

AT5-12-481

SECRETARY'S POTASH
OCD-HOBBS

HOBBS OCD

JUN 21 2012

Form 3160-3
(April 2004)

Split Estate

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No SHL NMLC066126 BHL NMLC0066126C
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Climarex 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. Hanson 26 Federal No. 3 <39293>
3b. Phone No. (include area code) 432-571-7800		9. API Well No 30-025- 40637
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 330 FNL & 1855 FEL Unit B At proposed prod. Zone 330 FSL & 1980 FEL Horizontal Bone Spring test		10. Field and Pool, or Exploratory Lea; Bone Spring, S <37580>
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area 26-20S-34E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 330'		12. County or Parish Lea
16. No of acres in lease NMLC066126 800 acres NMLC0066126C 320 acres		13. State NM
17. Spacing Unit dedicated to this well W2E2 160		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 330'		20. BLM/BIA Bond No on File COB000011
19. Proposed Depth Pilot Hole Depth 11300 MD 15544' TVD 11100'		
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3589' GR	22. Approximate date work will start* 07.10.12	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 3.12.12
Title Manager Operations Administration		
Approved By (Signature) <i>/s/ Jesse J. Juen</i>	Name (Printed/Typed) <i>/s/ Jesse J. Juen</i>	Date JUN 14 2012
Title STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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)

CAPITAN CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Ka 06/22/12 APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED
JUN 26 2012

Application to Drill
Hanson 26 Federal No. 3
 Cimarex Energy Co. of Colorado
 Unit B, Section 26
 T20S-R34E, 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 & 1855 FEL
 BHL 330 FSL & 1980 FEL

- 2 Elevation above sea level: 3589' 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 15544' TVD 11100'

- 6 Estimated tops of geological markers:

Rustler	1650'	Cherry Canyon	6700'
Top Salt	1800'	Bone Spring	8400'
Bottom Salt	3400'	Avalon Shale	8900'
Yates	3500'	FBSS	9600'
Capitan	3970'	SBSS	10150'
Delaware	5180'	TBSS	11050'

- 7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil
Yates/7 Rivers	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1675' 1775'	8.4 - 9.0	28	NC	FW
1675' to 5480'	10.0	30-32	NC	Brine water
5480' to 10749'	8.4-9.0	28-29	NC	FW and brine, use hi-vis sweeps to keep hole clean
10749' to 15544'	8.4 - 9.5	30-32	NC	Brine, KCL 2%

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 7 7/8" 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 10749. Set whipstock and kick off 7 7/8" lateral @ 10749 and drill to TD @ 15544 MD, 11100 TVD. Run 5½" 17# P-110 LTC from 0-15544 and cement,

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*Per Operator
 6/14/12
 CRW*

9 Casing & Cementing Program:

54.5 #

*See
 10/12*

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface	17½"	0' to 1715' 1675'	New 13½"	48#	STC	J-55
Intermediate	12¼"	0' to 5480'	New 9½"	40#	LTC	N-80
Production	7 7/8"	0' to 15544'	New 5½"	17#	LTC	P-110

10 Cementing:

Surface

Lead: 1175 sx Halcem C + Bentomite + 2% CaCl, 13.5 ppg 1.75 yield 100% Excess

Tail: 235 sx Halcem C + 2% CaCl, 14.2 ppg, 1.34 yield, 100% Excess

TOC Surface Centralizers per Onshore Order 2.III.B.1.f

Intermediate

Lead: 1695 sx Econocem + 5% Salt + 5 lbm/sk Gilsonite (wt 12.9, yld 1.92) 70% Excess

Tail: 235 sks Halcem + 1% CaCl₂ (wt 14.8, yld 1.34) 25% Excess

TOC Surface

Production

Lead: 1010 SKS EconoCem - H + 0.2 % HR-601 11.9ppg 2.44 yield 50% Excess

Tail: 1310 SKS Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess

TOC 3000

Centralizers every 3rd joint in lateral to provide adequate cement every 100' unless lateral doglegs require greater spacing between centralizers.

According to the State engineer, depth to ground water is 115.' Fresh water zones will be protected by setting 13½" casing at 1675' and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 5480' and cementing to surface, and by setting 5 1/2" casing at 15544' and cementing to 3000.'

Collapse Factor Burst Factor Tension Factor

1.125 1.125 1.6

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

11 Pressure control Equipment:

Exhibit "E". A 13½" 5000 PSI working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. Mud gas 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. From the base of the 13½" casing through the running of production casing, the well will be equipped with a 5000 psi BOP system.

Before drilling out of 13 3/8" surface casing BOPS will be tested by an independent service company to 250 psi low and 3000 psi high. Hydril will be tested to 250 psi low and 1500 psi high. Before drilling out of the 9 5/8" intermediate casing BOP's will be tested by an independent service company to 250 psi low and 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high.

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- 12 Testing, Logging and Coring Program: *See BOA*
- A. Mud logging program: 2 man unit from 5480' 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 **5000 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.**



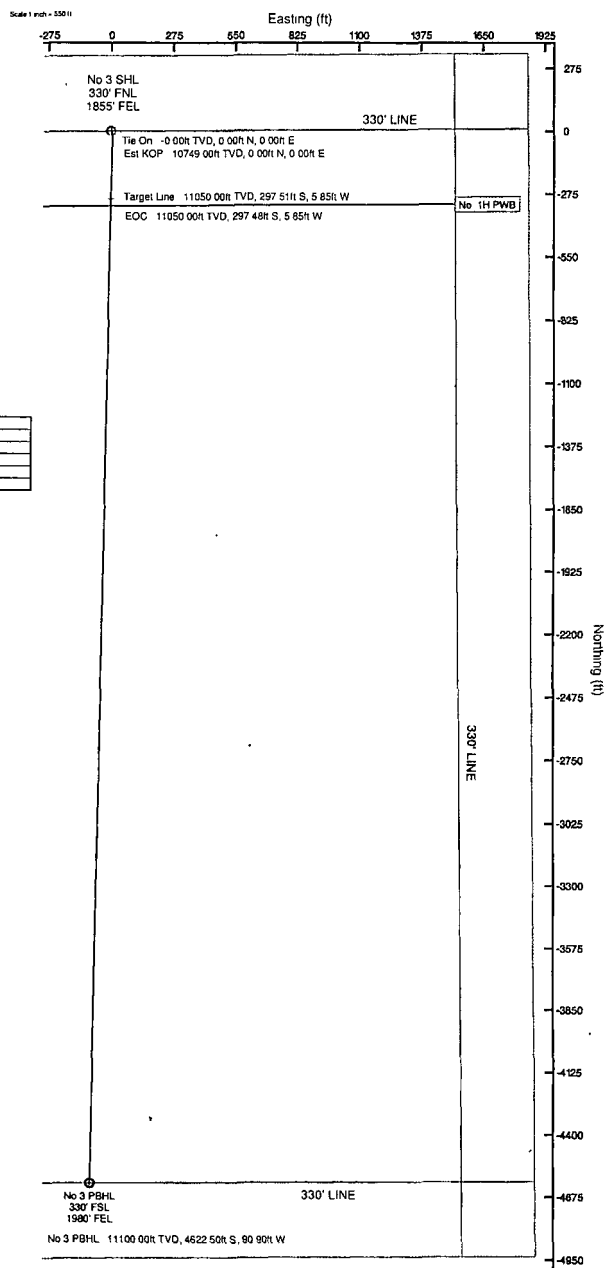
Cimarex Energy Co.

Location Lea County, NM
Field (Hanson) Sec 26, T20S, R34E
Facility Hanson 26 Fed Com No 3

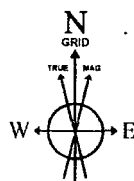
Slot No 3 SHL
Well No 3
Wellbore No 3 PWB



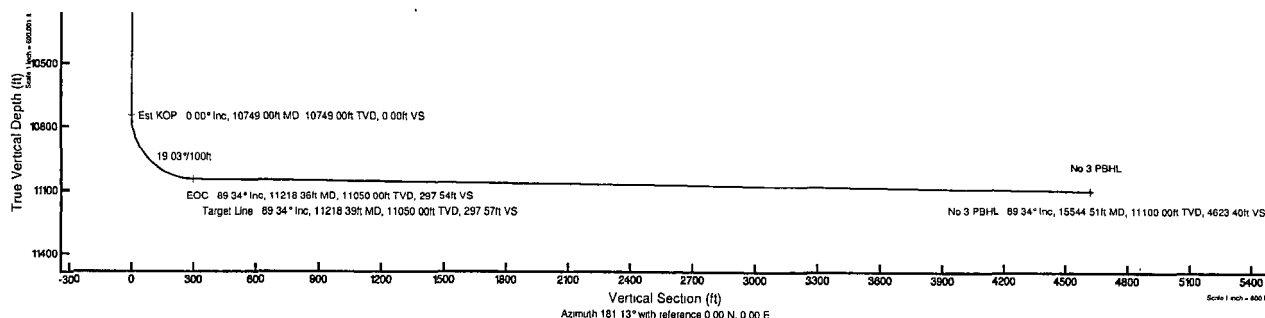
Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (ft/100ft)	VS (ft)
Tie On	0 00	0 000	181 127	0 00	0 00	0 00	0 00	0 00
Est KOP	10749 00	0 000	181 127	10749 00	0 00	0 00	0 00	0 00
EOC	11218 36	89 338	181 127	11050 00	-297 48	-5 85	19 03	297 54
Target Line	11218 39	89 338	181 127	11050 00	-297 51	-5 85	2 00	297 57
No 3 PBHL	15544 51	89 338	181 127	11100 00	-4622 50	-90 90	0 00	4623 40



Plot reference wellbore is PWB.	
True vertical depth are referenced to Rig on No 3 SHL (RT)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (2001), US feet
Measured depths are referenced to Rig on No 3 SHL (MT)	North Reference: Grid north
Rig on No 3 SHL (RT) to Mean Sea Level: 3569 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot No 3 SHL): 3569 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: genby on 2/23/2012



BGGM (1945 0 to 2013 0) Dip: 60 45° Field: 48757 9 nT
Magnetic North is 7 58 degrees East of True North (at 2/23/2012)
Grid North is 0 43 degrees East of True North
To correct azimuth from True to Grid subtract 0 43 degrees
To correct azimuth from Magnetic to Grid add 7 15 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 15 = 97 15





Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.3 SHL
Area	Lea County, NM	Well	No.3
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.3 PWB
Facility	Hanson 26 Fed Com No.3		

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	0.99998	Report Generated	2/23/2012 at 11:42:22 AM
Convergence at slot	0.43° East	Database/Source file	WA Midland/No.3_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	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W
Facility Reference Pt			789375.20	564923.20	32°33'01.633"N	103°31'42.045"W
Field Reference Pt			786380.10	564574.40	32°32'58.404"N	103°32'17.066"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No.3 SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.3 SHL (RT) to Mean Sea Level	3589.00ft
Vertical Reference Pt	Rig on No.3 SHL (RT)	Rig on No.3 SHL (RT) to Mud Line at Slot (No.3 SHL)	0.00ft
MD Reference Pt	Rig on No.3 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	181.13°



Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.3 SHL
Area	Lea County, NM	Well	No.3
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.3 PWB
Facility	Hanson 26 Fed Com No.3		

WELLPATH DATA (166 stations) T = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	181.127	0.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Tie On
100.00+	0.000	181.127	100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
200.00+	0.000	181.127	200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
300.00+	0.000	181.127	300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
400.00+	0.000	181.127	400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
500.00+	0.000	181.127	500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
600.00+	0.000	181.127	600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
700.00+	0.000	181.127	700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
800.00+	0.000	181.127	800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
900.00+	0.000	181.127	900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1000.00+	0.000	181.127	1000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1100.00+	0.000	181.127	1100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1200.00+	0.000	181.127	1200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1300.00+	0.000	181.127	1300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1400.00+	0.000	181.127	1400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1500.00+	0.000	181.127	1500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1600.00+	0.000	181.127	1600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1650.00+	0.000	181.127	1650.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Rustler
1700.00+	0.000	181.127	1700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
1800.00+	0.000	181.127	1800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Salit
1900.00+	0.000	181.127	1900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2000.00+	0.000	181.127	2000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2100.00+	0.000	181.127	2100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2200.00+	0.000	181.127	2200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2300.00+	0.000	181.127	2300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2400.00+	0.000	181.127	2400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2500.00+	0.000	181.127	2500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2600.00+	0.000	181.127	2600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2700.00+	0.000	181.127	2700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2800.00+	0.000	181.127	2800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
2900.00+	0.000	181.127	2900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3000.00+	0.000	181.127	3000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3100.00+	0.000	181.127	3100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3200.00+	0.000	181.127	3200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3300.00+	0.000	181.127	3300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3400.00+	0.000	181.127	3400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Tansill
3500.00+	0.000	181.127	3500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3600.00+	0.000	181.127	3600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3700.00+	0.000	181.127	3700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3800.00+	0.000	181.127	3800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3900.00+	0.000	181.127	3900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
3970.00+	0.000	181.127	3970.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Capitan
4000.00+	0.000	181.127	4000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4100.00+	0.000	181.127	4100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4200.00+	0.000	181.127	4200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	



Planned Wellpath Report

Prelim 1

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**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.3 SHL
Area	Lea County, NM	Well	No.3
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.3 PWB
Facility	Hanson 26 Fed Com No.3		

WELLPATH DATA (166 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
4300.00†	0.000	181.127	4300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4400.00†	0.000	181.127	4400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4500.00†	0.000	181.127	4500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4600.00†	0.000	181.127	4600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4700.00†	0.000	181.127	4700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4800.00†	0.000	181.127	4800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
4900.00†	0.000	181.127	4900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5000.00†	0.000	181.127	5000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5100.00†	0.000	181.127	5100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5200.00†	0.000	181.127	5200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5300.00†	0.000	181.127	5300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5400.00†	0.000	181.127	5400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5500.00†	0.000	181.127	5500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5600.00†	0.000	181.127	5600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5700.00†	0.000	181.127	5700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Cherry Canyon
5800.00†	0.000	181.127	5800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
5900.00†	0.000	181.127	5900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6000.00†	0.000	181.127	6000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6100.00†	0.000	181.127	6100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6200.00†	0.000	181.127	6200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6300.00†	0.000	181.127	6300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6400.00†	0.000	181.127	6400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6500.00†	0.000	181.127	6500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6600.00†	0.000	181.127	6600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6700.00†	0.000	181.127	6700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6800.00†	0.000	181.127	6800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
6900.00†	0.000	181.127	6900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7000.00†	0.000	181.127	7000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7100.00†	0.000	181.127	7100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7200.00†	0.000	181.127	7200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7300.00†	0.000	181.127	7300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7400.00†	0.000	181.127	7400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7500.00†	0.000	181.127	7500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7600.00†	0.000	181.127	7600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7700.00†	0.000	181.127	7700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7800.00†	0.000	181.127	7800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
7900.00†	0.000	181.127	7900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8000.00†	0.000	181.127	8000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8100.00†	0.000	181.127	8100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8200.00†	0.000	181.127	8200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8300.00†	0.000	181.127	8300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8400.00†	0.000	181.127	8400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Bone Spring
8500.00†	0.000	181.127	8500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8600.00†	0.000	181.127	8600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8700.00†	0.000	181.127	8700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	



Planned Wellpath Report

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**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.3 SHL
Area	Lea County, NM	Well	No.3
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.3 PWB
Facility	Hanson 26 Fed Com No.3		

WELLPATH DATA (166 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	181.127	8800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
8900.00+	0.000	181.127	8900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Avalon Shale
9000.00+	0.000	181.127	9000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9100.00+	0.000	181.127	9100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9200.00+	0.000	181.127	9200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9300.00+	0.000	181.127	9300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9400.00+	0.000	181.127	9400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9500.00+	0.000	181.127	9500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9600.00+	0.000	181.127	9600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	1st BSS
9700.00+	0.000	181.127	9700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9800.00+	0.000	181.127	9800.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
9900.00+	0.000	181.127	9900.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10000.00+	0.000	181.127	10000.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10100.00+	0.000	181.127	10100.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10150.00+	0.000	181.127	10150.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	2nd BSS
10200.00+	0.000	181.127	10200.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10300.00+	0.000	181.127	10300.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10400.00+	0.000	181.127	10400.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10500.00+	0.000	181.127	10500.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10600.00+	0.000	181.127	10600.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10630.00+	0.000	181.127	10630.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	3rd Carbonate
10700.00+	0.000	181.127	10700.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	
10749.00	0.000	181.127	10749.00	0.00	0.00	0.00	789375.20	564923.20	32°33'01.633"N	103°31'42.045"W	0.00	Est KOP
10800.00+	9.707	181.127	10799.76	4.31	-4.31	-0.08	789375.12	564918.89	32°33'01.590"N	103°31'42.046"W	19.03	
10900.00+	28.741	181.127	10893.75	37.09	-37.08	-0.73	789374.47	564886.12	32°33'01.266"N	103°31'42.056"W	19.03	
10936.98+	35.780	181.127	10925.00	56.81	-56.80	-1.12	789374.08	564866.40	32°33'01.071"N	103°31'42.063"W	19.03	3rd BSS
11000.00+	47.775	181.127	10971.91	98.72	-98.70	-1.94	789373.26	564824.50	32°33'00.656"N	103°31'42.076"W	19.03	
11075.19+	62.087	181.127	11015.00	160.10	-160.07	-3.15	789372.05	564763.13	32°33'00.049"N	103°31'42.096"W	19.03	3rd BS "C" SS
11100.00+	66.809	181.127	11025.70	182.48	-182.44	-3.59	789371.61	564740.76	32°32'59.828"N	103°31'42.103"W	19.03	
11200.00+	85.843	181.127	11049.23	279.20	-279.14	-5.49	789369.71	564644.06	32°32'58.871"N	103°31'42.133"W	19.03	
11218.36	89.338	181.127	11050.00	297.54	-297.48	-5.85	789369.35	564625.72	32°32'58.690"N	103°31'42.139"W	19.03	EOC
11218.39	89.338	181.127	11050.00	297.57	-297.51	-5.85	789369.35	564625.70	32°32'58.689"N	103°31'42.139"W	2.00	Target Line
11300.00+	89.338	181.127	11050.94	379.17	-379.10	-7.46	789367.74	564544.11	32°32'57.882"N	103°31'42.165"W	0.00	
11400.00+	89.338	181.127	11052.10	479.17	-479.07	-9.42	789365.78	564444.14	32°32'56.893"N	103°31'42.197"W	0.00	
11500.00+	89.338	181.127	11053.26	579.16	-579.05	-11.39	789363.81	564344.16	32°32'55.904"N	103°31'42.229"W	0.00	
11600.00+	89.338	181.127	11054.41	679.15	-679.02	-13.36	789361.85	564244.19	32°32'54.915"N	103°31'42.261"W	0.00	
11700.00+	89.338	181.127	11055.57	779.15	-779.00	-15.32	789359.88	564144.22	32°32'53.926"N	103°31'42.292"W	0.00	
11800.00+	89.338	181.127	11056.72	879.14	-878.97	-17.29	789357.91	564044.25	32°32'52.937"N	103°31'42.324"W	0.00	
11900.00+	89.338	181.127	11057.88	979.13	-978.94	-19.25	789355.95	563944.28	32°32'51.948"N	103°31'42.356"W	0.00	
12000.00+	89.338	181.127	11059.03	1079.13	-1078.92	-21.22	789353.98	563844.31	32°32'50.959"N	103°31'42.388"W	0.00	
12100.00+	89.338	181.127	11060.19	1179.12	-1178.89	-23.18	789352.02	563744.33	32°32'49.970"N	103°31'42.420"W	0.00	
12200.00+	89.338	181.127	11061.35	1279.11	-1278.87	-25.15	789350.05	563644.36	32°32'48.981"N	103°31'42.451"W	0.00	
12300.00+	89.338	181.127	11062.50	1379.11	-1378.84	-27.12	789348.08	563544.39	32°32'47.992"N	103°31'42.483"W	0.00	
12400.00+	89.338	181.127	11063.66	1479.10	-1478.81	-29.08	789346.12	563444.42	32°32'47.003"N	103°31'42.515"W	0.00	
12500.00+	89.338	181.127	11064.81	1579.09	-1578.79	-31.05	789344.15	563344.45	32°32'46.014"N	103°31'42.547"W	0.00	



Planned Wellpath Report

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.3 SHL
Area	Lea County, NM	Well	No.3
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.3 PWB
Facility	Hanson 26 Fed Com No.3		

WELLPATH DATA (166 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
12600.00+	89.338	181.127	11065.97	1679.09	-1678.76	-33.01	789342.19	563244.48	32°32'45.025"N	103°31'42.579"W	0.00	
12700.00+	89.338	181.127	11067.12	1779.08	-1778.74	-34.98	789340.22	563144.50	32°32'44.036"N	103°31'42.610"W	0.00	
12800.00+	89.338	181.127	11068.28	1879.07	-1878.71	-36.95	789338.25	563044.53	32°32'43.047"N	103°31'42.642"W	0.00	
12900.00+	89.338	181.127	11069.44	1979.07	-1978.68	-38.91	789336.29	562944.56	32°32'42.058"N	103°31'42.674"W	0.00	
13000.00+	89.338	181.127	11070.59	2079.06	-2078.66	-40.88	789334.32	562844.59	32°32'41.069"N	103°31'42.706"W	0.00	
13100.00+	89.338	181.127	11071.75	2179.05	-2178.63	-42.84	789332.36	562744.62	32°32'40.080"N	103°31'42.738"W	0.00	
13200.00+	89.338	181.127	11072.90	2279.05	-2278.61	-44.81	789330.39	562644.65	32°32'39.091"N	103°31'42.769"W	0.00	
13300.00+	89.338	181.127	11074.06	2379.04	-2378.58	-46.78	789328.42	562544.67	32°32'38.102"N	103°31'42.801"W	0.00	
13400.00+	89.338	181.127	11075.21	2479.03	-2478.55	-48.74	789326.46	562444.70	32°32'37.113"N	103°31'42.833"W	0.00	
13500.00+	89.338	181.127	11076.37	2579.03	-2578.53	-50.71	789324.49	562344.73	32°32'36.124"N	103°31'42.865"W	0.00	
13600.00+	89.338	181.127	11077.53	2679.02	-2678.50	-52.67	789322.53	562244.76	32°32'35.135"N	103°31'42.896"W	0.00	
13700.00+	89.338	181.127	11078.68	2779.01	-2778.48	-54.64	789320.56	562144.79	32°32'34.145"N	103°31'42.928"W	0.00	
13800.00+	89.338	181.127	11079.84	2879.01	-2878.45	-56.61	789318.60	562044.81	32°32'33.156"N	103°31'42.960"W	0.00	
13900.00+	89.338	181.127	11080.99	2979.00	-2978.42	-58.57	789316.63	561944.84	32°32'32.167"N	103°31'42.992"W	0.00	
14000.00+	89.338	181.127	11082.15	3078.99	-3078.40	-60.54	789314.66	561844.87	32°32'31.178"N	103°31'43.024"W	0.00	
14100.00+	89.338	181.127	11083.30	3178.99	-3178.37	-62.50	789312.70	561744.90	32°32'30.189"N	103°31'43.055"W	0.00	
14200.00+	89.338	181.127	11084.46	3278.98	-3278.35	-64.47	789310.73	561644.93	32°32'29.200"N	103°31'43.087"W	0.00	
14300.00+	89.338	181.127	11085.62	3378.97	-3378.32	-66.44	789308.77	561544.96	32°32'28.211"N	103°31'43.119"W	0.00	
14400.00+	89.338	181.127	11086.77	3478.97	-3478.29	-68.40	789306.80	561444.98	32°32'27.222"N	103°31'43.151"W	0.00	
14500.00+	89.338	181.127	11087.93	3578.96	-3578.27	-70.37	789304.83	561345.01	32°32'26.233"N	103°31'43.183"W	0.00	
14600.00+	89.338	181.127	11089.08	3678.95	-3678.24	-72.33	789302.87	561245.04	32°32'25.244"N	103°31'43.214"W	0.00	
14700.00+	89.338	181.127	11090.24	3778.95	-3778.22	-74.30	789300.90	561145.07	32°32'24.255"N	103°31'43.246"W	0.00	
14800.00+	89.338	181.127	11091.40	3878.94	-3878.19	-76.27	789298.94	561045.10	32°32'23.266"N	103°31'43.278"W	0.00	
14900.00+	89.338	181.127	11092.55	3978.93	-3978.16	-78.23	789296.97	560945.13	32°32'22.277"N	103°31'43.310"W	0.00	
15000.00+	89.338	181.127	11093.71	4078.93	-4078.14	-80.20	789295.00	560845.15	32°32'21.288"N	103°31'43.342"W	0.00	
15100.00+	89.338	181.127	11094.86	4178.92	-4178.11	-82.16	789293.04	560745.18	32°32'20.299"N	103°31'43.373"W	0.00	
15200.00+	89.338	181.127	11096.02	4278.91	-4278.09	-84.13	789291.07	560645.21	32°32'19.310"N	103°31'43.405"W	0.00	
15300.00+	89.338	181.127	11097.17	4378.91	-4378.06	-86.10	789289.11	560545.24	32°32'18.321"N	103°31'43.437"W	0.00	
15400.00+	89.338	181.127	11098.33	4478.90	-4478.03	-88.06	789287.14	560445.27	32°32'17.332"N	103°31'43.469"W	0.00	
15500.00+	89.338	181.127	11099.49	4578.89	-4578.01	-90.03	789285.17	560345.29	32°32'16.343"N	103°31'43.500"W	0.00	
15544.51	89.338	181.127	11100.00	4623.40	-4622.50	-90.90	789284.30	560300.80	32°32'15.903"N	103°31'43.515"W	0.00	No 3 PBHL, Wolfcamp



Planned Wellpath Report

Prelim_1

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.3 SHL
Area	Lea County, NM	Well	No.3
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.3 PWB
Facility	Hanson 26 Fed Com No.3		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.3 PBHL	15544.51	11100.00	-4622.50	-90.90	789284.30	560300.80	32°32'15.903"N	103°31'43.515"W	point

SURVEY PROGRAM: Ref Wellbore: No.3 PWB / Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15544.51	NaviTrak (Standard)		No.3 PWB

SR & A

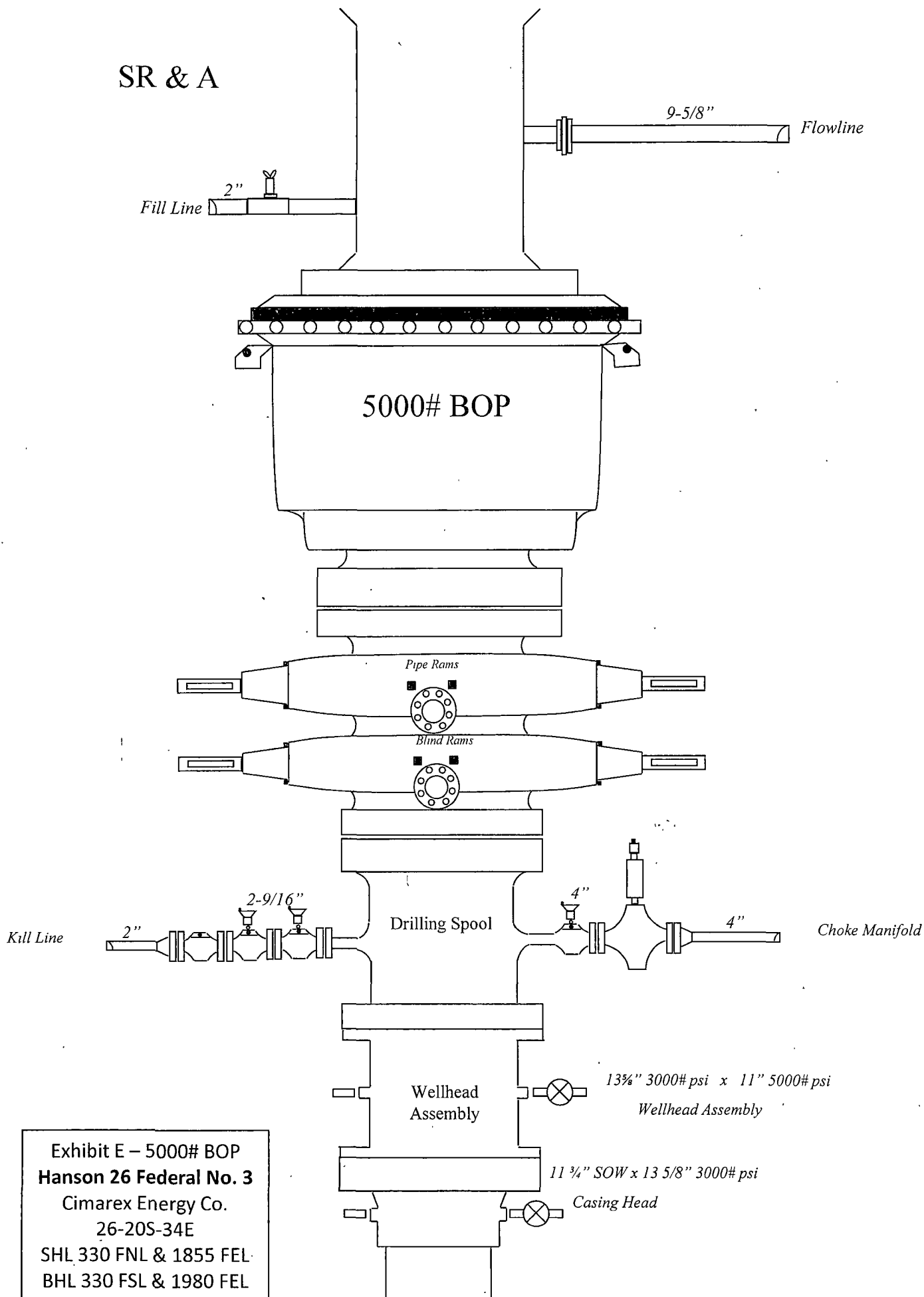


Exhibit E – 5000# BOP
Hanson 26 Federal No. 3
Cimarex Energy Co.
26-20S-34E
SHL 330 FNL & 1855 FEL
BHL 330 FSL & 1980 FEL
Lea County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram

Hanson 26 Federal No. 3

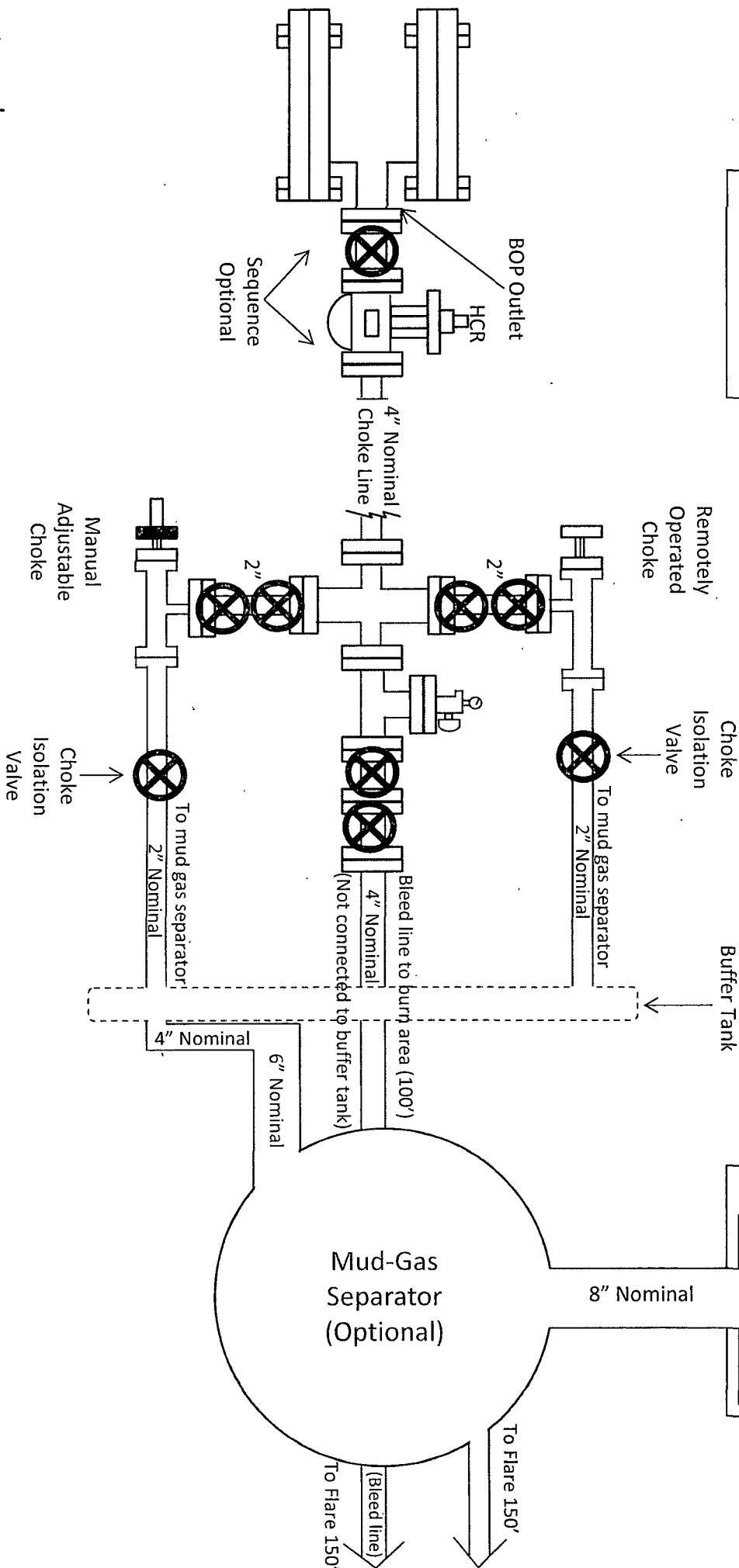
Cimarex Energy Co.

26-20S-34E

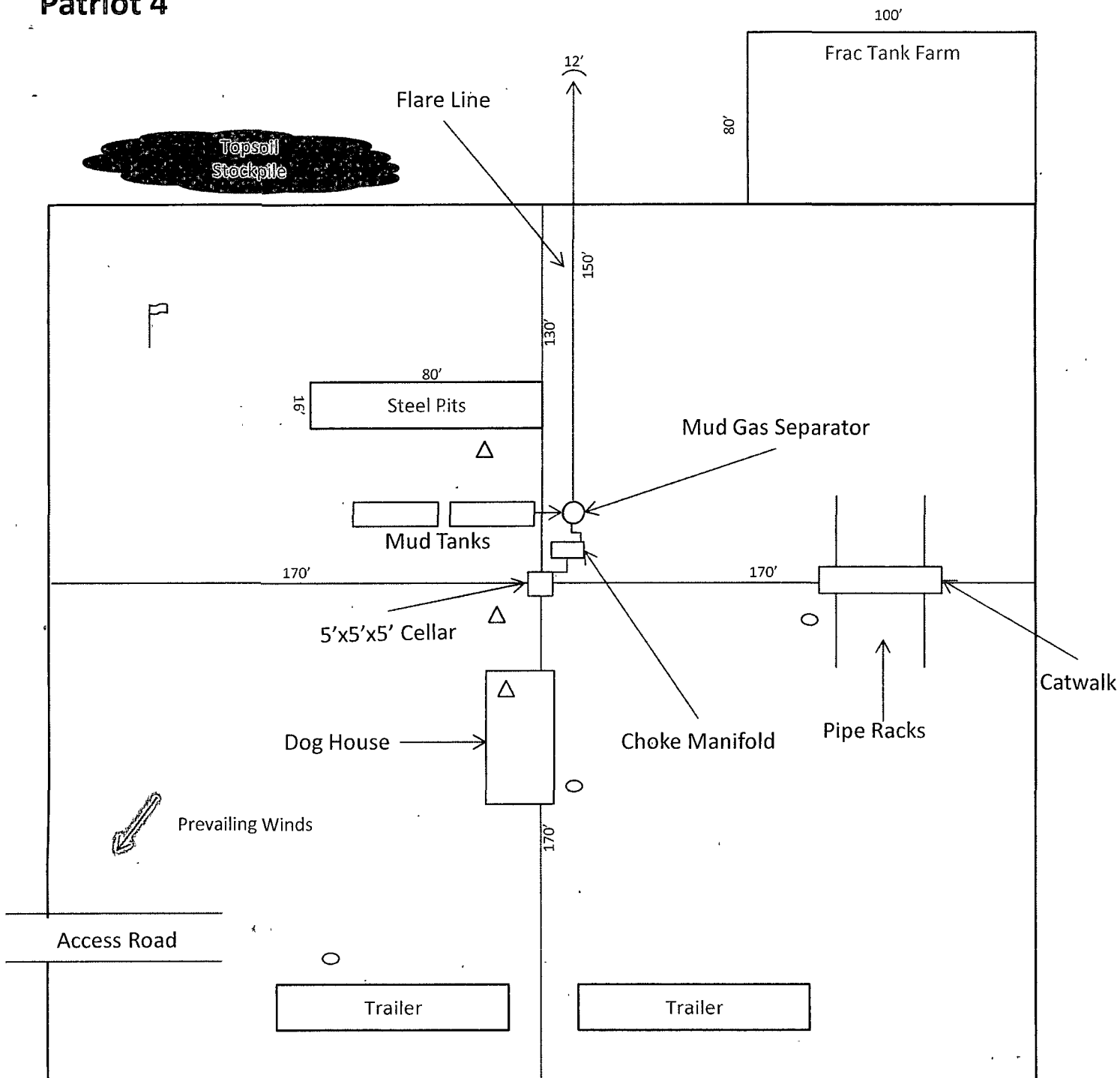
SHL 330 FNL & 1855 FEL

BHL 330 FSL & 1980 FEL

Lea County, NM



Patriot 4



Wind Direction Indicators
(wind sock or streamers)



H2S Monitors
(alarms at bell nipple and shale shaker)



Briefing Areas

1"=50'

N

Exhibit D – Rig Diagram
Hanson 26 Federal No. 3
Cimarex Energy Co.
26-20S-34E
SHL 330 FNL & 1855 FEL
BHL 330 FSL & 1980 FEL
Lea County, NM

Hydrogen Sulfide Drilling Operations Plan

Hanson 26 Federal No. 3

Cimarex Energy Co. of Colorado

Unit B, Section 26

T20S-R34E, 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.