

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

OCT 11 2012

RECEIVED

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. 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 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. Hanson 26 Federal Com No. 539480	
3b Phone No (include area code) 432-571-7800		9 API Well No. 30-025- 40819	
4 Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 530 FNL & 1930 FEL At proposed prod Zone 330 FSL & 1980 FEL Horizontal Bone Spring test		10 Field and Pool, or Exploratory Lea; Bone Spring, S 537580	
11 Sec, T, R, M. or Blk and Survey or Area		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 NMLC066126 800 acres NMLC0066126C 320 acres	17 Spacing Unit dedicated to this well E2W2 160	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 285'	19 Proposed Depth Pilot Hole TD: 11300' MD 15345' TVD 11100'	20 BLM/BIA Bond No on File NM-2575	
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3688' GR	22 Approximate date work will start* 10.05.12	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 	Name (Printed/Typed) Tracie J Cherry	Date 07.23.12
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Sr. Regulatory Analyst		
Approved By (Signature) /s/ Jesse J. Juen	Name (Printed/Typed)	Date OCT 4 2012
Title	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
10-16-2012

APPROVAL FOR TWO YEARS

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 Subject to General Requirements
& Special Stipulations Attached

Capitan Controlled Water Basin
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

OCT 18 2012

Operator - Landowner Agreement

Company: Cimarex Energy Co. of Colorado
Proposed Well: Hanson 26 Federal Com No. 2
Federal Lease Number: SHL NMLC066126 BHL NMLC0066126C

This is to advise that Cimarex Energy Co. of Colorado has an agreement with: Daniel C. Berry (PO Box 160 89 Berry Ranch Road Eunice NM 88231, the surface owner, concerning entry and, surface restoration after completion of drilling operations at the above described well.

After abandonment of the well, all equipment and trash will be removed from the well site. No other requirements were made concerning restoration of the well site.

July 23, 2012
Date


Signature Tracie J Cherry

Application to Drill
Hanson 26 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 Unit C, 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 530 FNL & 1930 FEL
 BHL 330 FSL & 1980 FEL

- 2 Elevation above sea level: 3688' 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 15345' TVD 11100'

- 6 Estimated tops of geological markers:

Rustler	1650'	Cherry Canyon	6700'
Top Salt	1800'	Brushy Canyon	8110'
Bottom Salt	3400'	Bone Spring	8400'
Yates	3500'	Avalon Shale	8900'
Capitan	3970'	FBSS	9600'
Bell Canyon	5180'	SBSS	10150'
		TBSS	11050'

- 7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil
Yates/7 Rivers	Oil

- 8 Proposed Mud Circulating System: * See CoA

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1675'	8.4 - 9.0	28	NC	FW
1675' to 5480'	10.0	30-32	NC	Brine water
5480' 10750'	8.4-9.0	28-29	NC	FW and brine, use hi-vis sweeps to keep hole clean
10750' to 15345'	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

* See CoA
 Drill 7 7/8" hole to 11300' and log. Pump 225 sks Premium Cement 0.5% CFR-3 0.1% HR-60116.5 ppg yield 1.06 0% Excess from 11300' to 10750'. Set whipstock and kick off 7 7/8" lateral @ 10750 and drill to TD @ 15345 MD, 11100 TVD. Run 5 1/2" 17# P-110 LTC from 0-15345 and cement.

Application to Drill
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Unit C, Section 26
T20S-R34E, Lea County, NM

9 Casing & Cementing Program:

** See COA*

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface	17½"	0' to 1675'	New 13¾"	54.5#	STC	J-55
Intermediate	12¼"	0' to 5480'	New 9¾"	40#	LTC	N-80
Production	7 7/8"	0' to 15345'	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 Surface

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

According to the State engineer, depth to ground water is 115'. Fresh water zones will be protected by setting 13¾" casing at 1675' and cementing to surface. Hydrocarbon zones will be protected by setting 9¾" casing at 5480' and cementing to surface, and by setting 5 1/2" casing at 15345' and cementing to surface.

See COA

Collapse Factor Burst Factor Tension Factor

1.125

1.125

1.6

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

11 Pressure Control Equipment:

** See COA*

Exhibit "E". A 13 3/8" 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 13¾" casing through the running of production casing, the well will be equipped with a 5000 psi BOP system.

** See COA*

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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Cimarex Energy Co. of Colorado
Unit C, Section 26
T20S-R34E, Lea County, NM

12 Testing, Logging and Coring Program:

** See COA*

- A. Mud logging program: 2 man unit from 5480' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR 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 **4950 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.

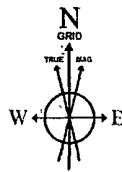
Location Lea County, NM
Field (Hanson) Sec 26, T20S, R34E
Facility Hanson 26 Fed Com No 2

Slot No 2 SHL
Well No 2
Wellbore No 2 PWB

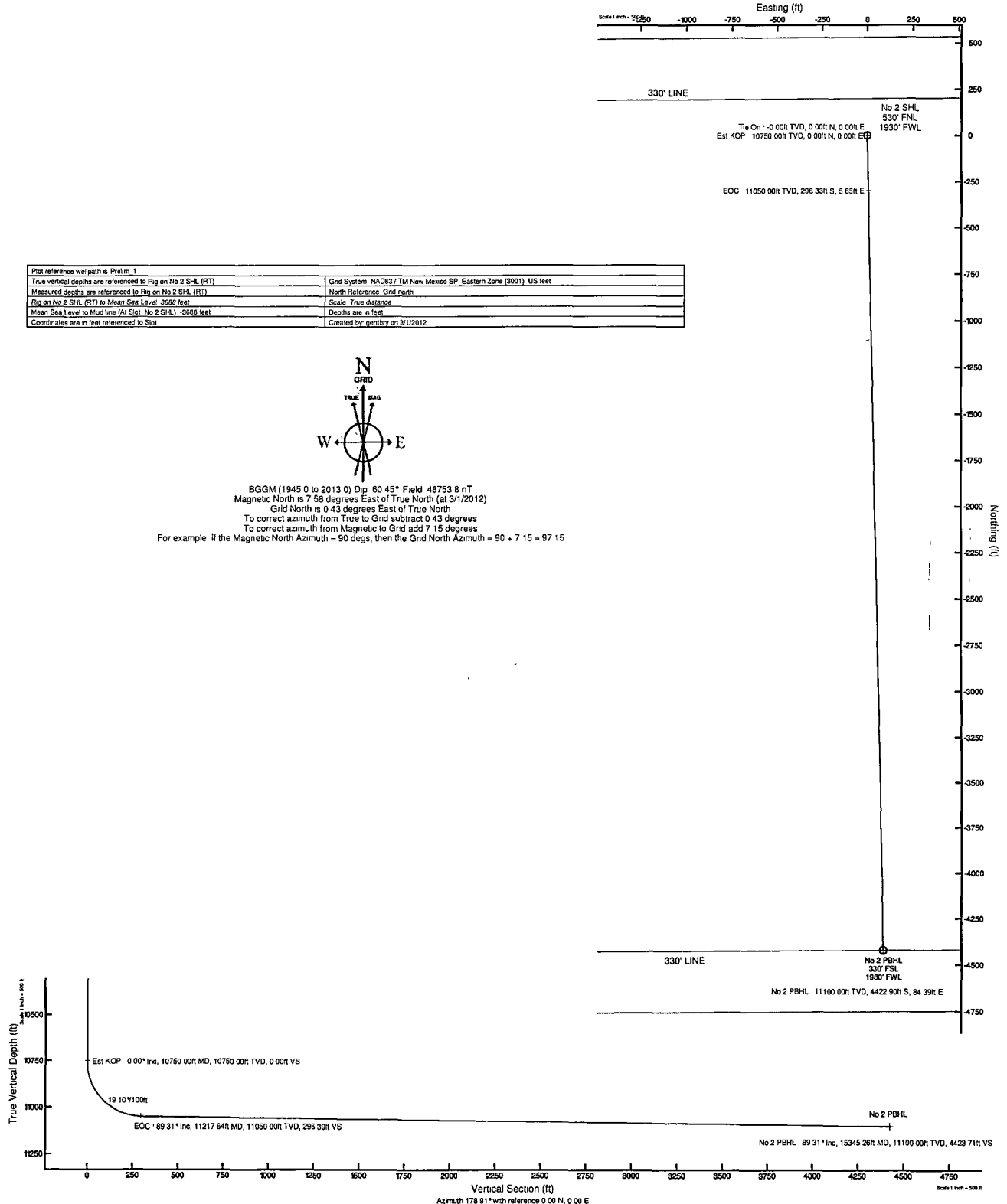


Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	0 00	0 000	178 907	0 00	0 00	0 00	0 00
Est KOP	10750 00	0 000	178 907	10750 00	0 00	0 00	0 00
EOC	11217 64	89 306	178 907	11050 00	-296 33	5 65	296 39
No 2 PBHL	15345 26	89 306	178 907	11100 00	-4422 90	84 39	4423 71

Plot reference wellpath is Prelim 1	
True vertical depths are referenced to Rig on No 2 SHL (RT)	Grid System NAD83 / TM New Mexico SP Eastern Zone (3001) US feet
Measured depths are referenced to Rig on No 2 SHL (RT)	North Reference Grid north
Rig on No 2 SHL (RT) to Mean Sea Level 3688 feet	Scale: True distance
Mean Sea Level to Mudline (At Slot No 2 SHL) -3688 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentry on 3/1/2012



BGGM (1945 0 to 2013 0) Dip 60 45° Field 48753 8 nT
Magnetic North is 7 58 degrees East of True North (at 3/1/2012)
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.2 SHL
Area	Lea County, NM	Well	No.2
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.2 PWB
Facility	Hanson 26 Fed Com No.2		

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	0.999979	Report Generated	3/1/2012 at 11:52:05 AM
Convergence at slot	0.43° East	Database/Source file	WA Midland/No.2 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	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W
Facility Reference Pt			787868.80	564713.90	32°32'59.674"N	103°31'59.662"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.2 SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.2 SHL (RT) to Mean Sea Level	3688.00ft
Vertical Reference Pt	Rig on No.2 SHL (RT)	Rig on No.2 SHL (RT) to Mud Line at Slot (No.2 SHL)	0.00ft
MD Reference Pt	Rig on No.2 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.91°



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.2 SHL
Area	Lea County, NM	Well	No.2
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.2 PWB
Facility	Hanson 26 Fed Com No.2		

WELLPATH DATA (161 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	178.907	0.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	Tie On
100.00†	0.000	178.907	100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
200.00†	0.000	178.907	200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
300.00†	0.000	178.907	300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
400.00†	0.000	178.907	400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
500.00†	0.000	178.907	500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
600.00†	0.000	178.907	600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
700.00†	0.000	178.907	700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
800.00†	0.000	178.907	800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
900.00†	0.000	178.907	900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1000.00†	0.000	178.907	1000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1100.00†	0.000	178.907	1100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1200.00†	0.000	178.907	1200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1300.00†	0.000	178.907	1300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1400.00†	0.000	178.907	1400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1500.00†	0.000	178.907	1500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1600.00†	0.000	178.907	1600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1700.00†	0.000	178.907	1700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1800.00†	0.000	178.907	1800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
1900.00†	0.000	178.907	1900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2000.00†	0.000	178.907	2000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2100.00†	0.000	178.907	2100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2200.00†	0.000	178.907	2200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2300.00†	0.000	178.907	2300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2400.00†	0.000	178.907	2400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2500.00†	0.000	178.907	2500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2600.00†	0.000	178.907	2600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2700.00†	0.000	178.907	2700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2800.00†	0.000	178.907	2800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
2900.00†	0.000	178.907	2900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3000.00†	0.000	178.907	3000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3100.00†	0.000	178.907	3100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3200.00†	0.000	178.907	3200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3300.00†	0.000	178.907	3300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3400.00†	0.000	178.907	3400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3500.00†	0.000	178.907	3500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3600.00†	0.000	178.907	3600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3700.00†	0.000	178.907	3700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3800.00†	0.000	178.907	3800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
3900.00†	0.000	178.907	3900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4000.00†	0.000	178.907	4000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4100.00†	0.000	178.907	4100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4200.00†	0.000	178.907	4200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4300.00†	0.000	178.907	4300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4400.00†	0.000	178.907	4400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	



Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.2 SHL
Area	Lea County, NM	Well	No.2
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.2 PWB
Facility	Hanson 26 Fed Com No.2		

WELLPATH DATA (161 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
4500.00†	0.000	178.907	4500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4600.00†	0.000	178.907	4600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4700.00†	0.000	178.907	4700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4800.00†	0.000	178.907	4800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
4900.00†	0.000	178.907	4900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5000.00†	0.000	178.907	5000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5100.00†	0.000	178.907	5100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5200.00†	0.000	178.907	5200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5300.00†	0.000	178.907	5300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5400.00†	0.000	178.907	5400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5500.00†	0.000	178.907	5500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5600.00†	0.000	178.907	5600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5700.00†	0.000	178.907	5700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	Cherry Canyon
5800.00†	0.000	178.907	5800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
5900.00†	0.000	178.907	5900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6000.00†	0.000	178.907	6000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6100.00†	0.000	178.907	6100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6200.00†	0.000	178.907	6200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6300.00†	0.000	178.907	6300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6400.00†	0.000	178.907	6400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6500.00†	0.000	178.907	6500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6600.00†	0.000	178.907	6600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6700.00†	0.000	178.907	6700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6800.00†	0.000	178.907	6800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
6900.00†	0.000	178.907	6900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7000.00†	0.000	178.907	7000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7100.00†	0.000	178.907	7100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7200.00†	0.000	178.907	7200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7300.00†	0.000	178.907	7300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7400.00†	0.000	178.907	7400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7500.00†	0.000	178.907	7500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7600.00†	0.000	178.907	7600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7700.00†	0.000	178.907	7700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7800.00†	0.000	178.907	7800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
7900.00†	0.000	178.907	7900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8000.00†	0.000	178.907	8000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8100.00†	0.000	178.907	8100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8200.00†	0.000	178.907	8200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8300.00†	0.000	178.907	8300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8400.00†	0.000	178.907	8400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	Bone Spring
8500.00†	0.000	178.907	8500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8600.00†	0.000	178.907	8600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8700.00†	0.000	178.907	8700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8800.00†	0.000	178.907	8800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
8900.00†	0.000	178.907	8900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	Avalon Shale



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.2 SHL
Area	Lea County, NM	Well	No.2
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.2 PWB
Facility	Hanson 26 Fed Com No.2		

WELLPATH DATA (161 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
9000.00†	0.000	178.907	9000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9100.00†	0.000	178.907	9100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9200.00†	0.000	178.907	9200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9300.00†	0.000	178.907	9300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9400.00†	0.000	178.907	9400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9500.00†	0.000	178.907	9500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9600.00†	0.000	178.907	9600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	1st BSS
9700.00†	0.000	178.907	9700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9800.00†	0.000	178.907	9800.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
9900.00†	0.000	178.907	9900.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10000.00†	0.000	178.907	10000.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10100.00†	0.000	178.907	10100.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10150.00†	0.000	178.907	10150.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	2nd BSS
10200.00†	0.000	178.907	10200.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10300.00†	0.000	178.907	10300.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10400.00†	0.000	178.907	10400.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10500.00†	0.000	178.907	10500.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10600.00†	0.000	178.907	10600.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10630.00†	0.000	178.907	10630.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	3rd Carbonate
10700.00†	0.000	178.907	10700.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	
10750.00†	0.000	178.907	10750.00	0.00	0.00	0.00	787868.80	564713.90	32°32'59.674"N	103°31'59.662"W	0.00	Est KOP
10800.00†	9.549	178.907	10799.77	4.16	-4.16	0.08	787868.88	564709.74	32°32'59.633"N	103°31'59.661"W	19.10	
10900.00†	28.646	178.907	10893.83	36.72	-36.72	0.70	787869.50	564677.18	32°32'59.311"N	103°31'59.657"W	19.10	
10936.85†	35.682	178.907	10925.00	56.33	-56.31	1.07	787869.87	564657.59	32°32'59.117"N	103°31'59.654"W	19.10	3rd BSS
11000.00†	47.743	178.907	10972.06	98.27	-98.25	1.87	787870.67	564615.65	32°32'58.702"N	103°31'59.648"W	19.10	
11074.86†	62.039	178.907	11015.00	159.35	-159.32	3.04	787871.84	564554.58	32°32'58.097"N	103°31'59.640"W	19.10	3rd BS "C" SS
11100.00†	66.840	178.907	11025.84	182.02	-181.99	3.47	787872.27	564531.91	32°32'57.873"N	103°31'59.637"W	19.10	
11200.00†	85.937	178.907	11049.27	278.77	-278.72	5.32	787874.12	564435.19	32°32'56.916"N	103°31'59.624"W	19.10	
11217.64†	89.306	178.907	11050.00	296.39	-296.33	5.65	787874.45	564417.57	32°32'56.742"N	103°31'59.622"W	19.10	EOC
11300.00†	89.306	178.907	11051.00	378.74	-378.67	7.22	787876.02	564335.24	32°32'55.927"N	103°31'59.610"W	0.00	
11400.00†	89.306	178.907	11052.21	478.74	-478.65	9.13	787877.93	564235.26	32°32'54.937"N	103°31'59.597"W	0.00	
11500.00†	89.306	178.907	11053.42	578.73	-578.62	11.04	787879.84	564135.29	32°32'53.948"N	103°31'59.583"W	0.00	
11600.00†	89.306	178.907	11054.63	678.72	-678.60	12.95	787881.75	564035.32	32°32'52.959"N	103°31'59.570"W	0.00	
11700.00†	89.306	178.907	11055.84	778.71	-778.57	14.85	787883.65	563935.35	32°32'51.969"N	103°31'59.556"W	0.00	
11800.00†	89.306	178.907	11057.05	878.71	-878.55	16.76	787885.56	563835.37	32°32'50.980"N	103°31'59.543"W	0.00	
11900.00†	89.306	178.907	11058.27	978.70	-978.52	18.67	787887.47	563735.40	32°32'49.991"N	103°31'59.529"W	0.00	
12000.00†	89.306	178.907	11059.48	1078.69	-1078.49	20.58	787889.38	563635.43	32°32'49.001"N	103°31'59.516"W	0.00	
12100.00†	89.306	178.907	11060.69	1178.68	-1178.47	22.48	787891.28	563535.46	32°32'48.012"N	103°31'59.502"W	0.00	
12200.00†	89.306	178.907	11061.90	1278.68	-1278.44	24.39	787893.19	563435.49	32°32'47.023"N	103°31'59.489"W	0.00	
12300.00†	89.306	178.907	11063.11	1378.67	-1378.42	26.30	787895.10	563335.51	32°32'46.034"N	103°31'59.475"W	0.00	
12400.00†	89.306	178.907	11064.32	1478.66	-1478.39	28.21	787897.01	563235.54	32°32'45.044"N	103°31'59.462"W	0.00	
12500.00†	89.306	178.907	11065.53	1578.65	-1578.37	30.11	787898.91	563135.57	32°32'44.055"N	103°31'59.448"W	0.00	
12600.00†	89.306	178.907	11066.74	1678.65	-1678.34	32.02	787900.82	563035.60	32°32'43.066"N	103°31'59.435"W	0.00	
12700.00†	89.306	178.907	11067.96	1778.64	-1778.32	33.93	787902.73	562935.63	32°32'42.076"N	103°31'59.421"W	0.00	
12800.00†	89.306	178.907	11069.17	1878.63	-1878.29	35.84	787904.64	562835.65	32°32'41.087"N	103°31'59.408"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.2 SHL
Area	Lea County, NM	Well	No.2
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.2 PWB
Facility	Hanson 26 Fed Com No.2		

WELLPATH DATA (161 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†	89.306	178.907	11070.38	1978.63	-1978.27	37.74	787906.54	562735.68	32°32'40.098"N	103°31'59.394"W	0.00	
13000.00†	89.306	178.907	11071.59	2078.62	-2078.24	39.65	787908.45	562635.71	32°32'39.108"N	103°31'59.381"W	0.00	
13100.00†	89.306	178.907	11072.80	2178.61	-2178.21	41.56	787910.36	562535.74	32°32'38.119"N	103°31'59.367"W	0.00	
13200.00†	89.306	178.907	11074.01	2278.60	-2278.19	43.47	787912.27	562435.76	32°32'37.130"N	103°31'59.354"W	0.00	
13300.00†	89.306	178.907	11075.22	2378.60	-2378.16	45.37	787914.17	562335.79	32°32'36.140"N	103°31'59.340"W	0.00	
13400.00†	89.306	178.907	11076.43	2478.59	-2478.14	47.28	787916.08	562235.82	32°32'35.151"N	103°31'59.327"W	0.00	
13500.00†	89.306	178.907	11077.65	2578.58	-2578.11	49.19	787917.99	562135.85	32°32'34.162"N	103°31'59.313"W	0.00	
13600.00†	89.306	178.907	11078.86	2678.57	-2678.09	51.10	787919.90	562035.88	32°32'33.172"N	103°31'59.300"W	0.00	
13700.00†	89.306	178.907	11080.07	2778.57	-2778.06	53.01	787921.80	561935.90	32°32'32.183"N	103°31'59.286"W	0.00	
13800.00†	89.306	178.907	11081.28	2878.56	-2878.04	54.91	787923.71	561835.93	32°32'31.194"N	103°31'59.273"W	0.00	
13900.00†	89.306	178.907	11082.49	2978.55	-2978.01	56.82	787925.62	561735.96	32°32'30.204"N	103°31'59.259"W	0.00	
14000.00†	89.306	178.907	11083.70	3078.54	-3077.98	58.73	787927.53	561635.99	32°32'29.215"N	103°31'59.246"W	0.00	
14100.00†	89.306	178.907	11084.91	3178.54	-3177.96	60.64	787929.43	561536.02	32°32'28.226"N	103°31'59.232"W	0.00	
14200.00†	89.306	178.907	11086.12	3278.53	-3277.93	62.54	787931.34	561436.04	32°32'27.236"N	103°31'59.219"W	0.00	
14300.00†	89.306	178.907	11087.34	3378.52	-3377.91	64.45	787933.25	561336.07	32°32'26.247"N	103°31'59.205"W	0.00	
14400.00†	89.306	178.907	11088.55	3478.52	-3477.88	66.36	787935.16	561236.10	32°32'25.258"N	103°31'59.192"W	0.00	
14500.00†	89.306	178.907	11089.76	3578.51	-3577.86	68.27	787937.07	561136.13	32°32'24.268"N	103°31'59.178"W	0.00	
14600.00†	89.306	178.907	11090.97	3678.50	-3677.83	70.17	787938.97	561036.15	32°32'23.279"N	103°31'59.165"W	0.00	
14700.00†	89.306	178.907	11092.18	3778.49	-3777.81	72.08	787940.88	560936.18	32°32'22.290"N	103°31'59.151"W	0.00	
14800.00†	89.306	178.907	11093.39	3878.49	-3877.78	73.99	787942.79	560836.21	32°32'21.300"N	103°31'59.138"W	0.00	
14900.00†	89.306	178.907	11094.60	3978.48	-3977.75	75.90	787944.70	560736.24	32°32'20.311"N	103°31'59.124"W	0.00	
15000.00†	89.306	178.907	11095.82	4078.47	-4077.73	77.81	787946.60	560636.27	32°32'19.322"N	103°31'59.111"W	0.00	
15100.00†	89.306	178.907	11097.03	4178.46	-4177.70	79.71	787948.51	560536.29	32°32'18.332"N	103°31'59.097"W	0.00	
15200.00†	89.306	178.907	11098.24	4278.46	-4277.68	81.62	787950.42	560436.32	32°32'17.343"N	103°31'59.084"W	0.00	
15300.00†	89.306	178.907	11099.45	4378.45	-4377.65	83.53	787952.33	560336.35	32°32'16.354"N	103°31'59.070"W	0.00	
15345.26	89.306	178.907	11100.00†	4423.71	-4422.90	84.39	787953.19	560291.10	32°32'15.906"N	103°31'59.064"W	0.00	No.2 PBHL



Planned Wellpath Report

Prelim_1

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.2 SHL
Area	Lea County, NM	Well	No.2
Field	(Hanson) Sec 26, T20S, R34E	Wellbore	No.2 PWB
Facility	Hanson 26 Fed Com No.2		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.2 PBHL	15345.26	11100.00	-4422.90	84.40	787953.20	560291.10	32°32'15.906"N	103°31'59.064"W	point

SURVEY PROGRAM - Ref Wellbore: No.2 PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15345.26	NaviTrak (Standard)		No.2 PWB

SR & A

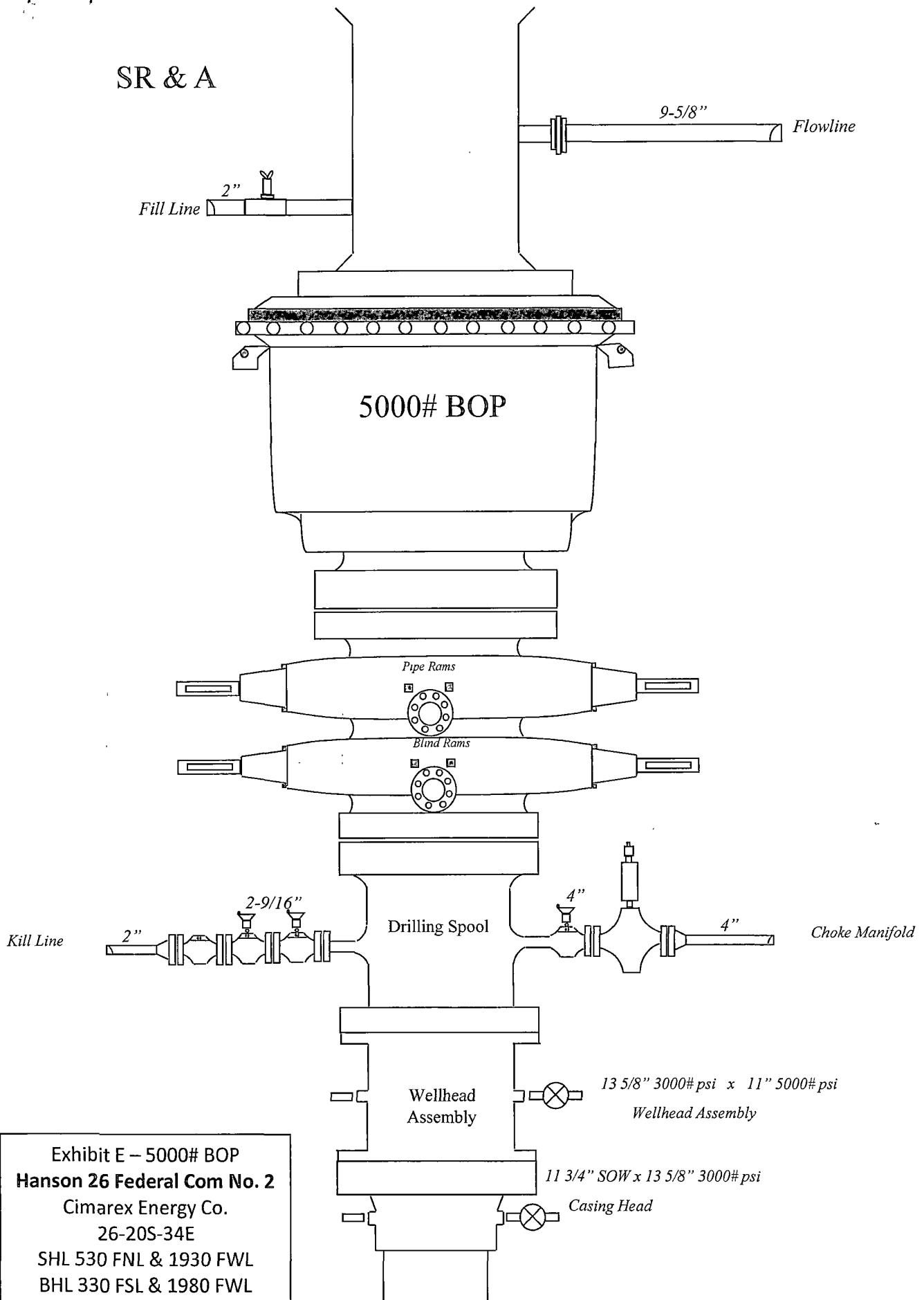


Exhibit E – 5000# BOP
Hanson 26 Federal Com No. 2
Cimarex Energy Co.
26-20S-34E
SHL 530 FNL & 1930 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram

Hanson 26 Federal Com No. 2

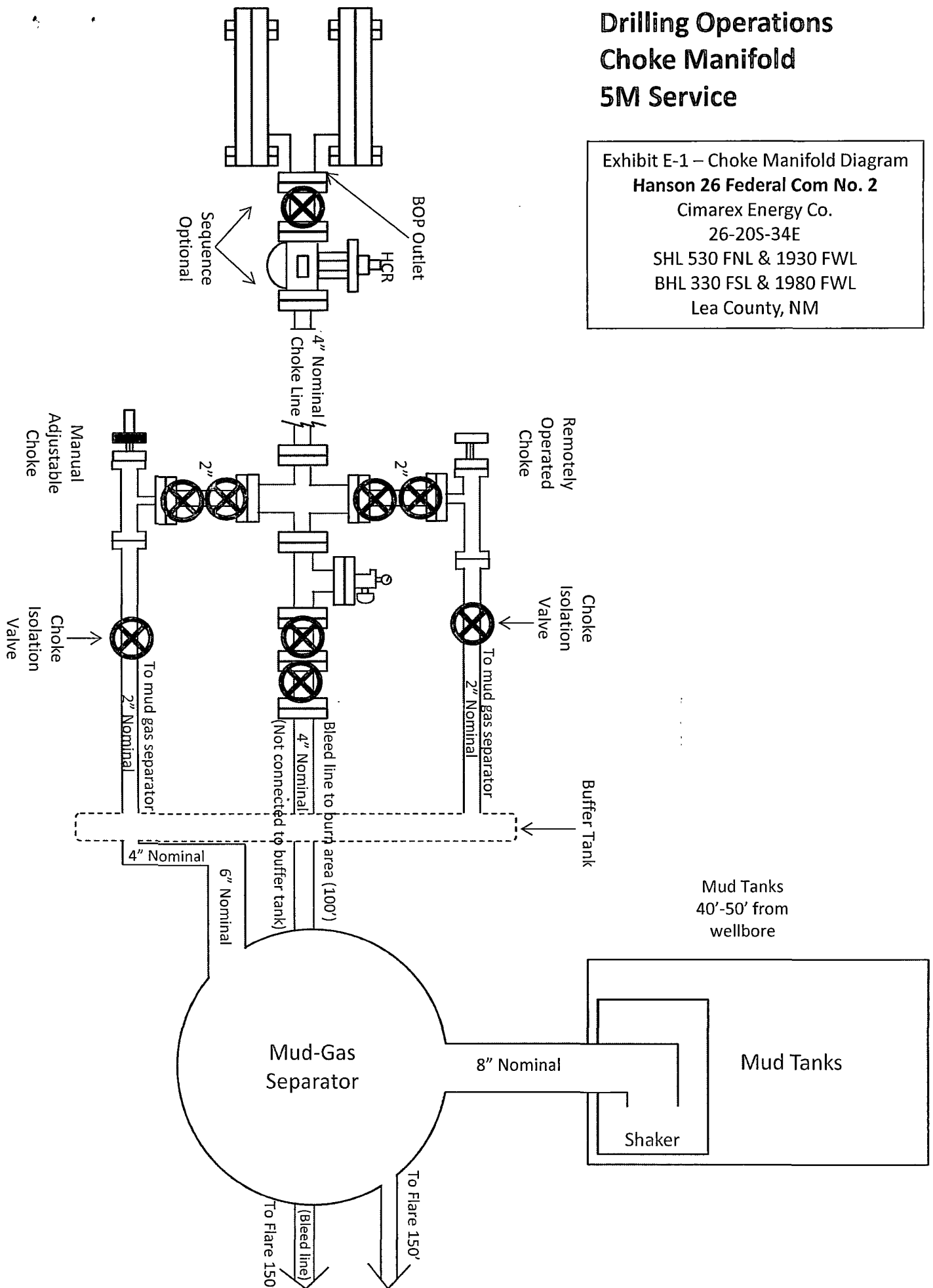
Cimarex Energy Co.

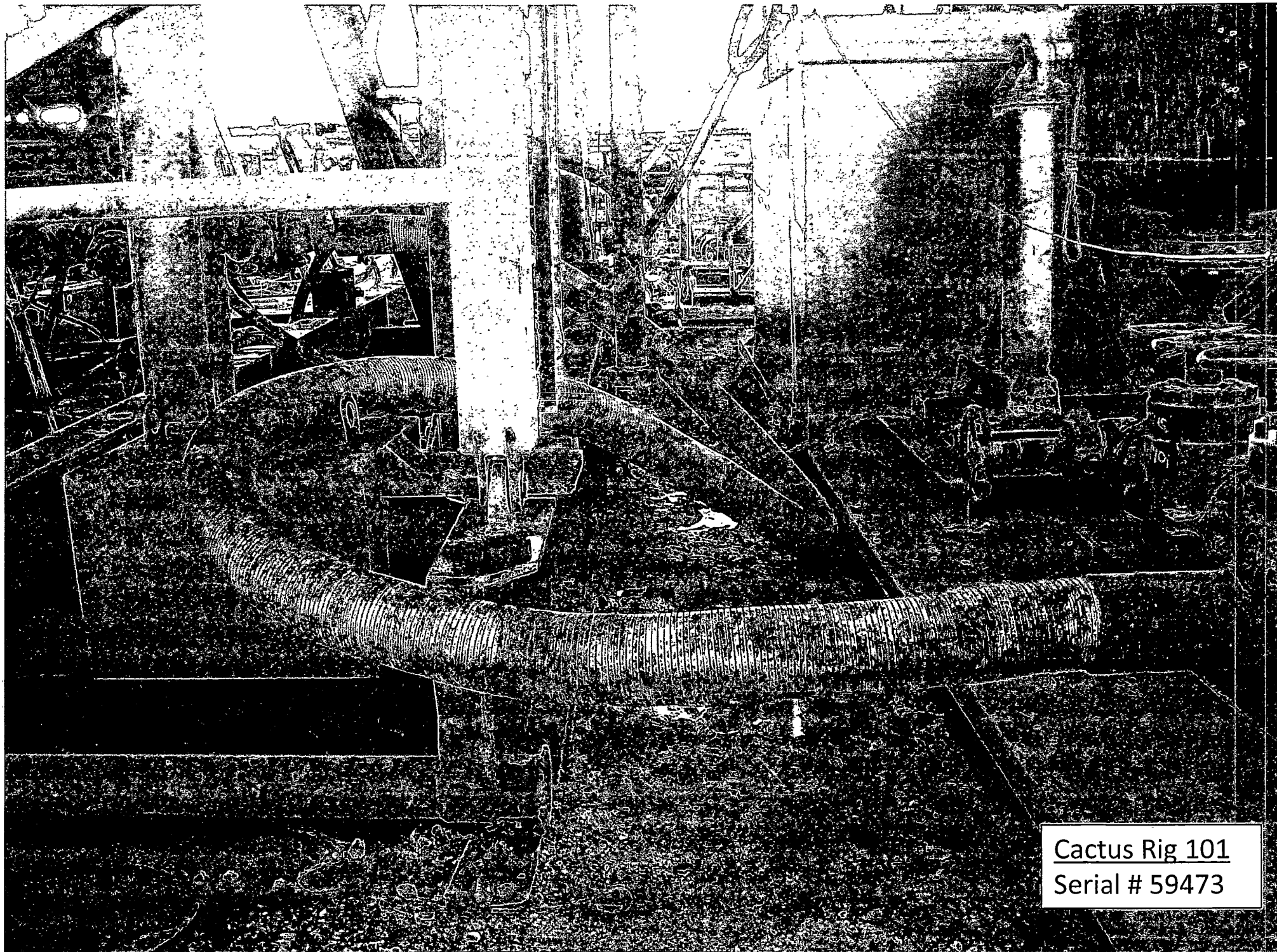
26-20S-34E

SHL 530 FNL & 1930 FWL

BHL 330 FSL & 1980 FWL

Lea County, NM





Cactus Rig 101
Serial # 59473

M I D W E S T
HOSE AND SPECIALTY INC.

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



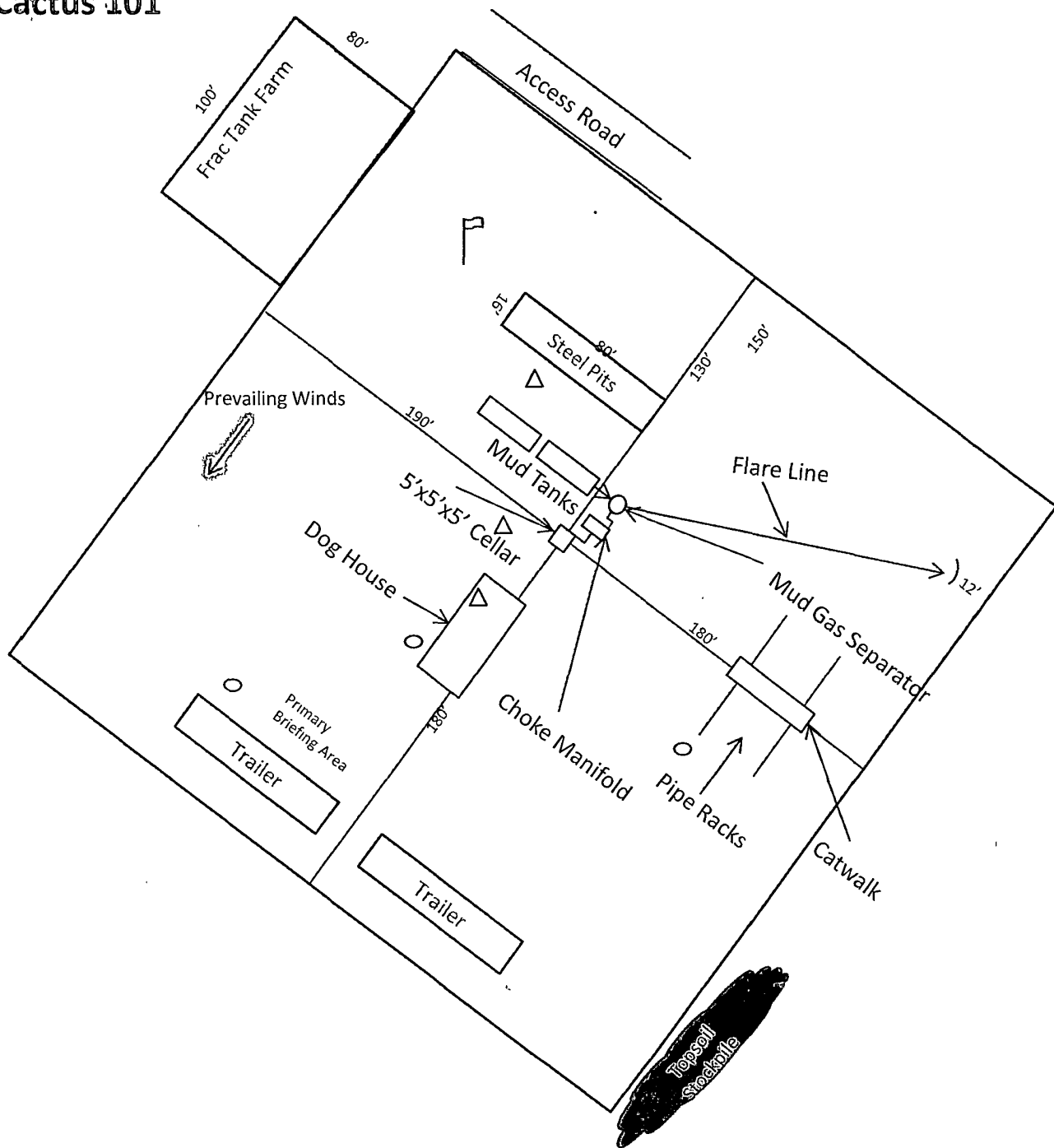
Midwest Hose
& Specialty, Inc.

Specification Sheet Choke & Kill Hose

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

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

Cactus 101



Wind Direction Indicators
(wind sock or streamers)



• H2S Monitors
(alarms at bell nipple and shale shaker)



Briefing Areas



Exhibit D – Rig Diagram
Hanson 26 Federal ComNo. 2
Cimarex Energy Co.
26-20S-34E
SHL 530 FNL & 1930 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM