.483"W	0.00	
14600.00†	90.000	176.557	10975.00	3761.49	-3754.70	225.88	759062.37	431639.75	32°11'04.910"N	103°37'46.421"W	0.00	
14700.00†	90.000	176.557	10975.00	3861.49	-3854.52	231.88	759068.37	431539.93	32°11'03.922"N	103°37'46.358"W	0.00	
14800.00†	90.000	176.557	10975.00	3961.49	-3954.34	237.89	759074.38	431440.12	32°11'02.934"N	103°37'46.296"W	0.00	
14900.00†	90.000	176.557	10975.00	4061.49	-4054.16	243.89	759080.38	431340.30	32°11'01.946"N	103°37'46.234"W	0.00	
15000.00†	90.000	176.557	10975.00	4161.49	-4153.98	249.90	759086.39	431240.48	32°11'00.958"N	103°37'46.172"W	0.00	
15100.00†	90.000	176.557	10975.00	4261.49	-4253.80	255.90	759092.39	431140.67	32°10'59.970"N	103°37'46.109"W	0.00	
15200.00†	90.000	176.557	10975.00	4361.49	-4353.62	261.91	759098.40	431040.85	32°10'58.982"N	103°37'46.047"W	0.00	
15300.00†	90.000	176.557	10975.00	4461.49	-4453.44	267.91	759104.40	430941.04	32°10'57.993"N	103°37'45.985"W	0.00	
15400.00†	90.000	176.557	10975.00	4561.49	-4553.26	273.92	759110.41	430841.22	32°10'57.005"N	103°37'45.922"W	0.00	
15469.85	90.000	176.557	10975.00	4631.34	-4622.98	278.11	759114.60	430771.50	32°10'56.315"N	103°37'45.879"W	0.00	No.4 PBHL



Planned Wellpath Report

Prelim_1
Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Lea County, NM	Well	No.4
Field	(Double X)Sec 25, T24S, R32E	Wellbore	No.4 PWB
Facility	Double X 25 Fed No.4		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.4 PBHL	15469.85	10975.00	-4622.98	278.11	759114.60	430771.50	32°10'56.315"N	103°37'45.879"W	point

SURVEY PROGRAM - Ref Wellbore: No.4 PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15469.85	NaviTrak (Standard)		No.4 PWB

SR & A

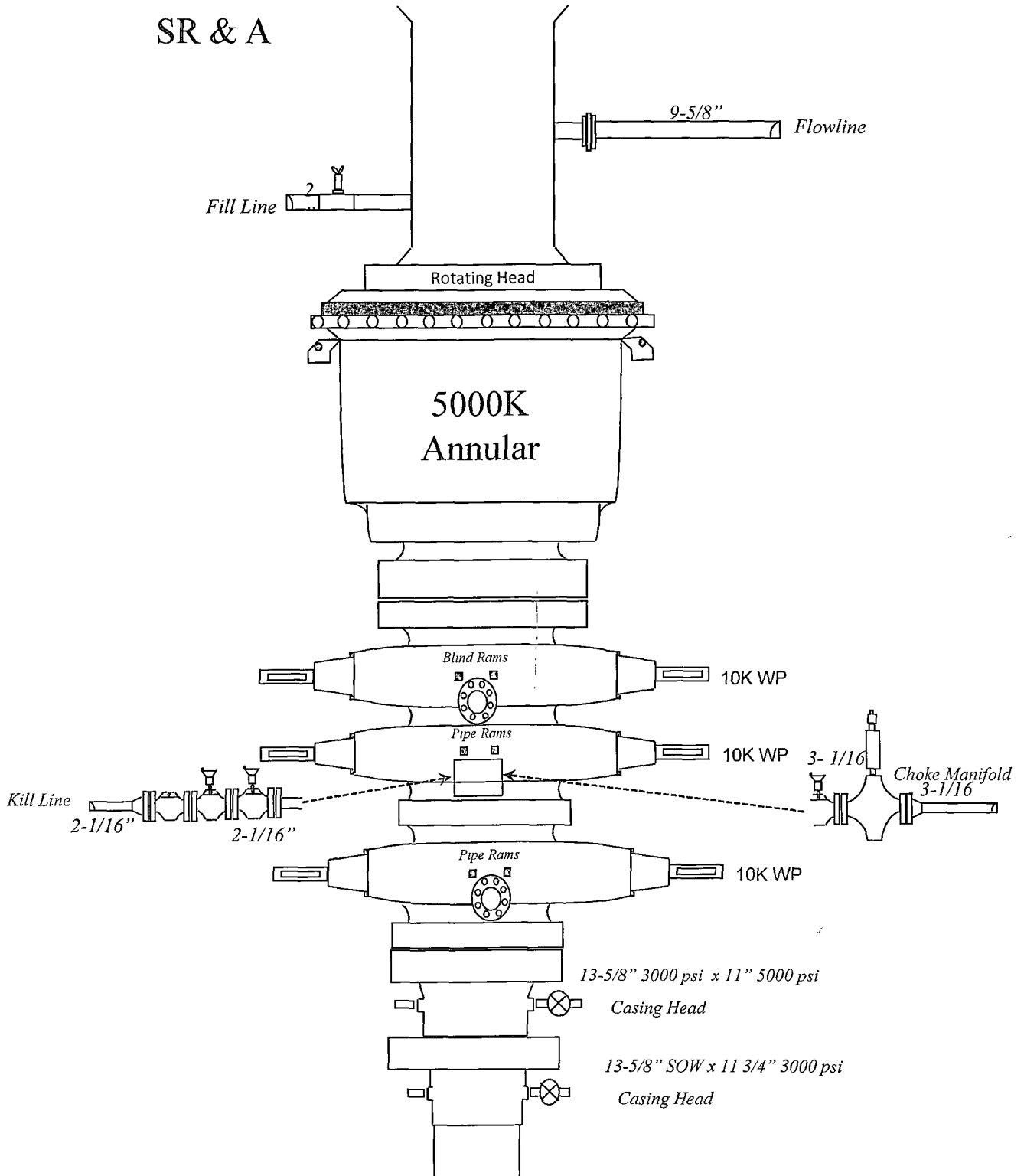
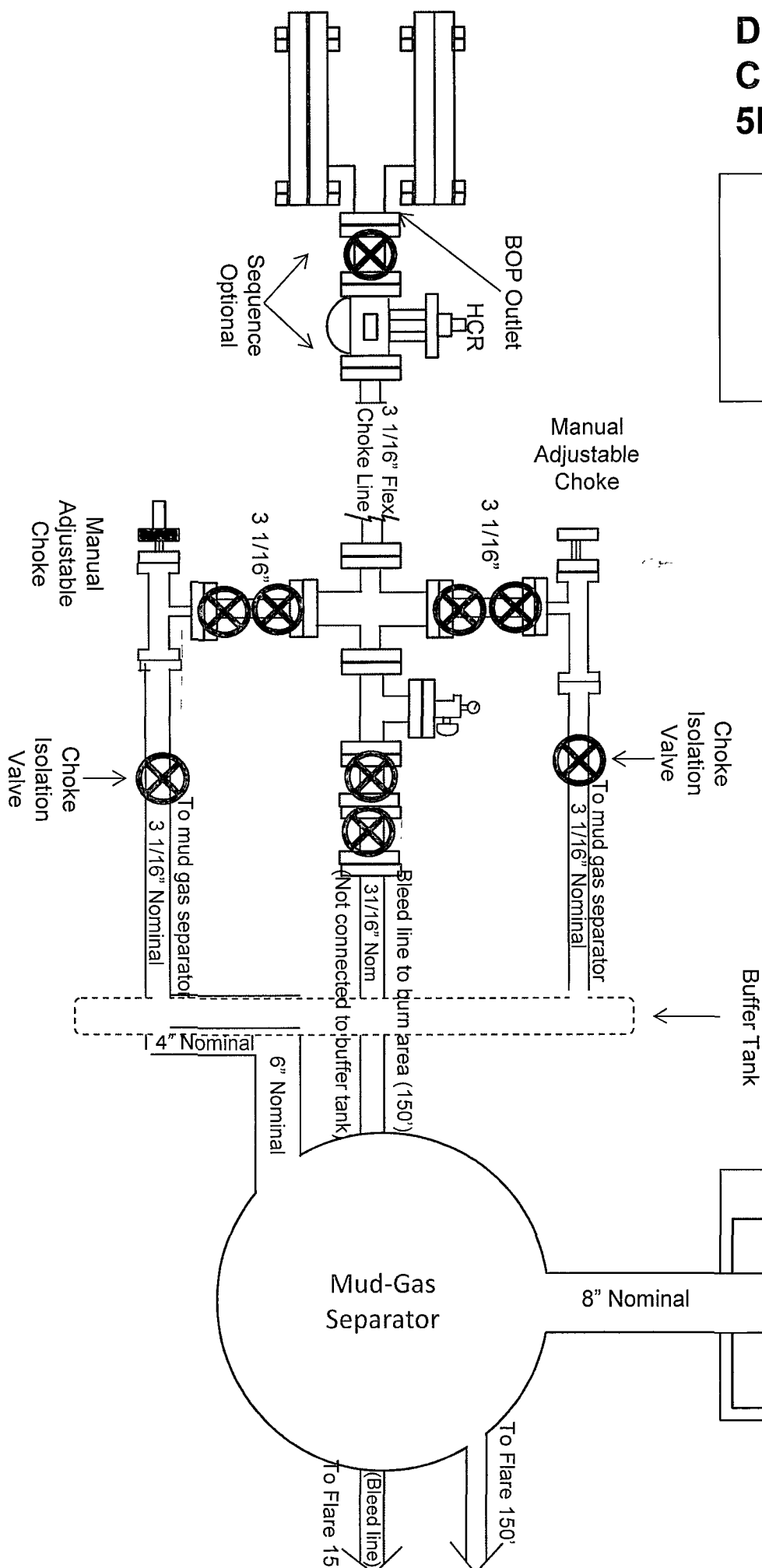
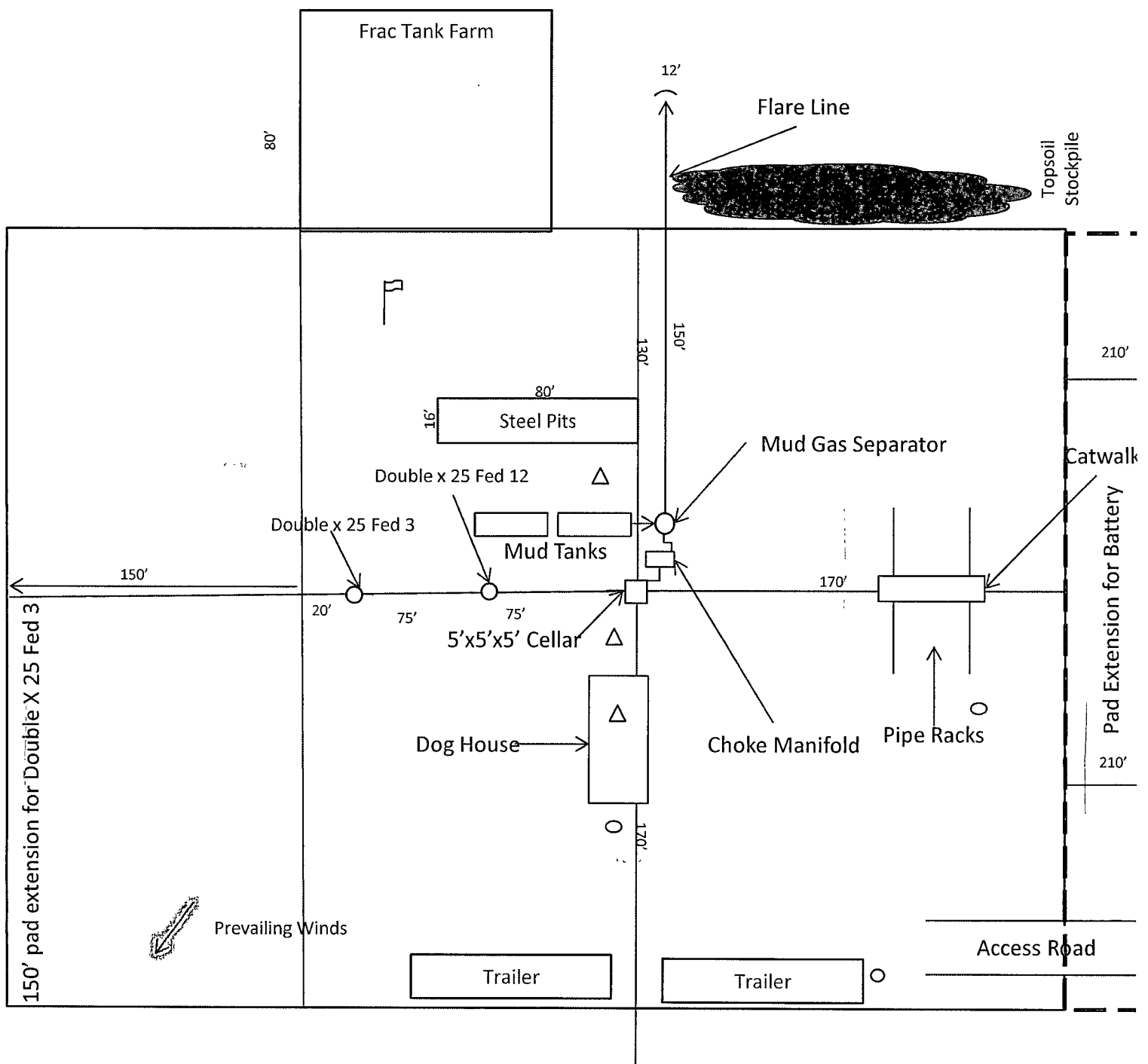


Exhibit E- 5K BOP
Double X 25 Federal No. 4
Cimarex Energy Co.
25-24S-32E
330 FNL & 2055 FWL
Lea County, NM

Exhibit E-1 – Choke Manifold
Diagram
Double X 25 Federal No. 4
Cimarex Energy Co.
25-24S-32E
330 FNL & 2055 FWL
Lea County, NM



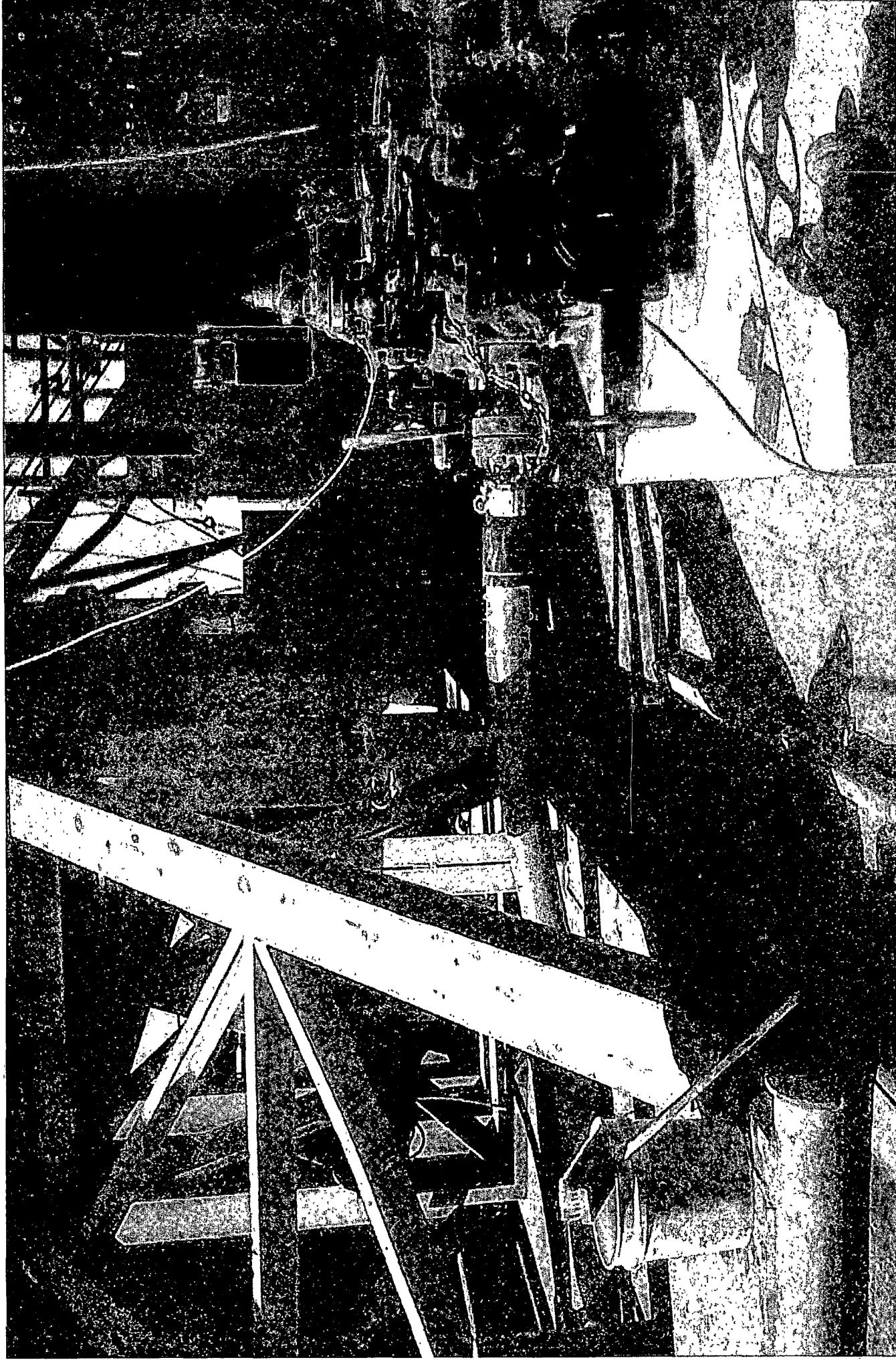
Scandril Eagle



-  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 4
 Cimarex Energy Co.
 25-24S-32E
 SHL 330 FNL & 2055 FWL
 BHL 330 FSL & 2310 FWL
 Lea County, NM

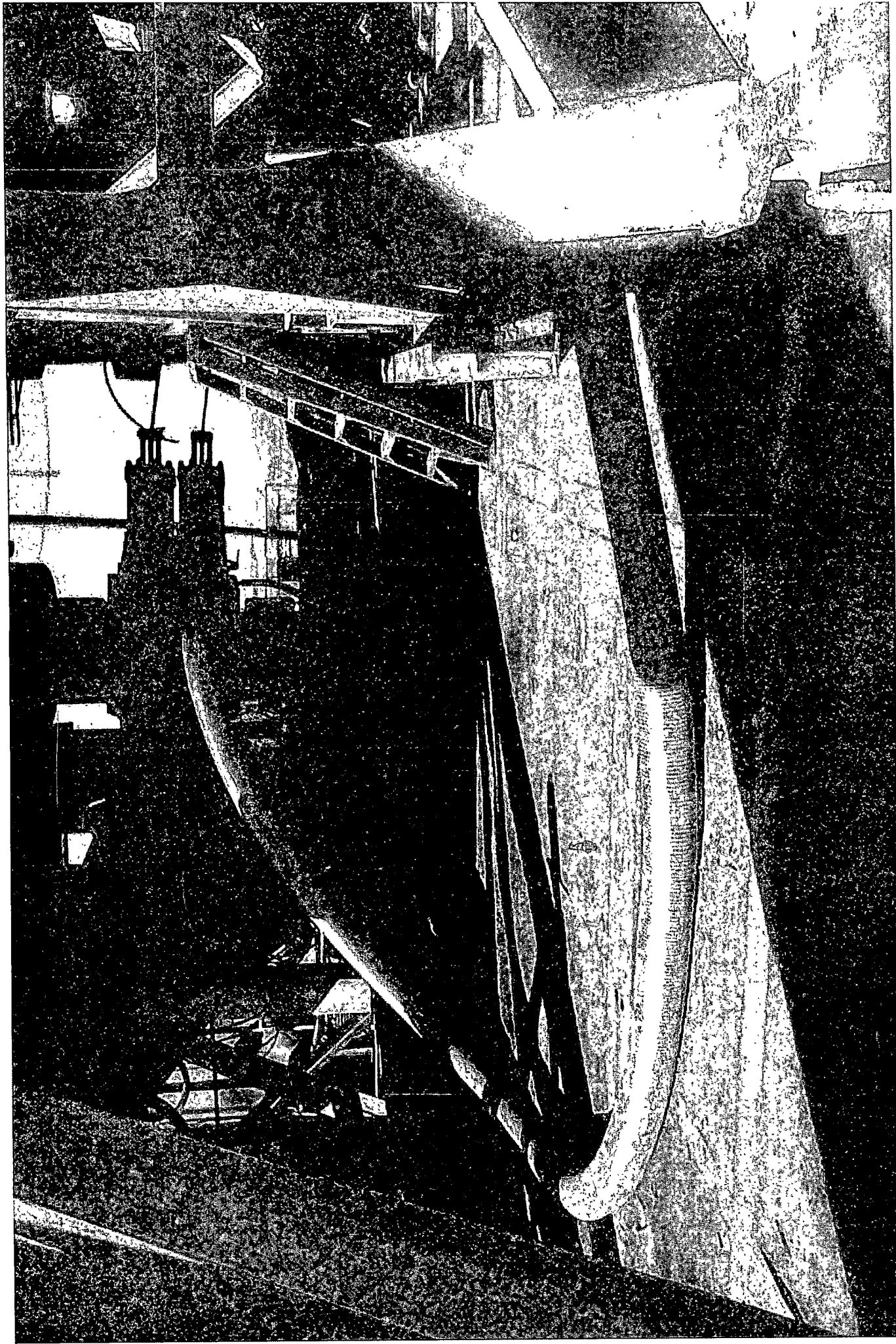




Scandril Eagle

Serial #

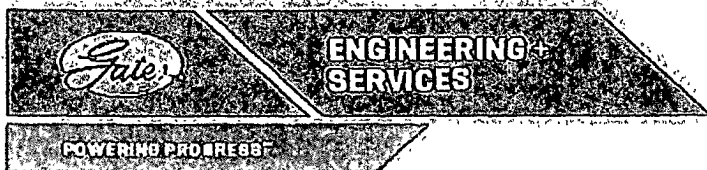
L31853011112D



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 :	